Cognitive Diversity and Team Performance: A Review

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ABSTRACT

During past there is an extensive research on the concept of cognitive diversity and the team performance. However, the relationship direction of the team cognitive diversity and performance is not yet fully answered. There are mixed arguments for the positive and the negative relationships. This paper is the comprehensive study of the relationship of cognitive diversity and the team performance. It clarifies our thinking related to the different positive and negative interpretations by the academicians and practitioners for the relationship. From the past literature major support is given to the positive consequences of the cognitive diversity on team performance but still the negative consequences cannot be ignored. The major implications of the study for the future research are also discussed.

KEY WORDS: cognitive diversity, team performance, intellectual diversity, diversity, performance.

INTRODUCTION

Despite of the stable team members the cognitive diversity of the team changes with the time (Jacobs & Campbell, 1961; Weick & Gilfillan, 1971). Some societal and the organizational psychologists believe that the diversity in the organizational teams brings competitive advantage to the organization, but at the same time, other psychologists and the management scholars see diversity as the source of disturbance and the trouble for the organization effectiveness (Jules, 2007). In cognitive diversity the researchers study the attitudinal differences along with the normative differences of the individuals who may be are homogeneous in terms of demographic factors of diversity (Kilduff, Angelmar, & Mehra) . Diversity might result into positive consequences depending upon how the management dealt with it and whether members of organization can deal with the process-oriented problems and difficulties (Alder, 2003) but a few other researchers are of the opinion that the same or homogenous groups can perform much better than the heterogeneous groups (Pelled, Eisenhardt, & Xin, 1999).

According to Erhardt, Werbel, & Shrader (2003), in the previous researches, there are two distinctions in the types of diversity: demographic diversity i.e., observable (like gender, race, age, and ethnicity) and the cognitive diversity i.e., unobservable (like education, knowledge, values, personality characteristics, affection and perception) (Maznevski, 1994; Millik en & Martins, 1996; Pelled L. , 1996; Boeker, 1997; Watson, Johnson, & Merritt, 1998; Timmerman, 2000; Petersen, 2000). The cognitive diversity has significant positive effects on the performance of the organization (Simons & Pelled, 1999). Changes in the firm performance greatly influence and was affected by the cognitive diversity in the teams. Teams that showed improved organization performance early are tended to have more and increased diversity in their decision making and the structure (Kilduff, Angelmar, & Mehra). The understanding of the fact that how the people's perceptions about thamseleves and the others are affected by the social and the psychological attributes and how they communicate with one another, is of much concern for the researchers now-a-days, as these attributes greatly impact the team or the group processes and the outcomes (Jules, 2007).

The paper will be revolving around the impact of cognitive diversity on the team performance of the organization. The direction and magnitude of the relationship of cognitive diversity and the team performance is not fully answered yet. The study will attempt to review the previous literature in the next section in order to develop a deep understanding of this relationship, and then will draw conclusions on those basis.

LITERATURE REVIEW

In the recent years, the work team composition has become relatively more diverse (Birchmeier, 2004). Managers and employees who think that the team work is an essential and important part of the organizations in today's composite environments, have to face an additional challenge of the diversity (Griest, 1995) especially the cognitive diversity. The employees with diverse knowledge, backgrounds, skills and expertise in the teams, augment the competitive advantage by enhancing and improving the processes and operations of the company (Sujin & Irwin,

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2007). According to theory, creating heterogeneous teams looks to be an effective strategy (Cox & Blake, 1991; Devine, Clayton, Dunford, & Meliner, 1999) but, in reality, the heterogenous teams face some unique and different challenges and sometimes may results in lower performance levels (Sujin & Irwin, 2007). There are number of factors that are associated with the performance of the teams like the interdependence, job design, team context, team composition and the team processes (Sauer, Felsing, Franke, & Ruttinger, 2006).

Cognitive diversity is the ability of the group to differently process, perceive and interpret information and varying stimuli (Milliken & Martins, 1996). With this the team cognitive diversity leads to a huge variety of perspectives (Bateman & Zeithaml, 1993; Milliken & Martins, 1996), additional creative ideas, a range of requisites, better alternatives and an improved worth of decisions (Milliken & Martins, 1996, p. 403/416). Cognitive diversity can also be defined as the degree to which the team or the group pertains the differences in skills and the knowledge level (including their preferences, beliefs and the perspectives) (Miller, Burke, & Glick, 1998). The past literature suggests that there exists a very complex relationship between cognitive diversity and the team's performance level (Sauer, Felsing, Franke, & Ruttinger, 2006), as there ae are number of moderating variables affecting the relationship (Milliken & Martins, 1996; Shaw & Barret-Poer, 1998; William & O'Reilly, 1998). The performance of the team will be enhanced with the increased team cohesion. The willingness of the team members to adopt the diversity within the individuals of the team also improves the performance of the teams. The discussions of the thoughts, views and the beliefs within the teams increases the job satisfaction level of the employees and also enhances the cohesiveness and the performance of the team members (Verduijn, 2010).

Number of researchers are trying to judge two propositions (1) diverse groups have more intellectual diversity than the homogeneous groups (2) due to this diversity, heterogeneous groups can outperfom the homogeneous groups (Griest, 1995). As Simons & Pelled (1999), suggested that the cognitive diversity has the positive relationship with the organizational performance. Maznevski (1994), concluded that the diversity within the group can significantly affect the decision making in the group, through communication and integration among the group members. Similarly, Mannix & Neale (2008) were of the opinion that the cognitive diversity can enhance the performacne of the group through productive task conflicts. To improve the performacne levels of the group, the presence of both the task relevant cognitive diversity and the collaboration among the team members is highly important (Mannix & Neale, 2008). The cognitively diverse groups are more beneficial in the creative and innovative tasks instead of the normal routine tasks (Hoffman, 1959; Hoffman, Harburg, & Maier, 1961; Hoffman & Maier, 1962; Triandis, Hall, & Ewen, 1965; Willems & Clark, 1971; Watson, Kumar, & Michaelsen, 1993; Bantel & Jackson, 1989; McLeod & Lobel, 1992). Diverse groups are also better on the performance of the proficiency tasks that needs the perceptual and the motor skills (Clement & Schiereck, 1973; Fenelon & Megaree, 1971; Terborg, Castore, & DeNinno, 1976).

