NOBEL INTERNATIONAL BUSINESS SCHOOL

DOCTOR OF PHILOSOPHY IN BUSINESS ADMINISTRATION

DIVERSITY, CONFLICT AND WORKGROUP CREATIVITY IN GHANA: THE MODERATING ROLE OF GROUP MEMBER GOAL ORIENTATIONS

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ABSTRACT

Creativity is key to organizational competitiveness and effectiveness, and much research has gone into enhancing it within organizations. A key antecedent to organizational creativity is diversity and therefore scholars have investigated how diversity translates into creativity. Diversity often acts as a double-edged sword, sometimes enhancing creativity and not at other times. As such, taking into consideration potential moderators and mediators in predicting the impact of diversity on outcomes has become important. However, many studies investigating the role of mediators have focused on one-dimensional mediators, which may not provide a comprehensive understanding of how diversity translates into creativity. The purpose of this study was therefore to investigate how diversity within workgroups leads to group creativity through the two dimensions of task and affective conflict. It also investigated how group member goal orientations moderate the impact of diversity on task and affective conflict. Building on the Categorization Elaboration Model, the Social Identity Theory and the Motivated Information Processing Theory, a conceptual model was proposed. To test this model, data was collected using questionnaires from 459 members of workgroups involved in marketing, manufacturing, and service across 40 organizations in Ghana. Following this, the data was analyzed using hierarchical linear regression. The mediating roles of task and affective conflict in the diversity-creativity relationship were also analyzed using Process Hayes. Findings indicate that cognitive diversity within groups influences group creativity through task and affective conflict. Moreover, both task and affective had a negative impact on group creativity. Findings also provide support for the moderating impact of the learning-approach and performance-approach goal orientations in the diversity-conflict relationship. Theoretical and practical implications of these findings are discussed.

Keywords: Diversity, Task Conflict, Affective Conflict, Creativity, Goal Orientations.

DEDICATION

This thesis is lovingly dedicated to my parents, Mr. and Mrs. S.A. Ewoade.

Thank you.

For everything.

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CHAPTER ONE

1.0 INTRODUCTION

This chapter gives a general overview of the study and serves as a basis for the other sections of the work. It discusses the background to the study, problem statement, research objectives and research questions, contribution of the study to knowledge and practice, and definition of terms. This section ends with an outline of the structure of the thesis.

1.1 Background of the Study

Creativity, defined as 'the production of novel and useful ideas concerning products, services, processes and procedures' (Shin et al. 2012, p. 198), has been long touted as a key to organizational effectiveness because of its ability to enhance competitiveness in today's highly dynamic marketplace (Lee & Yang, 2015). As such, various scholars and practitioners have investigated understanding how to enhance creativity in the organizations both at the individual and at a group level (Farh et al., 2010; Gong et al., 2013; Shin et al., 2012; Woodman, 2018; Zhang, 2016). Since creativity has been established as requiring different perspectives, knowledge and combining these different ideas to generate new ideas, products, concepts, and services, diversity has been identified as being a key antecedent to creativity (Dayan et al., 2017; Pelled, Ledford, et al., 1999; Torchia et al., 2015). The relevance of diversity to creativity is consistent with the information processing perspective which argues that the diverse perspectives brought on board by diversity enriches information processing and ultimately enhance outcomes (Joshi & Roh, 2009; van Knippenberg & Schippers, 2007). Because creativity often arises from being exposed to diverse perspectives (Farh et al., 2010), organizations are increasingly relying on the use of diverse workgroups in the workplace in a bid to harness the benefits of diversity with respect to creativity (Dierdorff & Ellington, 2012; Pieterse et al., 2013). While several studies investigating the impact of diversity on creativity have focused on functional and educational diversity (Torchia et al., 2015; Zhang, 2016), there are arguments that the reality facing organizations is that it is not always feasible to design and set up cross-functional groups to tackle all the innovation needs of the organization (Wang et al., 2016). Many workgroups in organizations comprise group members of

similar functional and educational backgrounds. Therefore, scholars and executives have been interested in how to stimulate creativity among groups that may appear similar in terms of functional background and education (Chow, 2018; Shin et al., 2012; van Knippenberg & Schippers, 2007; Wang et al., 2016). Certain studies suggest that regardless of the functional or educational similarity among group members if group members possess or perceive a high level of cognitive diversity among themselves, this can be very beneficial to group creativity (Chow, 2018; Olson et al., 2007; Shin et al., 2012; Wang et al., 2016). In other words, group members need not necessarily be different in terms of education and expertise for there to be cognitive diversity within the workgroup.

Cognitive diversity refers to the real or perceived differences among group members in terms of thinking style, knowledge, skills, and beliefs (Wang et al., 2016). Based on the information processing perspective on diversity, cognitive diversity makes available to the group varied knowledge, information, and skills that can be integrated to develop creative solutions to problems in the workplace (Shin et al., 2012; Van der Vegt & Janssen, 2003). Studies such as those by Chow, (2018), Shin et al., (2012), and Wang et al., (2016) provide empirical evidence for the relevance of cognitive diversity to group creativity. These studies also confirm that cognitive diversity is only beneficial to group creativity in the presence of other moderating and mediating factors such as leadership, motivation, group learning, and creative self-efficacy.

Another more readily perceptible diversity attribute that may affect group creativity is ethnic diversity. Ethnic diversity in workgroups is another important diversity attribute that may influence group creativity, particularly in the Ghanaian context. Ghana is an ethnically fragmented country with about ninety-two ethnic groups that can be classified under eight major groupings namely the Akan, Ewe, Mole Dagbani, Ga-Adangbe, Guan, Gurma, Grusi, and the Mande-Busanga (Asante & Gyimah-Boadi, 2004). Some of these groups have a history of war against each other (Bangura, 2006). Moreover, as appears to be the case in other parts of Africa, these major ethnic groups appear to be politically aligned with the major political parties in the country (Bangura, 2006; Bleaney & Dimico, 2017; Carlson, 2016; Ichino & Nathan, 2013). This may make for subgroupings and

undercurrents of hostility and animosity when members of these different ethnic groups are put together in workgroups, and this, in turn, hampers group outcomes (Joshi & Roh, 2009; Sivasubramaniam et al., 2012).

On the other hand, ethnic diversity could be beneficial to group outcomes like creativity and performance since this form of diversity shapes one's worldview and perspective. People of different ethnic groups tend to have different values, attitudes, and norms resulting from their differing ethnicity (Cox et al., 1991). Thus, ethnic diversity could bring on board diverse perspectives that could enrich the information elaboration process and ultimately enhance group outcomes. Studies indicate that ethnic diversity may enhance creativity. Research indicates that ethnic diversity is a strong predictor of cultural diversity (Cox et al., 1991; Desmet et al., 2017) and cultural diversity has been found to enhance group outcomes such as creativity (Li et al., 2017; Pieterse et al., 2013).

Ethnic diversity in workgroups however appears unavoidable as workplaces become more and more cosmopolitan. Like other diversity attributes, it may also act as a double-edged sword, enhancing information elaboration on one hand and engendering inter-group bias on the other. As such, moderating and mediating factors may play an important role in determining the impact of ethnic diversity on group outcomes (Guillaume et al., 2015; Joshi & Roh, 2009; van Knippenberg & Schippers, 2007).

As such, although diverse groups have the potential to enhance creativity by bringing onboard diverse knowledge, perspectives, and ideas, the very points of difference can also stand as barriers to cooperation and collaboration among group members (Joshi & Roh, 2009; Van Dijk et al., 2012; van Knippenberg & Mell, 2016). This has led scholars to label diversity a 'double-edged sword, capable of both enhancing and frustrating outcomes (Dayan, Ozer, & Almazrouei, 2017; Guillaume, Dawson, Otaye-Ebede, Woods, & West, 2015; Jehn & Bezrukova, 2004). These suggest that the relationship between diversity and outcomes may depend on other factors. As such, this has led to an increased interest in both moderating and mediating factors in the diversity-outcomes relationship (Guillaume et al., 2015; Joshi & Roh, 2009; van Knippenberg & Mell, 2016).

It has been argued that the group process is key when it comes to translating diversity into desirable outcomes such as creativity (Chen et al., 2019; Gong et al., 2013; Guillaume et al., 2015; Pieterse et al., 2013). These scholars contend that diversity must be expressed and applied to decision-making to be beneficial and that without effective integration, diversity will do more harm than good (Gong et al., 2013; Pieterse et al., 2013; Simons et al., 1999). Thus, van Knippenberg and Schippers (2007) have argued that the tendency to assume rather than assess mediating processing is a major hindrance to the development of this area of research. One such important group process mediating the diversity-creativity relationship is group conflict (DeGeest & Kristof-Brown, 2017; Farh et al., 2010; Jehn & Bezrukova, 2004; Torchia et al., 2015).

Group conflict refers to 'the process resulting from the tension between group members because of real or perceived differences' (De Dreu & Weingart, 2003, p. 741). Group conflict has been traditionally viewed as an undesirable interference with outcomes such as performance and satisfaction. This is because it is often associated with tension, antagonism and serves to distract group members from group tasks and objectives. Findings from early studies on group conflict reflect this view of conflict (Saavedra, Earley, & Van Dyne, 1993; Gladstein, 1984; Wall & Nolan, 1986). However, studies began to reveal a positive dimension of conflict particularly with regards to its ability to bring to attention issues that might otherwise not be considered (Deutsch 1973), Coser (1956), and Walton (1969). This is particularly important for creativity as conflict promotes the greater exchange of information, better analysis of the group task, and questioning the status quo (Farh et al., 2010), which in turn, enhances the production of creative outcomes. The conflict has thus been conceptualized as having two dimensions, one functional and the other dysfunctional (Amason, 1996; De Wit et al., 2012; Guenter et al., 2016; Guerra et al., 2005).

1.2 Problem Statement

In a bid to investigate the black box between diversity and outcomes, certain studies have examined the mediating role of factors such as information exchange (Shin et al., 2012), group efficacy (Homan et al., 2015) motivation (Wang et al., 2016) and group learning (Chow, 2018). As much as these mediating variables have yielded valuable insights into how diversity translates into creativity, these mediators are mostly unidimensional,

limiting the insight provided. Examining the two dimensions of conflict as a mediator in the diversity-creativity relationship may provide more insight and better explain how diversity sometimes enhances creativity and not at other times. The explanatory power may therefore be better here as compared to other uni-dimensional mediators that have been examined in the diversity-creativity relationship like information elaboration and information exchange (Gong et al., 2013; Pieterse et al., 2013; Shin et al., 2012).

According to Pelled (1996),

> *When viewed as a two-dimensional construct, with one dimension that can have a beneficial effect on cognitive task performance and the other dimension typically increasing turnover……, conflict has an advantage over previous intervening process explanations that cannot account for the mixture of outcomes associated with workgroup diversity (p. 619).*

Moreover, while the critical role of personal motivation in the diversity-creativity relationship has received some scholarly attention (Gong et al., 2013; Wang et al., 2016), there remains yet more to be done, particularly with regards to the processes through which this influence translates into creativity. While other factors like leadership and organizational culture may influence the impact of diversity on creativity, individual characteristics of group members, particularly motivation, may play a more relevant role due to the interactional approach creativity requires (Shin, Kim, Lee, & Bian, 2012).

The nature of one's personal motivation may play a key role in the willingness to seek, share and deliberate on information with others different from themselves in terms of cognition and ethnicity. According to van Knippenberg, Dreu, & Homan, (2004), the effectiveness of group processes depends on group motivation and this suggests that high levels of motivation may be necessary for group creativity to be realized. Thus, Mumford and Gustafsson (1988) have argued that creativity is a result of both cognitive and motivational processes. Corroborating this, Amabile (1996) has also posited that intrinsic motivation may be critical for creativity. It is for this reason that Shin et al. (2012) have called for research investigating the role of motivation in the diversity-creativity relationship.

Group goal orientation has been found to be an important motivational influence in creativity processes because it motivates group members to seek or avoid opportunities to be creative (Alexander & Van Knippenberg, 2014; Gong et al., 2013; Lee & Yang, 2015). According to Dweck (1986), a goal orientation refers to the motivational and self-regulatory mechanisms that an individual employs in achievement settings (settings in which task performance is required). Goal orientations have been found in previous research to influence various outcomes including creativity on both the individual and group level (Gong et al., 2013; Guillaume et al., 2015; Pieterse et al., 2013).

It is valuable to creativity as it affects the effort and attention group members give to developing creative solutions to challenges at work (VandeWalle & Cummings, 1997). Therefore, goal orientations act as a powerful motivational factor that encourages employees to find creative solutions to problems either as a result of intrinsic task motivation or extrinsic motivational factors such as receiving incentives or avoiding critique (Lee & Yang, 2015). While goal orientation factors have been confirmed to influence group creativity, the process through which this occurs has not been well examined. Merging both group conflict and goal orientation perspectives, this study argues that group goal orientations may motivate or inhibit communication, information exchange, and effective deliberation among group members. In so doing, this study seeks to examine how group member goal orientations may influence group conflict as a mediating process between diversity and creativity.

Goal orientations have been conceptualized into two main categories, namely the learning and the performance orientations (Dweck, 1986; Dweck & Leggett, 1988; Gong et al., 2013; Pieterse et al., 2013). Competence is the pivotal concept as far as goal orientations are concerned and may be differentiated on two key dimensions; how it is defined and how it is valenced (Elliot & McGregor, 2001). Firstly, in terms of definition, Elliot and McGregor (2001) explain that competence may be defined using three key standards; absolute (whether one has acquired a skill or mastered a task), intrapersonal (whether one has improved performance or fully developed skills) and third, normative (whether one has performed better than others). The absolute and intrapersonal standards tend to have conceptual and empirical similarities making it difficult to distinguish between the two.

As such, they are often treated as one. Thus, competence is defined either in absolute/intrapersonal terms or in normative terms. These two standards are the basis of the two-dimensional conceptualization of the achievement goal orientations, such that the learning orientation reflects the absolute/intrapersonal standard, while the performance orientation reflects the normative standard (Elliot & McGregor, 2001). Secondly, competence valencing is concerned with construing competence in terms of potential success (positive, desirable possibility) or a potential failure (negative, undesirable possibility). This tendency to valence competence appears to be a reflex response that in turn triggers either an approach or avoidance behavioral disposition.

Subsequently, Elliot & Church (1997) provided a trichotomous conceptualization of the goal orientations, bifurcating the performance orientation into two, namely the performance-avoidance and the performance approach orientations, and leaving the learning orientation intact. The trichotomous conceptualization has been found to be conceptually and empirically relevant, showing that each of the three-goal orientations identified has unique antecedents and consequences. Later, Elliot and McGregor (2001) pointed out that the learning orientation may not always have an approach disposition as had been popularly assumed and highlighted the danger of subsuming both the approach and avoidance components of the learning approach into one since they are quite different in terms of antecedents and consequences. Accordingly, they further divided the learning orientation into the learning approach and learning avoidance orientations, making four-goal orientations in all. Findings from three study samples in their study support the distinctness of each of the four-goal orientations.

Corroborating this, Baranik et al. (2010) have posited that the learning avoidance orientation 'is a conceptually and empirically distinct construct with unique antecedents and consequences and should be included in future studies on achievement goals' (pg. 265). That notwithstanding, several studies examining goal orientations and creativity have considered the trichotomous model to the exclusion of the learning avoidance orientation (e.g., Gong et al., 2013; Lee & Yang, 2015). Due to this, not much is known about the role of the learning avoidance goal orientation and its impact on workgroup creativity. Thus, this study considers and theorizes for the moderating role of all four goal

orientations in the diversity-conflict relationship namely the learning approach, learning-avoidance, performance-approach and performance-avoidance goal orientations.

Additionally, most studies examining conflicts or goal orientations in groups have focused primarily on student groups (Jehn & Mannix, 2001; Mohammed & Angell, 2004; Olson et al., 2007; Pieterse et al., 2013; Ramos et al., 2021). While this is useful, it provides limited insights into how these may play out in organizational settings. This highlights the need to examine these factors in workgroups within organizational work settings.

Finally, while there have been several studies investigating the impact of diversity on group outcomes, the majority of these studies have examined these variables at the group level, usually aggregating scores for individual group members and/or leaders to obtain group scores (e.g., van Ginkel & van Knippenberg, 2008; van Knippenberg et al., 2004; van Knippenberg & Mell, 2016; Wegge et al., 2008; Zhang, 2016). While this approach has undoubtedly yielded valuable insights into group functioning, it has certain limitations.

In the first place, aggregating group responses to obtain a group score may not be an accurate reflection of team characteristics. For instance, if in a group of four members, two are extremely satisfied (selecting 5 on a scale of 1 to 5, with 5 being the highest) and the other two are extremely dissatisfied (selecting 1 the same scale), it would be erroneous to put group satisfaction at 3 (neutral), which would be the score if the scores from the four group members were aggregated. As Kurtzberg (2005) found out, group members may have markedly differing views when it comes to their assessments of their group's creativity. Consequently, striking an average score to represent the sentiments of the group may not present a true picture of group member perceptions.

A less popular approach to assessing group creativity is to assess it through the lens of individual group members. Individuals' perception of group effort and creativity is important to consider because of the social identity theory (Ashforth & Mael, 1989, Tajfel and Turner, 1986). According to Guenter et al. (2016), if individuals' perception of group outcomes, such as performance, is favorable, they are more likely to identify with the group. When group members identify with their groups, they tend to feel that their fate is

intertwined with the fate of the group (Ashforth & Mael, 1989; Guenter et al., 2016), and this, in turn, makes them more committed to the group and more willing to work towards the success of the group, often putting in their best for the team (Hirst et al., 2009; Somech et al., 2009). Thus, team members that perceive their groups to be performing well more readily identify with such groups, display group-serving behaviors, act more cooperatively and make sacrifices for the group (Guenter et al., 2016; Schaeffner et al., 2015). Following this logic, if group creativity is the desired outcome, team members that perceive their groups to be creative are more likely to behave in ways that will promote creativity within groups. However, if they do not perceive their groups to be creative, regardless of what other assessments of group creativity are, group members are likely to behave in counter-productive ways. Based on the social identity theory, Hirst et al. (2009) argued that when group members identify with a group, they are stimulated to exert creative effort. Their findings confirm that group identification is indeed positively related to individual creative effort. Interestingly, very few studies (Kurtzberg, 2005; Liu et al., 2021) have examined group creativity from the perspective of individual group members.

This study, therefore, adds to the few studies that investigate group creativity from the individual group member perspective. As Jehn (1997) points out, objective or subjective measures used to assess group outcomes often yield different outcomes. Each method provides useful insights that complement the other. Creativity is a complex, multi-faceted construct, and examining it from different perspectives is vital for gaining a more comprehensive understanding (Kurtzberg, 2005).

To address these gaps, this study proposes and tests a moderated mediation model that investigates the moderating influence of group member goal orientations in the diversity-creativity relationship from the perspective of individual group members.

The proposed model suggests that cognitive and ethnic diversity in workgroups indirectly influence group creativity through conflict. Specifically, cognitive and ethnic diversity influence the level of task and affective conflict within the group. The levels of conflict, in turn, affect group creativity. Moreover, it also tests the moderating impact of all four group member goal orientations on the relationship between diversity and conflict. It is

argued that cognitive and ethnic diversity will elicit task and affective conflict. Moreover, group member goal orientations may moderate these relationships. Task conflict is expected to enhance group creativity whiles affective conflict will have a detrimental effect on creativity.

1.3 Objectives

The objectives of the study are as follows:

1. To determine how cognitive and ethnic diversity affects group creativity.
2. To examine the indirect impact of diversity on creativity through conflict.
3. To evaluate how group member goal orientations may moderate the relationship between diversity and conflict.

1.4 Research Questions

Culminating from these, the research questions include:

1. How does cognitive diversity affect task conflict?
2. How does ethnic diversity influence affective conflict?
3. What is the moderating role of the goal orientations in the relationship between diversity and task conflict?
4. What is the moderating role of the goal orientations in the relationship between diversity and affective conflict?
5. What is the relationship between task conflict and group creativity?
6. What is the relationship between affective conflict and group creativity?

1.5 Contributions of the Study

This study makes the several contributions practical and theoretical contributions, and these are subsequently discussed.

Theoretical Contributions

In the first place, it confirms and extends research based on the Categorization Elaboration Model (CEM) as it shows that diversity may simultaneously lead to both task and affective conflict. Additionally, it provides a further extension of the CEM by showing that both task and affective conflict fully mediate the relationship between

diversity and creativity. Moreover, it confirms the relevance of the Motivated Information Processing theory by showing that group member goal orientations indeed influence how diversity translates into task conflict. Furthermore, it extends goal orientation research by showing that the Learning Approach goal orientation may not always be beneficial for enhancing task conflict resulting from diversity and highlights the need to consider other boundary conditions particularly within the context of group conflict. Another theoretical contribution is that this study indicates that task conflict may not always be beneficial to group creativity and raises the need to consider other potential boundary conditions, including factors that may help decouple the link between task and affective conflict.

Additionally, the study also adds to the few studies that have investigated group dynamics from an individual perspective. A considerable number of studies examining group diversity have studied it from the collective perspective of the group. While these have been useful in providing valuable insights, the aggregation of data may obfuscate individual-level perspectives which are so key to group functioning. Examining group dynamics from the perspective of individual group members highlights the need to not only address group issues at the group level but also at the level of individual group members. Using the social identification theory as the basis for this approach to group diversity and outcomes provides an extension of the application of this theory.

The final contribution is that this study adds to the scant research on how workgroup diversity plays out in a Ghanaian setting. Most studies on group diversity have focused on Western and European settings (Guillaume et al., 2015; Joshi & Roh, 2009; Pelled, Eisenhardt, et al., 1999b; van Knippenberg & Schippers, 2007). African culture is quite different from the European and Western context (Cox et al., 1991). For instance, according to Hofstede (1980), West Africans tend to be more collectivist while North Americans, as well as Western and Northern Europeans, are more individualistic. Moreover, collectivist cultures have been found to be associated with greater cooperation within groups (Cox et al., 1991). By focusing on this context, this study makes a contextual contribution by showing how these variables interact in this setting.

Practical Contributions

In terms of practical contributions, while managers may set up diverse teams in the hopes of enhancing creativity, this study shows that the desired effect is not always guaranteed, as the intervening processes indicate that diversity may trigger both task conflict, which is desirable, as well as affective conflict, which is undesirable.

Moreover, the study also shows that diversity may lead to affective conflict by two main mechanisms. In the first place, cognitive diversity may cause affective conflict directly through categorization effects, and secondly through the mediating influence of task conflict. Since affective conflict is generally undesirable for group outcomes, understanding how it is engendered equips managers to be more strategic about managing it.

Relatedly, the study shows that if task conflict is not well managed, it may not be beneficial to group creativity. This is particularly true when it co-occurs with affective conflict. This highlights the need to dissociate task conflict from affective conflict. The study provides evidence that perceived conflict resolution may help minimize the tendency for task and affective conflict to co-occur. It therefore points to the need to consider other factors in predicting the impact of task conflict on group creativity.

Furthermore, the study shows that although conflict resolution may minimize the impact of task conflict on affective conflict, it may not enhance the impact of task conflict on group creativity. This suggests that there may be other potential factors that could enhance the impact of task conflict on group creativity. As such, the potential importance of cultural factors, for instance, in translating task conflict into creativity may need to be considered.

Additionally, it provides a more comprehensive understanding of the process through which diversity translates into group creativity by examining the mediating role of both task and affective group conflict. By considering both functional and dysfunctional dimensions of conflict, the study sheds more light on the process by which diversity may be beneficial to creativity and when it may not. This provides more insight into the

process through which diversity translates into creativity than previous uni-dimensional mediating processes.

A further contribution of the study is that this study also makes a contextual contribution by adding to the few studies that have examined the impact of group member goal orientations within workgroups. Most studies examining goal orientations have focused on student samples. By focusing on workgroups in organizational settings, this study shows how these goal orientations play out and provide findings generalizable to actual work settings.

1.6 Delimitations of the Study

This study focused on members of workgroups within organizations, and not on other groups like top management teams or student groups as others have done. This was because as compared to other group types like top management and student groups, workgroups have received relatively less attention. As such data was collected from members of workgroups and the constructs of interest were such that they could provide the necessary information.

The study also concentrated on the Greater Accra region of Ghana and not on other regions because this region has the most even distribution of the various ethnic groups as compared to the other regions(Owusu & Agyei-Mensah, 2011).

Respondents of the study were individual members of workgroups, and these were the focus because the study sought insight into the individual perspectives on group diversity, conflict and creativity.

While several other factors may moderate the relationship between diversity and conflict, this study focused on team member goal orientations because per the Motivated Information Processing theory, individual motivational factors, such as goal orientations may play a key role in the creative processes because of the information deliberation required for information integration.

The study also focused on group conflict as a mediating process because of its dual dimensions. As a two-dimensional construct, it promises greater explanatory power as compared to other uni-dimensional mediating factors.

A further delimitation is that this study employed a quantitative approach. This was deemed appropriate due to the maturity of research around diversity, conflict and creativity. Moreover, a quantitative approach makes the findings of the study more generalizable.

1.7 Definition of Terms

Group Diversity

Group diversity refers to the degree to which members of a group differ from each other in subjective or objective terms (van Knippenberg & Schippers, 2007; Weiss, Backmann, Razinskas, & Hoegl, 2018a).

Cognitive Diversity

Cognitive diversity is defined by Shin et al. (2012, p. 197) as the 'perceived differences in thinking styles, knowledge, skills, values and beliefs among individual group members.

Ethnic Diversity

Ethnic diversity refers to the representation of diverse ethnic groups within a group.

Task Conflict

This type of conflict tends to be task oriented, involving disagreement on task related issues such as objectives, procedures and appropriate courses of action (Amason, 1996; Pelled, Eisenhardt, et al., 1999b). It entails debate which forces group members to gain a deeper understanding of issues in order to develop the most appropriate solutions (Atuahene-Gima & Murray, 2004)

Affective Conflict

This refers to disagreements among group members characterized by personal attacks, frustration, anger, among other negative feelings (Amason, 1996; Pelled, Ledford, et al., 1999).

Goal Orientations

According to Dweck (1986), goal orientations refer to the motivational and self-regulatory mechanisms that an individual employs in achievement settings (settings in which task performance is required).

Learning Approach

As a result of the belief that ability is incremental, individuals with a learning approach goal orientation seek to improve themselves in terms of knowledge and skill (Dweck, 1986; VandeWalle et al., 2001).

Learning Avoidance

The learning avoidance goal orientation is concerned with avoiding the loss of knowledge and skill(Baranik et al., 2010; Elliot & McGregor, 2001).

Performance Approach

The performance approach orientation is concerned with demonstrating competence and seek positive appraisals from others in order to affirm their self-conceptions of superiority (Hulleman et al., 2010; Janssen & Prins, 2007).

Performance Avoidance

The performance avoidance orientation is concerned with avoiding negative appraisals from others(Dweck, 1986; Gong et al., 2013).

Group Creativity

Shin and Zhou (2007) define group creativity as "the production of novel and useful ideas concerning products, services, processes, and procedures by a group of employees working together" (Shin & Zhou, 2007, p. 1715).

1.8 Structure of the Study

This thesis is divided into five chapters.

Chapter One introduces the thesis, delineating the problem of study and the gaps the study seeks to fill in the literature. It highlights the lack of consistency in the findings regarding

the diversity-performance relationship, discussing the need to investigate the role of group longevity, particularly how it interplays with innovation type in the diversity-performance relationship. The objectives and research questions of the study are also outlined along with the conceptual model of the study.

Chapter Two provides an overview of relevant research on the topic, tracing the history and the current state of research. It goes on to discuss the theoretical underpinnings of the proposed model and formulates hypotheses that will guide the study.

Chapter Three focuses on the methodology of the study, discussing the research design and justifying the choices with regards to the guiding philosophy of the study, strategy as well as the methods of data collection.

Chapter Four focuses on analyzing the data collected and interpreting the results. It also presents relevant tables and figures, while Chapter Five discusses the findings of the study. The limitations of the study as well as recommendations for future research are also stated.

CHAPTER TWO

THEORY AND HYPOTHESES

2.0 Introduction

This chapter provides an overview of relevant literature on the topic. It also presents the conceptual model, arguments and resulting hypotheses. It begins with a description of the evolution of research on workplace diversity, its relationship with group creativity, and the role of goal orientations. It furthermore discusses relevant theories and postulates hypotheses based on the conceptual model proposed.

2.1 Creativity Defined

Creativity is 'the production of novel and useful ideas concerning products, services, processes and procedures' (Shin et al. 2012, p. 198). It comprises all the processes that lead to the generation of new and valuable ideas (West, 2002). Creativity has often been confused with innovation. While the two concepts are interrelated, scholars agree that they are not the same (Anderson et al., 2014; West, 2002). According to West (2002), creativity is the first step in the innovation process. While creativity involves the generation of new ideas, innovation implementation involves putting into action these ideas that have been generated. In other words, creativity is thinking up new things, while innovation implementation is doing new things. In an attempt to clarify the relationship between creativity and innovation, Anderson et al. (2014, pg.1298) indicate that:

> *Creativity and innovation at work are the process, outcomes, and products of attempts to develop and introduce new and improved ways of doing things. The creativity stage of this process refers to idea generation, and innovation refers to the subsequent stage of implementing ideas toward better procedures, practices, or products.*

Similarly, Rosing et al. (2018) conducted a longitudinal study of 76 project teams and proposed a temporal pattern of creativity that was linked to innovation. According to them, creativity takes place throughout the project, but that innovation teams minimized innovation implementation at the early stages of the project, increasing it over the course of the project. Thus, creativity is key throughout the project. They also indicate however that it helps to delay implementation in the early stages so that creativity is unhindered.

As such, timing of implementation is critical, often optimal at the midpoint of the project timeline. Clearly, creativity is different from, although closely related to innovation. Innovation encompasses both creativity and innovation implementation; the generation and implementation of creative ideas (Anderson et al., 2014; Gong et al., 2013; Rosing et al., 2011; West, 2002).

These ideas could be entirely new (i.e., never before known) or new to the focal organization or group. Generating such novel ideas requires looking at things from new perspectives, divergent thinking and combining processes, material and products that were erstwhile unrelated into something new and better (Amabile, 1996).

2.2 Earlier Creativity Research

Interest in creativity goes decades back and it appears earlier research focused on conceptualizing and understanding creativity. Feldhusen and Goh (1995) conducted an earlier review on creativity research spanning several decades back. The review focused on the various theories and models on creative behavior. They point out that earlier scholars acknowledged the complexity of the creativity construct and wrestled with a consensual definition. Creativity is a complex cognitive activity involving other cognitive activities such as critical thinking, using knowledge, decision-making and meta-cognition as opposed to earlier conceptualizations that excluded these other cognitive activities. Moreover, creativity goes beyond intelligence since it is not limited to only intellectual function. Acknowledging the breadth and complexity of creativity necessitates considering all other related factors in order to gain a more comprehensive understanding(Feldhusen & Goh, 1995). As such studies aimed at understanding and explaining this complex concept of creativity. While certain scholars, overwhelmed by the various dimensions and factors involved in creativity argued that there was no universal definition for creativity (Getzels, 1975), others thought otherwise. For instance, Vernon (1989) provided one of the earlier definitions for individual creativity, and he defined it as a person's ability to produce ideas, inventions, insights, among others, that experts deem aesthetically, scientifically, socially, or technologically valuable.

Another earlier and more popular conceptualization of creativity was the 4Ps of creativity by Rhodes (1961). According to him, four different factors influence creativity: person,

process, product, and press(situation). The person factor refers to the characteristics that make an individual creative. Process has to do with what goes on in the mind of a person when they are being creative. This process, he explains, involves four stages. First is identification of the problem, then generation of an idea, third, choosing the idea and finally implementing the idea and evaluating its effectiveness. Press, the third factor, refers to the context within which creativity occurs. The fourth factor according to Rhodes (1961) is the product, and this refers to the result or product of creativity. Subsequently, Simonton (1990) added a fifth factor, namely persuasion, referring to one's ability to convince others of the value of one's creative product.

