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Author(s)	Onyeneke, Gechinti Bede; Abe, Tomokazu
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Unpacking the Relationship Between Cultural Diversity and Workgroup Creativity

Gechinti Bede Onyeneke and Tomokazu Abe

Faculty of Economics and Business, Hokkaido University, Sapporo, Japan

Abstract

Purpose – This study aimed to illustrate the conditions under which cultural diversity enhances workgroup creativity. It does so by investigating the impact of ethnic diversity on workgroup creativity through the mediating mechanisms of cognitive diversity and information elaboration, while also exploring the role of inclusive leadership in this process.

Design/methodology/approach – Multi-source data was collected from a sample of 338 employees nested within 56 workgroups across three distinct organizations. Conditional process analysis was used to empirically test the proposed hypotheses.

Findings – The results show that ethnic diversity, a surface-level cultural attribute, contributed to diversity in deep-level cognitive resources and that workgroups were able to capitalize on these variations in deep-level cognitive resources to enhance their creativity when they engaged in the elaboration of task-relevant information. Results also demonstrated that the effective management of workgroup processes through inclusive leadership helped materialize the performance-promoting effects of cultural diversity. Overall, the findings support the notion that cultural diversity is indeed beneficial to workgroups.

Originality – Prior research has typically examined cultural diversity in workgroups from the perspective of either surface-level or deep-level cultural attributes, leading to conflicting findings. Our study takes a multifaceted approach to cultural diversity and its influence on workgroup creativity, offering a more nuanced understanding. Additionally, by integrating the concept of inclusive leadership, a relatively new conceptualization of leadership specifically relevant to diverse workgroups, we clarified strategies for fostering positive workgroup performance.

Keywords: Cultural diversity; Ethnic diversity; Cognitive diversity; Information elaboration; Inclusive Leadership; Creativity

Paper type Research paper

Introduction

In today's globalized, multicultural, and knowledge-based work environment, creativity and innovation have become essential for the successful performance and viability of organizations (Anderson et al., 2014). Organizations are increasingly relying on culturally diverse workgroups to foster creativity and innovation in such environments. The logic is that members from different cultural backgrounds and experiences tend to possess diverse cognitive resources (i.e., information,

knowledge, and perspectives) that can help to meet the creative needs of the workgroup and organization (Cox & Blake, 1991; Horwitz, 2005). However, despite widespread advocacy for cultural diversity, very little is known about the positive effects of cultural diversity in workgroups (Stahl & Maznevski, 2021), and organizations still face challenges in managing culturally diverse workgroups. Research shows that effectively leveraging the potential of such workgroups remains a challenging task, as relationships among members can complicate workgroup functioning, leading to coordination and conflict issues (Jehn et al., 1999; Ellemers & Rink, 2016; Stahl & Maznevski, 2021). Following this, there remains a need to investigate the performance-promoting effects of cultural diversity and to explore effective diversity management strategies (Minbaeva et al., 2021; Stahl & Maznevski, 2021).

Herein, we define cultural diversity as differences in deep-level cultural programming of the mind that emerge from socialization within distinct cultural groups (Staples and Zhao, 2006; Puck et al., 2007; Cheng et al., 2012; de Jong et al., 2021). According to this definition, cultural diversity can be viewed as a multi-dimensional concept. It encompasses surface-level diversity, i.e., differences in explicit demographic and social category attributes such as nationality, ethnicity, or race. It also includes deep-level diversity, i.e., differences in profound psychological characteristics, such as information, knowledge, and perspectives (Wang et al., 2019). For this study, we focus on ethnic diversity as a key surface-level attribute that represents distinct cultural groupings and refer to cognitive diversity, i.e., the extent to which the team reflects differences in cultural knowledge, preferences, and perspectives (Mitchell et al., 2011) as evidence of deep-level cultural programming of the mind (DiMaggio, 1997; Strauss & Quinn, 1997; Bender & Beller, 2016). Our choice of ethnic diversity as a representative surface-level cultural variable, over race and nationality, stems from its ability to provide a more comprehensive understanding of differences in cultural traits and practices, particularly within a country. While race is often based on presumed genetic differences, and nationality can be rooted in shared customs, values, norms, and legal and political affiliations, these categories fall short of capturing the cultural differences within a country, as countries can encompass multiple ethnic groups, each with distinct cultural practices (Kirkman & Shapiro, 2005; Bouncken et al., 2016; Godfrey et al., 2020). Exploring ethnicity allows for a richer understanding of the surface-level cultural diversity influencing organizational workgroups within a nation (which is the setting of the current study). Moreover, ethnic diversity has been effectively used to categorize and explore cultural differences in diversity research (Stahl et al., 2010).

Extant research on the effect of cultural diversity and workgroup creativity has produced mixed results, indicating that the outcome depends on the type of diversity being investigated (Ely & Thomas, 2001; Wang et al., 2019; Stahl & Maznevski, 2021). For instance, in their meta-analysis, Wang et al. (2019) considered the surface-level vs. deep-level distinction of diversity in culturally diverse teams. It was discovered that cultural diversity operationalized as deep-level diversity attributes had a positive effect on team creativity, whereas cultural diversity as surface-level attributes showed no discernible impact on team creativity (Stahl & Maznevski, 2021). On the

contrary, some other studies have found surface-level diversity to be either positively associated (McLeod et al., 1996; Li et al., 2017; Jang, 2017), or negatively associated (Nouri et al., 2013) with group creativity. This ambiguity in the effect of surface-level cultural diversity attributes raises the question; when and how does surface-level cultural diversity (e.g., ethnic diversity) lead to workgroup creativity?

One response to this question involves the relationship between surface-level and deep-level cultural diversity attributes. In the literature on (cultural) diversity, the “*value-in-diversity hypothesis*” and “*cognitive resource diversity theory*” posit that individuals with diverse cultural backgrounds possess unique cognitive resources, including knowledge, insights, and perspectives. When these cognitive resources are brought to the workgroup, they add more dimension to workgroup processes, potentially aiding in the generation of high-quality ideas, improving creativity, and enhancing decision-making (Cox & Blake, 1991; McLeod et al., 1996; Horwitz, 2005). Following these theories, much of cultural diversity research often presumes that surface-level/social category/demographic attributes are associated with diversity in deep-level cognitive resources. However, these studies have relied mainly on surface-level demographic attributes as proxies for such deep-level cognitive attributes without explicitly testing whether such demographic differences lead to cognitive differences (Kilduff et al., 2000; Stahl et al., 2010; Roberson, 2019; Zattoni et al., 2023). We contend that such operationalization of cultural diversity solely at the surface level, in isolation, might be misleading and could be responsible for the inconsistent findings in research. There is a need for research to consider the relationship between surface-level and deep-level characteristics in order to increase our understanding of the effects of surface-level diversity (van Knippenberg & Schippers, 2007; Roberson, 2019). Therefore, in our effort to address the aforementioned research question, this study investigates the relationship between ethnic diversity, a surface-level cultural diversity attribute, and cognitive diversity, a deep-level diversity attribute.

