The Influence of Team Goal Orientation on Team Creativity—Moderating Effect of Intellectual Stimulation

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Abstract. Through the questionnaire survey of 63 teams, this paper explores the mechanism of team performance goal orientation and team learning goal orientation on team creativity under the regulation of intellectual stimulation. The study found that: (1) Team performance goal orientation has a significant positive impact on team creativity. The positive impact of team learning goal orientation on team creativity is not significant, but the two are positively related; (2) Intelligence stimulation regulates the relationship between team performance goal orientation and team creativity. The relationship, that is, the higher the intellectual stimulation, the stronger the relationship between team performance goal orientation and team creativity; (3) Intelligence stimulation regulates the relationship between team learning goal orientation and team creativity. The relationship, that is, the higher the intellectual stimulation, the weaker the relationship between team learning goal orientation and team creativity.

The Introduction

In the fast changing and fierce competition environment in China, the influence of team creativity is extremely important, and the intellectual stimulation of the leader makes the employees no longer conform to the rules. The employees will think diversely out of the original thinking framework, re-examine the problems and environment, and use their imagination to explore new solutions. In addition to the relationship between leadership behavior and team creativity, team goal orientation also has a certain impact on team creativity. With the application and development of goal-oriented theory in organizational behavior, the relationship between goal-oriented theory and team creativity at the team level has attracted the attention of some scholars [5]. Team goal orientation focuses on the common understanding of team members on the overall atmosphere and achievement goals of the team, which will affect the team's learning behavior, and the learning behavior will affect the generation of creativity. Therefore, team goal orientation is an important predictive variable of team creativity [5]. Among all kinds of output, team creativity is of vital importance to enterprises. It can improve the core competitiveness of innovative enterprises and is the starting point and foothold for the healthy and sustainable development of enterprises.

Therefore, this study will explore the effect mechanism of team learning goal orientation and team performance approach goal orientation on team creativity under the influence of intellectual stimulation.

Theories and Hypotheses

Team Goal Orientation and Team Creativity

Team goal orientation determines team members’ behavioral motivation, achievement attitude and response to uncertain situations. It also helps the team to make decisions, solve problems cooperatively and coordinate conflicts within the team, so as to keep the team paying attention to learning goals or performance orientation. Team goal orientation has a great impact on the activity process of team members and the final output of the team. Based on this, this study attempts to explore two modes of team goal orientation, namely, the influence of team learning goal orientation and team performance reaching goal orientation on team creativity.
Team learning goal orientation helps team members to understand the degree to which the team is inclined to learn. Has a point target orientation team, pay more attention to access and update the knowledge in the work, this will help to form a more complete and mature cognitive structure, and finally develop creative strategies to cope with the challenge of working in, team members have more than the requirements of the task itself, but is involved in the activities in his own heart. In addition, the team is made up of learning goals orientation a common understanding of team the task team members, motivate team members to collect, process, and information exchange, and the team attaches great importance to the development of ability, team members will be challenging to work as an opportunity to learn new things, will actively put forward new ideas and practice; they try to overcome the difficulties encountered in the process of creative execution, and they can insist on finding effective coping strategies when they fail. Therefore, the learning goal orientation of team members is conducive to the improvement of team creativity, and this positive relationship will run through the whole process of team development. Hence we posit that:

Hypothesis 1: Team learning goal orientation is positively related to team creativity.

Secondly, team performance goal orientation encourages team members to work hard to obtain good performance to prove their team's ability and expect positive comments from the outside. For creativity, team performance toward goal-oriented team in order to better display its value and attract vc, encourages team members to work together, work and motivate team members to share information and knowledge, so as to maintain the team members focus on team task and team goals to finish, to enhance the performance task interdependence between team members, and achieve better result together. In addition, the study found that team performance tends to goal-directed would plan to the team, communication and cooperation have a positive impact, and effective team communication and cooperation to help team members of team, team goals to achieve common cognitive task, and based on this, puts forward new ideas and Suggestions, so as to promote creativity. Based on the above inferences, the goal orientation of team performance has a positive impact on team creativity. Hence we posit that

Hypothesis 2: Team performance orientation is positively related to team creativity.