Rhodes' (1961) conceptualization was relatively more comprehensive as compared to others by Amabile (1987) and MacKinnon (1962) which defined creativity with an emphasis on the end-product. According to MacKinnon (1962, p. 485), creativity

> *.... involves a response or an idea that is novel or other very least statistically infrequent. But novelty originality of thought or action, while a necessary aspect of creativity, is not sufficient. If a response is to lay claim to being part of the creative process, it must, to some extent be adaptive to, or of, reality. It must serve to solve a problem, fit a situation, or accomplish some recognizable goal. And thirdly, true creativeness involves sustaining of the original insight, an evaluation and elaboration of it, a developing of it to the full. Creativity, from this point of view, is a process extended in time and characterized by originality, adaptedness, and realization (p. 485).*

For these scholars, if ideas do not translate into reality, then there has not been any creativity. This view is interesting as it captures the more contemporary consensus on innovation, which comprises the entire process from idea generation to implementation(Anderson et al., 2014; Gong et al., 2013; Rosing et al., 2018; West, 2002).

Apparently contrary to MacKinnon's (1962) view, Albert (1990) proposed six guiding principles for understanding creativity. 1. Decisions, not products, express creativity. 2. The medium of creative behavior is knowledge of one's own self and one's environment. 3. Creative behavior must be intentional. 4. A person's creativity and personal identity

are emergent. 5. Creativity and personal identity are mutually dependent. 6. Individual creative behavior is consistent with personal identities and levels of ability. These principles are in clear contradiction with the conceptualizations that emphasize the end-product. Moreover, Albert's (1990) conceptualization appears to focus on factors and processes that are internal to the individual.

In an interesting departure from the aforementioned conceptualizations that focus on the individual, Czikszentmihalyi (1990) argued that creativity is largely determined by the social context within which the individual operates and is therefore outside of the individual. According to his model, it is the social context that presents problems and opportunities to the individual. Moreover, within this context are the experts and specialists who determine whether one's activity or product is indeed creative or not. Creativity is therefore contextual than personal. Similarly, Amabile (1990) and Woodman and Schoenfeldt (1989) also proposed models that highlighted the impact of external factors on the creative process and creative outcomes.

In summary, earlier research focused almost exclusively on understanding creativity, but these studies appear to have focused on the individual level. While earlier conceptualizations put creativity largely within the control of the individual, scholars later began to acknowledge the critical role of contextual factors in the creativity process. Clearly, research at the individual level has provided the critical foundation blocks for understanding creativity at all other levels. Thus, factors that serve as antecedents to individual creative behavior touch on both individual level and contextual factors. Subsequently, these conclusions drawn from individual research have been applied in group, organizational and multi-level studies with relevant adjustments.

From the above, creativity is indeed a complex phenomenon involving processes internal to the individual (cognitive skills, motivation, personality, among others). Additionally, these internal processes are influenced by external factors. Contextual factors may therefore encourage or inhibit individual creativity. Specifically, environments that are conducive to openness, flexibility and change foster creative behavior. Additionally, the effectiveness of the outcome of these creative processes determines whether creativity efforts have been successful or not.

There also appears to be a consensus that creativity can be taught in as much as training programmes focus on relevant cognitive skills and methods, personality factors, cognitive styles, and meta-cognitive skills. Moreover, regarding the measurement of creativity at the individual level, Feldhusen and Goh (1995) indicate that the complexity of the construct requires multiple forms of assessment to provide a more comprehensive understanding of the construct.

2.3 Research on Creativity within Organizations

Other studies on creativity have focused on the organizational context, trying to understand what makes an employee creative (Anderson et al., 2014). Employee creativity has been found to be key to organizational innovation and performance which give organizations a competitive edge in the highly turbulent and competitive business environment (Anderson et al., 2014; Hon & Lui, 2016; Lee & Yang, 2015; Rosing et al., 2018). As such, researchers have been interested in how to improve creativity within organizations.

2.3.1 General Theoretical Perspectives

Anderson et al. (2014) identify four key theoretical lenses that have shaped creativity research within organizations. They include the componential theory of organizational creativity, the interactionist approach, the model of individual creative action and finally the cultural perspective on creativity.

First is the componential theory of organizational creativity and innovation (Amabile, 1997). This perspective is also discussed in the review by Hon and Lui (2016). The key tenet of this theoretical perspective is that work environment factors impact creativity by influencing the components that contribute to creativity. These key components, which are characteristic of individuals and teams and which are identified as contributing to individual and group creativity include individual domain-related expertise, creative-thinking skill or ability and task intrinsic motivation (Anderson et al., 2014; Hon & Lui, 2016). Per the model, these components interact within the organization to produce creative outcomes. These components, in turn are affected by factors within the greater work context such as availability of resources, managerial practices, and organizational inclination towards innovation (Amabile and Conti, 1999).

The second theoretical perspective, identified as one of the most popular frameworks used in creativity research emphasizes the interaction of individual and contextual factors for creative outcomes (Woodman, Sawyer and Griffin, 1993). Again, Hon and Lui (2016) also discuss this perspective in their review although they focus on the individual level of analysis only. This interactionist perspective argues that creativity is the result of a complex interaction between individual employees and their work context at different levels within the organization (individual, group, and organizational levels). At the individual level, antecedent conditions such as biographical factors, a person's cognitive style and ability, relevant knowledge, social influences such as rewards and recognition, determine employee creativity (Anderson et al., 2014). In other words, creativity at the individual level is affected by both environmental and dispositional factors (Hon & Lui, 2016). Moreover, factors affecting group level creativity also include individual team member creative behavior, group members' interaction, characteristics of the group as well as team processes and the organization contextual factors including reward systems and organizational culture (Shalley, Gibson and Plum, 2009; Zhou and Shalley, 2010).

For instance, taking this interactionist perspective, the study by Janssen (2005) sought to examine how supervisor supportiveness interacts with employee influence in the work place to produce innovative outcomes. The study was conducted using a sample of 170 employees in a Dutch organization. Findings confirm his arguments that when employees perceive their supervisors to be supportive of innovation, their influence translates more strongly into innovative outcomes. In other words, employees are encouraged to initiate and execute innovative activities at work when they perceive their supervisors to be supportive of innovation. However, if supervisors are perceived as not being supportive, they were discouraged from doing so. Thus, from this perspective, factors internal to the individual or the group interact with contextual factors to determine creativity. This is clearly in consonance with Feldhusen's (1995) conclusion that creativity is determined by both personal factors as well as environmental factors. As such, it appears this principle is also reflected at the group level.

The third perspective is a relatively more complex model, and this is the model of individual creativity. This perspective is partly based on Ford's sensemaking theory

which argues that individuals are constantly choosing whether to engage in routine or creative behavior in response to situations. Three factors that influence this decision include individual sense-making processes, knowledge and skills, and motivation and these three factors jointly determine creative behavior (Unsworth & Clegg, 2010). Unsworth and Clegg (2010) stress that these three factors multiplicatively act to lead a person to take creative action, such that all three factors must be present if one is to make the choice to act creatively. Furthermore, factors such as goals, whether one expects that creativity will be rewarded or not beliefs about one's creative capacity and emotions also affect creative outcomes.

Critiquing the interactionist and componential approach, Unsworth and Clegg (2010) point out that these approaches focus on creative outcomes to the neglect of the process that leads to it. They highlight the importance of identifying the factors that motivate individuals to undertake creative, rather than routine action. The complexity of the model has made it challenging to test it in its entirety (Anderson et al., 2014). Parts of it have however been tested by Unsworth and Clegg (2010). Their study conducted semi-structured interviews with 65 engineers and found that creativity requirements, general work motivation, resources in terms of time, autonomy and cultural support for creativity were important cues for individual creativity depending on whether the engineers thought creative action would be worthwhile.

The final perspective from Anderson et al.'s review is the one on the cultural perspective on creativity within organizations (Morris and Leung, 2010, Zhou and Su, 2010). There has been relatively inadequate research on the impact of culture on the creative process. Due to differences in culture across contexts, there are likely to be potential differences regarding its impact on creativity. At the individual level, Erez and Nouri (2010) for instance examined the impact of individual cultural values (individualism vs. collectivism, power distance, uncertainty avoidance) on creativity as moderated by the nature of the task required and the social context. Additionally, Zhou and Su (2010) also investigated how culture influences the impact of supervisors, colleagues, and social networks on creativity, arguing that it is important to investigate, rather than assume the impact of culture on creativity in the workplace. In their study, they conducted a review

of cross-cultural research, comparing the impact of Eastern and Western cultures on creativity. Worthy of note is that these studies were based on laboratory tests and tasks, and the studies reviewed were primarily comparing the differences between American and Chinese cultures except for one that examined how Americans compared with Spanish counterparts (Saeki, Fan and Dusen, 2001; Niu, Zhang and Yang, 2007; Jacquish and Ripple, 1984; Riquelme, 2002). Although the findings generally point to Americans as being more creative, Zhou and Su (2010) argue that the fact that the laboratory tests and experiments were native to the Americans may have given the Americans an advantage. As such, they considered individual level factors (individualism vs collectivism, need for cognitive closure, need for uniqueness and promotional focus) as potential moderators. Still, the findings remained inconsistent. In a bid to reconcile these inconsistencies, they proposed a model that shows cultural factors (such as collectivism, conservation, and conformity) moderate the impact of social contextual factors (leaders, supervisors, coworkers, social network) on individual, group, and organizational creativity.

Again, Chiu and Kwan (2010) proposed a model showing how culture affects the whole process of creativity, highlighting the role of culture at various stages. In their model, they identity three key stages of creativity, namely authoring creative ideas, selecting, editing, and marketing these creative ideas and finally acceptance of these ideas. They propose that culture affects each of these stages in the creative process.

Relatedly, Zhou (2006) proposed a model for examining the different forms of paternalistic control within organizations and how this affects the creativity of teams within the organization. Zhou (2006) argued that national culture determines whether the paternalistic control will foster team motivation and ultimately team creativity or not. According to the model, while paternalistic control within organizations enhances creative outcomes in the East, it does the opposite for the West, inhibiting intrinsic motivation and therefore creativity. Anderson et al. (2014) call for further research into the important role of culture. These studies have clearly focused primarily on American and Chinese contexts to the neglect of other cultural contexts like Africa.

Each of the four theoretical perspectives identified by Anderson et al. (2014) provide insights that complement each other, and which taken together provide a more comprehensive view of creativity within organizations. Again, there are certain themes that cut across perspectives. In the first place, the role of individual team member characteristics, such as motivation and creative behavior, in determining group creativity is apparent particularly from the componential and interactionist perspectives. Moreover, the role of contextual factors for both individual and group level creativity are emphasized and as they interact with the individual characteristics to produce creative outcomes. Again, macro contextual factors like culture are also relevant factors to consider.

2.3.2 Levels of Creativity Research in Organizations

Aside the theoretical perspectives that have shaped creativity research within organizations, creativity research has focused on four different levels of analysis including the individual level, the group/team level, the organizational level and finally, multi-level (simultaneously considering more than one of the previously mentioned levels). These studies have cut across various disciplines in management. At each level, research has focused on identifying the factors that lead to creativity.

2.3.2.1 Individual Level Studies:

Individual level antecedents of creativity can be categorized into three, namely individual factors, task-related factors and social contextual factors(Anderson et al., 2014). Individual factors affecting creativity include personal traits, values, thinking styles, self-concepts and identity as well as psychological states (Amabile et al., 2005; Raja & Johns, 2010; Rank et al., 2009; Shung Jae Shin & Zhou, 2003; Tierney & Farmer, 2002). Regarding psychological states for instance, Amabile et al. (2005) found in a study using both qualitative and quantitative data that positive affect enhanced creativity. Their findings indicate a simple linear relationship between positive affect and creativity. Additionally, Shin and Zhou (2003) found that low organization-based esteem led to lower innovative behavior except in the presence of transformational leadership. It was however not clear whether this interaction between esteem and leadership affected idea generation or idea implementation. Using the Big 5 personality model, Raja and Johns (2010) conducted a study investigating how individual personality traits affect three

dimensions of performance including creativity as moderated by job scope. Their findings indicate a negative relationship between extraversion and neuroticism and creativity when job scope was high. Additionally, openness to experience was also significantly related to creativity, and this relationship was even stronger when job scope was low. Finally, Tierney and Farmer (2002) also found that individual creative self-efficacy was strongly predictive of creativity.

Task contexts relate to factors such as job complexity and routineness, and goals and job requirements. A task is said to be complex when it requires a variety of skills, is significant, is identifiable, autonomous and provides feedback(Anderson et al., 2014). Taking an interactionist approach, the study by (Shalley et al., 2009) found that job complexity moderates the relationship between an individual's growth need strength (the measure of how much a person wants to grow in their job) and creativity. Moreover, (Sandra Ohly et al., 2006) argued that task routinization would enhance creativity due to the availability of resources which could be used to generate new ideas. Their findings confirm these arguments since routinization was found to enhance creative and proactive behaviors.

Third, the social context has to do with issues relating to leadership and supervision, customer influences and other social influences. Shin & Zhou (2003) for instance found that transformational leadership enhanced individual creativity. The findings of Pieterse et al. (2009) corroborate this as they also found that transformational leadership is positively related to creativity. They also found however, that transactional leadership inhibited creativity. Moreover, in a study based on a sample of hair stylists, Madjar & Ortiz-Walters (2008) examined how customers formed part of the social context for employee creativity. Findings show that customer feedback and affective based trust had a positively significant impact on service-related creativity.

2.3.2.2 Organization Level:

At the organization level, factors like management, how knowledge is utilized, structure and strategy, organizational size, resources, culture and climate, innovation diffusion and corporate entrepreneurship have been found by previous research to affect organizational creativity. Studies by Martínez-Sánchez et al., (2011) and Martínez-Sánchez et al., (2009)

show that management practices, particularly flexible human resource management practices such as performance-based pay, flexible work hours, emphasis on job variety and autonomy, among others enhance creativity at the organization level. Another example is the study by (Cohendet & Simon, 2007) investigating the role of decentralization as it relates to creativity. In their case study of one of the largest video game studios in Canada, they found that decentralization enhanced creativity in organizations. Also, the study by Jung et al. (2008) confirmed that CEO transformational leadership is predictive of organization-wide innovation, just as it is on other levels. Finally, Damanpour (2010) indicates that larger organizations tend to be more innovative than their smaller counterparts.

2.3.2.3 Multi-level

Only a few studies have examined creativity in the organization at the multi-level(Hon & Lui, 2016; S. Ohly & Fritz, 2010; Sharif, 2017). An example is the study by Sharif (2017), whose study examined creativity at multiple levels within the organization, specifically looking at how individuals of different personalities interact to produce creative outcomes at different levels in an organization. His study proposed a model based on Holland's (1973) theory of vocational choice. Previous research has established a strong link between divergent thinking and creativity. Because creativity is the result of different ideas connecting or combining into something new, following the same logic, when individuals who think differently are put together and they interact, they are likely to produce creative outcomes. This is because the different personalities contribute different skills and knowledge, which when combined lead to valuable creative outcomes. As such, a group need not be functionally diverse to be creative; the group members only need to think differently. Another study on the same level is the one by Hon and Lui (2016). This study reviewed the creativity literature with emphasis on the hospitality industry. It also proposed a multi-level framework for creativity, particularly for the service sector, which integrated individual and group level factors based on the power theory of creativity.

2.3.2.4 Group Level Research

Creativity research at the individual and organization levels is relatively more extensive than studies done at the team level (Anderson et al., 2014). As organizations are becoming

increasingly reliant on teams and workgroups, interest in creativity research at the team level has increased over the years. Organizations want to know how to set up and manage teams that can develop creative responses to the ever changing demands of the marketplace (Farh et al., 2010). Although individual creativity is valuable, group creativity has become of great interest to scholars and practitioners due to the increasingly group-based nature of work. Moreover, because creativity requires the integration of diverse information, ideas, and perspectives hitherto unrelated (Amabile, 1996; Mumford and Gustaffson, 1988), diversity in groups is believed to enhance group creativity. Shin and Zhou (2007) define group creativity as "the production of novel and useful ideas concerning products, services, processes, and procedures by a group of employees working together" (Shin & Zhou, 2007, p. 1715).

Group leadership style has been identified as a key antecedent to group creativity. As such, the role of leadership in team creativity has also been well explored. Having conducted a meta-analytic review of studies investigating the role of leadership in team innovation, Rosing et al. (2011) found that results indicate a rather inconsistent and complex relationship. In a bid to clarify these results, the authors indicate that the key requisites for innovation are exploration and exploitation, and that there must be a flexibility that enables a fluid switch from exploration to exploitation and vice versa when need be. Exploration involves experimentation, risk taking, looking for alternatives and uncertainty, while exploitation involves alignment, risk avoidance and variance reduction(March, 1991). Since leadership is key to this switch, the authors propose an ambidextrous model of leadership that specifies two types of leadership behavior: opening and closing leader behavior. They argue that one type of leadership behavior is not enough to promote all innovative processes all the time. Rather, different sets of leadership behavior are relevant at different times to encourage exploration and exploitation as and when necessary. Opening leader behavior facilitates exploration, while closing leader behavior facilitates exploitation.

Additionally, team structure and composition as well team climate and processes have also been identified as important predictors of group creativity. Hulsheger et al. (2009) conducted a meta-analytic review for creativity research at the group level spanning the

previous 30 years within the organizational context. They classified research into three, namely Type 1, 2 and 3. Per their classification, Type 1 studies were those that focused on individual level antecedents and how they relate to individual level innovation outcomes. Type 2 referred to those studies that examined team level antecedents and how these affected team level innovation outcomes. The focus here is therefore on shared perceptions. Finally, Type 3 studies comprised studies that examined perceived team level antecedents and processes and how they relate to individual level outcomes. Thus, the focus here is on individual perceptions of team level variables.

Their review focused on Type 2 and Type 3 studies since these focused on team level of analysis. The review adopted Woodman et al.'s (1993) interactionist perspective on innovation which posits that individual, group and organizational level variables interact to promote innovation. Using the input-process-output model by Hackman (1987) to classify team level variables into input and process factors, their sample consisted of 104 studies and identified 15 group level variables and analyzed their impact on creativity across studies. As such, they identify such team compositional and structural factors as team level diversity, team tenure, team size as inputs that promote creativity and innovation. Team process variables included vision, participative safety, support for innovation, task orientation as well as task and relationship conflict. Their findings indicate that team process variables, such as vision, task orientation, external communication, and support for innovation, had a stronger impact on creativity and innovation than team composition and structure. They also examined the moderating influence of measurement method (self-ratings vs. independent ratings) and found a stronger relationship between team variables and creativity and innovation when self-ratings were used as compared to when objective ratings were used. Moreover, team level variables were more strongly related to creativity and innovation when measured at team level and not the individual level.

The findings lend support to studies that draw on the Categorization Elaboration Model(Van Knippenberg et al., 2004) as they show that diversity and other team composition variables on its own may not have a significant impact on outcomes. Thus, it is important to investigate moderating and mediating factors. Also, most studies at the

group level have largely focused on aggregating team member scores on team variables to obtain a collective score for the groups. Those studies that focused on individual group member perceptions focused on how perceived antecedent and process variables affected individual level creative outcomes. Very few studies have examined how group member perceived team level variables affect perceived team outcomes. According to Hon and Lui (2016, pg. 863), 'creativity research tends to focus either on individual creativity while ignoring the contextual influence of the group or on group creativity while ignoring individual factors within the group'. This tendency of focusing on group level outcomes to the neglect of individual level factors may give an incomplete picture on creativity within workgroups. Undoubtedly, the Types 2 and 3 approaches have provided valuable insights into creativity at the group level. Nevertheless, focusing solely on shared group level perceptions without considering individual group member perceptions may limit understanding on creativity processes within groups.

In the first place, the typical approach to Type 2 research involves aggregating group responses to obtain a group score. However, this may not provide an accurate reflection of team characteristics. For instance, if in a group of four members, two are extremely satisfied (selecting 5 on a scale of 1 to 5, with 5 being the highest) and the other two are extremely dissatisfied (selecting 1 the same scale), it would be erroneous to put group satisfaction at 3 (neutral), which would be the score if the scores from the four group members were aggregated. As Kurtzberg (2005) found out, group members may have markedly differing views when it comes to their assessments of their group's creativity. Consequently, striking an average score to represent the sentiments of the group may not present a true picture of group member perceptions.

A less popular approach to assessing group creativity is to assess it through the lens of individual group members. Individuals' perception of group effort is important to consider because of the social identity theory (Ashforth & Mael, 1989, Tajfel and Turner, 1986).

2.4 On Social Identity Theory

The social identity theory by Tajfel and Turner (1979) revolves around how a person views themselves based on the groups they belong to. It is an extension of the social

categorization theory and is based on the human tendency to classify people. The social identity theory identifies three stages namely social categorization, social identification, and social comparison. Regarding social categorization, Tajfel and Turner (1979) posit that people tend to categorize themselves and others in order to identify and understand themselves. Assigning themselves and others into categories based on certain characteristics makes it easier to organize their world and find their place in it (Mael & Ashforth, 2001).

The second stage is identification, and this is where after categorizing themselves and others, individuals adopt the identity of the groups they have decided they belong to. After meeting the basic physiological needs and safety needs on Abraham Maslow's (1943) hierarchy, individuals become keenly aware of the need for love and belonging. When people identify with a particular group, it is an attempt to meet this basic need for belonging. Thus, at this stage, individuals adopt behaviors in keeping with the identity of the group they belong to. They modify their behavior to represent the group they belong to. This explains the patriotic behavior of members of religious groups, football clubs, nations, among others. When people dress up in group regalia, abide by a group's code of conduct, or cheer for a team or country, they have identified with that social group. Thus, individuals that identity with a group conduct themselves in a manner that is consistent with the identity of the group. Furthermore, people who identify in such a manner with a social group derive a sense of pride and self-esteem from belonging to this group. As such individuals tend to identify more with a group that is prestigious as this enhances their self-esteem. In other words, individuals vicariously enjoy the success and status of the group they identify with. Contrarily, if a team has low prestige, group members are less likely to identify strongly with the group because that will be detrimental to their self-esteem(Ashforth & Mael, 1989).

The third stage in the model is the social comparison stage. This is the tendency to compare groups we identify with to other groups. People have an intrinsic desire to boost their self-esteem and therefore tend to resort to biased comparison to boost it. Because of identification, a person's self-esteem is enhanced when the group they belong to compares favorably with other groups. When two groups perceive themselves as rivals,

they compete not only for resources, but also for their self-esteem, which is enhanced when they do better than the other group.

The social identity theory has been widely used to understand human behavior in groups, conflicts among nations and groups, prejudice and affiliation(Ashforth & Mael, 1989; Guenter et al., 2016; Hogg et al., 2004, 2017; Mael & Ashforth, 2001). For instance, Mael and Ashforth (2001) examined the role of social identification in war, sports, work, and religion. Apart from the benefit of enhanced self-esteem, they posited that individuals identify with these entities because of the desire to belong, the desire to be part of something greater than self (transcendence), as a way of finding purpose and meaning in life, and also as a means of raising aspirations. Among the four entities examined they concluded that for those who believe, religion offers the most benefits for identification as compared to the others. In another study, Ashforth and Mael (1989) examined the theory within the organizational context particularly in the light of organizational socialization, intergroup conflict, and role conflict. They argue that antecedents to organizational identification include: distinctiveness of the group, prestige of the group, awareness of other groups, intergroup competition, and traditional factors (such as similarity, interaction, common goals and interests). Moreover, regarding consequences of this identification within organizations, they indicate that individuals are more likely to choose and support behavior and activities reflective of their group's identity. As such identification enhances support and commitment. Secondly, identification enhances cohesion within the group. Again, individuals that identify with a group tend to internalize the values and norms of the group, finally, the antecedents previously mentioned are reinforced by these consequences.

Of particular interest in this study is the social identification stage of the theory.

According to Guenter et al. (2016), if individuals' perception of group outcomes, such as performance, is favorable, they are more likely to identify with the group. This is because such an association enhances their self-esteem. Because self-esteem is one of the primary benefits of identification, people prefer to identify with successful and/or prestigious groups. When group members identify in such a way with their groups, they tend to feel that their fate is intertwined with the fate of the group (Ashforth & Mael, 1989; Guenter

et al., 2016), and this, in turn, makes them more committed to the group and more willing to work towards the success of the group, often putting in their best for the team (Hirst et al., 2009; Hogg et al., 2017; Somech et al., 2009). Thus, team members that perceive their groups to be performing well more readily identify with such groups, display group-serving behaviors, act more cooperatively and make sacrifices for the group (Guenter et al., 2016; Schaeffner et al., 2015).

Creativity is difficult; it requires effort, and the exercise of cognitive and creative skills. According to Tierney & Farmer (2002), the challenges associated with it necessitate a strong internal drive to persevere in the face of opposition. If group members do not feel committed to the group because they do not identify strongly with it, they are less likely to exert themselves in order to realize creative outcomes (Hon & Lui, 2016). As Ford (1996) indicates, creative behavior in organizations is a choice. Ford's (1996) model of individual creative action argues that individuals are constantly deciding between engaging in creative or routine behavior. Furthermore, these individuals look for cues, both internal and external to determine whether to engage in creative, rather than routine activity. Among other factors, an individual's self-efficacy plays an important role in this decision, such that the higher a person's self-efficacy, the more likely they are to engage in creative behavior. Based on Ford's (1996) work, Tierney and Farmer (2002) developed a model of creative self-efficacy. They define creative self-efficacy as the belief that one is able to produce creative outcomes (pg. 1138). They acknowledge that creative individuals have certain perceptions about themselves that predispose them to creative activity. Findings from their study confirm their arguments as creative efficacy was found to be strongly and positively predictive of creativity.

Following this logic, if group creativity is the desired outcome, team members that perceive their groups to be creative are more likely to identify with that group as it enhances their self-esteem. Moreover, this identification will result in higher creative efficacy. Because they believe they belong to a creative group, they are more likely to display behavior in keeping with this group identity. This is likely to cue to them to choose to behave in ways that will promote creativity within groups. However, if they do not perceive their groups to be creative, regardless what other assessments of group

creativity are, group members are likely to behave in counter-productive ways. Tierney and Farmer (2002) found that creative self-efficacy to be positively and strongly predictive of creativity. On the basis of the social identity theory, Hirst et al. (2009) argued that when group members identify with a group, they are stimulated to exert creative effort. Their findings confirm that group identification is indeed positively related to individual creative effort.

Secondly, within a group, members provide social cues to each other. If an individual engages in creative activity or demonstrates creativity as a result of believing they belong to a creative group, other group members are influenced to adopt similar behaviors in response(Gong et al., 2013). Moreover, creative acts of group members serve to focus the attention of other group members on the creative dimension of their work. Thus, these perceptions of creativity tend to rub off on other group members. Additionally, creative ideas from group members may serve as inputs to the creative performance of other group members. The result is that the shared norms and expectations of creativity serve to increase group creativity. The opposite is also true. If team members do not perceive the group to be creative, they are not likely to engage in creative activity. This, in turn, will cue other group members not to engage in creative activity. Group members are therefore not likely to cooperate with the creative efforts of others. They are also less likely to relate to, much less build on the creative efforts of other team members. This is relatable to the Pygmalion effect (McNatt, 2000) which predicts that positive expectations will yield positive outcomes.

Interestingly, very few studies (Kurtzberg, 2005; Liu et al., 2021) have examined group creativity from the perspective of individual group members. This study therefore adds to the few studies that investigate group creativity from the individual group member perspective. As Jehn (1997) points out, objective or subjective measures used to assess group outcomes often yield different outcomes. Each method provides useful insights that complement the other. Creativity is a complex, multi-faceted construct and examining it from different perspectives is vital for gaining more comprehensive understanding (Anderson et al., 2014; Kurtzberg, 2005).

2.5 Workgroup Diversity

Group diversity refers to the degree to which members of a group differ from each other in subjective or objective terms (van Knippenberg & Schippers, 2007; Weiss, Backmann, Razinskas, & Hoegl, 2018a). It is also defined as the differences in a common attribute that ultimately leads group members to perceive others as different from themselves (Dayan, Ozer, & Almazrouei, 2017). In other words, it is the extent to which group members are similar or dissimilar from each other with regards to a particular attribute.

Diversity has been of increasing concern and interest to both scholars and practitioners for various reasons. Factors such as changing demographic trends, the fight for gender equality and inclusion, freer movement of people from place to place, among others have led to an increasingly diverse workplace (Cunningham, 2009; Dwyer, Richard, & Chadwick, 2003).

Functionally or educationally diverse groups have the potential to bring on board diverse knowledge, skills, knowledge, and abilities which in turn make for rich information processing. Knowledge has been described as a building block for creativity(Gong et al., 2013). Thus, a wider array of information provides relevant cognitive resources for creativity. Organizations have therefore tended towards team-based structures in order to improve creativity and innovation as a means to tapping into varied knowledge and experience (Shalley, 2002).

As a result, both scholars and practitioners have touted the benefits of cross-functional groups for creativity and there is evidence that supports this (Dayan & Benedetto, 2010; Pelled, Ledford, et al., 1999; Sethi, 2000; Sivasubramaniam et al., 2012).

However, the reality facing organizations is that it is not always feasible to design and set up cross-functional groups to tackle all the innovation needs of the organization (Wang et al., 2016). Many workgroups in organizations comprise group members of similar functional and educational background, although group members could differ in other respects. Thus, a considerable amount of research has focused on understanding creativity among workgroups that may not necessarily be diverse in terms of function or education (van Knippenberg & Schippers, 2007). The use of workgroups in different organizational contexts, ranging from health to advertising, has been on the increase (Shalley, 2002).

In the literature, a workgroup is defined as having the following characteristics:

1. Reporting to a common supervisor (Jehn, 1995; Jehn et al., 1999a; Shung J Shin et al., 2012).
2. Being the smallest functional unit within a larger organization (Guillaume et al., 2012; Lee & Yang, 2015; Schippers et al., 2003; Shung J Shin et al., 2012).
3. Identified by themselves and others as forming an interdependent unit (Guillaume et al., 2012; Jehn, 1995; Jehn et al., 1999a; Schippers et al., 2015; Shung J Shin et al., 2012)
4. Working together permanently (Shung J Shin et al., 2012).

Thus, workgroups may or may not be cross-functional and a considerable amount of research has been devoted to understanding workgroups in organizations (Campion & Medsker, 1993; Dragoni & Kuenzi, 2012; Guillaume et al., 2012; Knippenberg et al., 2004; Kozlowski, 2017; Pelled, 1996; Pelled, Ledford, et al., 1999; Van der Vegt & Janssen, 2003; van Knippenberg & Schippers, 2007).

Research also suggests that if members of workgroups think differently or perceive themselves as thinking differently, this has the potential to enhance creativity (Van der Vegt & Janssen, 2003; Wang et al., 2016). Relatedly, earlier research by West (2002) indicates that various factors including diversity in group knowledge and skills are key to group creativity. This difference in thinking, knowledge, skills, and values is referred to as cognitive diversity. Cognitive diversity may result in greater innovation resulting from 'critical and investigative interaction processes in which group members identify, extract, and synthesize their different perspectives" (Amason, 1996, p. 124). According to Van der Vegt & Janssen (2003), an assumption in diversity research is that demographic differences (such as gender, function, age, education, among others) imply cognitive diversity. In other words, demographic diversity is beneficial to group outcomes because it represents differences in knowledge, skills, attitudes and thinking styles (i.e., cognitive diversity) that in turn, enrich information processing. However, demographic differences and cognitive diversity do not always covary perfectly, such that demographic differences do not automatically mean greater cognitive diversity. This also means that group members may be similar in demographic terms but have a high level of cognitive

diversity. Since cognitive diversity appears to be what is key to information processing, this study focuses on cognitive diversity within workgroups. Studies such as Chow, (2018); Olson, Parayitam, & Bao, (2007); Shin et al., (2012) and Wang et al., (2016) confirm the relevance of cognitive diversity to group creativity. However, it is clear from these studies that this desirable impact depends on the presence of other contingent factors.

Ethnic diversity is another diversity attribute that is unavoidable as workplaces become more and more cosmopolitan. The impact of ethnic diversity on group creativity may be either positive or negative depending on other factors. Ethnicity may form a ready basis for categorization, thereby hampering coordination, information sharing and ultimately group outcomes (Joshi & Roh, 2009; Sivasubramaniam et al., 2012). On the other hand, it may also enhance creativity as the resulting diversity in background and culture may provide varying perspectives on issues which may enhance information elaboration and ultimately group creativity (Cox et al., 1991; Enchautegui-de-Jesus et al., 2006). Thus, like cognitive diversity, its impact on group outcomes may depend on the role of moderators and/or mediators.