Furthermore, to explain how ethnic diversity influences workgroup creativity, this study employs the information-processing theory. This theory posits that diversity may lead to information processing/elaboration due to group members’ varied perspectives, knowledge, and decision-making styles. When effectively utilized, these differences can promote creativity (van Knippenberg et al., 2004; Stahl & Maznevski, 2021). Considering ethnic diversity as a source of cognitive diversity, this study seeks to demonstrate information elaboration as a fundamental workgroup process, serving as the cornerstone that enhances cultural diversity’s capability in driving workgroup creativity. This effort responds to calls in prior research to consider process factors that can either help or hinder the relationship between diversity and performance outcomes (van Knippenberg & Schippers, 2007; Roberson, 2019; Wang et al., 2019; Minbaeva et al., 2021; Stahl & Maznevski, 2021).

While cultural diversity has the potential to amplify creativity through the process of information elaboration, it is incumbent to acknowledge that this information elaboration does not occur spontaneously. The very presence of diversity can inhibit information elaboration by

enkindling biases, distrust, conflicts, and isolation of dissimilar others, all stemming from the complex network of social categorization (van Knippenberg et al., 2004; Stahl & Maznevski, 2021; de Jong et al., 2021). Consequently, an exploration of the contextual determinants that engender workgroup members to harness their diversified cognitive resources becomes a crucial endeavor (Minbaeva et al., 2021). Also, recent diversity research advocates for a contingency approach to understanding the effects of diversity, emphasizing the importance of exploring moderators that shape its impact (van Knippenberg et al., 2004; Guillaume et al., 2017; Minbaeva et al., 2021).

Amidst the study of moderators for workgroup diversity effects such as strategy, unit design, human resources, leadership, climate/culture, and individual differences (see e.g., Guillaume et al., 2017), there is an increasing emphasis on inclusive leadership being integral to the successful management of diversity in workgroups (Shore et al., 2011; Randel et al., 2018; Ashikali, 2019). Based on optimal distinctiveness theory, Shore et al. (2011) contend that members of diverse workgroups experience dual needs for belongingness and uniqueness, and strive to balance these two needs by finding an optimal level of inclusion within the groups to which they belong. Achieving this balance creates an environment that ensures members' unique voices and perspectives are brought to bear, and also stimulates the rich exchange of ideas, experiences, and knowledge (Randel et al., 2018), ultimately driving the process of information elaboration. Inclusive leadership stands out as an influential approach to managing diversity due to its crucial role in achieving this balance. They do so by actively engaging in behaviors that simultaneously facilitate the participation of all group members, and stimulate group members to adopt learning behaviors regarding their diversity (Ashikali, 2019). However, despite the widespread recognition of leadership, particularly inclusive leadership as a crucial moderator, research exploring inclusive leadership as a moderator remains scarce. Against this backdrop, we seek to investigate the moderating influence of inclusive leadership on the relationship between cognitive diversity and information elaboration in culturally diverse workgroups.

In summary, the purpose of this study is to explain how cultural diversity impacts workgroup creativity by demonstrating the intricate relationship between ethnic diversity, cognitive diversity, information elaboration, and workgroup creativity, while also examining the role of inclusive leadership in this process. Figure 1 presents the hypothesized model and serves as the theoretical framework for our investigation.

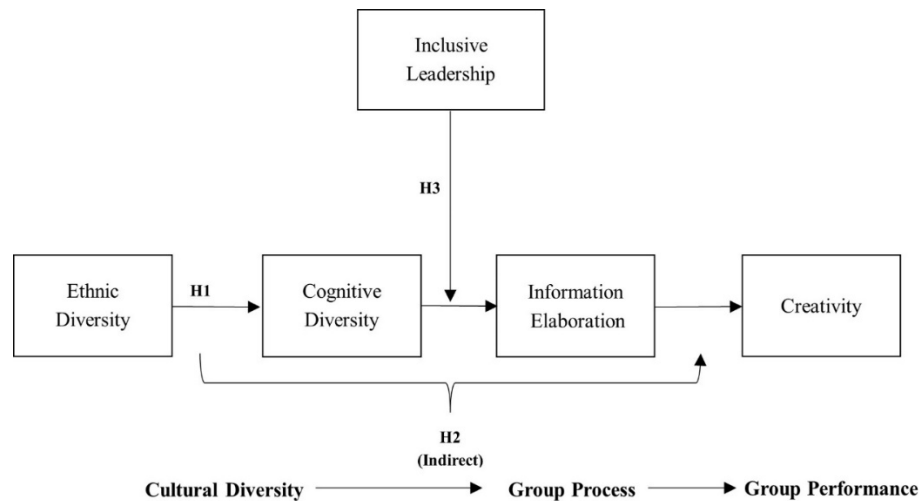


Figure 1. The Theoretical Model.

Source(s): Created by authors

Theory and hypotheses

Cultural diversity: ethnic diversity and cognitive diversity

As previously stated, the concept of cultural diversity involves social category demographic differences, as well as variations in values, perspectives, and cognitive frameworks among individuals from different demographic and cultural backgrounds (Wang et al., 2019). Prior studies assume social category attributes like ethnicity are linked to differences in cognitive resources (Cox et al., 1991; Jehn et al., 1999; van Knippenberg et al., 2004; van Knippenberg & Schippers, 2007; Ellemers & Rink, 2016; Roberson, 2019), but often use surface-level demographics as proxies for deep-level cognitive resources (de Jong et al., 2021). Rodriguez (1998) cautioned against such implicit assumptions that diversity in one area would lead to similar outcomes as diversity in other areas, therefore highlighting the necessity of verifying whether specific surface-level cultural differences lead to significant variations in deep-level cultural attributes. Additionally, Ellemers & Rink (2016) argue that visible differences along social groupings, such as race may not always reflect differences in ideas, perspectives, or abilities, emphasizing the need to verify such hypothesis (Jehn et al., 1999; Kilduff et al., 2000; Wang et al., 2019). van Knippenberg & Schippers (2007) opine that undertaking such an investigation would help increase our understanding of the effects of any diversity in workgroups.

In addition to the value-in-diversity hypothesis (Cox & Blake, 1991) and cognitive resource diversity theory (Horwitz, 2005), several sociocultural theories explain why we expect surface-level ethnic diversity to lead to deep-level cognitive diversity. For example, social constructionism explains how individuals' deeper-level knowledge and perspectives are shaped through interactions and negotiations within the social contexts in which they exist (Berger & Luckmann, 1966). Social identity theory explains how individuals derive their identity from group memberships and how this social identity shapes cognition and behavior (Hackel et al., 2017).

