

Review Paper:

A Conceptual Framework for Demographic Diversity and Performance

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Abstract

Much research on the effects of diversity in group composition on group performance has been conducted. We review the previous research, find the enablers to make diverse group effective and propose a conceptual framework that explicates how groups can maximize the benefits of diversity and minimize the costs and finally improve the performance in demographically diverse settings. Our conceptual framework suggests that (1) flow of diverse knowledge is positively related to performance, (2) demographic diversity is not necessarily positively related to the flow of diverse knowledge, (3) stock of diverse knowledge is positively related to the flow of diverse knowledge when behavioral integration is high and (4) demographic diversity is positively related to behavioral integration, when there is a mechanism to facilitate behavioral integration.

Keywords: Demographic Diversity, Performance, Concept, Framework.

Introduction

Since managing demographically diverse work force became a challenge for business leaders³⁷, much research on the effects of demographic diversity in group composition on group performance has been conducted. Although the previous research explored the 'black box' between demographic diversity and performance, our understanding of the underlying processes that lead to positive and negative results remains extremely limited.⁹

Based on the many research reports on the effects of group diversity on performance conducted for several decades, demographic diversity has been a double-edged sword in that diversity has both positive and negative relationships with performance.^{9, 79} The researchers who support the positive relationship argue that demographic diversity brings a broader range of knowledge and experience, therefore, the diverse knowledge can have a positive impact on performance.^{16, 34} The negative relationship is based on the argument that demographic diversity is negatively related to the variables with regard to group processes (e.g. communication, integration, cooperation) and, therefore; reduces performance.^{67, 82} For example, demographic diversity makes teams have difficulty in communicating

because individuals having diverse backgrounds were cognitively dissimilar⁷⁴ and less communication, in turn, leads to less performance. Although much research tried to resolve the conflicting consequences of demographic diversity, demographic diversity still remains a double-edged sword and an understanding of the underlying processes that lead to positive and negative results remains extremely limited.⁹

Our framework proposes the moderating role of group processes on the relationship between demographic diversity and performance, instead of considering the mediating role of the group process that many studies have suggested, with regard to the studies considering the mediating role of group process.^{5, 40, 59, 67} Although most research has suggested that diversity is negatively related to group processes^{40, 55, 82}, some research suggested diversity is positively related to group processes⁵. Therefore we propose that in some situations diversity can be positively related to group processes. We examine when diversity can bring more communication or integration to group processes.

Many researchers have explored the "black box" between demographic diversity and performance. In reviewing the previous research of the effects of demographic diversity on performance, we first started with previous review papers of the demographic diversity literature.^{30, 37, 50, 79}

Evolution of the Research of Demographic Diversity and Performance

We review how the studies on the demographic diversity and performance have evolved. In the following, D means demographic diversity, P means performance, GP means group process and M means moderating variables.

1st Generation: Is demographic diversity beneficial for performance? : Research of identification of a direct relationship between diversity and performance ($D \rightarrow P$).

2nd Generation: When is diversity beneficial for performance? : Research of identification of moderating variables in a direct relationship between diversity and performance ($D \rightarrow P$, when M).

3rd Generation: How does diversity affect on performance? : Research of identification of mediating variables in relationship between diversity and performance ($D \rightarrow GP \rightarrow P$).

4th Generation: Is the relationship between diversity and performance different depending on what kinds of diversity? : Research of identification of different types of diversity and direct relationship between each type of diversity and performance (D1, D2 → P).

Diversity is not a unitary construct.⁶⁷ Jackson³⁷ noted the need to distinguish between different types of diversity, drawing a distinction between diversity of "personal attributes" (e.g. race, gender and personality) and "task-related attributes" (the specific skills and abilities needed to perform the job).

5th Generation: How does the relationship between different kinds of diversity and performance vary depending on some conditions? : Research of investigation of moderating variables affecting on the relationship between different types of diversity and performance (D1, D2 → P, when M).

6th Generation: Is the relationship between diversity and group process different depending on what kinds of diversity?: Research of investigation of different types of diversity effecting on the direct relationship between each type of diversity and performance (D1, D2 → GP).

7th Generation: Is the relationship between diversity and performance different depending on what kinds of diversity and what kinds of group process? : Research of identification of different types of diversity and direct relationship between each type of diversity and performance (D1, D2 → GP1, GP2 → P).

8th Generation: When is the relationship between different types of diversity, different types of group process, and performance different? : Research of identification of moderating variables in the relationship between different types of diversity, different types of group process and performance (D1, D2 → GP1, GP2 → P: when M).