2.5.1 The Evolution of Workgroup Diversity Research

The focus of diversity research has changed over time because diversity has been commonly described as a double-edged sword (Díaz-García, Gonzalez-Moreno, & Saez-Martinez, 2013; Van Dijk et al. 2012; Weiss, Backmann, Razinskas, & Hoegl, 2018b), spurring creativity and innovation on one hand and yet erecting barriers to collaboration and coordination among group members on the other hand. There are two perspectives, informed by different theories regarding how group diversity affects group processes and outcomes, group member attitudes and subjective well-being (van Knippenberg & Schippers, 2007). They are the social categorization perspective and the information processing/decision making perspective (Van Dijk, Van Engen, & Van Knippenberg, 2012; van Knippenberg, Dreu, & Homan, 2004; van Knippenberg & Mell, 2016).

The information-processing and decision-making perspective indicates that diversity on groups is desirable because the different people bring different perspectives on board making for better informed and more creative decisions (Stasser and Titus, 1985; van

Knippenberg & Schippers, 2007). In other words, the diverse perspectives brought on board helps enhance information elaboration processes which are so critical to group outcomes. According to van Knippenberg et al. (2004), information elaboration within workgroups is defined as involving four key processes: first, information exchange, then individual group members processing the information and perspectives shared, third, these individuals provide feedback and then finally, the group discussing and integrating the feedback thus provided. As such, the more diverse a group is, the wider the range of knowledge, skills, abilities, perspectives, and opinions available to the group and this makes for greater creativity and innovation as well as a better capacity to handle non-routine tasks. This gives diverse groups an advantage over homogeneous groups.

On the other hand, according to the social categorization perspective (Tajfel and Turner, 1986; Turner, 1982), the differences among group members will lead to seeing others as similar or dissimilar to themselves, leading to in-group and outgroup categorization. Members of the in-group tend to see those outside their group in a more negative light and are less likely to relate with them (Earley & Mosakowski, 2000; Mohammed & Angell, 2004). For instance, The study by Earley & Mosakowski (2000) investigated subgroup categorizations within groups having strong fault lines. Findings indicate that a stronger sense of belonging to the subgroups along those fault lines and a weaker common identity as a group. This categorization disrupts group processes, hinders collaboration, and negatively affects creativity and performance (van Knippenberg & Schippers, 2007). Thus, according to this perspective, the more homogeneous group members are, the greater the efficiency of the group, while efficiency diminishes with increasing heterogeneity in groups.

Another perspective that makes a similar prediction about the impact of diversity on outcomes is the similarity/attraction perspective which draws on the theory of homophily (Backmann, Hoegl, & Cordery, 2015; Weiss et al., 2018). This theory indicates that people prefer to work with others similar to themselves, particularly in attitudes and values. Support for this is found in studies such as those by O'Reilly et al. (1989), Wagner et al. (1984) and Murnighan and Conlon (1991) report greater cohesion, lower turnover, and superior performance respectively among more homogeneous groups. This suggests

that conversely, groups with high levels of diversity are likely to be bedeviled with limited collaboration, lower efficiency and ultimately hampered creativity.

Research on group diversity and its effects on outcomes go as far back as circa the 1980s (Weiss et al., 2018a). Early research focused on the direct effects of cross-functional diversity on outcomes, with emphasis on how the interaction of marketing and R&D functions impacted group outcomes (e.g., Chubin, Rossini, Porter, and Mitroff, 1979; Gillespie and Birmbaum, 1980). With increasing diversity within the workforce in terms of age, gender, ethnicity, among others, the focus gradually extended beyond R&D and marketing to include other forms of diversity (van Knippenberg & Mell, 2016; Weiss et al., 2018a). A review of research of this first wave of diversity research was conducted by Williams and O'Reilly (1998). This review reported inconsistent findings regarding the impact of diversity on outcomes (Guillaume et al., 2012; van Knippenberg & Schippers, 2007) and marked the beginning of the departure from main effects research as the bankruptcy of that approach became evident. Subsequently, research began to focus on the role of moderators and mediators in the relationship between group diversity and outcomes (Jehn & Mannix, 2001; Jehn et al., 1999a; Pelled, Eisenhardt, & Xin, 1999a; Schippers et al., 2003; van Knippenberg, Dreu, & Homan, 2004).

In a subsequent review of group diversity research from 1997-2005, Van Knippenberg and Schippers (2007) note that research since the Williams and O'Reilly (1998) review has focused more on the role of moderators and mediators with findings confirming that these boundary conditions play an important role in determining the impact of diversity on outcomes (Harrison, Price, Gavin, & Florey, 2002; Jehn & Mannix, 2001; Jehn et al., 1999a; Mohammed & Angell, 2004; Pelled, Eisenhardt, et al., 1999a; Schippers et al., 2003; van Knippenberg et al., 2004). This review introduced the Categorization Elaboration Model (CEM), a model that has been described as the most comprehensive model of moderators and mediators in the diversity-outcomes relationship (Guillaume et al., 2015; van Knippenberg & Mell, 2016). According to this model, both the information processing and social categorization perspectives on diversity are valid but too simplistic when examined without taking into consideration the role of contingent factors. The CEM argues that all types of diversity have the capacity to engender social categorization as

well as information processing effects which interact with each other and that the ultimate impact on outcomes depends on moderating and mediating factors. Moderators in this model cause diversity to lead to positive or negative effects by making demographic diversity attributes more salient; engendering or preventing inter group bias; or enhancing or undermining information elaboration. This review also highlights the need for more complex conceptualizations of diversity as well as the need for more research into the underlying processes in the relationship between diversity and group processes.

Yet another meta-analytic review was conducted by Joshi and Roh (2009) covering 8, 757 groups from 39 studies from 1992-2008, a time span wider than the review by van Knippenberg and Schippers (2007). This review however focused on the role of context in workgroup diversity research. This review classified diversity into two namely relations-oriented diversity and task-oriented diversity. Relations oriented diversity attributes are defined as being readily recognizable and typically associated with social categorization processes. Examples include gender, age, and ethnicity, while task-oriented diversity attributes refer to skill based and informational differences among group members such as education, function, and tenure. The review examined the impact of these two categories of diversity on group performance given the moderating influence of these contextual factors: industry, occupation, and group level factors (group type and group interdependence). Preliminary tests of the main effects of these diversity attributes on performance yielded non-significant, near-zero effects, corroborating earlier conclusions (such as the one by the Williams and O'Reilly, (1998) review) about the insufficiency of the direct effects approaches in diversity research. Findings also indicated a weak but significant negative relationship between relations-oriented diversity and performance, while a weak, but significant positive relationship was found between task-oriented diversity and performance. Interestingly, these effects doubled or tripled when the moderating influences of industry, occupation and group level factors were considered. In all, this review provides additional support for the importance of considering the role of boundary conditions in determining the impact of diversity on outcomes. It also shows that the classification of diversity typologies is limited in predicting the outcome of diversity on outcomes, a conclusion consistent with the van Knippenberg and Schippers (2007) review.

Similarly, the next significant review was by Guillaume et al. (2015) also conducted another review which also focuses on the role of moderators in the diversity-performance link. Building on the CEM(van Knippenberg & Schippers, 2007), this review considered the following moderators: strategy, unit design, HR practices, climate and culture, leadership individual differences in the diversity-outcomes relationship. In terms of outcome, they consider these three outcome categories: social integration outcomes, such as conflict, cohesion, and attachment; performance related outcomes including organizational performance and workgroup innovation; and employee well-being variables such as in-role and extra-role performance. This review also classified diversity on three levels namely relational diversity, workgroup diversity and organizational diversity. Findings suggest that the aforementioned moderator variables indeed determine whether diversity is beneficial to each of these outcomes. They recommend that further research examine interrelationships among these moderating variables.

A more recent review is the one by Van Knippenberg and Mell (2016) built on earlier reviews by Williams and O'Reilly (1998), van Knippenberg and Schippers (2007) and Guillaume et al. (2015). The authors categorize diversity into three forms, namely trait, state, and emergent diversity. Trait diversity is defined as differences among group members with regards to stable characteristics such as gender. State diversity also refers to differences in malleable group member characteristics that are not determined by the group or group processes. An example is preference diversity. Finally, emergent diversity is defined as referring to differences in psychological states and group processes determined in reference to the group such as diversity of group cognition. Guillaume et al. (2015) also argue that consistent with the CEM, each of these may be beneficial or otherwise to group outcomes depending on the role of moderators/mediators. In order to advance the field of diversity research, they propose that future research integrate trait diversity research with state diversity research. Additionally, they also call for research integrating compositional diversity research with emergent diversity research. They posit that these steps are key to advancing research in the field.

Another theme that is evident across these reviews is the attempt to classify diversity into typologies in a bid to predict when diversity is beneficial and when it is not (Joshi & Roh, 2009; Pelled, Eisenhardt, et al., 1999b; Weiss et al., 2018b).

In a bid to clarify when diversity is beneficial and when it is not, certain scholars have argued that there are different forms of diversity and that some of these forms may be more likely to have categorization effects on group outcomes while others will more probably have desirable information processing effects on outcomes (Pelled, 1996; van Knippenberg & Mell, 2016; Weiss et al., 2018b). By far, the most popular is the one by Pelled et al (1999), and this is discussed below.

2.5.2 Diversity Typologies

Group members can differ from each other in a variety of ways, and it is reasonable to posit that the different diversity types will in turn have different impacts on innovation group outcomes (Weiss et al., 2018b). In a bid to explain the disparate findings regarding the impact of diversity on performance, some scholars have classified the various diversity types into categories. The rationale for these classifications is to better predict which diversity attributes are beneficial for organizational outcomes and those which are not.

Pelled (1996) proposed a model that classifies demographic diversity attributes such as age, gender, education, function using the degree of visibility and job relatedness. She describes visibility and job relatedness as 'the extent to which the variable is easily observed by group members, and job relatedness is the extent to which the variable directly shapes perspective and skills related to cognitive tasks' (p. 615). Job related attributes include educational diversity and functional diversity, while job-unrelated diversity attributes refer to factors such as age, gender, nationality, race, and other readily perceived attributes (van Knippenberg & Schippers, 2007).

In terms of visibility, diversity could be surface-level or deep-level. Surface level diversity attributes are more readily perceived than deep level diversity attributes that can only be perceived over time and with interaction. Surface level diversity attributes include age, nationality, ethnicity, and gender, while deep-level diversity attributes have also included personality, values, and attitudes (van Knippenberg & Schippers, 2007).

This categorization has been widely used in other studies (e.g., Weiss et al., 2018). In a review of diversity literature in the Journal of Product Innovation Management, Weiss et al. 2018 adapt this classification and extend it beyond only demographic diversity to include geographic distance, personality, personal values, background, organizational affiliation, cognitive diversity, and interaction styles. For each of the aforementioned diversity types, distinction is first made between job related and job unrelated diversity attributes. Subsequently, they further distinguish between surface-level and deep-level diversity attributes.

Previous research has established that job related diversity attributes such as function and education are more likely to lead to more information processing effects, while nonjob related diversity attributes may have undesirable categorization effects on outcomes (van Knippenberg & Mell, 2016; Weiss et al., 2018b). The reasoning behind this is that diversity is valuable in so far as it represents informational diversity (van Knippenberg et al., 2004). Although both job related diversity and non-job-related diversity attributes are associated with diversity of knowledge, non-job-related attributes tend to be linked with information that is linked to group specific experiences and cultural perspectives, while job related diversity attributes usually yield more task related information (Van Dijk et al., 2012). This is because job related diversity attributes tend to yield knowledge and perspectives gained through formal education, work experience or training.

Moreover, even though surface level attributes like age, gender and nationality may be associated with a degree of informational differences, this is not as pronounced as it is in the case of deeper level diversity attributes like function and education (Dayan et al., 2017; Pelled, Eisenhardt, & Xin, 1999). Additionally, surface level and job non-related diversity attributes are typically more likely to engender undesirable stereotypical thinking (van Knippenberg et al., 2004) compromising group process and output.

See table below for summary:

Table 2.1
Diversity Typologies Explained

Diversity typology	Meaning	Examples	Expected impact on group outcomes	Theoretical basis
Job related diversity	Job relatedness is the extent to which the variable directly shapes perspective and skills related to cognitive tasks' (Pelled, 1996, p. 615)	Functional diversity, educational diversity	Enhance job performance, innovation, and creativity	Information processing is likely to be strengthened because these differences related to differences in more task-relevant knowledge, skills, and information
Job non-related diversity		Age, gender, ethnicity,	To have little or no impact on job-related outcomes as differences do not represent information differences.	Information processing is likely to be weakened because group differences have no bearing on work tasks
Surface level diversity	Readily perceptible differences among group members	Gender, race, age, ethnicity.	Expected to hamper social cohesion and increase turnover due to greater categorization effects. Additionally, these differences do not enhance information processing as they are not usually associated with job related knowledge, skills, and information.	Social categorization effects are stronger as group members are likely to classify themselves versus other based on such differences. Typically associated with prejudices and bias
Deep level diversity	Differences that become evident after some interaction	Cognitive diversity, personality, values, and attitudinal differences	These are expected to enhance information processing since such factors as cognition, personality and values are associated with information and thinking styles.	Social categorization is expected to be weaker since these differences are not readily perceptible and therefore cannot be used as a ready basis for categorization.

Thus, the self-categorization and the similarity attraction argument is more relevant to non-job related and surface level diversity attributes, while the information processing perspective applies more to job-related, deep level diversity attributes.

The reviews discussed earlier show that these classifications may not be reliable in predicting the impact of diversity on outcomes. According to van Knippenberg and Schippers (2007),

'an important conclusion to emerge from the current state of the art is that, contrary to what seems popular belief, the positive versus the negative effects of diversity are not associated with job-related informational diversity versus less job-related demographic diversity, neither for group performance nor for more affective/evaluative responses to the group' (pg. 520).

This argument is corroborated by subsequent reviews such as Joshi and Roh (2009); Guillaume et al., 2015; van Knippenberg & Mell, (2016). Instead, mediators and moderators determine the impact of diversity on outcomes, regardless the type. This conclusion is the chief argument of the Categorization Elaboration Model (CEM) introduced by van Knippenberg et al. (2004).

2.5.3 The Categorization Elaboration Model

The Categorization Elaboration Model (CEM) was introduced by van Knippenberg et al., (2004) in an attempt to provide an integrative framework for workgroup diversity. The CEM defines diversity as any perceived differences among individuals that leads a person to believe that they are different from one another. This model integrates both the social categorization and information processing perspectives on diversity and argues that any type of diversity is capable of engendering both categorization and information processing effects (Guillaume et al., 2015; Knippenberg et al., 2004). In other words, no diversity attribute can be consistently attributed to positive or negative outcomes. Thus, diversity can lead to desirable outcomes due to enhanced information processing and it can equally hinder integration, performance, and other desirable outcomes due to social categorization processes. As such, they call for scholars to abandon attempts to link specific types of diversity to positive or negative outcomes and indicate that all types of diversity may have positive as well as negative effects on outcomes. They further argue

that the extent to which diversity will yield positive or negative outcomes depends on three types of factors: a. factors that encourage/prevent intergroup bias, b. factors that make demographic differences less salient, and c. factors that enhance information elaboration (Knippenberg et al., 2004). Although originally designed for workgroups, the model has been successfully used as a theoretical lens for other levels of analysis in diversity research (Adamovic, 2020; Cooper et al., 2014; Guillaume et al., 2015; Pieterse et al., 2013). It has proven to be a more robust model for explaining the differing impact of diversity on outcomes (Guillaume et al., 2015).

2.5.4 Diversity and Conflict

An important component in the diversity-creativity relationship is the role of mediators. Van Knippenberg and Schippers (2007) stress the importance of investigating mediating variables in the diversity-outcomes relationship. They argue that 'another major impediment to the advancement of the field is a tendency to assume rather than assess mediating processes' (pg. 519). West (2002) indicates that diversity is a powerful antecedent of innovation within workgroups but points out that in order for this potential to be realized, processes that foster integration are key.

Intra-group conflict has been commonly mentioned as being an important process that translates diversity into outcomes (Jehn et al., 1999b; Pelled, 1996; Pelled, Eisenhardt, et al., 1999b). It is defined as the process due to the tension produced among group members because of real or perceived differences (De Dreu & Weingart, 2003). In a bid to look into the black box between diversity and outcomes, several studies have examined the mediating role of conflict (Jehn et al. 1999; Jehn and Mannix, 2001; Olson, 2007; Pelled, 1996; Pelled, Eisenhardt, & Xin, 1999) which has been described as a robust mediator between diversity and outcomes (Mohammed & Angell, 2004).

Traditionally, conflict has been conceptualized as unidimensional and undesirable for outcomes (De Dreu et al., 2000; Pelled, 1996). Social categorization effects of diversity frequently suggest that diversity leads to conflict which in turn hampers outcomes (van Knippenberg & Schippers, 2007; Weiss et al., 2018b). This is because, the social identity (Tajfel, 1978; Tajfel and Turner, 1979) and self-categorization theories (Turner, 1982) suggest that diversity leads people to view others different from themselves in more unfavorable terms and are less likely to collaborate with such others. This tendency

appears to be more pronounced with demographic diversity attributes such as ethnicity. This is because these attributes are more readily observable and form a ready basis for prejudices and stereotypes. Some studies reflect this perception of conflict (Saavedra, Earley, & Van Dyne, 1993; Gladstein, 1984; Wall & Nolan, 1986).

The study by Saavedra, Earley, & Van Dyne (1993) for instance, examined the impact of complex group interdependence on performance mediated by conflict in a sample of 118 workgroups. Conflict was conceptualized as a unidimensional construct having negative consequences for group performance. Findings indicated a partial mediating role of intragroup conflict in the relationship between complex interdependence and performance.

However, researchers began to observe that certain levels of conflict were beneficial to outcomes, forcing group members to consider factors they would otherwise overlook (Coser, 1956; Deutsch, 1973; Walton, 1969). This is especially crucial for creative outcomes since conflict promotes greater exchange of information, better analysis of the group task and questioning the status quo (Farh et al., 2010). These, in turn, enhance the production of creative outcomes. Accordingly, conflict has thus been conceptualized as having two dimensions, one functional and the other dysfunctional (Amason, 1996; Eisenhardt, Kahwajy, & Bourgeois, 1997; Guetzkow and Gyr, 1954; Jehn et al. 1999).

In a study among two samples of top management groups, Amason theorized based on past research that conflict has more than one dimension. He observed that one dimension of conflict enhances quality of decision making while another dimension results in reduced affective acceptance and consensus and that somehow these two dimensions, along with their attendant effects, seemed to occur simultaneously. He therefore sought to resolve the paradox surrounding conflict.

He noted that one dimension of conflict is functional while the other is dysfunctional. He argued that functional conflict, which was labeled as cognitive conflict, is task oriented and focuses on how best to achieve intended objectives. During cognitive conflict, various perspectives are synthesized making for richer output as compared to an individual perspective. Additionally, Amason argued that cognitive conflict should enhance commitment and understanding among group members. Commitment is enhanced because group members are more likely to feel a sense of ownership of

decisions in which they have had a say. Understanding is also improved because cognitive conflict involves a thorough evaluation of diverse viewpoints. Dysfunctional conflict (labeled affective conflict) on the other hand, tends to be emotional and personal and often results in offence, avoidance, and hostility. Ultimately, affective conflict has a negative impact on decision quality, consensus, and affective acceptance. Hypotheses emanating from these arguments were tested on two samples and findings largely supported these arguments.

The study by Jehn et al. (1999) sought to examine the impact of diversity on group performance mediated by group conflict. The moderating impact of task type and task interdependence were also considered. They indicated that functional (task-related) conflict can be divided into two types; debates regarding what is to be done and those pertaining to how to do what is to be done. They labeled debates regarding what is to be done task conflict and those regarding how it is to be done process conflicts. Dysfunctional conflict was labeled relationship conflict. Thus, they examined the mediating role of three types of conflict in their study, namely task conflict, relationship conflict and process conflict in the relationship between diversity and group performance. Their hypotheses were largely supported by findings confirming the mediating role of conflict in the diversity-performance relationship.

As a two-dimensional mediating construct, conflict has greater explanatory power than other uni-dimensional mediators with regards to the processes through which diversity translates into outcomes. According to Pelled (1996), 'conflict has an advantage over previous intervening process explanations that cannot account for the mixture of outcomes associated with workgroup diversity (Pg. 619). Having both a functional and a dysfunctional dimension give conflict this advantage (Amason, 1996; DeGeest & Kristof-Brown, 2017; Farh et al., 2010; Pelled, 1996; Torchia et al., 2015).

Functional conflict tends to be task oriented, involving disagreement on task related issues such as objectives, procedures and appropriate courses of action (Amason, 1996; Pelled, Eisenhardt, et al., 1999b). It is essentially conflict regarding how best to achieve desired ends. It has also been referred to as substantive conflict (Guetzkow and Gyr, 1954;Eisenhardt, Kahwajy, & Bourgeois, 1997; Pelled et al. 1999), cognitive conflict

(Amason, 1996) and task conflict (Jehn et al., 1999b). It entails debate which forces group members to gain a deeper understanding of issues in order to develop the most appropriate solutions (Atuahene-Gima & Murray, 2004).

Functional conflict has been found to enhance performance at both group and individual levels, decision quality, understanding of decisions as well as affective acceptance in groups (Amason, 1996; Pelled, Eisenhardt, et al., 1999b; Tidd et al., 2004). It also enhances information elaboration – the thorough evaluation of alternatives' underlying assumptions and improves understanding of the task requirements (De Dreu & Weingart, 2003; Simons & Peterson, 2000). This, in turn, is likely to enhance creativity.

Dysfunctional conflict on the other hand, also known as emotional conflict (Jehn et al., 1999b), affective conflict (Guetzkow and Gyr, 1954; Amason, 1996), relationship conflict (Jehn, 1995; Mohammed & Angell, 2004; Tekleab & Quigley, 2014) or interpersonal conflict (Eisenhardt et al., 1997), refers to disagreements among group members often revolving around personal differences and often characterized by personal attacks, frustration, tension, anger, among other negative feelings (Amason, 1996; Mohammed & Angell, 2004; Pelled, Ledford, et al., 1999). This type of conflict distracts group members from their tasks, increases dissatisfaction with the group and increases the likelihood of turnover (Tekleab & Quigley, 2014). It also interferes with effective information processing and is therefore likely to hamper creativity (De Dreu & Weingart, 2003; Simons & Peterson, 2000).

Following Pelled (1999), this study will refer to functional conflict as task conflict. It will also refer to dysfunctional conflict as affective conflict following Amason (1996). Moreover, this study focuses on how cognitive and ethnic diversity might affect these two types of conflict and how these two types of conflict will in turn, influence group creativity.

2.6 Moderating Role of Goal Orientations

As earlier mentioned, due to the persistently inconsistent findings regarding the impact of diversity on organizational outcomes, the focus of research shifted onto the role of moderators and mediators in the diversity-performance relationship (Dayan et al., 2017; van Knippenberg & Schippers, 2007). Van Knippenberg et al. (2007) report that the various types of diversity can have either positive or negative effects, but this is largely

determined by the situational and informational factors. They indicate that these contingency variables fall into one of three categories: factors that promote or diminish intergroup bias, factors that emphasize demographic differences and finally, factors that facilitate or hamper information exchange and elaboration. Motivational factors like group member goal orientations may promote or diminish intergroup bias as well as facilitate or hamper information exchange and elaboration.

Individual group member characteristics may influence how diversity affects creativity because creativity requires an interactional approach (Shin et al. 2012; Guillaume et al., 2015). Mumford and Gustafsson (1988) have therefore argued that creativity results from motivational and cognitive processes. Individuals in a group react to diversity differently and their personal motivations (goal orientations) may influence how they interact with others different from themselves (Guillaume et al., 2015). In other words, group processes through which diversity translates into creativity may be influenced by these group member characteristics. Shin et al. (2012) have therefore called for research investigating the role of motivational factors in the diversity-creativity relationship (pg. 208).

2.7 Motivated Information Processing Theory and The Sensemaking Theory

According to Ford (1996), individuals are constantly engaged in sense-making processes of their environment to determine whether to adopt creative or routine behavior. Corroborating this, Chaiken and Trope (1999) also posit that people choose between using information and associations familiar to them to process information in a non-critical, superficial way or expending effort to critically evaluate information to arrive at decisions supported by sound arguments (Chaiken and Trope, 1999). In other words, people constantly choose whether they are willing to expend the effort and discomfort to properly process divergent information or to stick with the known and familiar.

The Motivated Information Processing Theory by De Dreu, Koole, & Steinel, (2000) argues that the personal motivation (arising from individual differences or situational cues) of group members will determine whether group members expend effort in in-depth and systematic information processing. In other words, the willingness to expend effort in order to engage in systematic information processing depends on one's personal motivation (De Dreu et al., 2000; Lee & Yang, 2015). This motivation, the theory argues,

may be driven by personal implications as well as situational cues (Lee & Yang, 2015). Earlier studies employing this theory focused on the impact of social motivation in negotiation, particularly with regards to the willingness to exchange information (Carnevale & Probst, 1998; De Dreu & Boles, 1998; De Dreu et al., 1999; Gelfand & Christako-poulou, 1999). More specifically, the focus was on how the perception of negotiation task by negotiators with prosocial versus individualistic motivation influenced information exchange and ultimate conclusions. Extending this line of research, De Dreu et al. (2000) examined the role of non-directional motivation in the negotiation process. They argued that negotiators, motivated by process accountability will engage in more systematic and thorough information processing resulting in more integrative agreements. The results of their experiments corroborate this. The impact of goal orientations on outcomes has also been investigated using this theoretical lens. While goal orientations have been found in previous studies to influence both individual and group creativity (Gong et al., 2013; Lee & Yang, 2015), the process through which this occurs has not been clarified in the literature. An exception to this is the study by Lee and Yang (2015) which examined the role of work unit goal orientation as a motivational factor influencing employee willingness to engage in information elaboration, which would in turn lead to creativity. Their findings confirm that goal orientations play a significant moderating role in this relationship and lend support to the relevance of the motivated information processing theory in information processing. As earlier discussed, intra-group conflict is an important mediator in the diversity-outcomes relationship and studies have shown that the type of conflict resulting from diversity may either promote or hinder creativity. However, little is known about how personal motivations may influence the type of conflict that mediates between diversity and creativity. Mumford and Gustafsson (1988) report that motivation is key to creativity. Amabile (1996) also highlights the importance of motivation to creativity processes. Indeed, personal motivation may determine the extent to which group members are willing to share information that is different and also the willingness to thoroughly elaborate on information from others that may be foreign. This shows how personal motivation may influence group processes. Moreover, personal motivations may determine the willingness to concede one's preconceived ideas and previously held notions and

assumptions about how things are and ought to be in favor of new information (Shin et al., 2012). In other words, one's goal orientations may influence one's cognitive flexibility.

Conscious effort and some discomforts are thus price to pay to keep conflicts functional as group members painstakingly explore and elaborate on new or different information from others different from themselves. On the other hand, dysfunctional conflicts are the likely result when group members insist on what they already know, refusing to understand and explore the alternative viewpoints that others may have. This shallow, non-critical way of processing information is likely to be perceived as intolerance and disdain for the views of others that are different from one's own, and is thus likely to fuel affective conflict (Simons & Peterson, 2000).

This study argues that a person's goal orientation may influence the sense-making process and determine whether group members view the diversity in their groups as opportunities to learn and improve or as threats that force them to stick with the known and routine. If they perceive diversity to be an opportunity for creative behavior, they are likely to engage more in functional conflict than dysfunctional conflict as they respectfully explore underlying assumptions of ideas generated. On the other hand, if their goal orientations influence them to see diversity as a threat, they are more likely to want to stick to the known and routine and may be close minded to differing views leading to an unwillingness to elaborate on information. Such an entrenched attitude is likely to fuel affective conflict.

This study extends preceding studies by providing novel applications of the Motivated Information Processing theory in the diversity, conflict, and creativity literature. Specifically, this study theorizes and tests how group member goal orientations interact with diversity to influence group creativity through group conflict.

This argument is also in keeping with the key tenets of the Categorization Elaboration Model mentioned earlier, as it argues that the impact of diversity on outcomes depends on key moderating and mediating factors(van Knippenberg et al., 2004). Thus, this study argues that the goal orientations of group members, which is a motivational factor will determine the nature and degree of conflict members of diverse workgroups will engage

in as their contrasting perspectives and viewpoints become evident. Goal orientations may influence whether the conflict diverse group members engage in is functional or dysfunctional.

2.7.1 Goal Orientation Types

As earlier indicated, goal orientations refer to the individual goal preferences of individuals in achievement settings that influence their actions and reactions (Dweck, 1986; Dweck & Leggett, 1988; Pieterse et al., 2013). Goal orientations were first introduced in the child psychology literature by Dweck (1986). She classified these orientations into two broad categories, namely the Learning and the Performance goal orientations. Individuals with a learning goal orientation 'seek to increase their competence, to understand or master something new', while those with a performance orientation 'seek to gain favorable judgments of their competence or avoid negative judgments of their competence' (Dweck, 1986, p. 1040). The learning goal orientation is rooted in the incremental theory, which posits that one's ability can be developed through effort. It also believes that effort is key to successful task performance (Dweck, 1986; VandeWalle et al., 2001). The performance goal orientation on the other hand is associated with the entity theory, which believes that ability is fixed, and that performance depends on having the requisite inherent ability. The perception that ability is difficult to develop leads to viewing effort as inconsequential to task performance. In fact, exerting effort is viewed as evidence of lack of ability since one would not need to try so hard if one were competent enough (Dweck, 1986; VandeWalle et al., 2001). These two broad classifications have subsequently been further subdivided into four, namely the learning approach orientation, the learning avoidance orientation, the performance approach orientation and the performance avoidance orientations (Elliot & McGregor, 2001; Pieterse et al., 2013).

According to Pieterse et al. (2013), the learning approach orientation focuses on improving upon one's knowledge and competence or on mastering a certain task. Performance is evaluated based on an absolute standard or self-improvement. They go on to describe the learning avoidance orientation as focusing on avoiding the loss of knowledge, expertise or skill gained. However, just like the learning approach orientation, performance evaluation is based on either a self-referent or absolute norm. Both the

performance approach and avoidance orientations evaluate performance as it compares with that of others. Demonstrating competence and doing better than others is the focus of the performance approach orientation, while the performance avoidance orientation strives to avoid appearing incompetent; looking worse than others (Pieterse et al., 2013; VandeWalle et al., 2001).

Most studies have examined three dimensions of the goal orientations, namely the learning goal orientation, the performance approach and the performance avoidance orientations, and have not distinguished between the learning approach and learning avoidance goal orientations (eg. Dierdorff & Ellington, 2012; Gong et al., 2013; Lee & Yang, 2015) and have used a measure that resembles the learning approach orientation (Pieterse et al., 2013). This reflects the popular assumption that a learning orientation has an approach form of regulation (Elliot & McGregor, 2001). The performance approach and avoidance orientations have however been commonly conceptualized and measured separately, making a total of three goal orientations commonly used in the literature (Dierdorff & Ellington, 2012; Gong et al., 2013; Lee & Yang, 2015; VandeWalle et al., 2001).

Thus, there is very little empirical evidence for the impact of the learning avoidance orientation (Cellar et al., 2011; Elliot & McGregor, 2001).

See Table 2.3 below for a summary of the four goal orientations:

Table 2.2

Goal Orientations Explained

Goal Orientation	Definition/Key Tenet	Underpinning Theory	Previous Studies
Learning Approach	Individuals with a learning approach goal orientation seek to improve themselves in terms of knowledge and skill (Dweck, 1986; VandeWalle et al., 2001)	Incremental Theory – the belief that knowledge and ability are incremental and therefore can be improved	(Payne et al., 2007; Pieterse et al., 2013; VandeWalle et al., 2001; VandeWalle & Cummings, 1997)
Learning Avoidance	The Learning Avoidance goal orientation is concerned with avoiding the loss of what one has learned.	Incremental Theory	(Baranik et al., 2010, 2013; Elliot & McGregor, 2001; Hulleman et al., 2010)
Performance Approach	Performance approach goal-oriented individuals seek positive appraisals from others to affirm their self-conceptions of superiority	Entity theory – knowledge is fixed and cannot be significantly improved.	(Cellar et al., 2011; Dierdorff & Ellington, 2012; Hulleman et al., 2010; Janssen & Prins, 2007; Payne et al., 2007)
Performance Avoidance	The focus of the performance avoid orientation is to avoid a negative evaluation from others. Thus, individuals with a high-performance avoidance orientation are concerned with avoiding mistakes and criticism.	Entity theory	(Cellar et al., 2011; Elliot & McGregor, 2001; Gong et al., 2013; Payne et al., 2007; VandeWalle & Cummings, 1997)

Table 2. 3 below summarizes the previously discussed theories that underpin the proposed conceptual model including the information processing theory, social categorization theory, the CEM, Homophily theory, similarity-attraction theory, sense-making theory, and the motivated information processing theory.