Cultural schema theory highlights how cultural background affects cognitive frameworks and leads to differences in deep-level understanding (Altarriba & Forsythe, 1993). Taken together, these theories provide a compelling argument for the interconnectedness between surface-level and deep-level diversity, particularly in the context of cultural backgrounds such as ethnicity and cognitive diversity. In alignment with this viewpoint, numerous cultural diversity studies have linked surface-level cultural diversity attributes to differences in deep-level cognitive diversity. For example, managers from different countries were found to have different frameworks for approaching a wide range of issues (Hofstede, 1984). van der Vegt & Janssen (2003) show that objective demographic diversity, such as ethnicity, produces diversity in knowledge, skills, and attitudes. Similarly, Phillips & Loyd (2006) found demographically diverse workgroups to have voiced more divergent and dissenting perspectives than homogeneous groups.

Against this backdrop, our study argues that to claim relevance for any social category diversity in a knowledge-based performance setting (such as workgroup creativity) concurrence between surface-level and deep-level features of culture would be required. A similar logic was presented by Jehn et al. (1999) who argued that any social category diversity cannot be beneficial in a workgroup except if it creates a diversity of information or perspective. Because cultural experiences can shape how individuals perceive and react to issues (Spencer-Rodgers et al., 2010), we expect people from different cultural groups to possess different opinions and perspectives about things. Following this, we argue that ethnic diversity in workgroups will result in diverse cognitive resources, i.e., differences in group members' cultural knowledge, ideas, experiences, and perspectives, all of which will have consequences for how workgroup goals are deliberated and achieved. Therefore, we hypothesize that.

H1. Ethnic diversity will positively influence cognitive diversity in workgroups.

Cognitive diversity and information elaboration as mediators of ethnic diversity's effect on workgroup creativity

Creativity refers to the generation of insights, problem solutions, and ideas that are original, novel, and potentially useful, either by an individual or a group (Amabile, 1988; Zhou & George, 2001). Although creativity can occur in any type of workgroup, cultural diversity is particularly relevant for workgroups that deal with creative tasks, i.e., tasks that have no single correct answer and require a group to generate and select ideas (Jang, 2017) and tasks that require knowledge and perspectives from different cultures (McLeod et al., 1996; Jang, 2017). Advocates for the value of diversity often point to creativity (the generation of new and potentially valuable ideas) as a major criterion upon which culturally diverse workgroups are assessed (Cox & Blake, 1991; Stahl et al., 2010; Jang, 2017). These studies often do so on the premise that social category diversity is associated with variety in cognitive resources, which, when applied to workgroup functioning, would lead to beneficial outcomes, including creativity (van der Vegt & Janssen, 2003; Stahl et al., 2010).

For cultural diversity to lead to workgroup creativity, there must be processes through which the positive aspects of diversity are brought to bear. Milliken & Martins (1996) argue that diversity affects workgroup performance outcomes through its impact on cognitive, affective, and communication processes. These processes that occur at the group level determine the effective application of individuals' cognitive attributes to result in workgroup creativity (Reiter-Palmon & Paulus, 2019). Against this backdrop, creativity at a group level is expected to be both cognitive and relationship-driven, i.e., individuals – the custodians of cultural-related cognitive resources – must engage in collaborative and interactive processes for cultural diversity to transcend to group-level creativity.

Information processing theory explains why we expect cultural diversity to produce a super-additive effect on workgroup creativity (Stahl & Maznevski, 2021). According to this theory, ethnic diversity within workgroups furnishes members with a broader spectrum of distinct and nonredundant information, knowledge, and perspectives, prompting the workgroup to more comprehensively deliberate on task-relevant information due to the need to reconcile conflicting viewpoints, ultimately fostering creativity (van Knippenberg et al., 2004; Stahl & Maznevski, 2021). Following this, we focus on information elaboration as a process-underlying variable that amplifies cultural diversity's effect on workgroup creativity.

Workgroup information elaboration is an intricate form of communication that involves the ability of diverse team members to exchange, discuss, and integrate task-relevant information and perspectives in productive ways (van Knippenberg et al., 2004). This process goes beyond just sharing information, it involves team members thoroughly explaining their ideas, engaging in productive discussions to consider each other's viewpoints, combining information, and figuring out the best way to utilize their collective knowledge to address the issue (Resick et al., 2014). The impact of any diversity on workgroup creativity, which involves cognitive tasks, such as decision-making, problem-solving, generating ideas, and information processing, is more likely to be significantly mediated by information elaboration.

Cognitive diversity and information elaboration

When exploring the relationship between cognitive diversity and information elaboration, the information decision-making perspective suggests that members of diverse workgroups tend to elaborate on task-related information to generate creative solutions when faced with conflicting ideas (van Knippenberg et al., 2004). Exposure to diversity motivates workgroup members to combine and rearrange the different perspectives and ideas they encounter (Ely & Thomas, 2001) and stimulate team members to generate creative ideas (Qi et al., 2022). Rahmi & Indarti (2019) contend that the epistemic motivation to share and process information/knowledge may result from the cognitive variety of a workgroup, given the group members' propensity to learn new things.

Homan et al. (2007) argue that diverse individuals are more likely to engage in information elaboration due to the absence of a single member with all the required information. Kearney & Gebert (2009) supports this claim by recognizing that cognitive diversity enables the exchange of

ideas and the synergistic combination of resources, leading to better overall performance. According to Stahl & Tung (2015), the varied perspectives and decision-making approaches brought by cognitive diversity among group members facilitate the processing of information, resulting in enhanced creativity within the workgroup. Wang et al. (2019) suggest that cognitive diversity provides a vast amount of information, which can lead to information elaboration. Rahmi & Indarti (2019) provide evidence that workgroups with a high level of cognitive diversity share knowledge more frequently.

Information elaboration and creativity

In terms of the relationship between information elaboration and team creativity, prior studies have identified information elaboration as a proximal predictor of workgroup creativity (van Knippenberg et al., 2004). Empirical research has strongly supported the significance of information elaboration for enhancing workgroup creativity (Hoever et al., 2012; Qi et al., 2022). For instance, Kearney & Gebert (2009) conducted a study on the direct effect of information elaboration on workgroup performance and discovered a significant positive impact on workgroup performance with respect to innovation quality. Similarly, Li et al. (2017) found that workgroup cultural diversity positively impacted team creativity through information sharing and elaboration. Jang (2017) also found a positive relationship between cultural diversity and creativity, especially when team members were able to elicit and integrate knowledge from each other.

These studies suggest that different members working together as a group bring a variety of information, knowledge, and perspectives relevant to accomplishing group tasks and that the elaboration of such cognitive resources will have a super-additive effect on creativity. In diverse workgroups, the value of members' diversity is subject to the ability of each member to improve the collective decisions and actions of the group. Each member's unique cognition enlarges the informational resources available to the group and the options it has for solving complex tasks. It is the in-depth and more extensive consideration of task-relevant information that makes heterogeneous groups outperform more homogeneous groups on tasks with clear information processing and decision-making requirements (Homan et al., 2007).

