State of the Art Review

Diversity in Innovation Teams

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SOTA Review No 8: October 2018

Diversity in the workplace has attracted significant interest in organisations that want to attract and retain talented employees. The increase in functional and demographic diversity of the workforce has led to the question whether diverse teams perform better than homogeneous groups. What is the evidence supporting the 'value in diversity' hypothesis? Research surrounding team performance suggests that diverse teams are essential to organisational innovation, creativity and productivity. However, too much diversity can reduce innovation team performance by negatively affecting cohesion, decision-making quality, and members' commitment to the group – suggesting an inverse U-shaped relationship between diversity and team performance.

Research on diversity in innovation teams has revealed ambiguous results regarding the effects of group composition on workgroup performance. While this might suggest that such a relationship does not exist, it may also be that a more complex phenomenon is involved than has been expected.

Background

Diversity appears to be a 'double-edged sword' (Horwitz and Horwitz 2007), increasing the opportunity for creativity and innovation but also the likelihood that group members will be dissatisfied and fail to identify with the group. So what is the role of team diversity in innovation? Diverse R&D teams are built to provide high task cohesion and are characterised by heterogeneous knowledge, skills, abilities, and attitudes (Bowers et al. 2000). However, the potential fragmentation of heterogeneous R&D teams into homogenous subgroups from excessive diversity constitutes a principal impediment of group cohesion (Blau 1977). When group cohesion is undermined, group performance suffers (Smith and Hou 2015).

Team diversity denotes the extent of objective or subjective differences among team members (van Knippenberg and Schippers 2007). When trying to understand the impact of different diversity types on innovation teams, categorisation studies distinguish between surface and deep-level diversity (Jackson et al. 1995). Surface-level diversity refers to those differences that are easily noticeable (e.g., age, gender, ethnicity/race, culture); deep-level diversity, on the other hand, refers to differences that take time to manifest themselves as team members need clues

from their interactions with each other to become aware of them (e.g., cognitive abilities, attitudes, values, knowledge and skills) (Bowers et al. 2000; Harrison et al. 2002). This categorisation is relevant since it has long been recognised that diversity can have differential effects on team performance because it influences both social and information processes (Mannix and Neale 2005).

First, according to social identity and social categorisation theory, people tend to categorise themselves into specific groups, and categorise others as outsiders or part of other groups. This perspective suggests that greater diversity in salient, demographic features (e.g., age, gender and culture) causes group members to employ divisive categorisations that often yield negative consequences (van Knippenberg et al. 2004; Guillaume et al. 2017).

Second, the information processing perspective on diversity centres around the value of diverse knowledge, skills, and ideas in group work (van Knippenberg et al. 2004). The positive effect of diversity, especially information-related diversity, particularly regarding team creativity and innovation, results from processes of elaboration of information and use of diverse information. Group members in informational diverse groups will engage in debates about divergent view points and discuss their disagreements over group tasks, which stimulates task conflict (Jehn et al. 1997). Task conflict is considered an important driver of teams' creativity and innovative behaviour (Woodman et al. 1993).

Evidence

Evidence from meta-analytic work has found no significant relationship between diversity and team performance (Webber and Donahue 2001; Horwitz and Horwitz 2007; Sivasubramaniam et al. 2012), or a small negative effect (Stewart 2006). Most studies assume that all aspects of diversity affect team performance in the same way. Although there are clearly some parallels among different diversity dimensions (van Knippenberg and Schippers 2007), there is evidence that different types of diversity may influence team outcomes in different ways (Horwitz and Horwitz 2007).

Evidence remains inconclusive regarding the differential effects of surface and deep-level diversity on performance outcomes. Surface-level attributes, such as age, race and gender, because of their salience, are likely to trigger immediate similarity-attraction and categorisation processes (Backmann et al. 2015), and thereby hamper the performance of innovation teams. For instance, evidence shows that gender-heterogeneous groups tend to exhibit increased conflict, low cohesion and increased turnover (Milliken and Martins 1996). However, innovation studies refer to the superior performance of mixed teams resulting from different thinking styles and behavioural modes that can complement each other in R&D projects (Fenwick and Neal 2001; Faems and Subramanian 2013).

Deep-level attributes, such as differences in cognitive abilities, attitudes and values, are also likely to affect team outcomes negatively, since value conflicts normally imply that there is no common ground on which to collaborate and communicate.

(Jackson and Ruderman 1995). However, deep-level diversity may also exert a positive influence on the team process. Deep-level diversity is associated with information-processing effects owing to the different cognitive perspectives (Mannix and Neale 2005). The creative benefits of heterogeneous team composition come

from the new ideas, multiple perspectives, and different problem-solving styles that members bring to the team (Garcia Martinez et al. 2017).

Summary and evidence gaps

State of the art research into diversity in innovation teams has produced mixed, and often contradictory, results. Social identity, self-categorization, and similarity-attraction theories lead to the same general prediction: high diversity teams will tend to have less positive attitudes toward each other, which may translate into conflict among team members. In contrast, a cognitive resource perspective suggests that diversity will positively impact group performance since members can access a wider range of opinions, skills and perspectives. Competing theories of team diversity explain why the link between team diversity and team outcomes has low predictability.

Whereas most diversity studies consider either surface-level or deep-level diversity, there is a need for research to simultaneously examine several of the dimensions of diversity that characterise teams' interactions (Weiss et al. 2018). The central premise of alignment theories is that multiple characteristics of individual differences are likely to be salient at the same time, and their influence must therefore be considered simultaneously (Bezrukova et al. 2007). Only few studies in the literature have considered several diversity attributes present simultaneously in innovation teams, and not just in isolation (e.g., Iseke et al. 2015; Garcia Martinez et al. 2017).

Evidence increasingly points to the presence of moderators that ultimately determine the direction of the diversity and team outcomes (Sivasubramaniam et al. 2012), including communication as a key determinant for cross-functional team effectiveness (Edmondson and Nembhard 2009) and the role of team leader in facilitating teamwork in cross-functional teams (Sarin and O'Connor 2009).

Sources

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