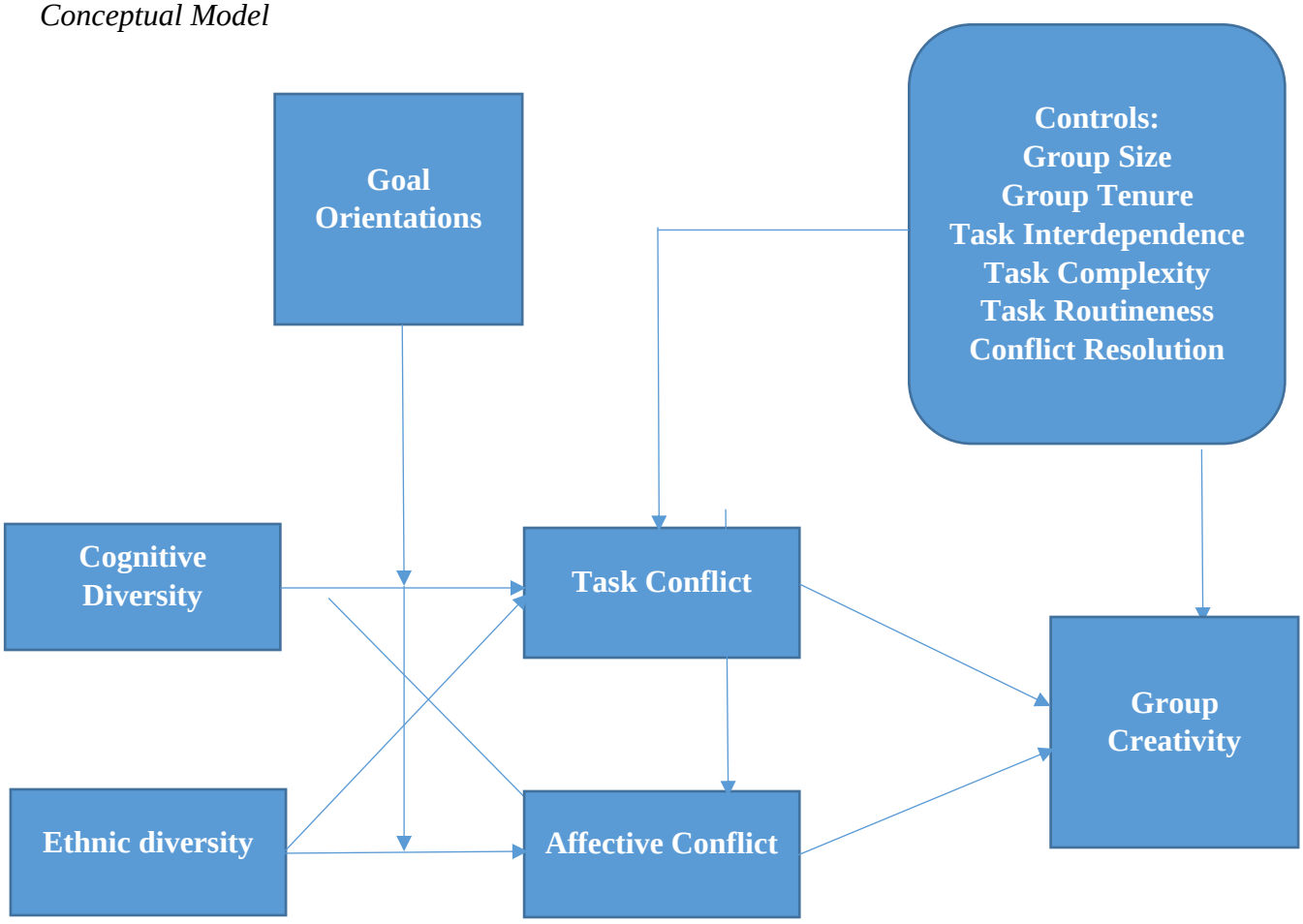
Table 2.3

Summary of Theories Underpinning Conceptual Model

Theory	Scholars	Basic tenets	Relationships in Conceptual Model
Information processing Theory	Stasser and Titus, 1985; van Knippenberg & Schippers, 2007	Diversity on groups is desirable because the different people bring different perspectives on board making for better informed and more creative decisions	Cognitive/Ethnic Diversity – Task Conflict Task Conflict – Group creativity
Social Categorization theory	Tajfel and Turner, 1986; Turner, 1982; van Knippenberg & Schippers, 2007	The differences among group members will lead to seeing others as similar or dissimilar to themselves, leading to in-group and outgroup categorization. Members of the in-group tend to see those outside their group in a more negative light and are less likely to relate with them. This categorization disrupts group processes, hinders collaboration, and negatively affects creativity and performance	Cognitive/Ethnic diversity – affective conflict Affective conflict – Group creativity
Categorization Elaboration Model	(Guillaume et al., 2015; Van Knippenberg et al., 2004)	Diversity may have both positive or negative impact on outcomes. It is therefore important to investigate the role of moderators and mediators.	Cognitive Diversity – Task and Affective Conflict. Moderating role of the goal orientations.
Homophily theory	Backmann, Hoegl, & Cordery, 2015; Weiss et al., 2018	People prefer to work with others similar to themselves, particularly in attitudes and values. Thus, groups with high levels of diversity are likely to be bedeviled with limited collaboration, lower efficiency and ultimately hampered creativity as a result of emotional/dysfunctional conflict.	Cognitive/Ethnic diversity-affective conflict Affective conflict – group creativity
Similarity-attraction theory	Byrne, 1971; Tekleab & Quigley, 2014	People prefer to interact with others similar to them in terms of values, preferences, and beliefs	Cognitive/Ethnic diversity-affective conflict Affective conflict – group creativity
Sense-making theory	Ford (1996)	Individuals are constantly engaged in sense-making processes of their environment to determine whether to adopt creative or routine behavior.	Goal orientations moderating the relationship between diversity and conflict
Motivated Information Processing theory	De Dreu, Koole, & Steinel, (2000)	The personal motivation (arising from individual differences or situational cues) of group members will determine whether group members expend effort in in-depth and systematic information processing.	Goal orientations moderating the relationship between diversity and conflict

Based on the foregoing discussion, the following conceptual model is proposed and subsequently discussed.

Fig. 2.1
Conceptual Model



2.8 Control Variables:

This study controls for the following six factors after reviewing the literature:

Group size – Group size is to be controlled for because the larger the size, the greater the chances for diversity. Moreover, it may influence the reactions of individual group members, decision processes and affect outcomes. Group size is therefore controlled for following the examples of Jehn (1995), Simons et al. (1999) and Wang et al. (2016).

Group tenure – How long group members have worked together – is also to be controlled for since this may affect group interactions and outcomes. This follows the example of Pelled, Eisenhardt, & Xin (1999) and Wang et al. (2016).

Task interdependence – The degree of interdependence might influence interaction and creativity. Thus, task interdependence was controlled for following the example of Jehn, Northcraft, & Neale (1999), Shin et al. (2012).

Task routineness – Whether tasks are often routine or not might influence group interactions and performance (Jehn, 1995; Pelled et al., 1999).

Educational level – The level of education might influence the level of creativity particularly with regards to domain expertise. Thus, educational level was controlled for following Shin et al. (2012).

Conflict resolution – The extent to which members feel conflicts have been resolved may also influence reactions and interactions within the group (Jehn, 1995).

2. 9 Hypotheses Discussions

Given that the CEM is the key theoretical lens for the proposed conceptual model means that both cognitive and ethnic diversity are expected to simultaneously lead to both task and affective conflict for the same theoretical reasons. As such, the direct and moderated arguments are likely to be repetitive if separated. Therefore, the arguments for both cognitive and ethnic diversity in direct and moderated relationships are discussed together and presented below:

2.9.1 Cognitive/Ethnic Diversity and Task Conflict

Cognitive diversity is defined by Shin et al. (2012, p. 197) as the 'perceived differences in thinking styles, knowledge, skills, values and beliefs among individual group members. Cognitive diversity is often, though not entirely, as a result of functional diversity (Shin et al., 2012), and may also arise from differences in education and experiences. Ethnic diversity refers to the representation of diverse ethnic groups within a group.

According to the information processing perspective, diversity (in this case, both ethnic and cognitive) makes available diverse opinions, perspectives and information that enhance information elaboration(Guillaume et al., 2015; van Knippenberg et al., 2004). For cognitive diversity, these differences in function, education or expertise are likely to result in different perceptions and opinions with regards to the task at hand and this increases the likelihood of debates and deliberations with regards to the task at hand. Even ethnic diversity, which has been traditionally treated as predictive of only categorization processes (Joshi & Roh, 2009; Sivasubramaniam et al., 2012), may also be associated with information elaboration processes. Ethnicity is associated with culture, background, and upbringing and these play a critical role in shaping one's perspective and worldview. As such, diversity in terms of ethnicity may also provide varying perspectives on issues that may ultimately enhance information processing(Cox et al., 1991; Enchautegui-de-Jesus et al., 2006). Relatedly, Stahl et al. (2010) also argued that one's culture, which emanates from ethnicity, is so deeply associated with one's perspective and cognitive framework that diversity in that regard brings on board varying sources and means of information processing to a group.

Moreover, apart from the heterogeneity of information and expertise available within diverse groups, the relatively wider social network of such groups also increases access to new information which could also enrich information elaboration (van Knippenberg et al., 2004; West, 2002).

The result is that such diversity of information is likely to lead to task conflict as team members are challenged to engage in more extensive information elaboration as they process varied task-relevant information.

The study by Chen et al. (2019) argued for and found a positive relationship between cognitive diversity and task reflexivity (defined as the elaboration of task-related information). Additionally, findings from the study by Olson et al. (2007) confirm that cognitive diversity drives task conflict. Similarly, Pieterse et al. (2013) found that cultural diversity enhances information elaboration among teams.

It is therefore hypothesized that:

H1: Cognitive diversity is positively related with task conflict.

H2: Ethnic diversity is positively related to task conflict

2.9.2 Cognitive/Ethnic Diversity and Affective Conflict

Diversity may also provide a ready basis for group members to categorize themselves and others (Guillaume et al., 2015; Mohammed & Angell, 2004; Stahl et al., 2010; van Knippenberg et al., 2004). The social categorization perspective posits that group members tend to categorize themselves into subgroups and tend to view others dissimilar from them as belonging to the 'out-group' (Tajfel and Turner, 1986; Turner, 1982). This sub-group classification causes group members to have a more favorable perception of others within the same subgroup and to perceive themselves as superior to other subgroups (Pelled, 1996). This intergroup bias has been associated with weaker group cohesion, lowered group identification, higher turnover, among others (van Knippenberg et al., 2004).

The similarity-attraction theory (Byrne, 1971) also suggests that homogeneous groups are more likely to cooperate with each other than those that are heterogeneous. According to this theory, people prefer to interact with others similar to them in terms of values, preferences and beliefs (Byrne, 1971; Tekleab & Quigley, 2014). A potential result is that group members are more likely to be open to views from those they perceive as being similar to them and more antagonistic to those they classify as being in the outgroup(Joshi & Roh, 2009; van Knippenberg et al., 2004).

Together, these theories predict that group members are likely to be defensive against and less likely to cooperate with other group members they perceive as different from themselves. This fosters unfriendliness and anxiety which is likely to fuel dysfunctional

conflict. (Chen et al., 2019; Guillaume et al., 2015; Pelled, 1996; van Knippenberg et al., 2004).

For instance, studies by Chen et al. (2019) and Cronin and Weingart (2007) argued and found that cognitive diversity is positively related to affective conflict. Stahl et al. (2010) also argued that cultural diversity would increase undesirable conflict among teams. Pelled et al. (1999) found that impermeable diversity attributes like race tend to increase dysfunctional conflict because people tend to find it difficult to relate with and consequently stereotype people of a different racial heritage. Thus, it is hypothesized that:

H3: Cognitive diversity is positively related to affective conflict

H4: Ethnic diversity is positively related to affective conflict.

2.9.3 Learning Approach Goal Orientation in The Cognitive/Ethnic Diversity- Task Conflict Relationship

As a result of the belief that ability is incremental, individuals with a learning approach goal orientation seek to improve themselves in terms of knowledge and skill (Dweck, 1986; VandeWalle et al., 2001). Thus, they are more likely to see diversity as an opportunity to learn or master something new. This desire to learn and improve is likely to motivate them to explore the diverse perspectives that come with a cognitively or ethnically diverse group in a bid to thoroughly understand underlying assumptions (Pieterse et al., 2013). Thus, group members with a high learning approach orientation are less likely to perceive differing views as personal threats to their own competence or ability and are therefore less likely to be defensive of their own ideas and views. They are more likely to be more tolerant and respectful of opposing views and are less likely to see these as a personal affront. A high learning approach goal orientation is therefore likely to promote task conflict rather than affective conflict as disagreements tend revolve around the task and on how to arrive at the best course of action.

The learning approach orientation may also foster task conflict because when group members are high in this orientation, they are less likely to feel inhibited by the fear of being wrong when sharing their views and opinions, however different they may seem. The learning orientation has been associated with a willingness to make errors,

experimentation and risk taking (Gully and Phillips, 2005). Thus, when group members have a high learning approach orientation, the fear of being criticized for sharing information that is different is minimized, thereby enriching content for task conflict. This is probably also because the learning orientation is noted for being persistent and for exerting consistent effort in the face of task difficulty (Dweck, 1986).

Also because of the belief that ability and knowledge are incremental, when group members have a high learning approach orientation, they are more likely to handle criticism better. Receiving feedback is associated with the fear of having others perceive one as weak or incompetent and may be deflating to one's ego, particularly when it is negative. However a high learning approach orientation is likely to be less concerned about these costs of feedback and more aware of the potential of self-improvement (VandeWalle & Cummings, 1997). Thus, it has been found that the learning orientation in general is positively related to seeking feedback, whether positive or negative(Payne et al., 2007; VandeWalle & Cummings, 1997). Since they are not likely to see it as a perceive criticism as a personal judgment or a judgment of their ability or knowledge, they are less likely to take offence. Thus, this goal orientation minimizes the chances of affective conflict thereby making way for more meaningful task conflict.

Again, when a learning approach orientation is high among group members, the tendency for fixed pie perceptions (Bazerman and Neale, 1983) tend to be lower. Fixed pie perceptions refer to the tendency to view one's ideas and those of others as diametrically opposed to each other (De Dreu et al., 2000). This perception implies an egocentric disregard for views different from one's own and blinds individuals to the benefits inherent in diversity. This attitude is likely to breed resentment and anger towards others when it is perceived that one's views are not respected (Pelled, Ledford, et al., 1999; Simons & Peterson, 2000). The result is suboptimal conclusions that do not take advantage of the integrative potential inherent in diversity as a result of high levels of affective conflict (Thompson, 1991; De Dreu et al. 2000). A high learning approach orientation may safeguard against this. Since it believes that ability is not fixed and can be enhanced through effort, group members may be more likely to engage in task conflict,

rather than affective conflict, in a bid to explore how to integrate divergent views in order arrive at more optimal conclusions.

Elliot and McGregor (2001) found the learning approach orientation to have the most positive outcomes in terms of deep information processing and performance as compared to the other goal orientations. Moreover, other meta-analyses by Cellar et al., (2011) and Payne, Youngcourt, & Beaubien, (2007) also provide additional empirical support for a strong positive relationship between the learning approach orientation and performance as well as other desirable outcomes across various contexts. Gong et al. (2013) also found that the learning goal orientation enhances information exchange among groups. Pieterse et al. (2013) also found that under a high learning approach goal orientation, cultural diversity was more strongly associated with information elaboration.

It is therefore hypothesized that:

H5: The learning approach goal orientation moderates the relationship between cognitive diversity and task conflict; the positive relationship between cognitive diversity and task conflict is strengthened when group members have a high learning approach orientation and weakened when members have a lower learning approach orientation.

H6: The learning approach goal orientation moderates the relationship between ethnic diversity and task conflict; the positive relationship between ethnic diversity and task conflict is strengthened when group members have a high learning approach orientation and weakened when members have a lower learning approach orientation.

2.9.4 Learning Approach Goal Orientation in The Cognitive/Ethnic Diversity-Affective Conflict Relationship

On the other hand, affective conflict resulting from diversity is likely to be lower under a high learning approach goal orientation. This is because group members are likely to engage in more deep level information processing rather than the shallow information processing with which stereotyping and categorization are associated (Dweck, 1999; Elliot and McGregor, 2001; Pieterse et al., 2013). The self-categorization and similarity attraction theories predict that group members are likely to classify themselves and others based on differentiating attributes and are more likely to view these others different from

themselves in unfavorable terms. They are also less likely to cooperate with them. These tendencies tend to breed resentment, anger, and make for affective conflict. Certain scholars have argued that this is more common among demographic differences such as ethnicity (Guillaume et al., 2012; Jehn et al., 1999a; Pelled, Ledford, et al., 1999; Stahl et al., 2010). However, a high learning approach orientation is associated with deep level information processing (Elliot & McGregor, 2001; Pieterse et al., 2013), which tends to look beyond surface level differences. Thus, the tendency to stereotype is lower when the learning approach orientation is high than when it is low.

Moreover, under a high learning orientation, group members are more likely to accommodate and be respectful of divergent views. Group members with a high learning goal orientation are more likely to see diversity as an opportunity to improve upon their knowledge base. They might find it interesting and stimulating to engage with others ethnically different from them. For instance, one's ethnicity, to an extent, shapes one's experiences, assumptions, and worldview. Thus, ethnic diversity brings on board different perspectives necessary for creative information processing. Group members with a high learning orientation are therefore likely to perceive new information as opportunities to learn something and ultimately improve themselves (Dweck, 1999).

They are therefore likely to be less defensive of their positions and ideas. Such a stance encourages others to present their views, however unconventional and promotes more thorough information elaboration as group members discuss underlying assumptions. It is therefore expected that under a high learning orientation, the link between diversity and affective conflict will be weakened.

H7: The learning approach goal orientation moderates the relationship between cognitive diversity and affective conflict; the positive relationship between cognitive diversity and affective conflict is weakened when group members have a high learning approach orientation and strengthened when members have a lower learning approach orientation.

H8: The learning approach goal orientation moderates the relationship between ethnic diversity and affective conflict; the positive relationship between ethnic diversity and affective conflict is weakened when group members have a high learning approach orientation and strengthened when members have a lower learning approach orientation.

2.9.5 The Learning Avoidance Goal Orientation

The Learning Avoidance goal orientation is concerned with avoiding the loss of what one has learned (Baranik et al., 2013). According to Elliot and McGregor (2001), the Learning Avoidance orientation has not received as much empirical attention as the other three goal orientations for two reasons. In the first place, this goal orientation has two components, (the learning component and the avoidance component), each having different and sometimes opposite antecedents and consequences(Elliot & McGregor, 2001). While the learning component is likely to result in positive and desirable consequences, the avoidance component is not. Moreover, it is difficult to determine the relative strength of each component. Thus, the impact of this goal orientation has been difficult to predict. While many have avoided examining this goal orientation, choosing to concentrate on the learning approach orientation instead (eg. Dierdorff & Ellington, 2012; Gong, Kim, Lee, & Zhu, 2013; Lee & Yang, 2015), others have predicted a zero impact of this goal orientation (eg. Pieterse, van Knippenberg, & van Dierendonck, 2013). Nevertheless, Elliot and McGregor (2001) have argued that it is important to address each of the goal orientations separately as they each have distinct achievement related processes and outcomes. Moreover, Elliot and McGregor (2001) argued that the negative dimension of the learning avoidance orientation is likely to supersede its positive dimension, causing this goal orientation to have a more negative impact on outcomes than the learning approach orientation (Elliot & McGregor, 2001). This negative impact, they hypothesized is however likely to be less than that of the performance avoidance orientation. This highlights the importance of distinguishing between the learning approach (which usually has desirable consequences) from the learning avoidance orientation. Lumping these two into one is likely to mask the true effects of these orientations. The findings of Elliot and McGregor (2001) confirm a less desirable impact of the learning avoidance orientation as compared to the learning approach orientation. This negative impact was however indeed less than the negative impact of the performance avoid orientation. Baranik et al. (2013) however found that the learning avoidance goal had a stronger, more negative relationship with performance than the performance-avoidance orientation. This is in consonance with Van Yperen's (2003) assertion that the learning avoidance goal may be even more detrimental than the performance avoidance goal.

In all, these scholars argue that the learning avoidance orientation is a distinct enough construct having clear consequences and therefore meriting examination in goal orientation research.

2.9.6 Learning Avoidance Goal Orientation on The Cognitive/Ethnic Diversity-Task Conflict Relationship

The learning avoidance goal orientation is concerned with avoiding the loss of knowledge, expertise and skills (Elliot & McGregor, 2001). While the learning component may cause individuals to seek information to keep their levels of knowledge and skill at adequate levels, it is not likely to motivate individuals to seek out and elaborate new information and insights (Pieterse et al., 2013). Moreover, the learning avoidance orientation is grounded in the fear of failure (Elliot & McGregor, 2001) and therefore may actually deter group members from seeking new information. This is because seeking information might be perceived as lacking competence or knowledge (Gong et al., 2013; Payne et al., 2007). Hulleman, Schrager, Bodmann, & Harackiewicz (2010) for instance, found that the learning avoidance orientation is negatively related to help seeking behavior. Information exchange, which is necessary for effective cognitive conflict, is therefore likely to be limited among group members with a high learning avoid orientation.

Additionally, because criticism of one's views may be perceived as a sign of deteriorating competence (Janssen & Prins, 2007), group members with a high learning avoidance orientation may be reluctant to share information that they suspect might be unpopular among group members. This may lead to a holding back of potentially relevant information. Again, Elliot and McGregor (2001) have posited that individuals with a high learning avoidance orientation strive to avoid misunderstanding. This tendency may again cause group members to avoid expressing dissenting views. Thus, information elaboration is likely to be limited when there is a high learning avoidance orientation (Pieterse et al., 2013).

In all, a learning avoid orientation may lead to group think as dissenting views are likely to be suppressed and these hinder task conflict.

Baranik, Lau, Stanley, Barron, & Lance, (2013) report that there is increasing evidence that a learning avoidance orientation has a deleterious effect on performance. A meta-analysis by Hulleman, Schrager and Bodmann (2007) in the domain of education shows a negative effect of the learning avoid orientation on interest and achievement. Relatedly, another meta-analysis by Baranik et al. (2010) shows a negative relationship between the learning avoidance orientation and cognitive ability, help seeking and performance.

Thus, it is hypothesized that:

H9: The learning avoidance orientation moderates the relationship between cognitive diversity and task conflict: the relationship between cognitive diversity and task conflict is weaker when the learning avoidance orientation is high and stronger when it is low.

H10: The learning avoidance orientation moderates the relationship between ethnic diversity and task conflict: the relationship between ethnic diversity and task conflict is weaker when the learning avoidance orientation is high and stronger when it is low.

2.9.7 Learning Avoidance on Cognitive/Ethnic Diversity-Affective Conflict Relationship

According to Pieterse et al. (2013), the focus of the learning avoidance goal orientation is task mastery. As such, individuals that are high on the learning avoidance orientation are not likely to focus on social issues like the ethnicity of other group members (Pieterse et al., 2013). The learning orientation, in general, is more associated with deeper information processing and individuals are therefore less prone to using shallow information processes like categorizations (Chen and Chaiken, 1999; Pieterse et al., 2013).

Relatedly, they are also less likely to depend on stereotypes in relating with others who think differently from themselves (Dweck, 1999; Pieterse et al., 2013). Altogether, categorization processes are likely to be lower when the learning avoidance orientation is high. Since categorization processes are what breed animosity and undermine integrative processes, affective conflict is likely to be lower when the learning avoidance goal orientation is high.

Thus, it is hypothesized that:

H11: the learning avoidance orientation moderates the relationship between cognitive diversity and affective conflict; when the learning avoidance orientation is high, the relationship between cognitive diversity and affective conflict is weaker and is strengthened when the learning avoidance orientation is low.

H12: the learning avoidance orientation moderates the relationship between ethnic diversity and affective conflict; when the learning avoidance orientation is high, the relationship between ethnic diversity and affective conflict is weaker and is strengthened when the learning avoidance orientation is low.

2.9.8 The Moderating Role of The Performance Approach Goal Orientation

The performance approach orientation has two essential components – an appearance component that strives to look good before others and a normative component that aims at outperforming others (Hulleman et al., 2010; Urdan & Mestas, 2006). With regards to the appearance component, an individual with a high-performance approach goal orientation tends to be focused on demonstrating ability before and receiving affirmation from others. This is with no regard to the performance of others. On the normative side, the individual focuses on doing well with respect to an objectively established standard of accomplishment, and not necessarily in comparison to others. Putting these two together, Hulleman et al., (2010) devised a third component that is evaluative. The evaluative component indicates that individuals with a high-performance approach orientation aim at having their ability or performance evaluated as superior to others.

Performance approach goal oriented individuals seek positive appraisals from others in order to affirm their self-conceptions of superiority (Janssen & Prins, 2007).

2.9.9 Performance Approach Goal Orientation on The Cognitive/Ethnic Diversity-Task Conflict Relationship

Research regarding the impact of the performance approach orientation has been mixed (Dierdorff & Ellington, 2012). While certain scholars have found a positive impact in terms of learning strategies, planning, cooperation and communication in groups, particularly where this orientation is shared (Payne et al., 2007; Weingart, 1992; Weldon et al., 1991), others have linked it to lowered motivation and learner anxiety (Chen, Gully and Whiteman, 2000; Fisher and Ford, 1998). Cellar et al. (2011) also found rather weak

relationships between the performance approach orientation and performance and self-regulation.

Nevertheless, with regards to its moderating influence on the relationships between diversity and task conflict, the performance approach orientation is likely to weaken the relationship between diversity and task conflict.

In the first place, individuals high on this orientation tend to be very competitive (Pieterse et al., 2013) and may be wary of seeking information from others as this may be interpreted to mean that one is not as able as others and may be deficient in certain respects (Janssen & Prins, 2007; Payne et al., 2007). This is likely to limit information seeking behavior.

Moreover, although group members with a high performance approach orientation may appear to seek information from others, they tend to prefer information that confirms their belief of superiority and competence rather than negative feedback (Janssen & Prins, 2007; VandeWalle, 2003). This is largely due to its roots in entity theory and causes performance approach goal-oriented individuals to perceive negative feedback as negative appraisals of their ability and knowledge as compared to others. Thus, although individuals with a high-performance orientation may want to seek information to enhance their performance, this desire tends to clash with their concern to not appear deficient or incompetent before others. In other words, performance oriented group members tend to associate seeking information for self-improvement with self-presentation costs (VandeWalle, 2003). This tendency is likely to discourage such group members from expressing views that they believe might be unpopular in their groups. Ultimately, the amount and diversity of information shared may be limited, and this suppression of dissent is detrimental to task conflict.

Additionally, performance approach orientation has been found to be unrelated to deep-level information processing (Elliot & McGregor, 1999; Pieterse et al., 2013). Group members with a high performance approach orientation tend to be more interested in performing better than others and may not be as interested in understanding the task and its demands (Dierdorff & Ellington, 2012). This is again likely to hinder task conflict.

Empirical support for this is found in the study by Janssen & Prins, (2007) which found a negative relationship between the performance approach goal and seeking self-improvement information. Moreover, VandeWalle & Cummings, (1997) found a negative relationship between the performance orientation and feedback seeking behavior. DeGeest & Kristof-Brown (2017) indicate that when there is high performance approach goal orientation, group members' capacity to for cooperation is diminished and they are not motivated to persist through disagreements.

Thus, it is hypothesized that:

H13: The performance approach goal orientation moderates the relationship between cognitive diversity and task conflict. The positive relationship between cognitive diversity and task conflict is weakened when group members have a high-performance approach orientation and strengthened when group members have a low performance approach orientation.

H14: The performance approach goal orientation moderates the relationship between ethnic diversity and task conflict. The positive relationship between ethnic diversity and task conflict is weakened when group members have a high-performance approach orientation and strengthened when group members have a low performance approach orientation.

2.9.10 Performance Approach Goal Orientation on Cognitive/Ethnic Diversity-Affective Conflict Relationship

Surface information processing, such as categorizations, has been associated with the performance approach goal orientation (Elliot & McGregor, 2001; Pieterse et al., 2013). As such, the performance approach goal orientation is rather likely to strengthen the positive relationship between diversity and affective conflict by emphasizing categorization effects. This is because the performance approach orientation is likely to reinforce categorization effects of ethnic diversity.

Moreover, the desire to demonstrate competence may be perceived by other group members as egotistical and this may further strain relations among group members (Dierdorff & Ellington, 2012). Highly performance oriented individuals are less likely to

be accommodating of opposing views because deferring to the views of others may be perceived as incompetence(Janssen & Prins, 2007; Payne et al., 2007). Additionally, because the performance approach goal orientation is competitive and therefore concerned with outperforming others (Pieterse et al., 2013), it may be detrimental to collaboration within groups. Group members high on this goal orientation may be more entrenched in their positions and this tendency has been found to lead to affective conflict (Simons & Peterson, 2000). In all, the performance goal orientation may strengthen the categorization effects of diversity and this may lead to animosity and disagreements that are rather personal in nature.

It is therefore hypothesized that:

H15: The performance approach orientation moderates the relationship between cognitive diversity and affective conflict: the positive relationship between cognitive diversity and affective conflict will be strengthened when there is high performance approach orientation and lower when performance approach orientation is low.

H16: The performance approach orientation moderates the relationship between ethnic diversity and affective conflict: the positive relationship between ethnic diversity and affective conflict will be strengthened when there is high performance approach orientation and lower when performance approach orientation is low.

2.9.11 Performance Avoidance Goal Orientation on The Between Cognitive/Ethnic Diversity-Task Conflict Relationship

The focus of the performance avoid orientation is to avoid a negative evaluation from others. Thus, individuals with a high performance avoidance orientation are concerned with avoiding mistakes and criticism (Dweck, 1986; Gong et al., 2013). This is likely to make them preoccupied with this at the expense of growth. This orientation therefore has the potential to limit the amount of information one shares, particularly information that one suspects will be unpopular among group members (Gong et al., 2013). Relatedly, group members may tend to avoid uncertainties and are more likely to stubbornly stick to what is known and familiar as this gives them more confidence and gives them an image of greater control and competence (Vandewalle, 1997). They are therefore less likely to seek new information from others as they fear that this may be perceived as a

lack of competence (Gong et al., 2013). This tendency is also likely to make group members less open to criticism. According to Tjosvold (1991), group members may take feel that their competence is being questioned when they are criticized. This is likely to be even more pronounced when group members have a high performance avoid orientation. Research has shown a negative relationship between the performance avoid orientation and feedback seeking behavior because of the fear of receiving negative feedback (Cellar et al., 2011; VandeWalle & Cummings, 1997). Thus, criticisms and debate are more likely to be taken personally, breeding anger and resentment towards others with different views, and such negative affect has been found to also impair cognitive processes. Altogether, these effects of the performance avoid orientation is likely to limit task conflict resulting from diversity.

Of the four goal orientations, there is considerable evidence for the negative consequences of the performance avoidance orientation. Elliot and McGregor (2001) found that this goal orientation to be negatively associated with deep level information processing and performance. The meta-analysis by Payne et al., (2007) also reports a negative relationship with job and task performance. Another meta-analysis by Cellar et al., (2011) corroborates this by reporting a negative relationship between this goal orientation and self-regulation and performance.

It is therefore hypothesized that:

H17: The performance avoidance goal orientation moderates the relationship between cognitive diversity and task conflict: The positive relationship between cognitive diversity and task conflict is weakened when group members have a high-performance avoidance orientation and weakened when group members have a low performance avoidance orientation.