Grounded in the above discussions, this study also proposes that the ability of culturally diverse workgroups to achieve creativity will depend largely on the ability of ethnic differences to engender variations in cognitive resources and the ability of such cognitive resource differences to bring about the elaboration of task-relevant information respectively. Therefore, the following hypothesis is put forth:

- H2.* Ethnic diversity will have a positive indirect effect on workgroup creativity through cognitive diversity and workgroup information elaboration.

Inclusive leadership as an enabler of information elaboration

Although the studies mentioned above support the idea that workgroup members are more likely to engage in information elaboration and develop creative solutions when they encounter

conflicting ideas due to diverse thinking, the “social categorization perspective” explained by van Knippenberg et al. (2004) presents a contrasting view. This perspective suggests that cognitive diversity can impede information elaboration because social categorization between individuals with diverse cognitive backgrounds can trigger social bias. Qi et al. (2022) argue that while social bias can weaken the positive impact of cognitive diversity, it may not negate it entirely. This is because categorical bias can impact interaction within the workgroup and impede information elaboration for certain members, but not necessarily all.

To address this contradiction, this study examines inclusive leadership as a potential moderator of the effect of cognitive diversity on information elaboration in a workgroup. This choice is motivated by inclusive leaders’ ability to create a context in which group members experience a sense of inclusion, thereby allowing them to actively contribute to information and decision-making group processes (Randel et al., 2018; Ashikali, 2019). Inclusive leadership is a relatively new conceptualization of leadership that has been recognized as specifically relevant in managing diverse workgroups (Randel et al., 2018; Thompson & Matkin, 2020). It refers to positive leadership behaviors that facilitate group members’ sense of belonging to a workgroup while simultaneously valuing their unique attributes, perspectives, and contributions (Randel et al., 2018). Inclusive leaders strive to encourage workgroup members to adopt learning behaviors with regard to utilizing their diversity, while also facilitating the involvement of all workgroup members (Ashikali, 2019). Generally, literature on managing diversity suggests that leaders are expected to help group members elaborate on task-relevant information by persuading and supporting culturally diverse members to exchange, discuss, integrate, and learn from one another (Resick et al., 2014; Homan et al., 2020). Leaders are expected to promote the benefits and suppress the costs of cultural diversity by encouraging all group members to appreciate the different perspectives each unique member brings to group functioning. The more group members believe in the value of their differences, the more diversity is likely to have positive effects in terms of group processes and performance (Kearney & Gebert, 2009). Inclusive leaders understand that diversity can have a range of benefits, including improved creativity, thus, they strive to foster an atmosphere where everyone is treated fairly and with respect, and where they all feel at ease speaking up and sharing their views (Ashikali, 2019).

Whereas previous studies have identified other forms of leadership, such as transformational leadership, as relevant in managing diversity, inclusive leadership, and transformational leadership differ significantly in the context of leading diverse teams. While transformational leadership focuses on motivating members towards shared goals through a visionary approach, it may lack inclusivity due to its emphasis on collective goals and assimilation, potentially neglecting individual needs for belongingness and uniqueness (Randel et al., 2018). In contrast, inclusive leadership prioritizes accepting members for who they are, encouraging unique contributions, and fostering a sense of belonging without compromising individual identities (Randel et al., 2018; Ashikali, 2019). Therefore, a focus on the concept of inclusive leadership adds significant value to diversity management literature, as it not only promotes collective social

identity but also ensures that individuals feel valued for their uniqueness, maintaining a balanced sense of belonging and individuality within the workgroup.

Considering that the main advantage of a culturally diverse workgroup stems from the unique cognitive resources each individual brings to the workgroup, and the ability of workgroup members to elaborate task-relevant information, it is expected that by simultaneously facilitating a sense of belonging and valuing unique and distinct viewpoints, inclusive leaders would create an open and inclusive climate where member can freely voice and tolerate divergent opinions and perspectives, thereby improving the positive impact of cognitive diversity on workgroup information elaboration. Therefore, we propose that:

- H3.* Inclusive leadership will moderate the relationship between cognitive diversity and workgroup information elaboration, such that the relationship is positively stronger when inclusive leadership is high.

Method

Sample and data collection

The data utilized in this study were obtained from three distinct organizations in Nigeria. Nigeria is notably a very culturally diverse society (SHRM, 2009), whose diversity hitherto has had a far-reaching effect on its socioeconomic and political life (Mustapha, 2006). The organizations include; a government ministry (GM) from the public sector, as well as two private sector organizations: a Pension Fund Administrator (PFA) and a Fertilizer Manufacturing and Distribution Company (FMDC). Including both public and private sector organizations provides a comprehensive perspective of the organizations within the country and enhances the generalizability of our findings. This population was chosen for this study because organizations in Nigeria tend to have a significantly ethnically diverse workforce, and individuals from different ethnic backgrounds are employed by the three companies.

A cross-sectional research design was adopted due to limited access to the research site and participant burden. While acknowledging the limitations of a cross-sectional research design like the potential for confounding bias and the inability to establish causation, it however aligns with our study objectives of testing assumptions about variable relationships (Maier et al., 2023). To address design weaknesses, we included control variables to enhance reliability and accuracy (Bartram, 2021), making it more plausible to infer causation between studied variables. While establishing causality is challenging in purely cross-sectional studies, it does not mean that these studies cannot provide evidence supporting causation (Maier et al., 2023).

We contacted several top-level managers in each organization's head office for their organizations' approval to participate in this study. Approvals were gained from each organization's HR division after explaining the purpose of the study, its time requirements, and potential benefits, and assuring the confidentiality of reports. Upon approval, a representative of each organization was responsible for distributing the questionnaires to randomly selected

workgroups. A workgroup was defined as a group of staff who worked together on a permanent basis and reported directly to the same supervisor.

Both paper-based (mail) and online questionnaires were utilized in this study, and each questionnaire included a cover letter explaining the nature of the study, as well as assuring the respondents of complete confidentiality. A total of 500 paper-based questionnaires were distributed to several workgroups at the GM. An envelope containing questionnaires with unique identification numbers (for data matching purposes) was sent to each group supervisor and employees were given the company time to complete it. Of the 500 paper-based questionnaires distributed, 218 valid employee responses (35 groups) were returned, giving a response rate of 43.6%. Furthermore, unique online survey links were distributed to randomly sampled workgroups at PFA and FMDC. PFA returned 49 valid responses (10 groups), while FMDC returned 80 valid responses (15 groups).