Critical to the Previous Research

Previous research shows that the issue is whether or not demographically diverse organizations utilize diverse knowledge. To utilize diverse knowledge, two conditions are needed. The first condition is that organizations should 'have' diverse knowledge. The second condition is that organizations should 'share' diverse knowledge. Therefore, we need to differentiate the 'sharing' diverse knowledge from 'having' diverse knowledge.

Previous research shows that functional diversity can be either or both a positive or negative impact on performance. Numerous scholars report a positive relationship between a team's functional diversity and performance attributes such as speed,^{15, 20, 21} flexibility and quality. However, Ancona and Caldwell⁵ reported that functional diversity was negatively related to team performance, innovation and meeting budgets and schedules

while Pelled and her colleagues⁵⁹ reported an insignificant but negative relationship between functional diversity and performance.

We argue that the reason the previous research shows the conflicting results may come from whether or not diverse knowledge is shared among team members. When a cross-functional team is assembled, collective knowledge is only potentially present. Although team members may work together in a cross-functional team, if information is not shared among team members, the team's potential collective knowledge may not be useful in achieving innovative performance.

However, many researchers who argued the positive results have followed the congruence assumption that demographically diverse teams utilize diverse knowledge. Information and decision-making theories suggest that demographic diversity can have a direct positive impact through the increase in the skills, abilities, information and knowledge that diversity brings. Williams and O'Reilly⁷⁹ suggest that demographically diverse individuals are expected to have a broader range of knowledge and experience than homogeneous individuals and the task, such as innovations, complex problems, or product design, can benefit from multiple perspectives and diverse knowledge.

They overlooked the fact that even though the teams consist of demographically diverse individuals, if the team members do not communicate each other, they can not achieve high performance. We criticize the argument that demographic diversity utilizes diverse knowledge. We argue that demographic diversity can be or and cannot be a positive moderator of performance dependent on whether or not diverse knowledge is utilized.

'Stock of diverse knowledge' and 'flow of diverse knowledge': We discuss whether demographic diversity brings diverse knowledge or not. For example, functional diversity is expected to provide the range of knowledge and skills that enhances problem solving.^{5, 7, 40} However, what if team members from different functional areas would not share their knowledge?

Although team members work together in cross-functional team, if information is not shared among team members, the team may not achieve high performance. Some researchers suggest that functional diversity may bring difficulty in information sharing.^{19, 31} Difficulty in information sharing comes from the fact that since cross-functional teams are formed with members from different departments such as marketing, R and D, manufacturing and so on¹⁹ and personnel from different functional areas often have different orientations, perspectives and values.⁵⁶ Information sharing would become less effective due to the communication impedance in the process of the interpretation of information.³ Especially engineers and marketers often find it

difficult to communicate with each other^{15, 68}, because they speak different languages and perceive the world in different ways.^{19, 31} Information sampling researchers suggest that group share common knowledge, not the unique knowledge.⁶⁹

To solve the problem that demographic diversity does not necessarily utilize diverse knowledge, we propose the term of 'flow of diverse knowledge', differentiating from 'stock of diverse knowledge'. Problem with congruence assumption between demographic predictors and subjective concepts and suggests that adequate subjective concepts are needed to explain the relationship between demographic diversity and performance.

The state of stock of diverse knowledge is the state in which team consists of members from diverse knowledge areas e.g. functional diversity, educational diversity, each member in team just has his own unique knowledge. If a team consists of members from diverse knowledge areas, each member in the team has his/her own unique diverse knowledge and they share their diverse knowledge, we call it the state of 'flow of diverse knowledge'.

The argument that diversity can be beneficial for organizations, known as the 'value in diversity' hypothesis¹⁶ is supported only when diverse knowledge flows within organizations. Flow of diverse knowledge within teams should be determinant on high performance. From the preceding discussion, we make two propositions:

Proposition 1: Flow of diverse knowledge is positively related to performance.

Proposition 2: Demographic diversity is not necessarily positively related to the flow of diverse knowledge.

Critical to the argument that group process variables mediate the relationship between demographic diversity and performance

Limitations of intervening model: Smith et al⁶⁷ tested three alternative models of the effects of the team's diversity and group processes on performance. They showed that there was partial support for the intervening model in which process is a mediator of the relationship between demographic diversity and performance and the process model in which demographic diversity and group process variables each affect performance separately. They also found little support for the argument underlying the demography model in which demographic diversity rather than process affects performance. They mentioned "the relationships between team demography, team process and organizational performance are not as straightforward or as simple as scholars have previously believed".