H18: The performance avoidance goal orientation moderates the relationship between ethnic diversity and task conflict: The positive relationship between ethnic diversity and task conflict is weakened when group members have a high-performance avoidance orientation and weakened when group members have a low performance avoidance orientation.

2.9.12 Performance Avoidance Goal Orientation on The Cognitive/Ethnic Diversity-Affective Conflict Relationship

The relationship between ethnic diversity and affective conflict is likely to be strengthened when the performance avoidance goal orientation is high among group members. It is expected that the performance avoidance goal orientation will enhance the positive relationship between cognitive diversity and affective conflict. In other words, categorization effects resulting from cognitive diversity were expected to be strengthened under a high-performance avoidance goal orientation. This is because categorization and stereotyping are strongly related to this goal orientation (Pieterse 2013). The performance-avoidance orientation has also been associated with negative affect such as emotionality, anxiety, fear, and worry (Elliot & McGregor, 2001).

According to Tjosvold (1991), people tend to take criticism as a challenge to their competence. This is likely to be more pronounced under a high-performance avoidance goal orientation since individuals high on this orientation strive to avoid negative evaluations from others. Confirming this, research has shown a negative relationship between the performance avoidance orientation and feedback seeking behavior because of the fear of receiving negative feedback (Cellar et al., 2011; VandeWalle & Cummings, 1997). Consequently, criticisms and debate are more likely to be taken personally, breeding anger and resentment towards others with different views. Altogether, these effects of the performance avoid orientation is likely to increase affective conflict resulting from diversity. It is therefore hypothesized that:

H19: The performance-avoidance goal orientation moderates the relationship between cognitive diversity and affective conflict such that: The positive relationship between cognitive and affective conflict is stronger when the performance-avoidance orientation is high and weaker when it is lower.

H20: The performance-avoidance goal orientation moderates the relationship between ethnic diversity and affective conflict such that: The positive relationship between ethnic and affective conflict is stronger when the performance-avoidance orientation is high and weaker when it is lower.

Group Conflict and Creativity

2.9.13 Task conflict and group creativity

Creativity requires the combination of previously unrelated ideas and information to generate something new, be it a product, service, or process. The information processing theory predicts that task conflict is likely to enhance group creativity. This is because task conflict enables greater understanding of the task and facilitates information exchange, and these in turn, enhance problem solving, idea generation and decision making(Chen et al., 2019; De Dreu & Weingart, 2003; Simons & Peterson, 2000; Yong et al., 2014). Thus, in the process of task conflict, group members tend to engage in deeper and more elaborate of information and this encourages learning, creativity and innovation (De Dreu & Weingart, 2003; Jehn, 1995). According to De Dreu and Weingart (2003), the deep and elaborate information processing associated with task conflict may lead to 'new and sometimes highly creative insights' (p. 742). Moreover, Farh et al., (2010) indicate that task conflict is likely to enhance group creativity due to minority dissent. They argue that when minority group members express dissenting views in a group, it causes group members to evaluate the status quo, integrate new information and this ultimately leads to more creative decisions.

Several studies provide empirical support for this. A study by Chen et al. (2019) found a positive relationship between task reflexivity (the elaboration of task-related information) and innovative behavior. Similarly, Yong et al. (2014) and De Clercq et al. (2015) also found a positive relationship between task conflict and creativity.

Thus, it is hypothesized that:

H21: There is a positive relationship between task conflict and group creativity.

2.9.14 Affective conflict and group creativity

On the other hand, affective conflict is likely to hamper group creativity. Information processing ability of a group is limited in the presence of affective conflict because group members tend to focus on each other rather than on the task at hand(Chen et al., 2019; De Wit et al., 2012; Pelled, 1996; Simons & Peterson, 2000; Yong et al., 2014). Additionally, anxiety, which often accompanies affective conflict has been found to disrupt cognitive processes (Sarason, 1984) as group members may be unable to consider all the important

information into consideration during problem solving (Pelled, 1996; Simons et al., 1999). Moreover, animosity, which is often attendant to affective conflict, may cause group members to hold back potentially relevant information. It may also make them defensive and closed to the opinions of others, thereby limiting the amount of information that is shared within the group (Pelled, 1996; Simons et al., 1999). Altogether, these have the potential to make affective conflict undesirable for group creativity.

The meta-analytic review by De Wit et al. (2012) found a negative relationship between affective conflict and group outcomes. Um & Oh (2021) also found a negative relationship between affective conflict and new product performance. Similarly, Chen et al. (2019) also found a negative relationship between affective conflict and innovative work behavior.

Thus, it is hypothesized that:

H22: Affective conflict is negatively related to group creativity.

2.9.15 Mediators of the Effects of Diversity

As earlier discussed, the CEM argues that group information elaboration processes are key to releasing the potential of diversity for creativity. Task conflict as an information elaboration process is advanced as the mechanism by which cognitive and ethnic diversity would enhance group creativity. Increased diversity is expected to lead to increased task conflict, which would in turn enhance group creativity. In other words, task conflict is the means by which cognitive and ethnic diversity is positively related to group creativity. This leads to these hypotheses:

H23: Task conflict will mediate the effects of cognitive diversity on group creativity.

H24: Task conflict will mediate the effects of ethnic diversity on group creativity.

Moreover, based on the earlier discussions predicting that cognitive and ethnic diversity would also enhance affective conflict, which would in turn impede group creativity, it is also argued that affective conflict is the mechanism by which diversity (both cognitive and ethnic) would impede group creativity. Thus, it is hypothesized that:

H25: Affective conflict will mediate the effects of cognitive diversity on group creativity.

H26: Affective conflict will mediate the effects of ethnic diversity on group creativity

Table 2.4

Summary of Key Papers Informing Conceptual Model

Author and Year	Title	Key Constructs	Findings/Insights relevant to present study	Limitation giving rise to current study
Amabile (1996)	Creativity in context: Update to the social psychology of creativity.	Creativity	• Diversity is key to creativity. • Motivation is key to creativity. • Creativity definition.	
Amason (1996)	Distinguishing the Effects of Functional and Dysfunctional Conflict on Strategic Decision Making: Resolving a Paradox for Top Management Groups	Conflict	Conflict conceptualized into two types: functional and dysfunctional. Functional conflict enhances outcomes, but dysfunctional conflict does not	
Baranik (2010)	Examining the construct validity of mastery-avoidance achievement goals: A meta-analysis	Goal Orientation	Presents arguments for the construct validity of the learning-avoidance orientation. Show that the learning avoidance orientation is positively correlated with negative affect, competitiveness, perceived competence and need for achievement.	Call for further research examining the learning-avoidance orientation
Baranik et al. (2013)	Achievement goals in organizations: Is there support for mastery-Avoidance?	Goal Orientation	Study highlights the importance of investigating the often-overlooked Learning-Avoidance goal orientation. Also provides evidence supporting its conceptual and empirical relevance.	Call for further research examining the learning-avoidance orientation.
Cellar et al. (2011)	Trait Goal Orientation, Self-Regulation, and Performance: A Meta-Analysis	Goal Orientation	Provide empirical evidence for the relationships between learning approach, performance approach and performance-avoid orientations and self-regulation variables (self-monitoring, self-reactions, self-evaluations, and self-efficacy) and task performance across various contexts.	Focused on only three of the goal orientations (learning approach, performance approach and performance avoidance).

Author and Year	Title	Key Constructs	Findings/Insights relevant to present study	Limitation giving rise to current study
Dayan, Ozer and Almazrouei (2017)	The role of functional and demographic diversity on new product creativity and the moderating impact of project uncertainty.	Diversity and Creativity	Diversity defined. Highlights the importance of examining moderators in the diversity-creativity relationship.	
De Dreu and Weingart (2003)	Task versus relationship conflict, group performance, and group member satisfaction: A meta-analysis	Conflict	Meta-analysis showing how task conflict is more desirable than relationship conflict for group performance and group member satisfaction.	
Dweck (1986)	Motivational Processes Affecting Learning	Goal Orientation	Propounded goal orientation theory, dividing them into learning and performance goal orientations.	
Elliot and McGregor (2001)	Test anxiety and the hierarchical model of approach and avoidance achievement motivation	Goal Orientation	Further divided the two key goal orientations into four: the learning approach, learning avoidance, performance approach and performance avoid. Argue that the learning avoidance orientation is conceptually distinct and has its own antecedents and consequences.	Call for research to examine the learning avoidance orientation since it has its own antecedents and consequences.
Gong et al. (2013)	A Multilevel Model of Group Goal Orientation, Information Exchange, And Creativity	Goal Orientation and Creativity	Provides evidence for how goal orientations affect both individual and group creativity.	Did not consider the learning-avoidance goal orientation.
Hulleman et al. (2010)	A Meta-Analytic Review of Achievement Goal Measures: Different Labels for the Same Constructs or Different Constructs with Similar Labels	Goal Orientation	Shows how all four goal orientations relate to help-seeking behavior, interest, and achievement	

Author and Year	Title	Key Constructs	Findings/Insights relevant to present study	Limitation giving rise to current study
Janssen and Prins (2007)	Goal orientations and the seeking of different types of feedback information	Goal Orientation	Show how the learning-approach, performance-approach and performance-avoidance orientations relate to seeking self-improvement and self-validation feedback information.	Did not consider the learning-avoidance orientation.
Jehn (1995)	A Multimethod Examination of the Benefits and Detriments of Intragroup Conflict	Conflict	Shows that task conflict is beneficial to performance while affective conflict is not. It also shows that task type and task interdependence may also influence the relationship between conflict and performance.	
Jehn (1999)	Why Differences Make a Difference: A Field Study of Diversity, Conflict, and Performance in Workgroups	Diversity and Conflict	Provides evidence for the mediating role of conflict in the diversity-outcomes relationship.	
Lee and Yang (2015)	Employee Goal Orientation, Work Unit Goal Orientation and Employee Creativity	Goal Orientation and Creativity	Provides support for the impact of goal orientations on creativity.	Focus on employee creativity and not group creativity. Considered only three of the goal orientations. Examined information elaboration as a mediator, which is unidimensional.
Mumford and Gustaffson (1988)	Creativity syndrome: Integration, application, and innovation.	Creativity	Posit that creativity is as a result of motivational and cognitive processes, thereby highlighting the importance of examining motivational factors, such as goal orientations in studying creativity.	

Author and Year	Title	Key Constructs	Findings/Insights relevant to present study	Limitation giving rise to current study
Payne, Youngcourt and Beaubien (2007) Meta-analysis	A meta-analytic examination of the goal orientation nomological net	Goal Orientation	Review shows the antecedents as well as proximal and distal consequences of the three goal orientations.	Did not include the learning-avoidance goal orientation
Pelled (1996)	Demographic Diversity, Conflict, and Workgroup Outcomes: An Intervening Process Theory	Diversity and Conflict	One of the earliest studies to proposes conflict (the two types) as mediating between diversity and performance.	Conceptual paper, so no empirical support.
Pelled (1999)	Exploring the Black Box: An Analysis of Workgroup Diversity, Conflict, and Performance	Diversity and conflict	Provides empirical support for the mediating role of conflict between diversity and outcomes. Task conflict enhances cognitive task performance while affective conflict does not. Shows task routineness moderates the relationship between diversity and conflict.	
Pieterse et al. (2013)	Cultural Diversity and Group Performance: The Role of Group Member Goal Orientation	Diversity and Goal Orientation	Goal orientations influence the impact of diversity on outcomes	Did not hypothesize for the learning-avoidance goal orientation. Also examined information exchange, a uni-dimensional mediating factor
Shin and Zhou (2007)	When Is Educational Specialization Heterogeneity Related to Creativity in Research and Development Groups? Transformational Leadership as a Moderator	Diversity and Creativity	Support for the impact of diversity on group creativity in the presence of moderators. Group creativity defined.	

Author and Year	Title	Key Constructs	Findings/Insights relevant to present study	Limitation giving rise to current study
Shin et al. (2012)	Cognitive Group Diversity and Individual Group Member Creativity: A Cross-Level Interaction	Diversity and creativity	Cognitive diversity defined. Support for the impact of cognitive diversity and creativity.	Focus on individual creativity and not group creativity. Call for research into motivational factors in creativity processes.
Simons and Peterson (2000)	Task conflict and relationship conflict in top management groups: The pivotal role of intragroup trust	Conflict	Show how task conflicts result in better decision making, while affective conflict does not. Also explains the interrelationships between task and affective conflict.	
Van Dijk et al. (2012)	Defying conventional wisdom: A meta-analytical examination of the differences between demographic and job-related diversity relationships with performance	Diversity (Typologies)	Show that the relationship between job-related diversity and job non-related diversity attributes and outcomes are not simple. That other factors may moderate this relationship.	
Van Knippenberg and Mell (2016)	Past, present, and potential future of group diversity research: From compositional diversity to emergent diversity	Diversity	Explain the information processing and social categorization theories as they relate to diversity and provide a review of corroborating studies. Shows how diversity research has evolved from direct effects into the examination of boundary conditions.	
Van Knippenberg and Schippers (2007)	Workgroup Diversity	Diversity	Review research on diversity in workgroups, highlighting the evolution of research in this domain. Also explains the relationship between job-related and job non-related diversity attributes on outcomes.	
Van Yperen (2003)		Goal Orientation		

Author and Year	Title	Key Constructs	Findings/Insights relevant to present study	Limitation giving rise to current study
Vandewalle and Cummings (1997)	A test of the influence of goal orientation on the feedback-seeking process	Goal Orientation	Shows how goal orientations influence feedback seeking behavior.	
Weiss, Backman and Hoegl (2018)	Group Diversity in Innovation—Salient Research in the Journal of Product Innovation Management	Diversity (Typologies)	Shows when and how job related and job non-related diversity attributes affect the performance of innovation groups.	

Table 2.5

Summary of Hypotheses

Hypothesis	Theory	Arguments
H1: Cognitive diversity is positively related with task conflict. H2: Ethnic diversity is positively related with task conflict.	Information Processing theory	Diversity makes available different opinions and perspectives that may enhance information processing. Moreover, the more diverse the group, the wider the social network accessible to the group. This wider network may again make available a greater variety of informational resources that enhance information elaboration within the group(Guillaume et al., 2015; Simons et al., 1999; van Knippenberg et al., 2004). .
H3: Cognitive diversity is positively related to affective conflict. H4: Cognitive diversity is positively related to affective conflict.	Social Categorization theory Homophily theory	Diversity attributes may also constitute a ready basis for classifying oneself versus other group members into subgroups that lead to an 'us versus them' situation. This minimizes cooperation and fosters unfriendliness and anxiety, making for affective conflict. Moreover, people prefer working with others similar to themselves and may be more critical of others they consider different from themselves. (Jehn et al., 1999a; Pelled, Eisenhardt, et al., 1999a).
H5: The learning approach goal orientation moderates the relationship between cognitive diversity and task conflict. H6: The learning approach goal orientation moderates the relationship between ethnic diversity and task conflict	Motivated Information processing theory	The fear of being wrong is lower when group members have a high learning approach orientation. Thus, group members are likely to feel freer to share task-relevant information during deliberations that may not be necessarily popular within the group. This enhances task conflict. Moreover, the desire to improve oneself makes group members in cognitively diverse groups more likely to seek out information from others as they see this as an opportunity to learn something new. Again, this also facilitates task conflict. Thirdly, group members with a high learning approach orientation are less likely to be offended when dissenting views are presented as they tend to perceive this as a new way of looking at the situation. This openness to criticism and dissent facilitates task conflict.
H7: The learning approach goal orientation moderates the relationship between cognitive diversity and affective conflict.	Motivated Information processing theory	A high learning approach orientation is associated with deep level information processing(Elliot & McGregor, 2001), which tends to look beyond surface level differences. Thus, the tendency to stereotype is lower when the learning approach orientation is high than when it is low.

H8: The learning approach goal orientation moderates the relationship between ethnic diversity and affective conflict		Moreover, under a high learning orientation, group members are more likely to accommodate and be respectful of divergent views. Group members with a high learning goal orientation are more likely to see diversity as an opportunity to improve upon their knowledge base. They might find it interesting and stimulating to engage with others different from them. This reduces the chances of affective conflict resulting from diversity.
H9: The learning avoidance orientation moderates the relationship between cognitive diversity and task conflict. H10: The learning avoidance orientation moderates the relationship between ethnic diversity and task conflict	Motivated Information processing theory	Learning avoidance orientation is concerned with avoiding the loss of knowledge and skills. It is also grounded in a fear of failure. When this orientation is high among group members, seeking information from others may be perceived as a sign of lack of or of deteriorating competence. This is likely to keep group members from seeking information from others thereby limiting task conflict. Additionally, the fear of failure may inhibit sharing information that one believes might not be popular among group members. This again limits task conflict.
H11: the learning avoidance orientation moderates the relationship between cognitive diversity and affective conflict. H12: the learning avoidance orientation moderates the relationship between ethnic diversity and affective conflict	Motivated Information processing theory	The learning orientation is more associated with deeper information processing and individuals are therefore less prone to using shallow information processes like categorizations (Chen and Chaiken, 1999; Pieterse et al., 2013). Relatedly, they are also less likely to depend on stereotypes in relating with others different from themselves (Dweck, 1999; Pieterse et al., 2013). Altogether, categorization processes are likely to be lower when the learning avoidance orientation is high.
H13: The performance approach goal orientation moderates the relationship between cognitive diversity and task conflict. H14: The performance approach goal orientation moderates the relationship between affective diversity and task conflict.	Motivated Information processing theory	The performance approach orientation is concerned with demonstrating competence to others. This makes them wary of seeking information from others as they fear that this will be interpreted as a sign of incompetence. Additionally, the desire to be well thought of by other group members may discourage group members with a high-performance approach orientation from sharing information that may be unpopular. Together, these tendencies limit the amount and quality of information shared and this limits task conflict. Additionally, performance approach orientation has been found to be unrelated to deep-level information processing (Elliot & McGregor, 1999; Pieterse et al., 2013). Group members with a high performance approach orientation tend to be more interested in performing better than others and may not be as

		interested in understanding the task and its demands (Dierdorff & Ellington, 2012). This is again likely to hinder task conflict.
H15: The performance approach orientation moderates the relationship between cognitive diversity and affective conflict. H16: The performance approach orientation moderates the relationship between ethnic diversity and affective conflict	Motivated Information processing theory	Because the performance approach orientation is associated with surface information processing such as categorizations, high levels of this orientation among group members is likely to strengthen the relationship between ethnic diversity and affective conflict.
H17: The performance avoidance goal orientation moderates the relationship between cognitive diversity and task conflict. H18: The performance avoidance goal orientation moderates the relationship between ethnic diversity and task conflict.	Motivated Information processing theory	The focus of the performance avoid orientation is to avoid a negative evaluation from others. Thus, individuals with a high-performance avoidance orientation are concerned with avoiding mistakes and criticism. This makes them less likely to share information that they perceive might not be well received, limiting the quality of information available to the group. Moreover, they are likely to take offence when others disagree with them and this may discourage task conflict.
H19: The performance-avoidance goal orientation moderates the relationship between cognitive diversity and affective conflict. H20: The performance-avoidance goal orientation moderates the relationship between ethnic diversity and affective conflict.	Motivated Information processing theory	The performance avoidance orientation has been found to be positively associated with surface information processing like categorization. Thus, a high level of this goal orientation among group members is likely to strengthen the positive effect of ethnic diversity on affective conflict. Moreover, the performance avoidance orientation is also associated with anxiety, emotionality and worry, all elements of affective conflict.

H21: There is a positive relationship between task conflict and group creativity.	Information processing theory	Task conflict enables greater understanding of the task and facilitates information exchange, and these in turn, enhance problem solving, idea generation and decision making (De Dreu & Weingart, 2003; Pelled, Eisenhardt, et al., 1999b; Simons & Peterson, 2000)
H22: Affective conflict is negatively related to group creativity.	Information processing theory/Social categorization theory	Information processing ability of a group is limited in the presence of affective conflict because group members tend to focus on each other rather than on the task at hand (De Dreu & Weingart, 2003; Pelled, 1996; Simons & Peterson, 2000). Additionally, anxiety, which often accompanies affective conflict has been found to disrupt cognitive processes (Sarason, 1984) as group members may be unable to consider all the important information into consideration during problem solving(Pelled, 1996; Simons et al., 1999). Moreover, animosity, which is often attendant to affective conflict, may cause group members to hold back potentially relevant information. It may also make them defensive and closed to the opinions of others, thereby limiting the amount of information that is shared within the group (Pelled, 1996; Simons et al., 1999). Altogether, these have the potential to make affective conflict undesirable for group creativity.
H23: Task conflict will mediate the effects of cognitive diversity on group creativity.	Information Processing Theory	

2.10 The Context of Ghana

2.10.1 Introduction:

This section discusses the cultural context of the study, providing a brief overview of its history and culture. As has been seen from the cultural perspective on creativity within organizations (Anderson et al., 2014; Chiu & Kwan, 2010; Erez & Nouri, 2010; Morris & Leung, 2010; Zhou & Su, 2010), the cultural context must be understood as it may have an impact on employee interaction and outcomes within organizations.

2.10.2 Overview:

Ghana is a West African country bordered by Burkina Faso, Togo, and Ivory Coast. It is an Anglophone country, and gained independence from British colonization on 6th March 1957, making it the first Sub-Saharan country to break free from colonial rule (BBC, 2020). According to the BBC (2020), the country has a population of 25.5million and covers an area of 238,533 square kilometers.

According to Bangura (2006), African countries tend to be among the most ethnically fragmented and he identifies Ghana as an example. Ghana has been described as a concentrated multipolar country comprising 72/92 ethnic groups, whereby a few large groups hold dominance(Bangura, 2006). The study indicates that the Akan ethnic group is the largest ethnic group holding 49.1% of the population. The next largest identified is the Mole-Dagbani (16.5%), then the Ewe (12.7%) and the Ga-Adangbe (8%). These top four altogether make up 86% of the population. The study indicates that such as structure has the potential to encourage ethnically driven political preferences, although this is somewhat mitigated by the fact that these key ethnic groups are themselves also highly fragmented. The Akan ethnic group is for instance comprised of twenty ethnic sub-groups(Bangura, 2006). Polarization within the country is primarily on two major fronts. First is the Ashanti-Ewe divide, which has been as a result of certain events and wars in history, and which is also reflected in the opposing support of the two major political parties in the country(Bangura, 2006). Although Ashantis (14.8% of the population) are part of the larger Akan ethnic group, the other subgroups are not as bent towards this divide.

The other form of polarization in the country is the North-South divide, and this is mostly along religious lines, with the North predominantly Muslim and the South, mainly Christian. Moreover, Bangura (2006) points out that Southern Ghana is relatively more developed than the North.

According to Hofstede (1993) culture is the 'collective programming of the mind which distinguishes one group or category of people from another' (pg. 89). Apart from the fact that Ghana's ethnic groups have complex cultures, generally, the Ghanaian people have a collective culture. Ghana's culture has been influenced by indigenous factors, as well as historical contacts with Islamic and European influences (Asante & Gyimah-Boadi, 2004).

Hofstede's seminal work on culture identified 5 dimensions on which the culture of one place differs from another: power distance, uncertainty avoidance, individualism, masculinity and long term orientation (Hofstede, 1993). These dimensions distinguish one culture from another. Moreover, as Williams & McGuire (2010) have rightly noted, culture influences national innovation, and various other studies have shown that these cultural dimensions may affect the functioning of workgroups.

According to Hofstede (1993), individualism (vs collectivism) refers to how much people in each society value group membership as compared to independence. In other words, the extent to which people prefer to act on their own as individuals versus acting as members of groups. Low levels of individualism indicate a more collectivist culture. Collectivist cultures identify strongly with the groups to which they belong and they expect the group to protect them(Hofstede, 1993). The opposite is true in individualist cultures, where individuals tend to think of themselves as on their own, do not expect groups to which they belong to look out for them. As such people are not very committed to the groups they belong to. In individualistic cultures, there are loose ties among individuals and self-interest is esteemed above group interest(Hofstede, 1993; Verma & Sharma, 2019). Goncalo & Staw (2006) argue that while previous studies have preferred collectivism as desirable to organizational behavior because it fosters cooperation and productivity, this may not be true for creativity. They argue that individualism in groups may be key to group creativity as it encourages uniqueness which is vital to generating

diverse viewpoints and this in turn enhances creativity. This line of argument is consistent with Thompson (2003) who argues that it is individuals, not groups, that excel at divergent thinking. He posits that groups tend to act as a 'norming device' that encourages conformity within the group. As such groups excel at convergent thinking, which is geared towards a consensus. The findings of Goncalo and Staw (2006) confirm these arguments as they show that individualistic groups were more creative than collective groups.

Another dimension of culture according to Hofstede (1993) is power distance, and this refers to how much people in a society accept unequitable distribution of power and authority. There is inequality in all societies, but some are more unequal than others(Hofstede, 1993; Verma & Sharma, 2019). Power distance refers to the degree of inequality in a particular society that is deemed normal. Some countries have relatively more equal power distribution (low power distance) while others have it relatively more unequal (high power distance). High power distance has been associated with reduced interactions among group members. A comparative study conducted by Conyne et al. (1999) between American and Chinese groups working on one project found that the nature of interactions differed across groups. The American group interacted much more frequently than the Chinese group. They observed that in the Chinese group, the pattern of interaction was more leader-initiated such that group members spoke in response to questions from leaders. Since interaction is the vehicle by which information is exchanged and processed, lowered interaction because of high-power distance could be detrimental to information processing which is key to group creativity. Corroborating this, another study by Van Der Vegt et al. (2005) found functional diversity to be positively related to work unit innovative climate in low power distance cultures and negatively related to innovative climate under high power distance cultures.

Uncertainty avoidance as a dimension of culture refers to the extent to which people in a society feel threatened by uncertainty(Hofstede, 1993). Also encompasses how much they strive to avoid such uncertainties. In other words, it is the degree to which people prefer structure and predictability over unstructured(unpredictable) situations(Verma & Sharma, 2019). In structured societies, people prefer clearly spelt out rules as to conduct.

Hofstede (1993) explains that people in high uncertainty avoidance societies show more nervous energy, while those in low uncertainty avoidance contexts are more easy-going. For high uncertainty avoidance cultures, what is different is dangerous, and people are generally uncomfortable with change and what is unfamiliar. On the other hand, those from low uncertainty contexts tend to be intrigued by novelty and for them, what is different is curious. High uncertainty avoidance is likely to hamper creativity as people tend to stick to rules to avoid ambiguity. A study by Kaasa (2017) using data from the European Values Study (EVS, 2010) and the World Values Study (WVS 2009) from twenty-six EU countries and 20 neighboring countries indicates a negative relationship between high uncertainty avoidance and national creativity.

Masculinity in culture refers to the relative dominance of values traditionally associated with masculinity, such as achievement, assertiveness, acquisition of material wealth and aggressiveness, while femininity refers to those values such as emotional openness, empathy, care for the weak, compassion, among others that are typically usually associated with women. All cultures have elements of both, but the relative strength of these values determines whether a culture is more masculine or feminine. Societies in which such masculine values as described above are dominant are described as masculine cultures, while those in which more feminine values are dominant are feminine cultures. The study cited earlier by Kaasa (2017) also showed a negative impact of cultural masculinity on national creativity.

Long-term orientation (vs. short term orientation) is the fifth dimension of culture and was the last to be added to the others(Hofstede, 1993). This refers to how society values attitudes and behavior geared towards future rewards as opposed to those pertaining to the past and/or the present. In long-term oriented cultures, people's values reflect the prospect of future gratification and this is evident in such behavior as savings, investment, and perseverance. Short-term oriented cultures, on the other hand, have a tendency towards the past and present and this is reflected in behavior that is respectful of custom and tradition and the priority placed on carrying out social obligations. In a study of top management teams from 750 firms in the semi-conductor and pharmaceutical industries, Lin et al. (2019) found that when top managers have a long term orientation, it enhances

speed, comprehensiveness and creativity of strategic decision making processes. This was because managers with a long-term orientation tend to be more adaptive, future oriented and entrepreneurial.

In a comparative analysis across countries including USA, Japan, Indonesia, Netherlands, France and West Africa, Hofstede (1993) indicates that West African countries like Ghana were found to score high on power distance, low on individualism (indicating a collectivist culture), low on long-term orientation, medium on Masculinity and uncertainty avoidance.

According to Hofstede (1993), there are no universal management theories. He argues that management concepts cannot help but be shaped by the culture and the constraints of the society in which it was developed. In other words, the culture of a place constrains the validity of the theory. As such what is true in one cultural context may not necessarily be true in other cultural contexts. Studies on workgroup diversity, conflict, team member goal orientation and workgroup creativity have been predominantly conducted in Western and European contexts to the exclusion of more African contexts (Gong et al., 2013; Guillaume et al., 2012, 2015; Pelled, 1996; Pieterse et al., 2013; Simons et al., 1999; van Ginkel & van Knippenberg, 2008; Van Knippenberg et al., 2004). As such, much of what is known about these subjects has originated from cultures markedly different from the African context.

It is therefore important to understand the cultural context of the current study and to also test these theorized relationships here in order to ascertain their validity in this cultural context.

There are not many studies that have examined the influence of the collective Ghanaian culture on workgroup diversity, intragroup conflict, and outcomes. An example is the study by Boateng and Agyemang (2015) and this supplies some evidence of the impact of culture on information processing within organizations. Boateng & Agyemang (2015), in a qualitative study based on Hofstede's model explored how culture affects knowledge sharing in the public sector. The study was conducted in the Afigya Kwabre district in the Ashanti region of Ghana. They argued based on previous studies that culture may promote or hinder knowledge sharing. Their study adopted a case study approach and

used semi-structured interviews to collect data, which was subsequently analyzed by thematic analysis.

They found that high power distance impedes knowledge sharing. Under the power distance dimension, four factors were found to be relevant to knowledge sharing in the Afigya Kwabre district, including decision making involvement, power and status, delegation of responsibility and respect and fairness Low uncertainty avoidance, reflected by higher levels of trust among employees also enhances knowledge sharing because of trust. They also found that femininity and collectivism also enhance knowledge sharing. These findings are however not generalizable, and they therefore asked for further quantitative research into the impact of culture on knowledge sharing for the sake of generalizability. It is interesting to find though that the scores on Hofstede's cultural dimensions were almost consistent with the general country picture reflected in the comparative analysis in Hofstede (1993).

The current study adds to this knowledge by examining how workgroup diversity translates into group creativity as mediated by conflict and moderated by group member goal orientations. It therefore shows how task and affective conflict, which are information processing variables play out in this context.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter explains the research methodology employed in this study. It discusses the research philosophical paradigm informing the selected methods. The methods and techniques adopted to collect and analyze the data are also discussed. This chapter is outlined as follows: Philosophical research paradigms, research approach, research design, methods of data collection and analysis, and then finally, ethical considerations. A summary is provided at the end of the chapter.

3.1 Philosophical Research Paradigms

A research paradigm refers to the worldview that guides the conduct of research and consists of the ontology, epistemology, axiology, methodology, and methods adopted by the researcher (Scotland, 2012).

Ontology refers to what one believes is the nature of reality (Petty et al., 2012). A researcher's ontological stance refers to his/her assumption about how things are and how they work. This ontological stance could be either realist or relativist. Realists believe that nature exists independent of the observer. Moreover, there is an emphasis on facts, and something is true only if it can be proven factually. A relativist ontology, on the other hand, views reality as subjective or relative. In other words, the nature of reality depends on the observer's perception of what is reality.

Whether the ontological stance is realist or relativist informs the epistemological stance of the researcher. Epistemology refers to the means by which we attain knowledge (Petty et al., 2012), and is concerned with the relationship the researcher has with the objects of research. It describes the nature of the relationship between the knower and what can be known. A realist view leads to an etic epistemology, otherwise known as an objective epistemology. In this view, the researcher is as detached as possible from the objects of research. The rationale behind this is that data should be collected with as little influence from the researcher as possible to be objective. A relativist view, on the other hand, leads to an emic or subjective epistemology. In this view, the researcher, who is described as a

detective, is as close as possible to the subjects of study. The rationale behind this is to understand truth from the perspective of the subjects. Data thus collected is also influenced by the observations and interpretations of the researcher.