Overall, we received 347 individual responses, nested within 60 various workgroups. Four workgroups with less than 4 members were excluded from the analysis in order to obtain a more reliable measure of the aggregated workgroup level variables. The final data set therefore consisted of 338 individual responses, nested within 56 workgroups. Among these respondents, approximately 61.2% were female. The average age of respondents was 38.146 years (s.d. = 4.506), and the mean tenure of 6.291 years (s.d. = 2.380). The average workgroup size was 6.036 (s.d. = 1.926), ranging from 4 to 14 members. The respondents' ethnic representation reflected Nigeria's demographics, with the three major ethnic groups, Yoruba, Igbo, and Hausa/Fulani, accounting for 60.6% (27.1%, 18.2%, and 15.3% respectively), and 30 others making up 39.4%. The ethnic diversity index ranged from 0.69 to 1.91, with lower index scores indicating lesser diversity and higher scores denoting greater diversity within workgroups in terms of ethnicity.

Measures

Participants were asked to indicate the extent to which they agreed with each statement pertaining to their respective workgroups. All survey items were assessed on a 7-point Likert-type scale (1 = strongly disagree; 7 = strongly agree).

Ethnic diversity: Ethnicity was the primary attribute used to measure surface-level cultural diversity. Respondent were asked to indicate their ethnic background from a list of 22 dominant ethnic groups in Nigeria (Mustapha, 2006) or to specify their ethnicity under "others" for a more detailed list. Scores for ethnicity were computed using Teachman's (1980) entropy-based index: $-\sum [p_k \times \ln(p_k)]$. Where p_k represents the proportion of the work unit members with each diversity characteristic. This index is widely used as one of the most common measures of diversity as variety and allows estimations to be made on samples with varying group sizes (Harrison & Klein, 2007).

Cognitive diversity: Four items adapted from van der Vegt & Janssen's (2003) measure for cognitive diversity were used to assess workgroup cognitive diversity. Sample items include: "The members of my workgroup differ in their cultural knowledge and skills."

Information elaboration: Four items adopted from Kearney & Gebert (2009) were used to measure workgroup information elaboration. Sample items include: "The members of your workgroup carefully consider all perspectives to generate optimal solutions".

Creativity: Five items adopted from Zhou and George (2001) were used to measure workgroup creativity. Sample items include: "The members of my workgroup come up with creative solutions to problems".

Inclusive leadership: 13 items from Ashikali (2019) were used to assess inclusive leadership. Sample items include: "Your workgroup leader... makes sure you have the opportunity to express diverse viewpoints; makes sure you have the opportunity to be yourself in the workgroup."

Control variables: We controlled for gender diversity, age diversity, group size (i.e., the number of workgroup members), and group tenure (i.e., the amount of time members have been working together, as a group), as previous research has shown that these variables can influence several important workgroup processes, including workgroup creativity (Stahl et al., 2010).

Analytical strategy

Data analyses were conducted following a multistep approach using SPSS 25.0, STATA 15, and PROCESS macro 3.4. First, the data was screened for missing values, normality, and sample bias. Second, a confirmatory factor analysis (CFA) was used to confirm the fitness, validity, reliability, and common method bias of the measurement model. Third, intraclass correlation (ICC) and inter-rater agreement (r_{wg}) were used to examine the reliability and validity of the data at the workgroup-level and to justify aggregating individual-level data to the workgroup level. Finally, the study hypotheses were tested using conditional process analysis with the PROCESS macro 3.4 (Hayes, 2022).

Results

Data screening. Our analysis revealed that the dataset had no missing values. The skewness and kurtosis values ranged between -904 and +.464, thus confirming the normality assumption. Finally, the homogeneity of variance test indicated no substantial response bias, as the differences in means were all non-significant.

CFA. A four-factor CFA model was used to confirm the measurement model's fitness, reliability, and validity. Some items under inclusive leadership (i.e., "My workgroup leader ... tries to prevent me from thinking in negative stereotypes about other colleagues ... tries to prevent employees from forming groups that could exclude other colleagues, and ... communicates the benefits of ethnic-cultural diversity for the workgroup to employees") had low communality values and insignificant

p-values and were thus removed from the model. The final measurement items used in the study are detailed in Table 1.

Table 1. Latent factor measurement items, intraclass correlations, and standardized factor loadings

Latent Factors	Items	Stdyx loadings
Cognitive Diversity	The members of my workgroup differ in their way of thinking	0.747
	The members of my workgroup differ in their cultural knowledge and skills	0.955
	The members of my workgroup differ in how they view the world	0.759
	The members of my workgroup differ in their beliefs about what is right and wrong	0.924
Information Elaboration	The members of my workgroup complement each other by openly sharing their knowledge	0.900
	The members of my workgroup carefully consider all perspectives in an effort to generate optimal solutions	0.887
	The members of my workgroup carefully consider the unique information provided by each team member	0.812
	As a workgroup, we generate ideas and solutions that are much better than those we could develop as individuals	0.678
Creativity	The members of my workgroup suggest new ways to achieve goals or objectives	0.777
	The members of my workgroup are a good source of creative ideas	0.768
	The members of my workgroup exhibit creativity on the job when given the opportunity to	0.804
	The members of my workgroup often have new and innovative ideas	0.802
Inclusive Leadership	The members of my workgroup come up with creative solutions to problems	0.809
	My workgroup leader encourages me to discuss diverse viewpoints and perspectives on problem-solving with my colleagues	0.931
	My workgroup leader makes sure I have the opportunity to express diverse viewpoints	0.896
	My workgroup leader stimulates me to exchange different ideas with colleagues	0.899
	My workgroup leader encourages me to use colleagues' diverse ethnic-cultural backgrounds for problem-solving	0.899
	My workgroup leader makes sure that I use colleagues' diverse ethnic-cultural backgrounds as a source of creativity and innovation	0.910
	My workgroup leader stimulates me to learn from colleagues' ethnic-cultural backgrounds	0.943
	My workgroup leader stimulates me to actively participate in the team	0.908
	My workgroup leader makes sure I am treated as an equal member of the team	0.886
	My workgroup leader makes sure I have the opportunity to be myself in the team	0.908
	My workgroup leader makes sure I have the opportunity to have a voice in the team	0.894

Note(s): $N = 338$.

Source(s): Created by authors

The CFA analysis showed that all remaining items had standardized loading estimates above 0.5, indicating strong internal correlation and sufficient convergent validity. Discriminant validity was ensured by comparing the square root of the average variance extracted (AVE) to

inter-factor correlations, which showed adequate discrimination. The model achieved good reliability, with composite reliability (CR) estimates above 0.70 for all factors. The model also demonstrated a good fit to the data, with observed values of $\chi^2 = 317.366$, $df = 224$, $CMIN/df = 1.416$, $CFI = .988$, $TLI = .986$, $RMSEA = .035$, $SRMR = .033$ for the four latent factor CFA model (Hair et al., 2014).

To address common method bias, we conducted Podsakoff et al.'s (2003) unmeasured latent method factor test. The results showed minimal differences (less than 0.1) in standardized regression coefficients between the CFA models with and without the common latent factor, indicating that common method bias did not significantly affect the results. Details of the validity, reliability, and latent factor correlation results are presented in Table 2.