The intervening model, like Ancona and Caldwell⁵ and Keller⁴³, may not explain 'value in diversity' hypothesis. According to their studies, the role of diversity only lies in

the increase of communication, not in the 'diverse' knowledge. As we argue, performance is positively related to flow of diverse knowledge. If organizations consist of demographically homogeneous individuals and communication increases, do the organizations have similar performance to the organizations which consist of demographically diverse individuals and flow of diverse knowledge increases?

Moderating role of behavioral integration between the stock of diverse knowledge and the flow of diverse knowledge: Now we should focus on how to change the stock of diverse knowledge to the flow of diverse knowledge. If the diverse knowledge does not flow within a team, demographic diversity will not bring high performance. Theoretically, high flow of diverse knowledge depends on the concurrence of two factors: the high stock of diverse knowledge and its effective behavioral integration. Now we use the term of 'behavioral integration' proposed by Hambrick.²⁷

Hambrick²⁷ proposed the term of 'behavioral integration' as a "meta-construct" for describing various elements of group processes – more encompassing than only the amount of internal communication⁴², communication quality⁵³ or collaboration. Behavioral integration is the degree to which the group engages in mutual and collective interaction and has three major elements: (1) quantity and quality (richness, timeliness, accuracy) of information exchange, (2) collaborative behavior and (3) joint decision making.²⁷

Hambrick and Mason²⁹ suggested that the links between group demographics and organizational outcomes hold with particular strength only when the group is highly integrated. Interactions across individuals who each possess diverse and different knowledge structures will augment the organization's capacity for innovating. Jehn et al⁴⁰ show that value diversity moderated the effect of information diversity on actual performance and efficiency: informational diversity was more beneficial when there were low levels of value diversity than when there were high levels. In their research, low levels of value diversity mean low levels of conflict which are high levels of integration because value diversity is positively related to all conflict. Based on the previous discussion, we make the following proposition:

Proposition 3: Stock of diverse knowledge is positively related to the flow of diverse knowledge when behavioral integration is high. In other words, when stock of diverse knowledge is high and behavioral integration is high, the flow of diverse knowledge is the highest and performance is the highest. When stock of diverse knowledge is high and behavioral integration is low, flow of diverse knowledge is low and the performance is the lowest.

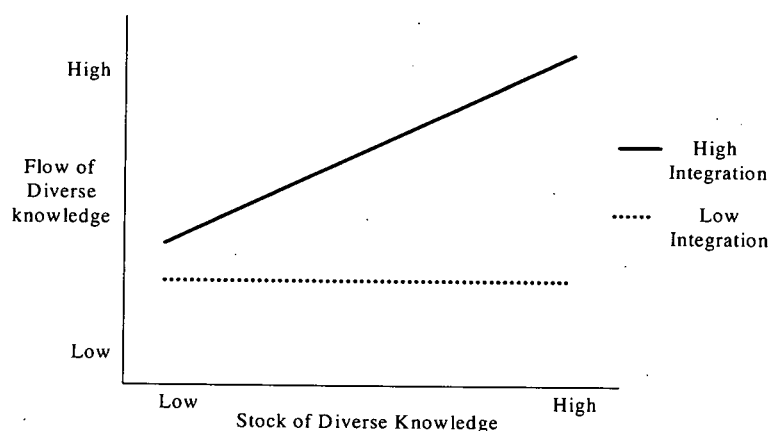


Fig. 1: Interaction Effect between Stocks of Diverse Knowledge and Behavioral Integration on Flow of Diverse Knowledge

Critical to the relationship between demographic diversity and group processes

The literature suggests that diversity without coordination results in chaos.^{29, 75} Several integration mechanisms have been proposed as means for achieving coordination of efforts in order to minimize conflict and enhance communication in organizations. In order of increasing integration these are: hierarchical rules; standardization of tasks, skills or outputs; scheduling procedures; establishment of informal liaison roles; creation of task forces and teams; and establishment of formal integrating roles. These integration devices are not mutually exclusive but are cumulative, in that higher forms are added to, not substituted for, lower forms of integration. In general, higher-level integration mechanisms enhance lateral communications and increase the capacity for processing information^{20, 21} and for reducing the conflict and communication impedance created by team differentiation.³

For example, functional diversity is expected to provide the range of knowledge and skills that enhances problem solving.^{5, 7, 40} However, what if team members from different functional areas do not share their knowledge?