Griest (1995) has discussed the diversity within the groups in terms of age, gender, ethnicity, personality, and experiences, etc. According to him the groups or teams having diverse backgrounds, especially diverse in terms of individual perspectives, greatly outperform if the tasks assigned to them are creative and innovative in nature. In creative and innovative tasks these groups prominently outperform the homogeneous groups. As the cognitive diversity within the group memberrs leads to the creation of the creative new knowledge base among the group members (Mitchell & Nicholas, 2006)

Bell & Suzanne (2007), studied the team composition variables (like personality-traits, values and abilities) and team performance. According to them, minimum team amicability, team mean preciseness, openness for experience, preferences for teamwork and collectivism are found to be the very strong predictors of team performance (Bell & Suzanne, 2007).

Verduijn (2010) concluded from his research that the openness to cognitive diversity direcctly influence the team performance. According to him, if team members are open to the values, attitudes, believes and behaviors of others they will accept one another and their satisfaction level increases. With the increased satisfaction they will get motivated and will also motivate other, which in return increase the performance level of the individuals and benefits the teams and the organization. Also, the cognitive coordination and integration among the team members is less likely to occur if they are highly demographically diverse, and hence it will be difficult for them to resolve conflicts (Cronin, Bezrukova, Weingart, & Tinsley, 2004), decreasing the performance of the team.

Kilduff, Angelmar, & Mehra (n.a.) said that the differences in the demographic backgrounds of the employees directly influence the differences in their attitudes, believes, values and the norms. Hence the more the demographic diversity, the more diferently the individuals see the world, this will increase the cognitive diversity among the team members and affects the performance of the firms or the teams, and at the same time the cognitive diversity and the team performance holds a reciprocal relationship, as the cognitive diversity among the team members increases the performance of the team enhances may be due to some creativity or flexibility.

Sauer, Felsing, Franke, & Ruttinger (2006) investigated the effects of two types of diversity, the system understanding and the team specialization. He concluded that the effect of cognitive diversity is influenced by the task complexity. If the task is complex the greater the cognitive diversity the better will be the performance level but the simple tasks remains unaffected.

In contrast, there are a number of researches that suggest the negative relationship between the cognitive diversity and the performance levels. Number of studies have suggested that the diversity (cognitive diversity) weakens the commitment and cohesion among the group members (Wagner, Pfeffer, & O'Reilly, 1984; Tsui, Egan, & O'Reilly, 1992; O'Reilly, Caldwell, & Barnett, 1989). Hambrick, Cho, & Chen (1996), concluded that the homogenous teams outperformed the heterogenous teams as the hetergeneous teams are relatively slower in actions due to more disagreements among the team members. Due to diversity, the difference of opinion within the group will be much greater in diverse groups than in the homogeneous groups (Alder, 1986). The performance of the work group could be either much greater or much lesser depending on the their development stage and the way in which they handle the group deiversity (Alder, 1986; Kovach, 1976).

Birchmeier (2004) studied both the positive and negative consequences of making the diverse teams. From the past literature he discussed that the cognitively diverse teams are high performing teams in case of complex and creative tasks but at the same time such teams lack communication and cohesion among the team members. Team members face difficulty in their identification with the teams and the less comfortable (Birchmeier, 2004). Basadur & Head (2001) also concluded from the empirical research of the cognitive styles among the team members that the cognitively diverse teams foster high performance association, although they have less cohesion and satisfaction due to differing belifs and values.

RESEARCH METHODOLOGY

The methodology used for the paper is the review of the literature on the relationship of the cognitive diversity and the team performance. For this purpose, a rich literature has been analyzed including the working papers, meta-analysis, reviews, thesis, dissertations and the reports, etc. The literature has been collected from the rich online resources. The analysis/conclusion and the future recommendations are given in the next section.

DISCUSSION AND CONCLUSION

The literature discusses the different perspectives of researchers regarding the impact of the cognitive diversity on the performance level of the teams. Cognitive diversity impacts the team performane both positively and negatively, depending on the number of moderating variables. The most important thing is that how the team members deal with the different believes, attitudes, values and norms of the group members and how much they are open to them. The openness to others views and ideas will help the diverse teams to resolve their conflicts and compliment each other. Secondly, the literature shows that the diverse teams are mainly the high performing teams in case of the complex and creative tasks, instead of simple tasks. Thirdly, the demographic diversity factors also influence as the moderating variable on the relationship of cognitive diversity and team performance. Hence, the organizations focussing on the diverse teams have to consider the number of issues while making the teams and have to work to improve the communication and cohesion among the team members, to make them the high performing teams.

Limitations and Future Research

This review is quite relevant and useful for many academicians and practitioners. But like any other study, this study also have certain limitations. The sources for data collection are limited due to the limited access of many journals and publishing websites. Secondly, the study is the review of the literature not the empirical research, hence the real time data and perspectives are not the part of the study.

Despite of these limitations, the study opens the new avenues for the prospective researchers to work on the cognitive diversity and its relationship with the team performance. Although a lot of work in the recent past has been done on the cognitive diversity but still there is very limited literature available on the relationship between cognitive diversity and the team performance.

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