Unit of analyses. Given that this study assumes workgroup-level as the unit of analysis, there was a need to examine the consistency and consensus of responses provided by group members in evaluating group-level variables using intraclass correlations (ICC) and inter-rater agreement (r_{wg}), respectively. ICC is a standard measure of interrater reliability: ICC (1) explains the extent to which individual ratings are attributable to group membership, while ICC (2) describes the reliability of the group mean scores within a sample. r_{wg} , however, measures agreement among judges by calculating the proportional reduction in error variance (LeBreton & Senter, 2008; Woehr et al., 2015). The ICC and r_{wg} results for the study variables all demonstrated high reliability and consensus between the raters, thereby justifying the aggregation of individual-level responses to group-level units (LeBreton & Senter, 2008; Woehr et al., 2015). Results of the ICCs, r_{wg} , aggregate level descriptive statistics, and correlations are shown in Table 3.

Table 2. CFA Latent Factor Validity, Reliability, and Correlations

	CR	AVE	Cognitive Diversity	Information Elaboration	Creativity	Inclusive Leadership
Cognitive Diversity	0.884	0.986	<i>0.972</i>			
Information Elaboration	0.852	0.983	0.212***	<i>0.966</i>		
Creativity	0.841	0.978	0.164**	0.286***	<i>0.956</i>	
Inclusive Leadership	0.975	0.824	0.156**	-0.028	-0.062	<i>0.679</i>

Note(s): $N = 338$. The diagonal values in italic letters represent the square root of AVE to all inter-factor correlations. * $p < .05$, ** $p < .01$, *** $p < .001$.

Source(s): Created by authors

Hypothesis testing

PROCESS macro (Model 6) was used to test the hypothesized direct and indirect effects simultaneously (Hayes, 2022). With regards to the direct effect of ethnic diversity on cognitive diversity in workgroups, as shown in Table IV, the results show that the path between surface-level ethnic diversity and deep-level cognitive diversity was positive and significant ($\beta = .45$, $p < .01$). Therefore, Hypothesis 1 was supported. The relationship between cognitive diversity and

information elaboration ($\beta = .41, p < .01$), and between information elaboration and creativity ($\beta = .54, p < .00$) were also positive and significant.

Regarding the indirect effect between ethnic diversity and workgroup creativity through both cognitive diversity and workgroup information elaboration, results show that ethnic diversity was positively and significantly related to workgroup creativity via cognitive diversity and workgroup information elaboration ($\beta = .10, 95\% \text{ CI} = [.02, .21]$). The estimated indirect effect was determined to be statistically significant and positive because the 95% bootstrap confidence interval values were above zero. Therefore, Hypothesis 2 was supported.

Finally, PROCESS macro (Model 1) was used to test the hypothesized moderating effect of inclusive leadership on the relationship between cognitive diversity and information elaboration. We computed mean-centered cognitive diversity and inclusive leadership and multiplied them to create the interaction term. Consistent with Hypothesis 3, results show that the interaction between cognitive diversity and inclusive leadership was positively and significantly related to workgroup information elaboration ($\beta = .25, p < .01, 95\% \text{ CI} = [.07, .43]$). A simple slope test was performed to determine the significance of the above moderation effect. The result of the simple slope for inclusive leadership computed at one standard deviation below the mean was positive but non-significant ($\beta = .23, p < .13, 95\% \text{ CI} = [-.07, .53]$), while the simple slope computed at one standard deviation above the mean ($\beta = .74, p < .00, 95\% \text{ CI} = [.50, .97]$) was positive and significant. This result suggests that the moderation effect was statistically significant only at high levels of inclusive leadership. The simple slope plot in Figure 2 shows that as inclusive leadership increases, the relationship between cognitive diversity and information elaboration becomes positively stronger. Thus, Hypothesis 3 was supported. A summary of the hypothesized effects is shown in Table 4.

Discussion

This study draws on both cognitive resource diversity theory (Horwitz, 2005) and information-processing theory (Stahl & Maznevski, 2021) to examine the effect of cultural diversity on workgroup performance. Consistent with our predictions, we found that the presence of ethnic diversity in culturally diverse workgroups led to increased cognitive diversity and that the serial mediation of cognitive diversity and workgroup information elaboration accounted for the relationship between ethnic diversity and workgroup creativity. Additionally, our results indicate that the impact of cognitive diversity on workgroup information elaboration was moderated by inclusive leadership. Specifically, higher levels of inclusive leadership positively influenced the effect cognitive diversity had on workgroup information elaboration, which, in turn, facilitated workgroup creativity. Our investigation makes several important contributions to our understanding of the impact of cultural diversity on workgroup performance.

Theoretical implications

First, our study responds to the call by Stahl & Maznevski (2021) to direct further attention to confirming whether surface-level indicators of cultural diversity serve as a proxy for deep-level

Table 3: Aggregate level descriptive statistics and correlations

	ICC(1)	ICC(2)	r _{wg}	Mean	S.D.	1	2	3	4	5	6	7	8	9
1 Size	-	-	-	6.04	1.93	1.00								
2 Tenure	-	-	-	6.29	2.38	0.09	1.00							
3 Gender Diversity	-	-	-	0.94	0.28	0.11	0.08	1.00						
4 Age Diversity	-	-	-	0.53	0.22	0.09	0.07	-0.00	1.00					
5 Ethnic Diversity	-	-	-	1.39	0.27	0.57***	-0.24	0.07	-0.03	1.00				
6 Cognitive Diversity	0.42	0.82	0.90	4.41	0.92	0.16	-0.16	0.20	-0.17	0.42***	1.00			
7 Information Elaboration	0.35	0.77	0.85	4.95	0.95	0.02	-0.13	-0.05	0.09	0.32*	0.44***	1.00		
8 Creativity	0.53	0.87	0.93	5.41	0.93	0.08	0.33**	0.07	-0.22	0.21	0.28*	0.50***	1.00	
9 Inclusive Leadership	0.21	0.72	0.87	3.92	1.20	0.08	0.06	0.14	-0.07	0.17	0.42***	-0.19	0.07	1.00

Note(s): *N* = 56. **p* < .05, ***p* < .01, ****p* < .00.