Axiology is concerned with the assumptions about how values and ethics influence the conduct of research. In quantitative research, which is informed by a realist ontology and an etic epistemology, the researcher's values do not influence the outcome of research because he/she is as distant as possible from the objects of research(Bryman, 2006). Qualitative research, on the other hand, which is informed by a relativist ontology and an emic epistemology, tends to be value-laden owing to the proximity between the researcher and the object of research(Bryman, 2006; Morgan & Smircich, 1980).

While methodology and methods are sometimes used interchangeably, a methodological stance informs the methods to be employed in research. Methodology is informed by the ontological and epistemological stances and is concerned with how the researcher can know what has been assumed can be known. In other words, it refers to the general approach to conducting research. Corbin and Strauss (2008, p.1) describe it as 'a way of thinking about and studying social phenomena'. Methods, on the other hand, refer to the specific tools and techniques used to collect and analyze data.

3.2 Research Methodological Paradigms

There are five types of paradigm, namely positivism, post positivism, constructivism, critical theory and interpretivism, each influenced by different ontological and epistemological stances. It is important to clearly define the paradigm employed in research as it enables the reader to properly assess the merits of the study (Petty et al., 2012).

Positivism

It is also known as the scientific method and developed in the eighteenth century (Petty et al., 2012). Positivism is founded on a realist ontology and an etic epistemology. To the positivist, the external world is real and should be known without influence from the researcher. There is an emphasis on separation between the researcher and the objects of

research since objectivity is paramount in positivism. In other words, this paradigm implies an objective relationship between the researcher and the object of research particularly with regards to how knowledge about the phenomenon under study is discovered.

The goal of positivist research is to scientifically explain and predict (Zahra and Ryan, 2005), and findings from research are described as facts or truths. It is described as the 'exclusive province of quantitative research' (Ponterotto, 2013, p.20). Thus, studies using this lens employ quantitative methods such as experiments, quasi-experiments, and surveys. Positivism upholds such methods over others and findings tend to be generalizable and free of personal values.

Post-positivism

Founded on positivism, post-positivists assume that reality exists but that human limitations make it impossible to be completely known. Epistemologically, the researcher is seen as a data collection instrument, but the researcher takes care in ensuring that findings are informed by empirically collected data and not by personal impressions. As such, there is low inference in post positivism (Ponterotto, 2013). Observational data is important here because it is assumed that certain thoughts/constructs cannot be observed directly. Because such observations are influenced by intuition and perception, they tend to be relatively more value laden. Post-positivists, while having certain views in common with positivists seek to address the weaknesses of positivism by incorporating certain qualitative elements/techniques. Thus, traditionally qualitative methods are chiefly used in a quantitative manner (Ponterotto, 2013).

Critical Theory

This paradigm assumes a virtual reality shaped over time by social, political and ethnic factors, and a chief assumption is that there is inequity and oppression in the real world (Ponterotto, 2013). It is usually aimed at emancipation/advocacy for marginalized groups. Accordingly, the issues of concern typically include domination, discrimination, oppression, etc. Thus, the participants/victims' view is of key importance. Data is collected qualitatively, usually through in-depth interviews, participant observation, and

focus group discussions. Such studies could take the form of ethnographies and historical studies.

Pragmatism

Pragmatists do not restrict themselves to either objectivism or meaning construction. Instead, either approach could be employed if it proves the more suitable in addressing research questions. Knowledge claims are not determined beforehand. Rather, they are made based on the demands of the situation.

Constructivism

Ontologically, constructivists hold the view that there are multiple realities constructed by individuals (Petty et al., 2012). Thus, there is no absolute reality. Therefore, epistemologically, the researcher and the participants construct that reality together. Thus, the research question is as broad as possible in order not to restrict the exploratory process. Thus, the researcher must be as close as possible to the objects of research (Ponterotto, 2013). The researcher is aware of and acknowledges how personal values and experiences influence interpretation. Methodologically, data is collected using qualitative tools such as interviewing. Research reports under this paradigm typically include quotes from participants reflecting their varying perspectives. Thus, the writing style tends to be less formal and is narrative in nature (Petty et al., 2012). The researcher draws out themes and patterns from the data collected. Typical outcomes include case studies and grounded theory.

This study adopts a positivist paradigm as it seeks to explain the process through which group diversity relates to creativity, taking into consideration the moderating influence of group member goal orientations. It believes that the impact of group diversity on group creativity, as mediated by group conflict, is an independent reality and that these effects can be measured using objective means. Hypotheses are therefore formulated and tested using data collected via questionnaires in a survey.

3.3 Research Approach

There are two broad approaches to research, namely quantitative/deductive and qualitative/inductive approaches.

Theory testing and development is the goal of the deductive approach, while theory building and extension is the goal of the inductive approach. As such, the deductive approach typically begins with a theory, hypotheses are subsequently developed and tested. Thus, this approach is described as moving from the known (theory) to the unknown (specific study under consideration). The inductive approach, on the other hand, tends to be more open-ended and exploratory in a bid to build or extend theory. This approach is usually associated with qualitative techniques, while the deductive approach is usually associated with quantitative techniques. This study adopts a deductive approach owing to its positivist paradigm. As such, it begins with a conceptual model informed by these theories: the Information processing theory, the social categorization theory, the homophily theory, the social identity theory, the Categorization Elaboration Model (CEM), the Motivated Information processing theory and the sense-making theory. Hypotheses from the proposed conceptual model are subsequently tested using data collected using quantitative methods.

3.4 Research Design

This refers to the strategy for data collection. There are four basic types of research design. They are explanatory, exploratory, descriptive, and predictive research designs. Exploratory research design is employed when much is not known about a phenomenon. This design relies on qualitative data collection methods including participant observation and in-depth interviewing. Descriptive research design describes a particular phenomenon with emphasis on what is happening (done using qualitative methods) and the degree to which it is happening (done using quantitative methods). It is however not concerned with why this phenomenon occurs. This method therefore tends to employ mixed methods of research. The explanatory research design focuses on understanding why a phenomenon occurs and thus the emphasis is on explaining causal relationships between variables. Data collection tools used are chiefly quantitative and include surveys, in-depth interviews as well as document analysis. Finally, predictive research design is concerned with forecasting the results of a phenomenon. Experiments and quasi-experiments are often employed in this research design.

This study adopts an explanatory research design as it seeks to examine the relationships between group diversity and group creativity as mediated by group conflict. Previous research has been dominated by studies that examine group diversity and creativity from the perspective of the entire group (Farh et al., 2010; Gong et al., 2013; Guillaume et al., 2015; Pieterse et al., 2013; Torchia et al., 2015). Typically, these studies compute scores for group creativity by aggregating the scores of group members in order to arrive at a group score. While this approach has been undoubtedly useful in providing insights into these concepts, it has certain shortcomings. In the first place, aggregating individual group member scores in order to obtain a group score may obfuscate the true perceptions group members regarding the creativity of the group. According to Kurtzberg (2005), group members may have markedly different evaluations with regards to their assessment of group creativity. For instance, supposing that in a group of four members, two are extremely satisfied (selecting 5 on a scale of 1 to 5, with 5 being the highest) and the other two are extremely dissatisfied (selecting 1 the same scale), it would be erroneous to put group satisfaction at 3 (neutral), which would be the score if the scores from the four group members were aggregated. Another valuable, albeit less popular approach is to examine group creativity from the perspective of individual group members. The social identity theory justifies the importance of examining group creativity from the perspective of individual group members (Ashforth & Mael, 1989, Tajfel and Turner, 1986). As Guenter et al. (2016) point out, if individuals' perception of group outcomes, such as performance, is favorable, they are more likely to identify with the group. Group members who identify with their groups tend to perceive their fate as tied to the fate of the group (Ashforth & Mael, 1989; Guenter et al., 2016), and this, in turn, makes them more committed to the group and more willing to work towards the success of the group and to make sacrifices where necessary(Hirst et al., 2009; Somech et al., 2009). Moreover, they tend to display behavior that is consistent with the group's identity. Thus, team members that perceive their groups to be performing well more readily identify with such groups, display group-serving behaviors, act more cooperatively, make sacrifices for the group and act in a manner consistent with the group's identity (Guenter et al., 2016; Schaeffner et al., 2015). Following this logic, if group creativity is the desired outcome, team members that perceive their groups to be creative are more likely to

behave in ways that will promote creativity within groups. However, if they do not perceive their groups to be creative, regardless of what other assessments of group creativity are, group members are likely to behave in counter-productive ways. On the basis of the social identity theory, Hirst et al. (2009) argued that when group members identify with a group, they are stimulated to exert creative effort. Their findings confirm that group identification is indeed positively related to individual creative effort. Interestingly, very few studies (Kurtzberg, 2005; Liu et al., 2021) have examined group creativity from the perspective of individual group members. By examining group creativity from the perspective of individual group members, this study aims at filling that methodological gap.

Moreover, the study also seeks to explain how group member goal orientations might influence the relationship between group diversity and group conflict. As such, a survey was conducted using questionnaires. A survey refers to the process of collecting information from a sample of individuals. Slater and Atuahene-Gima (2004) indicate that a key advantage of using a survey is that the research design is specifically adapted to the research problem.

3.5 Sample Design

The sampling design is key to the research design and enables more accurate generalizations to the population of interest (Slater & Atuahene-Gima, 2004). It is often not feasible to include all elements of a population of interest in a study primarily due to associated costs and complexity. Thus, samples are usually used. A sample refers to a relatively small portion of the population of interest that is used to represent the entire population (Kothari, 2004).

Apart from being more cost effective and easier to use, samples may actually also provide reliable information that can be generalized to the entire population (Slater & Atuahene-Gima, 2004).

Churchill (1979) proposed a procedure of sample design following these six steps: population definition; identifying the sampling frame; choosing an appropriate sampling procedure; sample size determination; sample element selection and finally data collection. This process is followed in this study and subsequently outlined.

3.6 Population Definition

The population of a given study can be defined as 'all the items under consideration in any field of inquiry' (Kothari, 2004, pg. 14). Depending on the nature and objectives of the study, the elements of a population could be individuals, households, groups, organizations, among others. According to Slater and Atuahene-Gima (2004), informants for a study must be chosen considering how knowledgeable they are regarding the topics of interest in a study. Since this study is concerned with workgroup diversity, group conflict, group member goal orientations and group creativity from the perspective of individual group members, workgroup members were selected as the unit of interest for the study. While majority of previous studies on workgroup diversity have focused on student workgroups (Behfar et al., 2008; Gong et al., 2013; Jehn & Mannix, 2001; Liu et al., 2021; Pieterse et al., 2013)others have focused on organizational workgroups (Chow, 2018; Farh et al., 2010; Rousseau & Aubé, 2010; Torchia et al., 2015; Wegge et al., 2008; Zhang, 2016).

Although student samples have provided valuable insights into the role of diversity in teams, such studies are not as easily generalizable to organizational settings as those focusing on actual workgroups. In organizations, a workgroup is defined as having three key characteristics. In the first place, members of a workgroup report to a common supervisor (Jehn, 1995; Jehn, Northcraft, & Neale, 1999a; Shin, Kim, Lee, & Bian, 2012). Secondly, a workgroup is described as the smallest functional unit within a larger organization (Guillaume, Brodbeck, & Riketta, 2012; Lee & Yang, 2015; Schippers, Den Hartog, Koopman, & Wienk, 2003; Shin et al., 2012). Third, a workgroup is identified by themselves and others as forming an interdependent unit (Guillaume et al., 2012; Jehn, 1995; Jehn et al., 1999a; Schippers, West, Dawson, West, & Dawson, 2015; Shin et al., 2012).

Workgroups therefore exist in every organization. There are three key sectors identified in the Ghanaian economy, namely Agriculture, Industry and Services (Ghana Statistical Service (GSS), 2018). It is also reported that there are 638,234 business establishments in Ghana under these three sectors, with services being the largest sector (82.6%), followed by industry (17%) and finally agriculture (less than 1%)(Ghana Statistical

Service (GSS), 2015). These identified businesses are further subdivided into the formal and informal sector, with the formal sector comprising businesses that have been registered with the Registrar General's Department (RGD) and who keep formal accounts. The informal sector, on the other hand, is made up of businesses that have not been registered and who do not keep formal accounts. The GSS (2015) further reports that only 9.5% of these businesses across all sectors fall under the formal sector with the greater majority of 90.5% making up the informal sector. More specifically, the formal sector within the agriculture sector is 24.9%, 8.4% for the industry sector and 9.6% of the service sector.

This study focuses on members of workgroups in the formal industry and services sectors within the Greater Accra region. The Greater Accra region has approximately 19,564 businesses within the formal sector(Ghana Statistical Service (GSS), 2015).

3.7 Identifying the Sampling Frame

Survey researchers aim at gaining some information about a given population through a survey of a selected sample. This sample is drawn from a list of all the elements within a population and this list is called a sampling frame. The sampling frame for a study refers to the list of all elements in a given target population (Kothari, 2004). As previously stated, this is the list from which the sample is drawn, and it includes all eligible elements of the target population. As previously stated, the approximately 19, 564 formal business establishments within the Greater Accra region formed the sampling frame for this study. The focus was on the formal sector because they are more likely to be better organized than unregistered businesses.

One reason this study focuses on the Greater Accra region is that because the focus of the study is ethnic and cognitive diversity, Accra was selected because it has a fair representation of the various ethnic groups of the country (Agyei-Mensah & Owusu, 2010; Owusu & Agyei-Mensah, 2011). According to Owusu and Agyei-Mensah (2011), Accra is a melting pot of Ghana's population. They indicate that although the Ga-Dangme is the indigenous ethnic group in Accra, urbanization and other factors have resulted in a fair representation of all the major ethnic groups in the country. Moreover, the Greater

Accra region has the highest proportions of total services and industry sector businesses within the country(Ghana Statistical Service (GSS), 2015).

3.8 Sampling Procedure

A sampling procedure refers to the researcher's technique for selecting units from the population to constitute the desired sample(Kothari, 2004). It is important to employ an appropriate sampling technique to arrive at a representative sample for the study. Sampling techniques are classified under two categories, namely probabilistic and non-probabilistic sampling techniques.

When probabilistic sampling techniques are used, each element of the population has a known and equal chance of being included in the sample (Kothari, 2004). Examples of techniques here include simple random sampling, stratified sampling, cluster/area sampling and systematic sampling. With non-probabilistic sampling techniques, all elements of the population do not have an equal probability of being selected (Kothari, 2004). Other factors determine the inclusion of elements of the sample. Techniques here include quota sampling, convenience sampling and judgment sampling.

This study adopted simple random sampling technique in targeting sixty medium to large scale organizations to participate in the study. However, several of the selected organizations declined to participate largely because due to the COVID-19 pandemic, many businesses had been unsettled and appeared to be seeking a new equilibrium of operation. Thus, several organizations that were contacted declined to participate in the survey. Within the participating organizations, members from workgroups to which creativity was more relevant, such as marketing, sales, production, customer service and production, were targeted to participate.

In all, data was obtained from 459 members of workgroups from 40 different organizations. Selecting respondents from several organizations is not unusual is diversity research (see Lee & Yang, 2015; Schippers, Den Hartog, Koopman, & Wienk, 2003).

3.9 Sample Size Determination

For sample size, the 5:10 sample determination rule by Hair, Black, Babin, & Anderson, (2010) suggests that the number of items in the questionnaire be multiplied by 5 to obtain the minimum sample size and by 10 to obtain the upper threshold. There were 44 scaled items in the questionnaire. Using this formula, the range obtained is between 220 and 440 respondents. This study pegged the sample size at 440. This is comparable to samples used in similar studies by Gong et al., (2013), Janssen and Prins (2007), Lee & Yang (2015) and Pieterse et al. (2013).

3.10 Sample Element Selection

The informants for a study should be selected because they are able to provide the knowledge required for the study(Slater & Atuahene-Gima, 2004). As earlier discussed, the sample comprised members of selected workgroups of certain service and industry sector companies in the Greater Accra region.

3.11 Data Collection

Data was collected in a single cross-sectional survey. In a cross-sectional survey, data is collected at a single, fixed point in time and analyzed in detail (Neuman, 2007).

The sample size for this study, as stated earlier, was pegged at 440. This sample was drawn from workgroups in Ghanaian manufacturing and service companies in the Greater Accra region. Letters introducing the researcher and the study and requesting permission to collect data from their workgroups were sent to several organizations. A letter of introduction along with an explanation of the purpose of the study were sent to the relevant stakeholders/Human Resource manager of the selected companies. Some accepted to participate while others declined. The companies that consented to participate included twelve manufacturing companies, and twenty-eight service companies into telecommunications, real estate, banking, aviation, among others.

In order to ensure that participants indeed formed a workgroup, we ensured from the HR that they fit the following criteria. To further confirm this, respondents were also asked the following questions:

- My group members and I report to the same supervisor. True/False
- My group members and I see ourselves as a unit. True/False

- Other members of the organization see my group members and I as a unit. True/False

At the initial phase of data collection, paper-based questionnaires for both leaders and members were given to group leaders to be administered to their group members. These were to be picked up at an agreed time.

Due to the COVID-19 crisis, majority of businesses closed their offices and began to work remotely in keeping with the President's directives to combat the crisis. Even after the lockdown was lifted two weeks after, many organizations continued to keep majority of staff operating remotely for safety reasons. As a result of this turn of events, some other organizations declined to participate. Moreover, it became necessary to have a digitized version of the questionnaire created to be filled remotely.

Online surveys as a method of data collection have become popular these days due to the advantages of lower costs and relatively greater speed than other traditional approaches (Slater & Atuahene-Gima, 2004). Although set up is more time consuming, data control and design flexibility are greater with online surveys. Moreover, in the wake of COVID-19, it is also safer. Thus Jotform, a survey application, was used to collect the data from group members that were working remotely.

Data collection took approximately five months at the end of which 459 completed questionnaires were gathered. After cleaning out the data for missing values and incorrect values, 372 usable questionnaires remained.

3.12 Instrument Design

In keeping with its positivist stance, the quantitative approach and the use of questionnaires were adopted as the most appropriate means of collecting data to address the objectives of the study.

The group member questionnaires provided information on group diversity, task and affective conflict, group creativity, group member goal orientations as well as the control factors.

At the beginning of the questionnaires, there was a preamble introducing the researcher, explaining the purpose of the study, and seeking consent. The next part comprised questions measuring goal orientations, group diversity, group conflict, group creativity

as well as some of the control variables (task routineness, task complexity and conflict resolution) on Likert scales. Specifically, goal orientations were measured on a six-point Likert scale ranging from 1 (Completely false) to 6 (Completely true), Creativity on a seven-point scale from 1 (Very poor) to 7 (Exceptional), conflict resolution, task complexity and task routineness on a five-point scale from 1 (Strongly Disagree) to 5 (Strongly Agree).

Finally, the next section collected categorical data focused on demographic information and the other control variables.

3.13 Pre-Testing and Survey Instrument Revision

Brun et al. (2014) emphasize the importance of pre-testing a questionnaire before administering to respondents. This can be done in several ways including expert opinion and pilot testing the questionnaire with respondents that are representative of the sample. In terms of expert opinion, after designing the questionnaire, the supervisor of this study thoroughly reviewed the questionnaire for face and content validity, as well as for avoiding common method variance. He then provided critical input for revising it.

Moreover, the school's programme director and the production manager of a manufacturing company also provided some input for making it more user friendly

Furthermore, the questionnaire thus revised was pilot tested with 108 respondents. Constructs that needed revision were revised accordingly.

3.14 Constructs and Measures

All measures used in the study were obtained from the literature and in certain instances adapted for the present study. According to Slater and Atuahene-Gima (2014), it is safer and easier to use existing measures that have been successfully used in previous research. Single item measures were avoided because they tend to have higher levels of measurement error (Churchill, 1979). As such, all the constructs were measured on multi-item scales. A sample of the questionnaire is attached in the Appendix.

Cognitive Diversity:

As previously discussed, cognitive diversity is defined as the extent to which group members differ in terms of their thinking styles, knowledge, skills and beliefs (Shin et al., 2012).

The four-item scale developed by Van der Vegt and Janssen (2003) was used to assess cognitive diversity in this study. This is following the example of Wang et al. 2016 and Shin et al. (2012). It captures diversity in terms of skills, knowledge, beliefs, and world views. It is anchored on a scale of 1 (Strongly Disagree) – 5 (Strongly Agree) likert scale. Sample items include 'To what extent do the members of the workgroup differ in their way of thinking?' and 'To what extent the members of the workgroup differ in their knowledge and skills?'

Ethnic Diversity:

Ethnic diversity is the extent to which group members differ in terms of their ethnicity. Studies measuring categorical variables like ethnicity often use either the Blau's index or the Teachman's index (e.g. (Joshi & Roh, 2009; Pieterse, van Knippenberg, & van Dierendonck, 2013; Sacco & Schmitt, 2005; Simons, Pelled, & Smith, 1999; Van der Vegt & Janssen, 2003), but these measures are used when collecting data from all members of a group.

To measure ethnicity from the perspective of individual group members, a three-item scale was adapted from the measure by Colquitt et al. (2002), which has also been used by Dayan & Benedetto (2010) and Dayan, Ozer, & Almazrouei (2017). This was anchored on a five-point Likert scale (1 – Strongly Disagree to 5 – Strongly Agree). Items on the scale include 'My workgroup has members from different Ghanaian ethnic backgrounds', 'My work unit is ethnically diverse' and 'My group members speak different native languages'.

Task and Affective Conflict

Task conflict refers to disagreements among group members regarding the tasks they perform (Jehn, 1995). Task conflict was measured using the four-item scale developed by Jehn (1995) as this scale was designed for workgroup settings. This scale has been successfully used by Jehn et al. (1999) and Tidd et al. (2004). Items were anchored on a 5-point Likert scale ranging from Never to Always. Sample items included 'How often do people in your work unit disagree about opinions regarding the work being done?' and 'How much conflict about the work you do is there in your work unit?'.

Affective conflict also refers to disagreements among group members revolving around personal differences and is often characterized by anger, tension, personal attacks, among others (Amason, 1996; Jehn et al., 1999a). Affective conflict was measured using the three-item scale developed by Janssen et al. (1999) and anchored on a five-point Likert scale. Sample items include 'The personal relationships in the team are always strained' and 'Some team members visibly dislike each other'.

Team Creativity

Team creativity is defined as 'the production of novel and useful ideas concerning products, services, processes and procedures by a team of employees working together'(Shin & Zhou, 2007, pg. 1715). Team creativity was measured using the four-item scale developed by Shin & Zhou, (2007) anchored on a 7-point scale. It has been used by (Gong, Kim, Lee, & Zhu, 2013; Shin, Kim, Lee, & Bian, 2012; Wang, Kim, & Lee, 2016) and sample items include 'How well does your team produce new ideas?' and 'How creative do you consider your team to be?'

Goal orientations

As previously defined, goal orientations refer to refer to the individual goal preferences of individuals in achievement settings that influence their actions and reactions (Dweck, 1986; Dweck & Leggett, 1988; Pieterse, van Knippenberg, & van Dierendonck, 2013). In this study group member goal orientations were measured using the 16-item scale developed by Baranik, Lau, Stanley, Barron, & Lance, (2013).

This scale measures all four goal orientations, namely the Learning Approach, the Learning Avoidance, the Performance Approach, and the Performance Avoidance goal orientations. Sample items for the learning approach goal orientation include 'I am willing to select a challenging work assignment that I can learn a lot from' and 'For me, development of my work ability is important enough to take risks'. Learning Avoidance items include 'I just hope I am able to maintain enough skills, so I am competent at my job' and 'At work, I am just trying to avoid performing the tasks required for my job poorly'. Sample items for performance approach include 'I like to show that I can perform better than my coworkers' and 'I prefer to work on projects where I can prove my ability to others'. Finally, for performance avoidance orientation, sample elements are 'Avoiding

a show of low ability is more important to me than learning a new skill' and 'I prefer to avoid situations at work where I might perform poorly'.

Controls

One characteristic of an effective research design is that the influence of extraneous variables are minimized or controlled for(Kothari, 2004). It is important for a research design to have sufficient controls in order to enhance confidence in the resulting findings(Slater & Atuahene-Gima, 2004). The following extraneous factors were controlled for after reviewing the literature:

Team size

Team size was to be controlled for because the larger the size, the greater the chances for diversity, and this is following the examples of previous studies such as Jehn, (1995); Simons et al., (1999); Wang, Kim, & Lee,(2016). Team members were asked to indicate the number of members in their groups.

Team tenure

Team tenure – how long team members have worked together – was also controlled for since this may affect team interactions. This follows the example of previous studies like Pelled et al., (1999b); Wang et al., (2016). Team members were asked to indicate how long they had worked together.

Task interdependence

The degree of interdependence might influence interaction and creativity. This is because highly interdependent tasks tend to require more interaction among team members as compared to less interdependent tasks. Thus task interdependence was controlled for following previous studies such as Jehn et al., (1999) and Shin et al., (2012). The degree of task interdependence was measured using the three-item scale developed by Campion, Medsker and Higgs (1993), following the example of Shin et al. (2012) and this was anchored on a five-point scale. Sample items include 'I cannot accomplish my tasks without information or materials from other members of my team' and 'Within my team, jobs performed by team members are related to one another'.

Task routineness

Whether tasks are often routine or not might influence group interactions and performance (Jehn, 1995; Pelled, Eisenhardt, et al., 1999b). More routine tasks require less interaction and deliberation among team members. Task routineness was measured using the four-item scale developed by Chung and Jackson (2013). The items include "My job is very routine," and 'the methods I follow in my work are about the same for dealing with all types of work, regardless of the activity'.

This was anchored on a five-point scale and sample items are 'I feel like we do the same thing repeatedly' and 'We encounter a lot of repetitive tasks in a normal working day'.

Task Complexity

The complexity of tasks may also influence the degree and the nature of interactions among team members. More complex tasks are usually not easily understood, require more frequent discussions and debate and tend to be more frustrating (Jehn et al., 1999a; Simons et al., 1999). Task complexity was measured using the 3-item measure by Dean and Snell (1991) and used by Yang et al. (2019). The items are:

1. Our work is mentally demanding.
2. Our work involves problem solving.
3. Our work requires a lot of professional knowledge and expertise.

Conflict Resolution

These may also influence reactions and interactions within the team (Jehn, 1995). This is measured using an adapted version of the 3-item scale from Jehn (1995) and the 4-item scale developed by Mello and Delise (2015) to increase the content validity of the measure for conflict resolution. One item from the Jehn (1995) measure "Disagreements about who should do what were usually discussed and resolved" concerned process conflict and this was removed as this is not a focus in this study. Thus, there were 6 items on this scale, and this was anchored on a five-point likert scale. Sample items included 'Emotional conflicts are usually discussed and resolved in my work unit' and 'This team knows what to do when conflicts between group members arise'.

Table 3.1 summarizes the previously discussed constructs, the items used to measure them and their sources.

Table 3. 1

Constructs, Items and Sources

Type of Variable	Construct	Number of Items	Sources
Independent	Cognitive Diversity	4 items	(Van der Vegt & Janssen, 2003)
	Ethnic diversity	3 items	Colquitt et al. (2003)(Dayan et al., 2017; Dayan & Benedetto, 2010)
Mediating	Task Conflict	4 items	(Jehn, 1995)
	Affective Conflict	3 items	Janssen et al. 1999
Moderating Variable	Goal Orientations	16 items	(Baranik et al., 2013)
Dependent Variable	Group Creativity	4 items	(Shung J Shin & Zhou, 2007)
Control Variables	Task Complexity	3 items	Yang et al. 2019
	Task Routineness	4 items	(Chung & Jackson, 2013)
	Task Interdependence	3 items	(Campion et al., 1993)
	Conflict Resolution	6 items	(Greer et al., 2008; Mello & Delise, 2015)
	Group tenure	1 item (categorical)	(Pelled, Eisenhardt, et al., 1999a; Wang et al., 2016)
	Group size	1 item (categorical)	(Jehn, 1995; Wang et al., 2016)
	Educational level	1 item (categorical)	(Shung J Shin et al., 2012)

3.15 Reliability

A good measure for any construct should be both reliable and valid(Slater & Atuahene-Gima, 2004). Validity and reliability are particularly essential to multi-item measures. A measure is said to be reliable if it measures the true value of a construct and is error free (Hair et al., 2010). In other words, reliability is concerned with the extent to which the measurement procedure is accurate and precise. Likert scales have been associated with greater reliability (Slater & Atuahene-Gima, 2004). Moreover, multiple item measures also ensure greater reliability of measures (Hair et al., 2010). Accordingly, in this study, single item measures were avoided and likert scales were also used to assess all key constructs. To statistically assess reliability, the Cronbach alpha coefficient (α) is used. To be reliable, the measure of a construct should be equal to or greater than .70 (Hair et al., 2010; Nunnally, 1978; Peterson, 1994). Moreover, composite reliability scores above 0.6 are a good indication of reliability and this was also assessed (Bagozzi & Yi, 1988).

3.16 Validity

Validity refers to the extent to which an instrument measures the construct it was intended to measure (Hair et al., 2010; Slater & Atuahene-Gima, 2004). In other words, if a scale is valid, it means that any differences found among subjects reflect an actual difference between them in terms of the construct being measured (Kothari, 2004). Reliability is an essential, but not sufficient for validity (Nunnally, 1967). Reliability must therefore be measured first in order to determine the validity of a measure. In addition to this, content validity is also essential. This is because even if a measure is reliable, it may still lack content validity as a result of multidimensionality. A measure is said to have face or content validity when the items of a construct completely reflect the domain of the construct and exclude extraneous items (Slater & Atuahene-Gima, 2004). In other words, content validity assesses how well the items selected to make up a summated scale correspond with its conceptual definition (Hair et al., 2010). Content validity can be subjectively assessed using expert judgments and pretests (Hair et al., 2010; Yaghmaie, 2003). As such, face and content validity were assessed using expert opinions from the supervisor of the study.

Discriminant validity refers to how distinct conceptually similar constructs are from each other (Hair et al., 2010). Preliminary tests for convergent and discriminant validity were

conducted using the exploratory factor analysis and confirmatory factor analysis. Additionally, discriminant validity was also assessed using the Fornell & Larcker (1981) criterion which indicates that constructs have discriminant validity when the square root of the AVE for each construct is higher than its correlation with any other construct. Results of these tests are presented in Chapter Four.

3.17 Common Method Bias

Common method variance can lead to spurious results and must therefore be avoided(Slater & Atuahene-Gima, 2004). In this study, common method bias was hedged against using three techniques.

In the first place, the scales for the different variables were measured using different scales.

Secondly, closely related constructs were arranged such that they did not directly follow each other. For instance, the four group member goal orientations were not put together. Instead, the measures for the goal orientations were interspersed with the measures for other variables. Moreover, complex hypotheses involving mediators and moderators have been associated with lower Common Method Variance (Slater & Atuahene-Gima, 2004). Common method bias was also tested using Harman's One Factor test which is used to determine whether the latent variables load onto one factor. If the total variance accounted for by a single factor is less than 50%, it is an indication that common method bias does not affect the data.

3.18 Method of Data Analysis

The quantitative research approach focuses on the use of statistical techniques in analyzing data collected in order to explain relationships among the constructs of the study. This is done through both descriptive and inferential analysis. Both descriptive and inferential analyses for this study will be conducted using the Statistical Package for Social Sciences (SPSS) version 25. As a first step, the data collected was coded, cleaned, and prepared for the descriptive analysis using the SPSS. Here, tests were conducted to check for missing values and to also assess correlations among constructs, the normality, homoscedasticity, and multicollinearity of the data and therefore its suitability for multivariate analysis. Moreover, an exploratory factor analysis (EFA) was also conducted

after which the data was transferred into Amos for Confirmatory Factor Analysis (CFA). Subsequently, data was analyzed using hierarchical multiple regression following the example of Gong et al. (2013) and Pieterse et al. (2013). Hierarchical multiple regression was selected because the data was deemed suitable for this type of analysis after establishing normality, homoscedasticity, and absence of multicollinearity. Moreover, hierarchical multiple regression is useful for assessing and comparing the incremental effect of different classes of variables on the dependent variable (Meyers, Gamst, & Guarino, 2013). Mediating hypotheses were also tested using Process Hayes. Results of these tests are presented in Chapter Four.

3.19 Ethical Considerations

Ethical considerations are of key importance in the conduct of research. This study was conducted cognizant of its responsibility to uphold basic human rights and to be respectful to respondents. The following ethical considerations governed the conduct of this study:

- Voluntary consent was sought from organizations and respondents. The introductory letter clearly stated that as much as participation was desired, respondents were free to decline to participate.
- Confidentiality of information shared was assured. Respondents were aware that the data being collected would be used solely for academic purposes.
- The purpose of the study was also clearly spelt out in the preamble of the questionnaire.