Some researchers suggest that functional diversity may bring difficulty in information sharing.^{19, 31} Difficulty in information sharing comes from the fact that personnel from different functional areas often have different orientations, perspectives, and values.⁵⁶ Information sharing among members from different functional areas would become less effective due to the communication impedance in the process of the interpretation of information.³ Especially engineers and marketers often find it difficult to communicate with each other^{15, 68} because they speak different languages and perceive the world in different ways.^{19, 31} Furthermore, information sampling researchers suggest that a group shares common knowledge, not the unique knowledge.⁶⁹ Group discussions and group judgments are dominated by knowledge that members held in common prior to their meeting, while

information of which most members are unaware is discussed less often and has less influence.²⁶

Proposition 4: Demographic diversity is positively related to behavioral integration, when there is a mechanism to facilitate behavioral integration.

By summarizing the discussion to this point, we suggest a conceptual framework. Figure 2 shows the overall conceptual framework.

Conclusion

Although previous researchers have tried to resolve the conflicting consequences of demographic diversity in group composition, demographic diversity remains a double-edged sword, having costs as well as benefits on the performance. We review the previous research, find the enablers to make diverse group effective and propose a conceptual framework that explicates how groups can maximize the benefits of diversity and minimize the costs and finally improve the performance in demographically diverse settings.

Our conceptual framework suggests that (1) flow of diverse knowledge is positively related to performance, (2) demographic diversity is not necessarily positively related to the flow of diverse knowledge, (3) stock of diverse knowledge is positively related to the flow of diverse knowledge when behavioral integration is high and (4) demographic diversity is positively related to behavioral integration, when there is a mechanism to facilitate behavioral integration.

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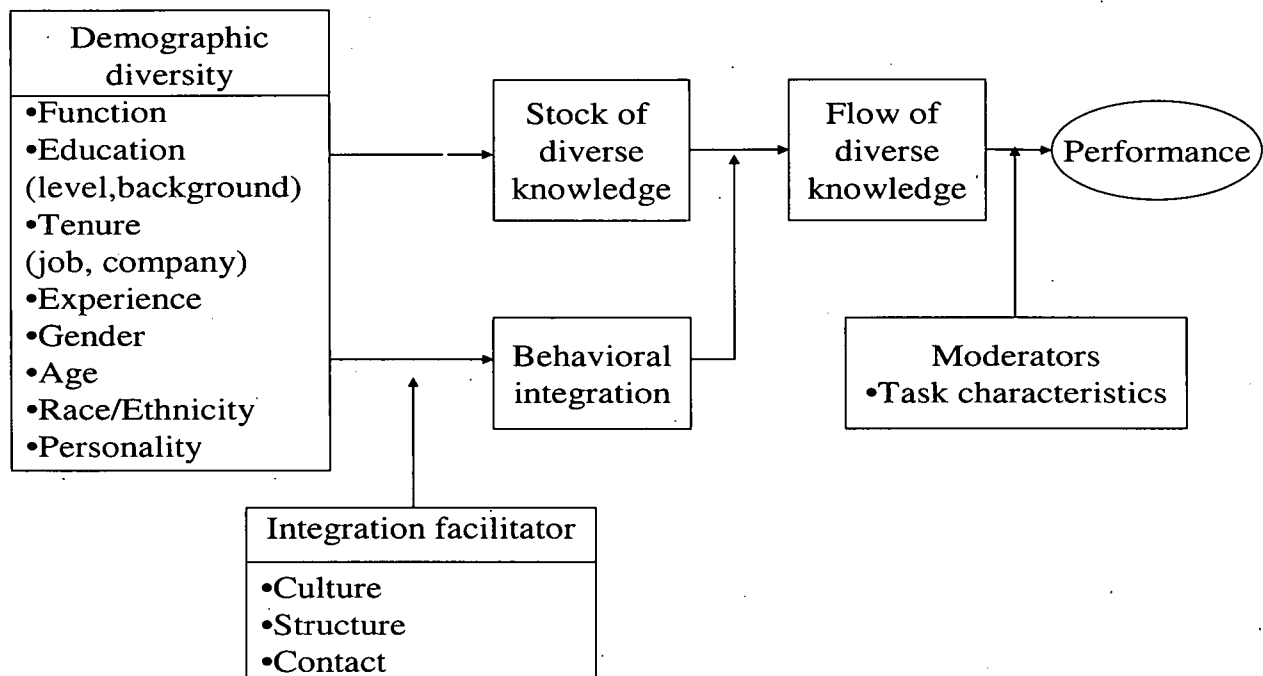


Fig. 2: A Conceptual Framework for Demographic Diversity and Performance

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(Received 24th January 2012, accepted 15th April 2012)

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