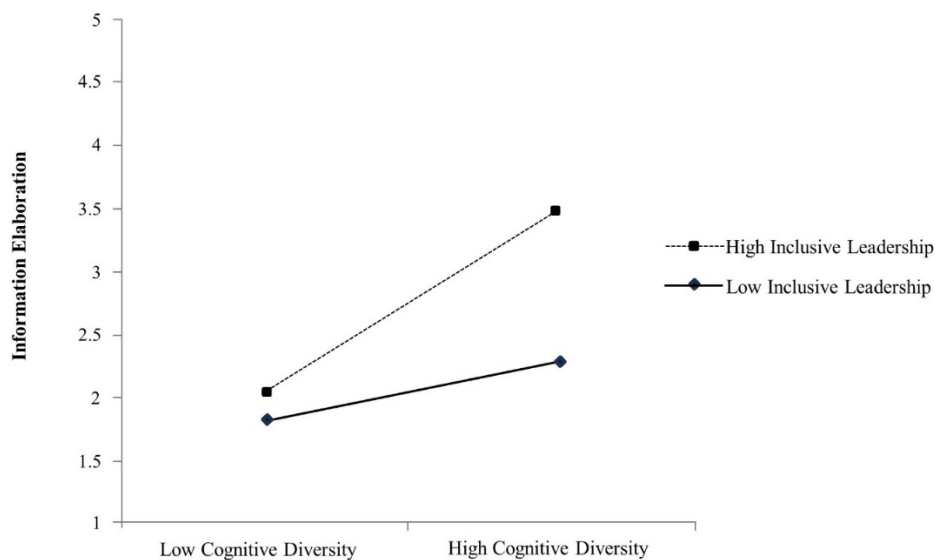
Source(s): Created by author

Table 4: Summary of hypothesized effects

	Cognitive Diversity β (S.E)	Information Elaboration β (S.E)	Creativity β (S.E)
<i>Controls</i>			
Size	-0.10 (0.06)	-0.23 (0.06)	-0.04 (0.05)
Tenure	-0.05 (0.04)	0.03 (0.04)	0.46 (0.04)***
Gender Diversity	0.18 (0.39)	-0.13 (0.45)	0.06 (0.38)
Age Diversity	-0.14 (0.31)	0.19 (0.35)	-0.29 (0.30)**
<i>Direct Effects</i>			
Ethnic Diversity	0.45 (0.42)**	0.30 (0.51)	0.16 (0.43)
Cognitive Diversity		0.41 (0.16)**	0.00 (0.14)
Information Elaboration			0.54 (0.12)***
<i>Serial Mediation</i>			
Ethnic Div. > Cognitive Div. > Information Elaboration > Creativity			0.10 (0.05)***
<i>Moderation Effect</i>			
Inclusive Leadership		-0.38 (0.09)***	
<i>Interactions</i>			
Inclusive Leadership*Cognitive Div.		0.25 (0.09)**	
R^2	0.24	0.29	0.52
F	3.23	3.30	7.36

Note(s): $N = 56$. standardized regression coefficients are reported. * $p < .05$. ** $p < .01$. *** $p < .00$. (10,000 bootstrap iterations).

Source(s): Created by authors

**Figure 2.** Simple slopes of cognitive diversity on workgroup information elaboration at levels of inclusive leadership.**Source(s):** Created by authors

indicators of cultural diversity. As previously discussed, the notion that cultural diversity promotes creativity and innovation within workgroups is rooted in “cognitive resource diversity theory” and information-processing theory, which posits that individuals from different cultural backgrounds possess distinct cognitive resources which when applied to information and decision-making processes within workgroups is expected to enhance creativity and innovation (Horwitz, 2005; Stahl & Maznevski, 2021). However, the hypothesis that differences in cultural background (i.e., surface-level diversity) translate into variations in cognitive resources (i.e., deep-level diversity) has rarely been examined in previous studies (Roberson, 2019; Wang et al., 2019; Stahl & Maznevski, 2021). Consequently, there is a lack of consensus, leading to conflicting understanding of the effect of surface-level cultural diversity in workgroups.

By treating surface-level ethnic diversity and deep-level cognitive diversity as composite dimensions of cultural diversity, as opposed to as isolated concepts which are prevalent in cultural diversity research, our study was able to empirically demonstrate that diversity along culture-related demographic attributes; particularly ethnicity, can lead to substantial variation in cognitive resources relevant within organizational and workgroup settings. While our finding on ethnic diversity is significant, further investigation into other culture-related surface-level attributes is necessary for a more comprehensive understanding of this relationship. Nevertheless, our approach extends the perspectives of both “cognitive resource diversity theory” and information-processing theory by shedding light on this relationship.

Second, our research addresses the call for Positive Organizational Scholarship (POS) - i.e., to devote more attention to the beneficial effects of cultural diversity, considering that workgroup diversity research has largely been characterized by an overemphasis on the adverse repercussions of cultural diversity (Stahl & Tung, 2015; Stahl *et al.*, 2017; Stahl & Maznevski, 2021). By adopting a resource-based view of cultural diversity (Horwitz, 2005; Stahl & Maznevski, 2021), and exploring process-related factors (i.e., the elaboration of task-relevant information) that intervenes between the ethnic composition of workgroups and its creativity, our study demonstrated the performance-promoting effects of cultural diversity. Our finding of a positive relationship between cognitive diversity and information elaboration aligns with van Knippenberg et al. (2004) position that group members respond favorably to diversity when they see it as beneficial for overall group functioning (van Knippenberg et al., 2004). However, this finding also contradicts the “social categorization perspective” which presents an alternative hypothesis suggesting potential hindrances due to biases arising from cognitive diversity (van Knippenberg et al., 2004).

Several factors could explain why our study yielded different outcomes. First, there is limited research on the specific relationship between cognitive diversity and information elaboration in a cultural context. However, drawing insights from the broader body of research on workgroup diversity, Qi et al. (2022) acknowledge biases in cognitive diversity but contend that since biases may affect certain members of a workgroup but not others, they may only weaken, not entirely negate, its positive impact on information elaboration. Furthermore, assessing the

evidence that supports alternative hypotheses, we observed that many studies that reported a negative, nonexistent, or inconclusive effect often employed surface-level diversity indicators as proxies for cognitive diversity (Dahlin et al., 2005; Cheung et al., 2016). Our study directly measures cognitive diversity based on deep-level perceptions, avoiding the use of surface-level proxies criticized in previous studies (Rodriguez, 1998; Roberson, 2019). This approach aligns with recommendations to precisely define and measure diversity to enrich our comprehension of its effects (van Knippenberg & Schippers, 2007; Stahl & Maznevski, 2021). Our study's operationalization of cognitive diversity, beyond surface-level attributes, adds value and supports prior research e.g., Rahmi & Indarti (2019) and Qi et al. (2022) that found a positive relationship between cognitive diversity and information elaboration. Our finding confirms this favorable association between cognitive diversity and information elaboration in a cultural context and further strengthens the arguments put forward by these prior studies.

Third, our finding of serial mediation is also noteworthy, as it confirms prior studies that argue that social category/demographic diversity attributes (e.g., ethnicity) and workgroup performance (e.g., creativity) do not have a simple relationship and that additional variables or factors may be involved. This is also in line with prior studies that argue for a process orientation in investigating the diversity effect (van Knippenberg & Schippers, 2007), and lends credence to information elaboration as a mediating factor required for the beneficial effect of cultural diversity. Notably, it also supports the idea that for any surface-level diversity to improve knowledge-based team performance, it must result in variation in cognitive resources available to a workgroup (Jehn et al., 1999).