3.20 Chapter Summary

This chapter has outlined the philosophical foundation of the study and the resulting research approach, research design, sampling procedure, the instrument design, the method of data analysis as well as ethical considerations. It has shown that given the objectives of the study, the positivist approach and its associated quantitative methods were deemed best for the study. Items and scales used in the questionnaire were obtained from existing literature and adapted where necessary for the study. The reliability and validity of these items were assessed. How common method variance was hedged against was also outlined. Data was collected using pre-tested and well-structured questionnaires

and analyzed using the multiple hierarchical regression. Results of this analysis are presented in the subsequent chapter.

CHAPTER FOUR

RESULTS AND FINDINGS

4.0 Introduction

The purpose of this study was to examine how team member goal orientations influence the relationship between team diversity and team conflict and how both affective and task conflict translate into perceived team creativity. A quantitative approach was adopted to address this purpose. This chapter presents the results of the various tests, including descriptive analysis, exploratory and confirmatory factor analysis, and finally the results from the hierarchical linear regression as well as the mediation analysis.

4.1 Procedure

Respondents were members of workgroups from 40 Ghanaian companies involved in insurance, banking, media, manufacturing, and education. Letters were sent to managers in these organizations explaining the purpose of the study and requesting the participation of their workgroups.

This was during the onset of the COVID-19 pandemic, and many organizations were in a state of upheaval, trying to adjust to the changes the pandemic gave rise to. As such, some declined to participate. Data was therefore collected from organizations that were willing and able to participate given the constraints of the season. Workgroup members of organizations that consented to participate were debriefed regarding the purpose of the study, assured that participation was voluntary, and that the confidentiality of responses given would be guaranteed. Of the 60 organizations that were targeted, representatives from workgroups from 40 consented to participate. Subsequently, data from members of workgroups across these organizations were obtained using both paper-based questionnaires and an online version using Jotform. At the end of the data collection period, 459 group member questionnaires were obtained. Subsequently, the responses were coded and entered into SPSS and the data was then cleaned. Cases with incomplete responses were dropped. In all, 87 cases were deleted because of missing responses and wrong entries. This put the completion rate at 81%. At the end of this process, usable data from 372 workgroup members remained.

4.2 Normality, Skewness and Kurtosis

In order to confirm normality, the mean, skewness, and kurtosis for the variables were computed. Skewness refers to the degree of asymmetry displayed in the distribution of variable scores (Meyers, Gamst, & Guarino, 2013). According to Meyers et al. (2013), a positive skew suggests that values tend towards relatively lower scores while negative skewness indicates that scores tend toward relatively higher values. Kurtosis, on the other hand refers to the extent to which the data is compressed or flattened as compared to a normal distribution curve. They explain that a positive kurtosis (leptokurtosis) indicates that the data is relatively more compressed towards the center, while a negative kurtosis (platy kurtosis) shows that the distribution of scores is relatively flattened as compared to a normal distribution. George and Mallery (2010) posit that kurtosis and skewness values of between -2 to +2 are acceptable for normality. Given this, the Table 4.1 below indicates that the data distribution for all variables is fairly normal as they fall within the prescribed range. The results are displayed in Table 4.1 below:

Table 4.1

Means, Normality and Skewness

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
COGNIT1	372	1.00	5.00	3.2339	1.14531	-.284	.126	-.615	.252
COGNIT2	372	1.00	5.00	3.3145	1.10158	-.173	.126	-.570	.252
COGNIT3	372	1.00	5.00	3.5833	1.05689	-.551	.126	-.214	.252
COGNIT4	372	1.00	5.00	3.2527	1.14718	-.151	.126	-.689	.252
TASKCONF1	372	1.00	5.00	2.5591	.92829	.212	.126	-.030	.252
TASKCONF2	372	1.00	5.00	2.4167	.96071	.147	.126	-.532	.252
TASKCONF3	372	1.00	6.00	2.2473	1.08313	.890	.126	.829	.252
LEARNAPP1	372	1.00	6.00	4.7527	1.30027	-1.019	.126	.491	.252
LEARNAPP2	372	1.00	6.00	4.7285	1.34943	-1.250	.126	1.119	.252
LEARNAPP3	372	1.00	6.00	5.0054	1.12313	-1.388	.126	1.940	.252
LEARNAPP4	372	1.00	6.00	4.9731	1.14658	-1.306	.126	1.654	.252
AFFCONF1	372	1.00	6.00	2.8145	1.37576	.475	.126	-.568	.252
AFFCONF2	372	1.00	5.00	2.7151	1.37537	.230	.126	-1.222	.252
AFFCONF3	372	1.00	6.00	2.5672	1.34517	.397	.126	-.984	.252
ETHDIV1	372	1.00	5.00	4.1290	1.24797	-1.242	.126	.217	.252
ETHDIV2	372	1.00	6.00	3.7608	1.38310	-.750	.126	-.499	.252
ETHDIV3	372	1.00	7.00	4.2231	1.10192	-1.204	.126	1.078	.252
LEARNAVD1	372	1.00	7.00	3.3360	1.72269	.075	.126	-1.267	.252
LEARNAVD2	372	1.00	7.00	4.3871	1.60714	-.807	.126	-.420	.252
LEARNAVD3	372	1.00	7.00	3.2419	1.73766	.104	.126	-1.305	.252
TEAMCRET1	372	1.00	7.00	4.6048	1.45082	-.577	.126	.289	.252
TEAMCRET2	372	1.00	7.00	4.8683	1.32216	-.530	.126	.430	.252
TEAMCRET3	372	1.00	7.00	4.8817	1.36849	-.305	.126	-.268	.252
TEAMCRET4	372	1.00	7.00	4.8952	1.35674	-.466	.126	-.100	.252
PERFAPP1	372	1.00	7.00	3.4597	1.80624	.155	.126	-1.127	.252
PERFAPP2	372	1.00	6.00	3.9274	1.54103	-.398	.126	-.837	.252
PERFAPP3	372	1.00	6.00	3.8306	1.51393	-.277	.126	-.844	.252
PERFAPP4	372	1.00	6.00	4.1237	1.55433	-.471	.126	-.725	.252

COGNIT (Cognitive Diversity), TASKCONF (Task Conflict), ETHDIV (Ethnic Diversity), LEARNAPP (Learning Approach), LEARNAVD (Learning Avoidance goal orientation), AFFCONF (Affective Conflict), TEAMCRET (Team Creativity), PERFAPP (Performance approach), PERFAVD (Performance Avoidance), TASKROUT (Task Routineness), TASKINT (Task Interdependence), CONFRES (Conflict Resolution).

Table 4.1 continued

Means, Normality and Skewness continued

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
TASKINTD1	372	1.00	6.00	3.6989	1.44837	-.267	.126	-.797	.252
TASKINTD2	372	1.00	6.00	3.7446	1.42441	-.347	.126	-.616	.252
TASKINTD3	372	1.00	7.00	4.1505	1.29437	-.665	.126	.198	.252
PERFAVD1	372	1.00	7.00	3.2634	1.57146	.019	.126	-1.029	.252
PERFAVD2	372	1.00	6.00	2.8952	1.54616	.225	.126	-1.063	.252
PERFAVD3	372	1.00	7.00	3.4274	1.60612	-.098	.126	-1.107	.252
PERFAVD4	372	1.00	7.00	3.3038	1.68286	.108	.126	-1.120	.252
TASKCOMP1	372	1.00	7.00	4.1747	1.52220	-.113	.126	-.710	.252
TASKCOMP2	372	1.00	7.00	4.0269	1.52405	-.220	.126	-.611	.252
TASKCOMP3	372	1.00	7.00	4.2258	1.48762	-.219	.126	-.514	.252
TASKROUT1	372	1.00	7.00	3.6935	1.28128	-.185	.126	-.412	.252
TASKROUT2	372	1.00	6.00	3.5296	1.28087	-.043	.126	-.783	.252
TASKROUT3	372	1.00	6.00	2.9516	1.33088	.379	.126	-.705	.252
TASKROUT4	372	1.00	6.00	3.3871	1.36204	.021	.126	-.739	.252
CONFRES1	372	1.00	6.00	3.4892	1.15504	-.390	.126	-.571	.252
CONFRES2	372	1.00	5.00	3.6102	1.16147	-.518	.126	-.681	.252
CONFRES3	372	1.00	5.00	3.4785	1.09990	-.348	.126	-.536	.252
CONFRES4	372	1.00	5.00	3.6156	1.19751	-.663	.126	-.386	.252
Valid N (listwise)	372								

COGNIT (Cognitive Diversity), TASKCONF (Task Conflict), LEARNAPP (Learning Approach), LEARNAVD (Learning Avoidance goal orientation), AFFCONF (Affective Conflict), TEAMCRET (Team Creativity), PERFAPP (Performance approach), PERFAVD (Performance Avoidance), TASKROUT (Task Routineness), TASKINT (Task Interdependence), CONFRES (Conflict Resolution).

4.2 Descriptive Statistics:

Out of the sample, 73.4% of the respondents were male, 26.3% were female, while one respondent preferred not to say. Majority of respondents were between the ages of 20-30 (58.6%), while 27.2% fell between the ages of 31-40. Of the respondents, 10.5% were above the age of 41, while 3.8% were below age 20. These statistics suggest a young and predominantly male sample. In terms of education, 34.9% held a bachelor's degree, while 12.9% held a post-graduate degree. 17.5% held an HND/Diploma, while 33.6% were senior high school graduates and below. This indicates that majority of the sample were educated well above senior high school and would be able to understand and relate with relatively complex concepts. Moreover, increased education has been found to be associated with creativity. In terms of team experience, a majority of 53.6% had been on their teams for up to three years, while 26.3% had a team tenure of 4-6 years. 8.3% had a team tenure of 7-10 years and finally 11.6% had been on their teams for 11 years or more. In terms of the size of teams respondents belonged to 12.1% were from teams comprising up to 3 members, 21% from teams with 4 to 6 members, 25.3% also came from teams with 7-10 members and finally, 41.7% came from teams with 11 or more members. These indicate that while majority of participants came from relatively larger groups, their team tenure tended to be relatively low. These descriptive statistics are summarized in Table 4.2 below:

Table 4.2
Demographic Characteristics

	Characteristics	Frequency	Percentage
Gender	Male	273	73.4
	Female	98	26.3
Age	Under 20	14	3.8
	20-30	218	58.6
	31-40	101	27.2
	41 and above	39	10.5
Education	Secondary school	125	33.6
	HND/Diploma	65	17.5
	Bachelor's	130	34.9
	Postgraduate	48	12.9
	Other	4	1.1
Team Experience	0-3 years	199	53.6
	4-6 years	98	26.3
	7-10	31	8.3
	Above 10 years	43	11.6
Team Size	1-3 members	45	12.1
	4-6 members	78	21
	7-10 members	94	25.3
	11 members and above	155	41.7

Source: Author's fieldwork (One respondent each did not indicate gender and team experience, hence N=371 in those cases).

4.3 Exploratory Factor Analysis:

An exploratory factor analysis was conducted for all 46 items measured on a scale in the model in order to determine the underlying structure. These variables included the items measuring two independent variables (cognitive and ethnic diversity), two mediating variables (task and affective conflict), four moderating variables (the goal orientations) and one outcome variable (team creativity). Extraction was done using the Principal Component Analysis and the Varimax rotation was also used. Principal component was used because these variables, although previously validated in the literature, were new in the current context. Moreover, this method of extraction is useful for variables that could

be strongly correlated. The threshold was set at factor loading of 0.5 with an eigen value of 1 or more, and any loading below this was dropped following the recommendations of Hair et al. (2010). Table 4.4 below also shows the various constructs and their rotated factor loadings. Nine items were deleted, leaving 37 items that loaded on factors in order to obtain an acceptable structure. The nine items deleted had to be iteratively dropped because of cross-loadings or loadings lower than 0.5. These factors included the three items making up the Ethnic Diversity scale, the three items for the task complexity scale, and one item each on the Learning Avoidance, Learning Approach, and the Affective conflict scales.

The Kaiser-Meyer Olkin (KMO) measure of sampling adequacy and the Bartlett's test of sphericity are preliminary tests that indicate that the data is suitable for structure identification. While the KMO shows the proportion of variance in the variables under consideration which could be caused by underlying factors, the Bartlett's test for sphericity also tests the null hypothesis that variables in the model are not significantly correlated and should therefore result in a statistically significant outcome. The KMO was adequate at .720 and indicated a significant correlation among variables, warranting the use of factor analysis (Meyers, Gamst, & Guarind, 2013). Regarding the Bartlett's test of sphericity, values of less than 0.05 significance level shows that factor analysis may be useful. As shown in Table 4.3 below both the KMO and the Bartlett's test were acceptable for factor analysis to be conducted.

Table 4.3

KMO and Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.720
Bartlett's Test of Sphericity	Approx. Chi-Square	6622.294
	df	666
	Sig.	.000

Table 4.4 below shows the total variance explained by the 11 factors extracted. Cumulatively, the 11 factors extracted account for 71% of the variance. Eigen values for

the components extracted and their corresponding percentage variances in order of appearance are as follows: Performance Approach (5.54, 14.97%), Team Creativity (4.66, 12.61%), Conflict Resolution (2.60, 7.03%), Cognitive Diversity (2.49, 6.73%), Performance Avoidance (1.99,5.39%), Task Routineness (1.94, 5.26%), Learning Approach (1.64, 4.4%), Task Interdependence (1.59, 4.3%), Task Conflict (1.41, 3.82%), Affective Conflict (1.23, 3.33%) and Learning Avoidance(1.15, 3.13%).

Table 4.4

Total Variance Explained

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.542	14.979	14.979	5.542	14.979	14.979	2.896	7.827	7.827
2	4.667	12.613	27.592	4.667	12.613	27.592	2.866	7.746	15.572
3	2.603	7.034	34.626	2.603	7.034	34.626	2.779	7.510	23.083
4	2.490	6.729	41.356	2.490	6.729	41.356	2.610	7.054	30.137
5	1.994	5.390	46.745	1.994	5.390	46.745	2.483	6.712	36.849
6	1.946	5.259	52.004	1.946	5.259	52.004	2.314	6.255	43.104
7	1.646	4.449	56.454	1.646	4.449	56.454	2.270	6.136	49.240
8	1.595	4.310	60.763	1.595	4.310	60.763	2.241	6.057	55.297
9	1.413	3.819	64.582	1.413	3.819	64.582	2.036	5.502	60.798
10	1.232	3.330	67.912	1.232	3.330	67.912	1.944	5.255	66.054
11	1.158	3.131	71.042	1.158	3.131	71.042	1.846	4.989	71.042
12	.860	2.325	73.368						
13	.838	2.265	75.633						
14	.800	2.161	77.794						
15	.664	1.795	79.589						
16	.628	1.697	81.285						
17	.570	1.541	82.826						
18	.548	1.480	84.306						
19	.534	1.445	85.750						
20	.490	1.324	87.075						
21	.480	1.297	88.372						
22	.420	1.135	89.507						
23	.406	1.097	90.603						
24	.383	1.036	91.640						
25	.346	.935	92.575						

Table 4.4

Total Variance Explained continued

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
26	.330	.893	93.468						
27	.303	.820	94.288						
28	.277	.748	95.036						
29	.275	.744	95.779						
30	.272	.735	96.514						
31	.254	.688	97.202						
32	.221	.597	97.798						
33	.205	.554	98.352						
34	.180	.486	98.838						
35	.157	.425	99.263						
36	.144	.390	99.653						
37	.128	.347	100.000						

Extraction Method: Principal Component Analysis.

Furthermore, after iteratively deleting the nine items mentioned earlier, the final factor structure obtained which revealed eleven factors is displayed in Table 4.5 below:

Table 4.5

Rotated Component Matrix

	Rotated Factor Loadings										
	1	2	3	4	5	6	7	8	9	10	11
COGNIT1	.158	-.152	.059	.746	.134	-.018	.033	.286	.119	-.107	-.087
COGNIT2	.174	-.024	.048	.741	.094	-.059	.016	-.006	.172	.158	-.170
COGNIT3	.131	.072	.014	.765	-.043	-.026	.155	.032	.121	.044	.105
COGNIT4	.175	.095	-.069	.660	.035	.180	.039	-.111	.054	.093	.086
TASKCONF1	.049	-.009	-.072	.266	.097	-.021	.131	.040	.748	-.006	.082
TASKCONF2	.066	-.152	-.017	.173	.013	.002	.068	.002	.736	.199	-.012
TASKCONF3	.024	-.081	-.064	.006	.130	.048	-.165	.008	.778	.185	.148
LEARNAPP2	.096	.128	.086	.030	.010	.103	.722	.186	-.070	-.141	.208
LEARNAPP3	.037	.302	.134	.221	.023	.031	.739	.118	-.009	.153	.019
LEARNAPP4	.066	.114	.082	.046	-.003	-.033	.872	.073	.111	.038	-.125
AFFCONF2	.067	-.094	-.168	.091	.079	-.001	.049	-.054	.151	.863	.017
AFFCONF3	.150	-.129	-.078	.101	.075	.021	-.030	-.115	.232	.850	.064
LEARNAVD1	-.095	.002	.043	.071	.031	-.015	.046	.061	.123	-.029	.864
LEARNAVD3	.086	-.029	.003	-.092	.054	.045	.005	.058	.064	.094	.842
TEAMCRET1	.073	.830	.064	-.120	-.032	-.101	-.020	.157	-.117	.096	-.074
TEAMCRET2	.045	.831	.214	.048	.036	-.050	.167	.067	-.090	-.103	.060
TEAMCRET3	.037	.776	.210	.115	-.014	.019	.234	.068	.000	-.163	-.072
TEAMCRET4	.063	.612	.349	-.010	-.055	-.026	.313	-.001	-.088	-.201	.098
PERFAPP1	.724	.003	.117	.192	.060	.040	-.035	-.100	.100	.079	.128
PERFAPP2	.855	.019	.094	.128	.047	.012	.058	.075	.035	.088	.039
PERFAPP3	.844	.031	.096	.213	.025	-.011	.122	.108	-.036	.065	.022
PERFAPP4	.761	.138	-.079	.064	.018	.044	.054	.103	.046	-.024	-.194
TASKINTD1	.106	.060	.155	.152	.020	.037	.020	.776	-.021	.104	.157
TASKINTD2	.052	.067	-.045	-.043	.116	.058	.100	.798	-.004	-.089	-.042
TASKINTD3	.013	.143	-.009	.013	.045	.001	.201	.782	.071	-.165	.034
PERFAVD1	.072	-.059	-.044	.011	.831	-.082	.073	.071	.054	-.074	.073
PERFAVD2	-.091	-.194	-.011	-.104	.737	.096	-.001	.189	.097	.212	-.006
PERFAVD3	.017	.100	.036	.112	.822	-.038	.051	.077	.023	.043	-.074
PERFAVD4	.175	.092	-.155	.179	.670	-.089	-.163	-.156	.090	.035	.156

COGNIT (Cognitive Diversity), TASKCONF (Task Conflict), LEARNAPP (Learning Approach), LEARNAVD (Learning Avoidance goal orientation), AFFCONF (Affective Conflict), TEAMCRET (Team Creativity), PERFAPP (Performance approach), PERFAVD (Performance Avoidance), TASKROUT (Task Routineness), TASKINT (Task Interdependence), CONFRES (Conflict Resolution).

Table 4.5

Rotated Component Matrix continued

	Rotated Factor Loadings										
	1	2	3	4	5	6	7	8	9	10	11
TASKROUT1	-.025	.017	.149	-.051	-.035	.793	.133	.117	.018	-.138	.076
TASKROUT2	-.125	.030	.132	.001	-.045	.795	.053	.140	-.017	.075	.075
TASKROUT3	.064	-.082	-.118	-.015	-.018	.643	-.095	-.107	.140	-.074	-.149
TASKROUT4	.206	-.117	-.039	.161	-.020	.718	-.012	-.046	-.135	.191	.035
CONFRES1	.163	.167	.613	.179	.084	-.066	.105	-.112	-.168	-.009	.224
CONFRES2	.109	.339	.782	.095	-.019	.032	.090	.058	-.114	-.107	.069
CONFRES3	-.050	.099	.837	-.042	-.089	.030	-.014	.102	-.008	-.024	-.096
CONFRES4	.080	.119	.801	-.118	-.080	.124	.154	.019	.063	-.128	-.036

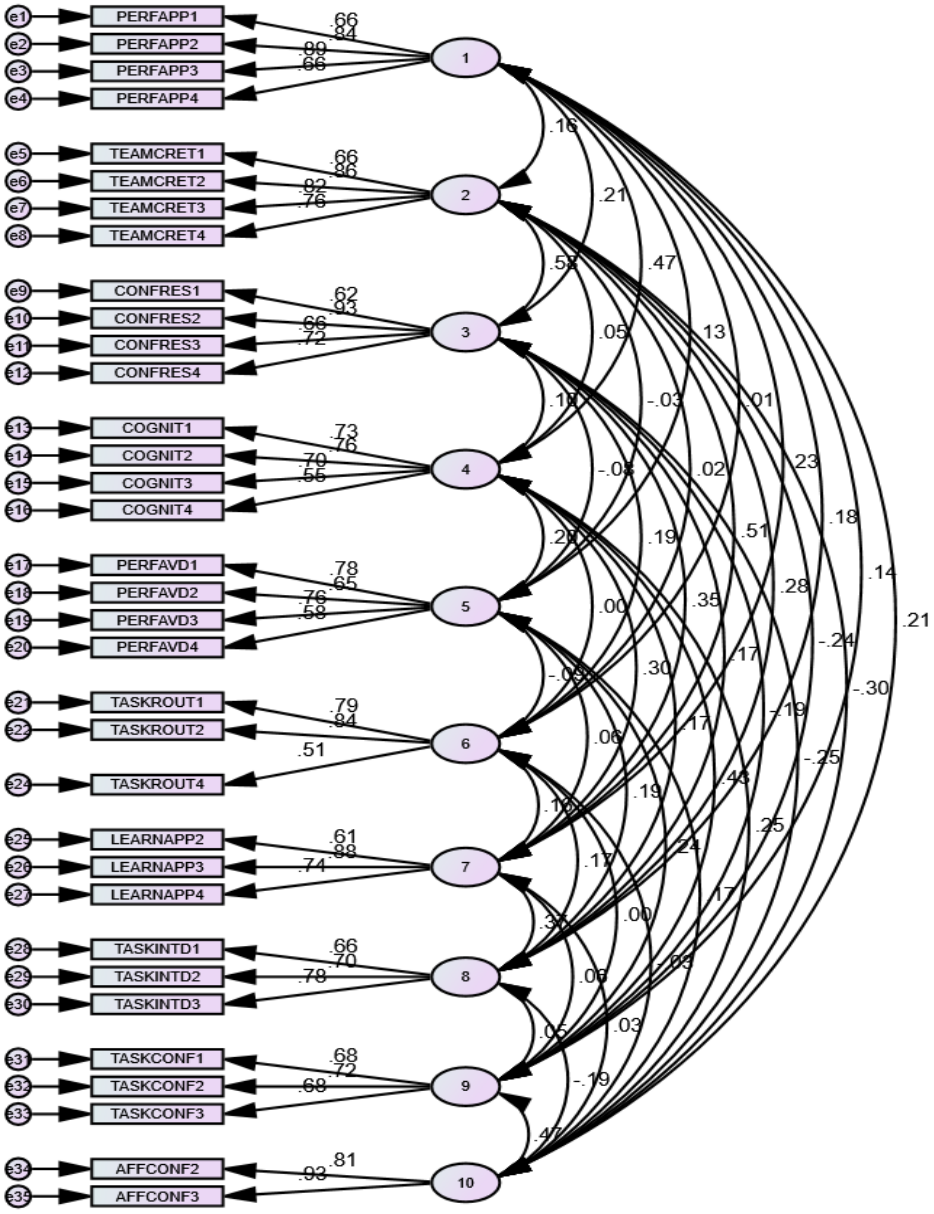
COGNIT (Cognitive Diversity), TASKCONF (Task Conflict), LEARNAPP (Learning Approach), LEARNAVD (Learning Avoidance goal orientation), AFFCONF (Affective Conflict), TEAMCRET (Team Creativity), PERFAPP (Performance approach), PERFAVD (Performance Avoidance), TASKROUT (Task Routineness), TASKINT (Task Interdependence), CONFRES (Conflict Resolution).

4.4 Confirmatory Factor Analysis:

The structure thus obtained was transferred into Amos and subjected to a confirmatory factor analysis. This was to ensure the uni-dimensionality and validity of constructs as well as to assess the model fit (Bagozzi & Yi, 2012; Slater & Atuahene-Gima, 2004). At this stage, three more items had to be dropped, namely the first and third items of the Learning Avoidance construct and the third item of the Task Routineness construct because they were not found to be significant and/or their standardized estimate scores fell below the 0.5 threshold. Various fit indices are used by researchers to assess the confirmatory factor analysis model fit. This study used the ratio of x^2 to the degrees of freedom, the Root Mean Square Error of Approximation (RMSEA) and the Comparative Fit Index (CFI). Per the results, the model fit indices obtained fell within the acceptable ranges as prescribed by Kline (2005) (x^2/df =2.33, RMSEA=.060, CFI=.902, IFI=.904). Figure 4.1 below is the final CFA model showing the standardized estimates after eliminating the factors with weak loadings.

Figure 4.1

Confirmatory Factor Analysis with Standardized Loadings



1 (Performance Approach), 2 (Team Creativity), 3(Conflict Resolution), 4 (Cognitive Diversity), 5(Performance Avoidance), 6 (Task Routineness), 7(Learning Approach), 8(Task Interdependence), 9(Task Conflict), 10(Affective Conflict)

4.5 Reliability and Validity

The items for the various constructs that remained at this stage were taken through reliability tests in SPSS. Cronbach's alpha value of 0.7 was used as the threshold (Nunnally, 1978). All the constructs yielded a Cronbach's alpha score of 0.7 or more. Moreover, Composite Reliability scores for the constructs were also above the threshold of 0.7 confirming reliability. Subsequently, the standardized estimates obtained from the confirmatory factor analysis were also useful for assessing convergent and discriminant validity of constructs (Slater & Atuahene-Gima, 2004). To confirm that each of the constructs was measuring what it was intended to measure, the convergent and discriminant validities for each construct were computed. The threshold for Composite Reliability (CR) was 0.7 and for the Average Variance Extracted (AVE) it was 0.5 (Bagozzi & Yi, 2012). Per the Fornell & Larcker (1981) criterion, a look at the Correlation Matrix (Table 4.7) indicates that discriminant validity has been established since the square root of the AVE for each construct is higher than its correlation with any other construct. Moreover, Table 4.7 shows that each item loads highest on the construct it is associated with. The results are summarized in Table 4.6.

Table 4.6

Reliability and Validity of Scale Items

Construct and Source	Scale items	SFL	t-value	Composite Reliability (CR)	Reliability (α)	Validity (AVE)	√AVE
Cognitive Diversity	1. To what extent do the members of your workgroup differ in their way of thinking?	.73		.77	.77	.53	.72
	2. To what extent the members of your workgroup differ in their knowledge and skills?	.75	12.21				
	3. To what extent the members of your workgroup differ in how they view the world?	.69	11.53				
Task Conflict	1. We often disagree about opinions regarding the work being done	.68		.73	.73	0.5	.7
	2. We have conflicting ideas regarding our work in my work unit.	.71	10.13				
	3. We disagree about how to do our work in my work unit.	.67	9.89				
Learning Approach	1. I am willing to take risks at work if it will develop my work ability.	.61		.79	.78	.57	.75
	2. I often look for opportunities to develop new skills and knowledge.	.87	11.36				
	3. I enjoy challenging work if it will teach me something new.	.74	10.94				

Note: SFL (Standardized Factor Loadings)

Table 4.6

Reliability and Validity of Scale Items

Construct and Source	Scale items	SFL	t-value	Composite Reliability (CR)	Reliability (α)	Validity (AVE)	√AVE
Affective Conflict	1. Some team members visibly dislike each other	.81		.86	.86	.76	.87
	2. The tension between my team members is sometimes painful	.93	12.986				
Team Creativity	1. How well does your team produce new ideas?	.66		.86	.85	.61	
	2. How useful are those ideas?	.86	13.75				
	3. How creative do you consider your team to be?	.82	13.32				
	4. How significant are those ideas to your organization?	.75	12.50				
Performance Approach	1. I like to show that I can perform better than my coworkers	.65		.84	.83	.59	.76
	2. I prefer to work on projects where I can prove my ability to others	.83	13.34				
	3. I try to figure out what it takes to prove my ability to others at work	.88	13.69				
	4. I enjoy it when others at work are aware of how well I am doing.	.66	11.12				

Note: SFL (Standardized Factor Loadings)

Table 4.6

Reliability and Validity of Scale Items Continued

Construct and Source	Scale items	SFL	t-value	Composite Reliability (CR)	Reliability (α)	Validity (AVE)	√AVE
Task Interdependence	1. I cannot accomplish my tasks without information or materials from other members of my team.	.66		.76	.75	.52	.71
	2. In my workgroup, we depend on each other for materials or information to do our individual work.	.70	10.26				
	3. Within my team, jobs performed by team members are related to one another	.78	10.48				
Performance Avoidance	1. I would avoid taking on a new task if there was a chance that I would appear rather incompetent to others.	.78		.77	.78	.54	.73
	2. Avoiding a show of low ability is more important to me than learning a new skill.	.65	11.21				
	3. I prefer to avoid situations at work where I might perform poorly.	.75	12.42				
Task Routineness	1. Our work as a group is very routine	.78		.76	.74	.53	.72
	2. We encounter a lot of repetitive tasks in a normal working day	.84	10.50				
	3. I feel like we do the same thing repeatedly.	.50	8.75				
Conflict Resolution	1. Emotional conflicts are usually discussed and resolved in my work unit	.61		.82	.81	.55	.74
	2. This team knows what to do when conflicts between team members arise.	.92	12.74				
	3. This team can avoid the negative aspects of conflict before they occur.	.65	10.61				
	4. If conflict arises on this team the people involved in the conflict initiate steps to resolve the conflict immediately.	.71	11.29				

Cognitive Diversity (1= To a very small extent - 5 = To a very large extent), Task Conflict (1=Never – 5=Always), Learning Approach, Performance Approach, Performance avoidance (1=completely false – 6 = completely true), Affective Conflict, task Interdependence, Task Routineness, Conflict Resolution (1=Strongly Disagree – 5 = Strongly Agree), Team Creativity (1=Very poor - 5 =Exceptional).

4.6 Common Method Bias

Common method variance can lead to spurious results and must therefore be avoided (Slater & Atuahene-Gima, 2004). In this study, common method bias was hedged against using three techniques.

In the first place, the scales for the different variables were measured using different scales.

Secondly, closely related constructs were arranged such that they did not directly follow each other. For instance, the four group member goal orientations were not put together. Instead, the measures for the goal orientations were interspersed with the measures for other variables. Moreover, complex hypotheses involving mediators and moderators have been associated with lower Common Method Variance since respondents are less likely to guess the relationships being tested.(Atuahene-Gima & Murray, 2007; Slater & Atuahene-Gima, 2004).

Moreover, common method variance was tested for using Harman's 1 factor test. In this test, all the items used to measure the latent variables are loaded onto one factor. If the total variance accounted for by a single factor is less than 50%, it is an indication that common method bias does not affect the data. Results from Harman's one factor test for this study (presented in the Appendix) indicates that a single factor accounts for 13.373%, which falls far below the 50% threshold. This shows that common method bias does not affect the data.