The Moderating Effect of Intellectual Stimulation

Team leader's intellectual stimulation behavior aims to encourage team members to innovate and challenge themselves, which is conducive for team members to be fully engaged in creative activities and brave to propose new and useful ideas and ideas, thus stimulating the production of creative achievements. Team learning goal orientation reflects the common recognition of a team that focuses on learning goals. Team learning goal orientation is a reliable response for team members to pursue goals and behaviors related to learning. When the goal orientation of team learning is high, team members pay attention to the development of learning opportunities and abilities, actively propose a large number of new ideas to expand team activities, and these new ideas will largely deviate from existing ideas and behaviors. At the same time, team learning goal orientation may affect the overall decision-making and action of the team, which is to measure the overall learning tendency of the team, rather than activate specific learning behaviors. Ultimately, team goal orientation is only reflective of whether a team focuses on learning, rather than whether they will succeed in learning, emphasizing that learning and learning outcomes are mutually independent. Therefore, in challenging situations, intellectual stimulation can replace this effect of team learning goal orientation. Intellectual stimulation can replace the positive influence of team learning goal orientation on team creativity, making the positive relationship between team learning goal orientation and team creativity weakened when the intellectual stimulation is high. Hence we posit that

Hypothesis 3: Intellectual stimulation negatively moderates the relationship between team learning goal orientation and team creativity.

Secondly, team performance goal orientation tends to be goal-oriented and focuses on the pursuit of performance, while the ultimate goal of intellectual stimulation is to achieve better performance breakthrough, and there are consistent in motivation. When leaders help employees engage in
problem solving activities, offer additional perspectives that can support and challenge employees to consider different approaches. This may enhance the problem-solving ability of employees. Intellectual stimulation has an open and forward-looking strategy for pursuing goals. Therefore, a high level of intellectual stimulation will enable employees to cope with routine challenges and problems less frequently [7], thus generating new ideas and ideas in the process of team development. Therefore, when team members are performance goal-oriented, high-level intellectual stimulation of team leaders will improve team members' creativity. Hence we posit that:

Hypothesis 4: Intellectual stimulation positively moderates the relationship between team performance goal orientation and team creativity.

Research Methods

Research Object

Questionnaires are filled out on site and collected by a “person in charge” in each team. The questionnaire involving team creativity is answered by the team leader. Team members report other variables such as team goal orientation and intellectual stimulation. A total of 365 questionnaires were collected for team members and 70 questionnaires for team leaders, a total of 435 questionnaires. After eliminating the questionnaires with severe repetitive responses, severe data loss and un-matching, 353 effective questionnaires were obtained, including 63 team leaders and 290 team members, a total of 63 teams, with an effective questionnaire recovery rate of 81.15%.

Among the 63 teams, the average feedback of members was 5.60 (SD=1.76), with a minimum of 4 members giving effective feedback and a maximum of 18 members giving effective feedback. Team members were 64.3% male and 35.7% female. In terms of education, high schools and universities account for the majority, including 49.9% in high schools and 26.6% in universities. The overall length of service is mainly between 4 and 7 years, 29.7%.

Measurement of Variables

Team Goal Orientation. The two team goal orientation dimensions (learning and performance) were measured using nine items from a scale that was developed and validated by VandeWalle (1997). The alpha coefficient for this scale was 0.883.

Intellectual Stimulation. The intellectual stimulation was measured using four items from a scale that was developed and validated by Bass, B.M (1995). The alpha coefficient for this scale was 0.863.

Team Creativity. The team creativity was measured using four items from a scale that was developed and validated by Shin & Zhou (2007). The alpha coefficient for this scale was 0.765. All items used a five-point response format ranging from 1(strongly disagree) to 5(strongly agree).