Finally, our study responds to calls to move beyond the concept of cultural diversity as a “double-edged sword”, towards examining how diversity can be managed such that it becomes a strategic human capital resource (Minbaeva et al., 2021). Our finding that inclusive leadership enabled information elaboration is particularly significant, as previous studies have identified that culturally diverse workgroups are prone to affective and interactional difficulties that can negatively impact communication and knowledge sharing in workgroups (Bouncken et al., 2016). van Knippenberg et al. (2004) and Resick et al. (2014) put forth the point that the link between diversity and the thorough processing of task-relevant information requires a strong motivation and drive to engage in such processing. This drive, our findings suggest, is something that inclusive leadership provides. In other words, cognitive diversity alone is not necessarily enough to lead to the effective elaboration of task-relevant information but requires a motivating force, which inclusive leadership is capable of providing. Inclusive leadership behaviors play a crucial role in promoting an environment that is conducive to information elaboration within workgroups. Leaders who exhibit inclusive behaviors are more likely to reduce the occurrence of social barriers that might otherwise hinder the sharing of information and ideas (Randel et al., 2018). Thus, by creating an atmosphere of inclusion, one that values and respects diversity, inclusive leadership behaviors helped workgroup members feel more comfortable sharing their unique perspectives and thoughts. This results in the pool of information and viewpoints being enriched by

contributions from a diverse range of cultures. As a beneficial process for cognitively diverse workgroups, information elaboration can be attained when distinctions are preserved and encouraged to be salient (Shemla et al., 2020). Overall, our results lend credence to the notion of inclusive leadership as a means to manage the costs and benefits that may result from increased cultural diversity.

Practical implications

Managerially, the findings of this study present substantial information that can help in the management of culturally diverse workgroups. First, the findings of this study underscore the importance of fostering cultural diversity within workgroups as a strategic approach to enhancing workgroup creativity. Organizations should actively seek to assemble workgroups with diverse ethnic-cultural backgrounds, acknowledging that such diversity can contribute positively to creative outcomes through their distinct cognitive resources. By consciously integrating individuals with varied cultural- knowledge, perspectives, ideas, and experiences, organizations can create an environment conducive to generating novel ideas and useful solutions.

Also, our findings regarding the direct effects between ethnic diversity and cognitive diversity advocate a resource-based view of cultural diversity. It encourages managers and workgroup leaders to look beyond surface-level diversity and ensure that they recognize and value the variety of deep-level cognitions each unique member brings to the workgroup. They could do so by not only setting up culturally diverse workgroups, but also facilitating shared decision-making, and encouraging diverse contributions amongst group members. Moreover, many diversity initiatives tend to fail when organizations hire and promote diversity solely on surface-level cultural attributes without regard to potential deep-level cultural resources (Ernst Kossek et al., 2003). This study does not undermine surface-level diversity in any way; rather, it highlights the potential value of surface-level diversity which tends to be overlooked when deep-level cognitive attributes are ignored. Ignoring the accompanying cognitive diversity could lead to negative cognitive processes such as stereotyping and negative perceptions of diversity initiatives, e.g., Tokenism. To address this, organizations should consider implementing regular, comprehensive training programs to develop leaders' and employees' cultural understanding and competence. Cultural awareness and skill-building training can help members identify the value in diversity, foster trust, and open communication, and prevent groupthink and discrimination (Cox & Blake, 1991).

Furthermore, our findings regarding the moderating role of inclusive leadership highlight the crucial role of inclusive leadership in maximizing the performance-promoting effects of cultural diversity in workgroups. We show that leaders play a crucial role in shaping how group members interact with one another. Through inclusive behaviors such as ensuring fairness, facilitating shared decision-making, and encouraging diverse contributions, workgroup leaders can cultivate a sense of belonging among members, nurturing a collaborative work environment where group members work together successfully. Therefore, workgroup leaders must prioritize inclusion in their leadership approach. Leaders who prioritize inclusion foster an environment where

workgroup members feel valued, respected, and empowered to contribute their diverse perspectives.

Notably, our findings that inclusive leadership enhances the positive relationship between cognitive diversity and information elaboration only when inclusive leadership is high underscore the importance of leaders genuinely embodying inclusivity, not just superficially. In practice, leaders must actively create environments where diverse perspectives are integrated into decision-making processes. For example, through leader-member exchange and mentorship programs, leaders can help employees from diverse cultural backgrounds feel more valued and empowered, boosting their identification with the group, and their confidence to share their unique knowledge and ideas. Finally, diversity performance evaluations for workgroup leaders can also play a crucial role in creating a stronger culture of inclusion, ensuring they remain accountable for fostering an inclusive environment. In sum, our linkage between inclusive leadership and workgroup processes offers new insights into how workgroup leaders can better manage workplace diversity. By effectively harnessing the potential synergies arising from cognitive diversity, leaders can improve information elaboration and ultimately foster creativity.

Limitations and future research

Like any study, this research has certain limitations. First, prior studies have shown time effects on diversity (Harrison et al., 2002). Given that our study was cross-sectional and examined the effects of cultural diversity and workgroup process at a specific point in time, we could not investigate possible time effects of diversity. Therefore, we call for more longitudinal studies of the same phenomenon as this might show how the effect of cultural diversity on workgroup creativity unfolds over time and allow for conclusions about causality.

Second, we note that the effect size observed for serial mediation was admittedly small. Past studies have shown that subjective ratings of performance may influence observed results in the diversity-performance relationship. Kurtzberg (2005) argues that different people may have different ideas about what constitutes creativity and that people's perceptions of their creativity may not always line up with established and objective metrics of creativity. The limited access to the research sites constrained our exploration of objective performance ratings, therefore, we utilized group members' self-rated perceptions to measure creativity. To detect stronger effect sizes, future studies may consider using objective measures of creativity or a combination of both.

Finally, whereas we focused on ethnicity as a key surface-level cultural attribute, several cultural grouping/social category variables exist that may have differential effects when investigating cultural diversity's effect on workgroup performance. The current study results regarding surface-level diversity resulting in deep-level diversity are limited to ethnicity and culture-related cognitive resources. Given that culture can exist within several forms of social networks, e.g., organizations, functions, religion, etc., subsequent research could consider the influence of membership in other important social category variables on workgroup cognitive diversity.

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About the authors

Gechinti Bede Onyeneke is an Assistant Professor at Hokkaido University, Japan. His research interest focuses on topics such as workgroup dynamics, leadership, organizational change management, digital transformation, and new ways of working. He has published in journals such as *Journal of Organizational Change Management*.

Tomokazu Abe is a Professor of Innovation Management at the Faculty of Economics and Business, Hokkaido University, Japan. His research interests focus on workplace/coworking space design for facilitating knowledge creation and process study of business model innovation. His research has been published in journals such as *Current Psychology*, and *Journal of Organizational Change Management*.