The control variables were mainly used to measure the basic variables including gender, education background, age, working age and the department of the team.

Structure Validity and Polymerization Problems

(1) Structure validity

Since team goal orientation and intellectual stimulation are evaluated by multiple team members in a team, validation factor analysis is conducted on individual level data before aggregation to test the structural validity of both team goal orientation and intellectual stimulation. The four-factor model assumed reached a good fitting level, and all its fitting indicators were within the acceptable range (χ²/df=1.829, CFI=0.98, NFI=0.95, IFI=0.98, RMSEA=0.04). In order to determine whether other model has better fitting effect, we examined three factor model in sequence (χ²/df=3.64, CFI=0.93, RMSEA=0.08), the two factors model (χ²/df=6.58, CFI=0.84, RMSEA=0.12) and the single factor model (χ²/df=11.65, CFI=0.70, RMSEA=0.17). The analysis results show that the four-factor measurement model proposed in this study has the best fitting effect.

(2) Intra-group consistency and data aggregation
To further determine whether individual data can be aggregated, we need to calculate the within-group interrater agreement ($r_{wg}$) of each team perception variable. The results show that $r_{wg}$ has achieved the aggregation requirement in group consistency, and the $r_{wg}$ mean values of three variables, namely, team performance goal orientation, team learning goal orientation and intellectual stimulation, are 0.93, 0.91 and 0.92 respectively.

According to the results of univariate analysis of variance, there was significant variance ($p < 0.001$) among the groups with goal orientation in team performance, goal orientation in team learning and intellectual stimulation. The intergroup correlation coefficients of the three measurements were further calculated, and the ICC (1) values were 0.37, 0.26 and 0.40 respectively, and the ICC (2) values were 0.74, 0.64 and 0.77 respectively. The above analysis results indicate that team goal orientation and intelligence excitation data at the individual level can be aggregated to the team level for statistical analysis. The data after aggregation will be used in the following data analysis.

### Research Results

In this study, the correlation between each variable was first tested by Pearson coefficient. Table 1 shows that there is a significant positive correlation between team performance goal orientation and team creativity ($r=0.190$, $p<0.01$). There was a significant positive correlation between team learning goal orientation and team creativity ($r=0.135$, $p<0.05$).

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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</thead>
<tbody>
<tr>
<td>1 Gender</td>
<td>1.40</td>
<td>0.462</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>2 Education background</td>
<td>2.05</td>
<td>0.715</td>
<td>-0.152**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Working age</td>
<td>2.59</td>
<td>1.184</td>
<td>-0.090</td>
<td>-0.136*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Team learning goal</td>
<td>3.71</td>
<td>0.647</td>
<td>0.050</td>
<td>0.093</td>
<td>-0.019</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Team performance goal</td>
<td>3.84</td>
<td>0.604</td>
<td>-0.010</td>
<td>0.170**</td>
<td>-0.002</td>
<td>0.593***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Intellectual stimulation</td>
<td>3.83</td>
<td>0.668</td>
<td>0.053</td>
<td>0.129*</td>
<td>-0.010</td>
<td>0.516***</td>
<td>0.402**</td>
<td></td>
</tr>
<tr>
<td>7 Team creativity</td>
<td>3.49</td>
<td>0.427</td>
<td>0.161**</td>
<td>-0.076</td>
<td>-0.194***</td>
<td>0.135*</td>
<td>0.190**</td>
<td>0.044</td>
</tr>
</tbody>
</table>

*p<.05; **p<.01

In order to further test the specific quantitative relationship between variables, this study adopted SPSS 22.0 for regression analysis. The test results are shown in table 2.

In hypothesis 1,2,3 and 4, team creativity was taken as the dependent variable, and the influence of team performance goal orientation, team learning goal orientation and the addition of moderator intelligence excitation on the dependent variable was investigated. The results showed that the goal orientation of team performance had a significant positive effect on team creativity ($\beta = 0.344$, $p <0.05$), and the relationship between team learning goal orientation and team creativity was not supported by data ($\beta = 0.023$, $p > 0.05$), that is, hypothesis 1 was true and hypothesis 2 was not true. After join the regulating variable intelligence excitation, team performance goal orientation on team creativity is still a significant positive impact ($\beta = 0.238$, $p < 0.05$), but the team learning goal orientation significant negative impact on team creativity ($\beta = 0.229$, $p < 0.05$), indicating that intelligence excitation adjustment team performance goal orientation and team learning goal orientation and team creativity, the relationship between the assumption 3 with hypothesis 4 was confirmed.
Table 2. Hierarchical regression analysis of relationships between variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Team creativity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
</tr>
<tr>
<td>control variables</td>
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<tr>
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<td>0.226</td>
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<tr>
<td>Education background</td>
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<tr>
<td>Working age</td>
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<tr>
<td>Independent variable</td>
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</tr>
<tr>
<td>Team performance goal</td>
<td>0.330*</td>
</tr>
<tr>
<td>Moderator</td>
<td></td>
</tr>
<tr>
<td>Intellectual stimulation</td>
<td>-0.086</td>
</tr>
<tr>
<td>Performance goal × IS</td>
<td>0.238*</td>
</tr>
<tr>
<td>learning goal × IS</td>
<td>0.292*</td>
</tr>
<tr>
<td>R²</td>
<td>3.984**</td>
</tr>
<tr>
<td>Adjust R²</td>
<td>0.262</td>
</tr>
<tr>
<td>ΔR²</td>
<td>0.197</td>
</tr>
</tbody>
</table>

*p < 0.05; **p < 0.01

Based on the recommendations of Aiken and West (1991), we further tested the influence of team goal orientation on team creativity under different levels of intellectual stimulation at high and low intensity. As can be seen from figure 1, when the team goal orientation is performance goal orientation, the level of intellectual stimulation is different, and the team creativity is also different. The higher the level of intellectual stimulation, the stronger the team's creativity. Further verify hypothesis 3. As can be seen from figure 2, when team goal orientation is learning goal orientation, team creativity varies with different intelligence levels. The higher the level of intellectual stimulation, the more goal-oriented the team, the less creative the team. Hypothesis 4 is further validated.

Figure 1. Moderating effect of intellectual stimulation. Figure 2. Moderating effect of intellectual stimulation.

Summary

The influencing factors of team creativity are the important contents of team creativity research. This study found that intellectual stimulation is one of the most important factors affecting team creativity. The theoretical contribution, first, an important antecedent variable that positively influences team creativity, namely, team goal orientation, is investigated, and the research category of antecedent variable of team creativity is extended under the framework of I-P-O model. Second, the moderating effect of intellectual stimulation on team goal orientation and team creativity was tested, and the understanding of the boundary conditions of factors influencing team creativity was deepened. Thirdly, previous researches on team creativity were mostly carried out in the western context. This study's exploration in the Chinese context has enriched the intercultural universality of the research results.

The practical significance, goals are crucial to the development of both the team and the enterprise. Therefore, team leaders should select appropriate team goals, and set good team goals to promote team creativity. In addition, when using the method of intellectual stimulation, the goal
orientation of the team should be clearly defined. According to the degree of goal orientation, the appropriate increase or decrease of intellectual stimulation can help to promote the positive effect of intellectual stimulation on team creativity.

Inadequate, this study obtained cross-sectional data through questionnaire survey, and the conclusion is only the correlation between variables. And, the team sample size is relatively small and has regional limitations. Thirdly, the data sources of this study have a certain degree of homology, and future studies can consider collecting data from more sources to strengthen causal inference. The prospect, focus on the characteristics of the team, including team properties, the team size, the team set up time. And, other situational variables should also be considered.

References