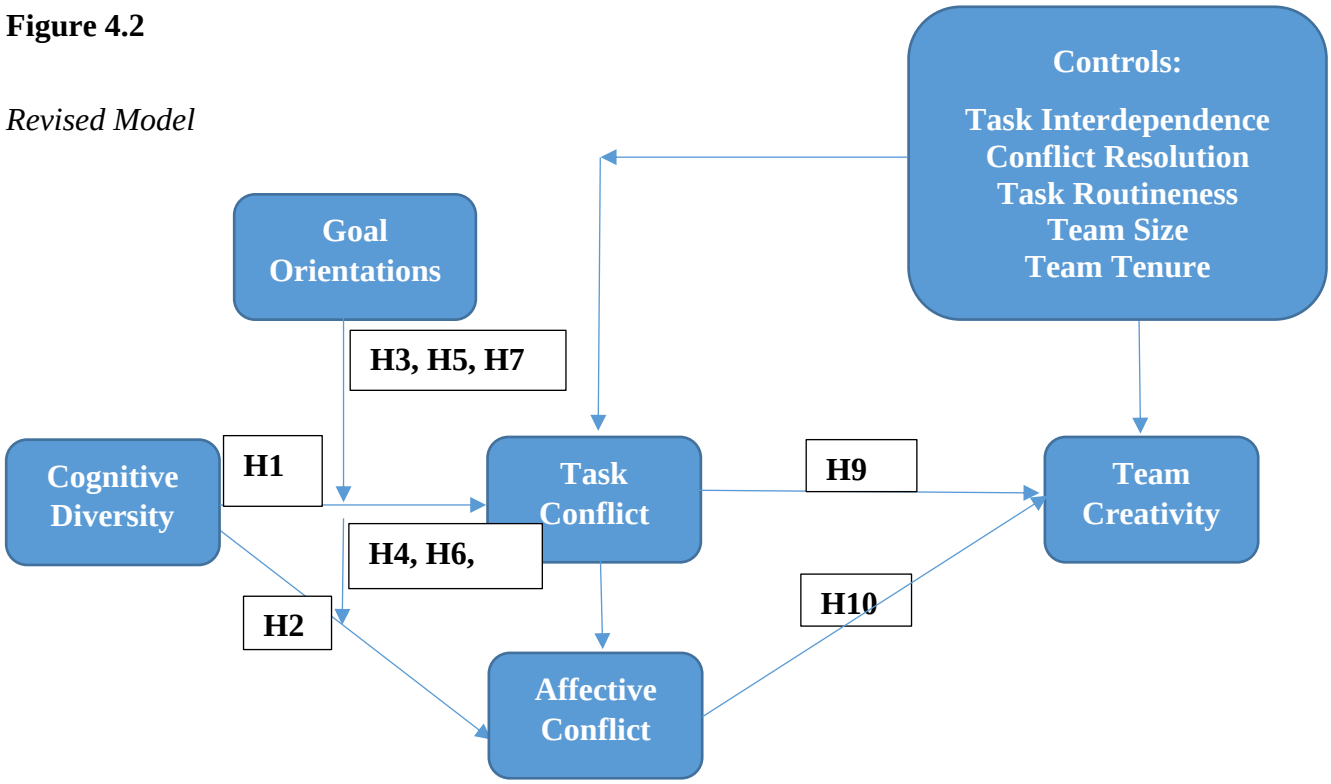
4.7 Scale Aggregation, Standardization and Correlations

Following the exploratory factor analysis, reliability, and validity tests, three constructs had to be dropped namely the Learning Avoidance goal orientation (a moderator), Ethnic Diversity (an independent variable) and Task Complexity (a control variable) and were therefore not included in the hypothesis tests. Given this, the researcher proceeded to test the direct relationships between Cognitive Diversity and Task/Affective Conflict, Task conflict and Team Creativity, Affective Conflict and Team creativity and the moderating influence of the Learning Approach, Performance Approach, and the Performance Avoidance goal orientations on the relationship between Cognitive diversity and Task/Affective Conflict. It also examined the mediating role of task and affective conflict

in the relationship between cognitive diversity and creativity. The revised conceptual model, showing the renumbered hypotheses, is depicted below:

Figure 4.2

Revised Model



The items for the various constructs, having passed reliability and validity tests were aggregated using the mean function in SPSS to obtain scores for each construct. These scores were subsequently standardized using SPSS. Standardizing scale constructs is important because the various constructs are usually measured on different scales and therefore require a level of uniformity in order to facilitate computation, comparison and interpretation (Felson, 1974; Iacobucci et al., 2016). SPSS computes standardized scores by subtracting the mean from the scores and then dividing it by the standard deviation (Felson, 1974). Since the scales to measure the various constructs in this study were different with some on five-point scales (e.g., cognitive diversity, task and affective conflict, task interdependence), others on 6-point scales (learning approach, performance

approach and performance avoidance goal orientations) and yet some on seven-point scales (group creativity), the scores had to be standardized.

Afterwards, the standardized aggregated scores for the independent variable (Cognitive Diversity) were multiplied by the standardized aggregated scores for the various goal orientations (Learning Approach, the Performance Approach, and the Performance Avoidance). This was done to obtain the interaction scores since the study is investigating the moderating influence of team member goal orientations (Dawson, 2014). Table 4.7 below shows the correlations among the various constructs. The purpose of the correlations analysis was to assess the nature and strength of relationships among the variables, particularly the mediating and dependent variables. It was also done to determine whether there is a problem with multicollinearity. According to Hair et al. (2010), multicollinearity exists when the correlation between two constructs is higher than 0.8. As seen in Table 4.7 below, none of the correlation coefficients exceeds this threshold, indicating that there is no multicollinearity among the variables. Moreover, task conflict was found to be significantly correlated with affective conflict ($r = .373$, $p < .01$), team creativity ($r = -.209$, $- < .01$), Performance Approach ($r = .132$, $p < .05$), Performance Avoidance ($r = .183$, $p < .01$) and Conflict Resolution ($r = -.142$, $p < .01$). Team creativity was also found to significantly correlate with Task conflict ($r = -.209$, $p < .01$), Learning Approach ($r = .419$, $p < .01$), Affective conflict ($r = -.253$, $p < .01$), Performance Approach ($r = .138$, $p < .01$), Task Interdependence ($r = .221$, $p < .01$) and Conflict Resolution ($r = .470$, $p < .01$). Team creativity was not significantly related to Performance Avoidance goal orientation and task routineness. An examination of the means suggests that Team creativity has the highest mean (4.80), while Task conflict had the lowest mean (2.40). The skewness and kurtosis values for all constructs except the Learning Approach fall within the -2/+2 range (George and Mallery, 2010) indicating a normal distribution. Learning Approach appears to have a relatively peaked distribution.

The Variance Inflation Factor (VIF) is used to assess the degree of multicollinearity among a set of multiple regression variables. If a variable has a high VIF, it suggests that it is highly collinear with other variables in the model. While multicollinearity does not reduce the explanatory power of a model, it can reduce the statistical significance of the

independent variables in the model. As shown in Table 4.11(see Appendix), all the Variance Inflation Factors (VIFs) for the variables in the regression model were less than 2 and well below the threshold of 5 (Witten et al. 2013), indicating that multicollinearity was not a problem. Moreover, to be assured of normality, the histograms and normal probability plots of the regression residuals were examined. As shown in Figures 4. 2, 4.3, 4.4 ,4.5, 4.8, 4.9, 4.11, and 4.12 (in Appendix A), they show a normal distribution. Homoscedasticity was also assessed using the scatter plots of the regression residuals. An examination of the scatter plots Figures 4.6, 4.7 and 4.10 and 4.13 in the Appendix shows that the majority of the scores are clustered in the center, indicating homoscedasticity. Moreover, the skewness and kurtosis values fell within the -2/+2 range for all the aggregated scores (see Table 4.7).

Table 4.7

Correlation Matrix

Variables	1	2	3	4	5	6	7	8	9	10
1. Cognitive Diversity	1									
2. Task Conflict	.312**	1								
3. Learning Approach	.212**	.022	1							
4. Affective Conflict	.179**	.373**	-.020	1						
5. Team Creativity	.010	-.209**	.419**	-.253**	1					
6. Performance Approach	.372**	.132*	.177**	.179**	.138**	1				
7. Task Interdependence	.164**	.039	.308**	-.124*	.221**	.136**	1			
8. Performance Avoidance	.117*	.183**	.043	.149**	-.052	.069	.185**	1		
9. Task Routineness	.018	.006	.125*	.020	-.029	.083	.111*	-.032	1	
10. Conflict Resolution	.065	-.142**	.285**	-.223**	.470**	.164**	.120*	-.068	.123*	1
Mean	3.37	2.40	4.90	2.60	4.80	3.83	3.86	3.19	3.53	3.54
Standard Deviation	.912	.801	1.008	1.275	1.144	1.318	1.141	1.308	1.065	.929
Skewness	-.304	.508	-1.38	.315	-.308	-.287	-.197	-.10	.213	-.423
Kurtosis	-.172	.495	2.21	-1.03	-.019	-.608	-.298	-.62	-.491	-.400

*p<.05(two-tailed test)
**p<.01(two-tailed test)
Population (N) = 372

4.8 Hypotheses Testing Using Hierarchical Linear Regression

The first ten hypotheses for the study were tested using Hierarchical Linear Regression. This is an extension of multiple linear regression in which the researcher inputs predictor variables in subsets or blocks (Meyers, Gamst, & Guarind, 2013). This method of analysis is beneficial because it enables predictors entered in previous blocks to serve as covariates for those entered later. This method has been previously used in other group research studies (Farh et al., 2010; Liu et al., 2021). In this study, it was used to test the direct effect hypotheses as well as the moderating hypotheses.

Results from Hierarchical Regression Analysis

4.8.1 The Impact of Cognitive Diversity on Task Conflict

The relationship between Cognitive Diversity and Task Conflict was tested along with the moderating influence of the three goal orientations (Learning Approach, Performance Approach and Performance Avoidance). In the first step (block one), the control variables were entered, namely team size, team experience, task interdependence, task routineness and conflict resolution. In the next block, the independent variable, Cognitive Diversity as well as the goal orientations, Learning Approach, Performance Approach and Performance Avoidance were entered. Subsequently, in the third block, the interactions between the independent variable and the moderators were entered. Cook's distances were measured to identify and eliminate outliers.

As shown in Table 4.8.1 below, Model 1 test the effects of the control variables (Team size, team tenure, task interdependence, task routineness and conflict resolution) on task conflict. Model 2 adds the effect of the independent and moderator variables (Cognitive diversity, Learning approach, Performance approach and Performance avoidance) and shows that they contribute 11.7% above the variance explained by the controls in Model 1(R^2 =.160, change in R^2 =.117, F =7.734, change in F = 12.16, $p < .01$).

Moreover, Model 3 adds the effect of the interaction between the independent and the moderator variables (cognitive diversity, learning approach, performance approach and performance avoidance) and explains 2.8% of the variance in affective conflict (R^2 = .188, change in R^2 = .028, F = 6.428, change in F = 2.268, $p < .01$).

Table 4.8.1

The Impact of Cognitive Diversity on Task Conflict

	Task Conflict		
Variables	Model 1 B(t-values)	Model 2 β(t-values)	Model 3 B(t-values)
Control Variables			
Team size	.057(1.073)	.074(1.475)	.075(1.507)
Team Tenure	.082(1.553)	.076(1.525)	.076(1.551)
Task Routineness	.071(1.336)	.088(1.736)	.070(1.383)
Task Interdependence	.006(.120)	-.039(-.720)	-.060(-1.108)
Conflict Resolution	-.175(-3.293)**	-.159(-3.014)**	-.147(-2.809)**
Independent Variable			
Cognitive Diversity		.264(4.910)***	.288(5.153)***
Moderator Variables			
Learning Approach		-.109(-1.916)+	-.153(-2.530)*
Performance Approach		.084(1.534)	.066(1.209)
Performance Avoidance		.132(2.570)*	.104(2.024)*
Interaction Effect			
Cognitive diversity x Learning Approach			-.106(-1.898)+
Cognitive diversity x Performance Approach			-.131(-2.527)+
Cognitive diversity x Performance Avoidance			.020(.384)
R^2	.043	.160	.188
Change in R^2	.043	.117	.028
F value	3.397**	7.734***	6.428***
F value change	3.397**	12.613***	2.268**
Degrees of Freedom	5/365	9/361	12/358

+p value <.1, *p<.05, **p<.01, ***p<.001

Note: Unstandardised regression coefficients were reported along with the t-values for each effect in brackets.

The results indicate that the data supports Hypothesis 1, which argued that there is a positive relationship between cognitive diversity and task conflict ($\beta = 0.288$, $p < 0.001$). This suggests that task conflict increases with cognitive diversity within workgroups.

Results also show that the Learning Approach goal orientation moderates the positive relationship between cognitive diversity and task conflict as argued in Hypothesis 3 ($\beta = -.106$, $p < 0.1$). However, this moderating influence was in the negative direction, rather than the positive direction as hypothesized. This means that under high levels of learning approach goal orientation, the positive relationship between cognitive diversity and task conflict is weakened. In other words, high learning approach goal orientation among cognitively diverse groups is associated with reduced task conflict.

The data also lends support to Hypothesis 4, which argued that the Performance Approach goal orientation moderates the positive relationship between cognitive diversity and task conflict ($\beta = -.131$, $p < .05$). The direction of this relationship was indeed negative as hypothesized. This means that under high levels of the performance approach goal orientation, cognitive diversity is less strongly associated with task conflict. In other words, when the performance approach goal orientation is high, the positive relationship between cognitive diversity and task conflict is weakened.

Hypothesis 5, which argued that the Performance Avoidance goal orientation would negatively moderate the positive relationship between cognitive diversity and task conflict, was not supported ($\beta = 0.020$, $p > .1$).

4.8.2 The Impact of Cognitive Diversity on Affective Conflict

The relationship between Cognitive Diversity and Affective Conflict was also tested along with the moderating influence of the three goal orientations (Learning Approach, Performance Approach and Performance Avoidance). In the first step (block one), the control variables were entered, namely team size, team experience, task interdependence, task routineness and conflict resolution. In the next block, the independent variable, Cognitive Diversity as well as the goal orientations, Learning Approach, Performance Approach and Performance Avoidance were entered. Subsequently, in the third block, the interactions between the independent variable and the moderators were entered. Cook's distances were measured to identify and eliminate outliers.

As shown in Table 4.8.2 below, Model 1 tests the effects of the control variables (Team size, team tenure, task interdependence, task routineness and conflict resolution) on affective conflict. Model 2 shows that the control, independent variable (cognitive diversity) and moderator variables (Learning approach, Performance approach and Performance avoidance) explained 8.9% of the variance in affective conflict (R^2 = .174, change in R^2 = 0.089, F = 8.456, change in F = 9.767, p <.001).

Moreover, for affective conflict, Model 3 shows that the interaction between cognitive diversity and the moderator variables (learning approach, performance approach and performance avoidance) explained 0.2% of the variance in affective conflict (R^2 = .176, change in R^2 = .002, F = 6. 376, change in F =.287).

Table 4.8.2

The Impact of Cognitive Diversity on Affective Conflict

	Affective Conflict		
Variables	Model 1 B(t-values)	Model 2 β(t-values)	Model 3 B(t-values)
Control Variables			
Team size	-.063(-1.236)	-.051(-1.055)	-.053(-1.075)
Team Tenure	.144(2.858)**	.137(2.834)**	.139(2.870)**
Task Routineness	.042(.815)	.037(.754)	.037(.744)
Task Interdependence	-.093(-1.827)	-.173(-3.332)**	-.169(-3.197)**
Conflict Resolution	-.229(-4.468)***	-.253(-4.961)***	-.254(-4.966)***
Independent Variable			
Cognitive Diversity		.132(2.513)*	.143(2.623)**
Moderator Variables			
Learning Approach		.033(.626)	.008(.127)
Performance Approach		.174(3.317)**	.175(3.277)**
Performance Avoidance		.138(2.795)**	.138(2.761)**
Interaction Effect			
Cognitive diversity x Learning Approach			-.050(-.888)
Cognitive diversity x Performance Approach			.046(.020)
Cognitive diversity x Performance Avoidance			-.009(-.174)
R^2	.085	.174	.176
Change in R^2	.085	.089	.002
F value	6.758***	8.456***	6.376***
F value change	6.758***	9.767***	.287
Degrees of Freedom	5/365	9/361	12/358

+p value <.1, *p<.05, **p<.01, ***p<.001

Note: Unstandardised regression coefficients were reported along with the t-values for each effect in brackets.

Hypothesis 2 is supported as the findings indicate a positive relationship between cognitive diversity and affective conflict as well ($\beta = 0.143$, $p < 0.01$). This suggests that affective conflict also increases with cognitive diversity.

The moderating effect of the Learning Approach goal orientation on the positive relationship between cognitive diversity and affective conflict was however not significant ($\beta = -0.050$, $p > 0.1$). Although insignificant, the direction of the effect was negative, as hypothesized. Thus, Hypothesis 6 was unsupported.

Hypothesis 7 was unsupported as the moderating impact of the performance approach goal orientation was found to be insignificant ($\beta = 0.046$, $p > 0.1$). Again, although insignificant, the direction of the effect was positive as hypothesized.

Similarly, the performance avoidance goal orientation was found to have no significant moderating effect on the relationship between cognitive diversity and affective conflict ($\beta = -0.009$, $p > .1$). As such, Hypothesis 8 was also unsupported.

4.8.4 The Relationship between Task/Affective Conflict and Creativity

Hypothesis 9 argued that there would be a positive relationship between task conflict and creativity, while Hypothesis 10 predicted a negative relationship between affective conflict and team creativity, and both were tested in models 1 and 2 as shown in Table 4.8.4 below. In the first block, the control variables including team size, team tenure, task interdependence and task routineness were entered. Subsequently, in the next block, task and affective conflict were entered and the analysis was again run. According to Table 4.8.4, for Team Creativity, Model 1 shows tests the effect of the control variables on team creativity. Model 2 shows that the independent variables (task and affective conflict) explain 11.3% of the variance in team creativity ($R^2 = .155$, change in $R^2 = .113$, $F = 10.929$, change in $F = 23.88$, $p < .001$).

Results indicate that there is a significant relationship between task conflict and team creativity ($\beta = -.190$, $p < 0.001$). However, the nature of the relationship was negative rather than positive as was hypothesized. The data therefore indicates that team creativity reduces with increased task conflict. Thus, Hypothesis 9 is unsupported. Hypothesis 10, which argued for a negative relationship between affective conflict and team creativity

was also tested. The results also show a significant relationship between affective conflict and team creativity ($\beta = -.224$, $p < .001$). The nature of the relationship was negative, as hypothesized, suggesting that team creativity reduces with increased affective conflict. Details are shown in Table 4.8.4 below.

Table 4.8.4

The Relationship between Task/Affective Conflict and Creativity

	Team Creativity	
Variables	**Model 1**	**Model 2**
	B(t-values)	β(t-values)
Control Variables		
Team size	-.043(-.829)	-.051(-1.037)
Team Tenure	.068(1.311)	.120(2.417)
Task Routineness	-.070(-1.328)	-.056(-1.139)
Task Interdependence	.192(3.681)***	.156(3.112)**
Independent Variable		
Task Conflict		-.190(-3.608)***
Affective Conflict		-.224(-4.154)***
R^2	.042	.155
Change in R^2	.042	.113
F value	3.947	10.929
F value change	3.947	23.88
Degrees of Freedom	4/359	6/357

+p value <.1, *p<.05, **p<.01, ***p<.001

Note: Unstandardized regression coefficients were reported along with the t-values for each effect in brackets.

4.9 Mediation Tests

The study also hypothesized a mediating role of task conflict in the diversity-creativity relationship. Specifically, it argued that cognitive diversity will have no impact on creativity except through task conflict. Additionally, affective conflict was expected to mediate the relationship between cognitive diversity and team creativity.

To test these relationships, Hayes' Process v. 3 was used to test the mediating role of task and affective conflict in the diversity-creativity relationship at a confidence interval of 95% and a bootstrap of 5000. Team size, team tenure, task routineness and task interdependence were included as control variables.

According to Meyers et al. (2013) in order to confirm mediation, the following three conditions must be met:

1. There must be a significant relationship between the independent variable and the dependent variable.
2. There must be a significant relationship between the independent variable and the mediating variable.
3. There must be a significant relationship between the mediating variable and the dependent variable

In more recent times, however, the first condition has been disputed as an unnecessary condition for mediation (Hayes, 2017). Hayes argues that the premise of this condition outdated and misguided. He cites Bollen (1989, pg. 52) who argues that "lack of correlation does not disprove causation" and "correlation is neither a necessary nor a sufficient condition of causality." This perspective is reflected in studies such as those by (Cerin & MacKinnon, 2009; Hayes & Rockwood, 2017; Rucker et al., 2011). According to Hayes (2017, pg. 80), 'Mediation analysis as practiced now no longer imposes evidence of simple association between X and Y as a precondition'.

4.9.2 The Mediating Role of Task Conflict in the Cognitive Diversity-Creativity Relationship

Table 4.9.2
The Mediating Role of Task Conflict in the Cognitive Diversity-Creativity Relationship

Direct Effect on Mediator (Task Conflict)						
Variable	Effect	SE	t	p	LLCI	ULCI
Cognitive Diversity	.3094	.0502	6.167	<.001	.2107	.4080
Direct Effect on Dependent Variable (Team Creativity)						
Cognitive Diversity	.0407	.0530	.7685	>.1	-.0635	.1449
Task Conflict	-.2468	-.0526	-4.692	<.001	-.350	-.1434
Indirect Effect on Dependent Variable (Team Creativity)						
	Effect	BootSE	LLCI	ULCI		
Cognitive Diversity	-.0764	.0219	-.1238	-.0387		

To test for the mediating role of task conflict in the diversity-creativity relationship, the direct relationship between cognitive diversity and task conflict was first examined. As shown in Table 4.9.2 below, the findings indicate a significant relationship between cognitive diversity and task conflict (effect = .3094, $p < .001$, SE = .0502).

Secondly, the relationship between task conflict and team creativity was also tested. Results show a significant negative relationship between task conflict and team creativity (effect = -.2456, $p < .001$, SE = .526).

The direct relationship between cognitive diversity and team creativity was insignificant at p-value of 0.1. Corroborating this, zero fell between the upper and lower limits of the confidence interval for that relationship (Boot LLCI = -.0635 and Boot ULCI = .1449) indicating an acceptance of the null hypothesis of no direct relationship between cognitive diversity and team creativity). Details are shown in Table 4.9.2 below.

Results however indicate a mediating effect of task conflict in the relationship between cognitive diversity and team creativity as zero does not fall within the upper and lower limits of the confidence interval for that relationship (Effect = -.0764, Boot LLCI = -.1238 and Boot ULCI = -.0387). In summary, these results indicate that cognitive diversity has a significant relationship with task conflict and not directly with team creativity. Task conflict has a significant relationship with team creativity. According to Meyers et al.

(2013), there is full mediation when the independent variable does not significantly predict the dependent variable in the presence of the mediator in the model. Thus, it can be said that task conflict fully mediates the relationship between cognitive diversity and team creativity. The foregoing lends support to Hypothesis 11 which argued that task conflict would mediate the relationship between cognitive diversity and team creativity.

4.9.3 The Mediating Role of Affective Conflict in the Cognitive Diversity-Creativity Relationship

Direct Effect on Mediator (Affective Conflict)						
Variable	Effect	SE	t	p	LLCI	ULCI
Cognitive Diversity	.2055	.0513	4.0026	<.001	.1045	.3065
Direct Effect on Dependent Variable (Team Creativity)						
Cognitive Diversity	.140	.0515	.2715	>.1	-.0873	.1153
Affective Conflict	-.2415	-.0514	-4.7004	<.001	-.3426	-.1405
Indirect Effect on Dependent Variable (Team Creativity)						
	Effect	BootSE	LLCI	ULCI		
Cognitive Diversity	-.0496	.0173	-.0869	-.0193		

Similarly, to test for the mediating role of affective conflict in the diversity-creativity relationship, the direct relationship between cognitive diversity and affective conflict was tested. As shown in Table 4.9.3 above, the findings indicate a significant relationship between cognitive diversity and affective conflict (effect = .2055, $p < .001$, SE = .0513).

Subsequently, the relationship between affective conflict and team creativity was also tested. Results show a significant negative relationship between affective conflict and team creativity (effect = -.2415, $p < .001$, SE = .0514).

The direct relationship between cognitive diversity and team creativity was insignificant at p-value of 0.1. Corroborating this, 0 fell between the upper and lower limits of the confidence interval for that relationship (Boot LLCI = -.0635 and Boot ULCI = .1449) indicating an acceptance of the null hypothesis of no direct relationship between cognitive diversity and team creativity). Details are shown in Table 4.9.3 above.

The results however indicate a mediating effect of affective conflict in the relationship between cognitive diversity and team creativity as the zero does not fall within the upper and lower limits of the confidence interval for that relationship (Effect = -.0496, Boot LLCI = -.0869 and Boot ULCI = -.0193). In sum, the results indicate that cognitive diversity has a significant relationship with affective conflict but not directly with team creativity. Affective conflict has a significant relationship with team creativity. Thus, per the findings, it can be said that affective conflict also fully mediates the relationship between cognitive diversity and team creativity.

Table 4.10 below summarizes the results of all hypotheses tested in this study. From the table, of the twelve remaining hypotheses, six were supported.

Table 4.10
Summary of Hypotheses

Hypotheses	Significant?	Significance Level	Coefficient	Expected Sign	Empirical Conclusion
H1: Cognitive diversity has a positive relationship with task conflict.	Yes	P<.001	.288	+	Supported
H2: Cognitive diversity has a positive relationship with affective conflict.	Yes	P<.05	.143	+	Supported
H3: The positive relationship between cognitive diversity and task conflict is moderated by the Learning Approach goal orientation.	Yes	P<.1	-.106	+	Not supported
H4: The positive relationship between cognitive diversity and affective conflict is moderated by the Learning Approach goal orientation.	No	p>.1	-.050	-	Not Supported
H5: The positive relationship between cognitive diversity and task conflict is moderated by the Performance Approach goal orientation.	Yes	P<.05	-.131	-	Supported
H6: The positive relationship between cognitive diversity and affective conflict is moderated by the Performance Approach goal orientation	No	p>.1	.046	+	Not supported
H7: The positive relationship between cognitive diversity and task conflict is moderated by the Performance Avoidance goal orientation.	No	p>.1	.020	-	Not supported
H8: The positive relationship between cognitive diversity and task conflict is moderated by the Performance Avoidance goal orientation.	No	p>.1	-.009	-	Not supported
H9: Task conflict has a positive relationship with team creativity.	Yes	P<.001	-.190	+	Not supported
H10: Affective conflict has a negative relationship with team creativity.	Yes	P<.001	-.224	-	Supported
H11: Task Conflict mediates the relationship between cognitive diversity and team creativity	Yes	Boot LLCI=-.1241 and ULCI=-.0380		+	Supported
H12: Affective conflict mediates the relationship between	Yes			-	Supported

4.8.3 Post Hoc Analysis

Although not hypothesized, the model suggests certain other relationships that may provide insight into the unexpected nature of some of relationships previously reported. As such, those propositions were tested in a post-hoc analysis and these results are subsequently presented.

The Relationship between Task and Affective conflict.

Task conflict was found to mediate the relationship between cognitive diversity and creativity. However, contrary to expectations, the results indicate that task conflict is negatively related to team creativity. In order to understand why task conflict has a negative relationship with team creativity, the relationship between task and affective conflict was also tested, although this was not hypothesized for. This is because, the literature suggests that when task conflict is positively related with affective conflict, the impact of task conflict on group outcomes tends to be negative (De Wit et al., 2012). Moreover, in such instances, conflict resolution has been found to decouple the link between task and affective conflict (Greer et al., 2008). Thus, conflict resolution, which was a control variable was treated as a moderating factor to examine whether it would moderate the link between task and affective conflict.

As such, Models 1, 2 and 3 in Table 4.8.3 below test the direct effect of task conflict on affective conflict as well the moderating impact of conflict resolution in this relationship. In the first block, team size, team tenure, task interdependence and task routineness were entered as control variables. Subsequently, in the next block, task conflict and conflict resolution were entered as independent variables. Then finally, in block three, the interaction between task conflict and conflict resolution was entered. As shown in Table 4.8.3, Model 1 shows the effect of the control variables. Model 2 shows that the control variables and the independent variables explained 16% of the variance in affective conflict (R^2 = .211, change in R^2 = .160, F = 19.150, change in F = 36.202, p <.001). Moreover, Model 3 shows that the interaction between task conflict and conflict resolution explains 0.9% of the variance in affective conflict (R^2 = .220, change in R^2 = .009, F = 19. 150, change in F = 4. 012, p < .001). These indicate that task conflict has a strong significant relationship with affective conflict (β = .337, p < 0.001). Moreover, conflict resolution was found to negatively moderate this relationship. In other words, the

positive relationship between task and affective conflict is weakened when there is conflict resolution ($\beta = -.096$, $p < 0.05$).

The Relationship between Task and Affective conflict
Table 4.8.3

	Affective Conflict		
Variables	**Model 1**	**Model 2**	**Model 3**
Control Variables			
Team Tenure	.132(2.55)*	.108(2.260)*	.114(2.403)*
Task Routineness	.032(.620)	.038(.806)	.028(.579)
Task Interdependence	-.178(-3.434)**	-.167(.3.504)**	-.175(-3.675)
Independent Variables			
Task Conflict		.326(6.797)***	.337(7.011)***
Conflict Resolution		-.189(-3.916)***	-.184(-3.837)***
Interaction			
Task Conflict x Conflict Resolution			-.096(-2.003)*
R^2	.051	.211	.220
Change in R^2	.051	.160	.009
F value	6.509***	19.150***	19.150
F value change	6.509	36.202	4.012
Degrees of Freedom	3/360	5/358	6/357

+p value <.1, *p<.05, **p<.01, ***p<.001
Note: Unstandardized regression coefficients were reported along with the t-values for each effect in brackets.

Additionally, given the relationship between task and affective conflict, a further test was conducted to assess the mediating role of task conflict in the relationship between cognitive diversity and affective conflict. In other words, this test sought to determine whether task conflict is a means by which cognitive diversity would lead to affective conflict. As such, following the procedures for mediation earlier discussed, this relationship was also examined.

Table 4.9.1

The Mediating Role of Task Conflict in the Cognitive Diversity-Affective Conflict Relationship

Direct Effect on Mediator (Task Conflict)						
Variable	Effect	SE	t	p	LLCI	ULCI
Cognitive Diversity	.3147	.0494	6.371	<.001	.2175	.4118
Direct Effect on Dependent Variable (Affective Conflict)						
Cognitive Diversity	.1122	.050	2.2417	<.05	.0138	.2106
Task Conflict	.3188	.0504	6.327	<.001	.2197	.4179
Indirect Effect on Dependent Variable (Affective Conflict)						
	Effect	BootSE	LLCI	ULCI		
Cognitive Diversity	.1003	.0235	.0059	.1489		

To test for the mediating role of task conflict in the diversity-affective conflict relationship, the direct relationship between cognitive diversity and task conflict was first examined. As shown in Table 4.9.1 above, the findings indicate a significant relationship between cognitive diversity and task conflict (effect = .3147, $p < .001$, SE = .0494).

Secondly, the relationship between task conflict and affective conflict was also tested. Results show a significant negative relationship between task conflict and affective conflict (effect = -.3188, $p < .001$, SE = .0504).

The direct relationship between cognitive diversity and affective conflict was significant (effect = .1122, p <0.5, SE = .050). Corroborating this, zero did not fall between the upper and lower limits of the confidence interval for that relationship (Boot LLCI = .0138 and Boot ULCI = .2106 indicating a rejection of the null hypothesis of no direct relationship between cognitive diversity and affective conflict). Details are shown in Table 4.9.1 below.

Moreover, the results indicate a mediating effect of task conflict in the relationship between cognitive diversity and affective conflict as zero does not fall within the upper and lower limits of the confidence interval for that relationship (Effect = -.1003, Boot LLCI = .0059 and Boot ULCI = .1489). In summary, these results indicate that cognitive diversity has a significant relationship with task conflict and directly with affective conflict. Additionally, task conflict has a significant relationship with affective conflict. This suggests a partial mediation. Thus, task conflict partially mediates the relationship between cognitive diversity and affective conflict.

The Moderating Role of Conflict Resolution in the Task/Affective Conflict-Creativity Relationship

Furthermore, given that both task and affective conflict were found to have a negative impact on team creativity, the moderating impact of conflict resolution in those relationships was also examined. This is because, certain studies indicate that …. the potential moderating role of conflict resolution

Research suggests that conflict resolution may enhance the impact of task/affective conflict on creativity (Behfar et al. 2008). As such the researcher also investigated how conflict resolution would potentially moderate the relationships between task/affective conflict and group creativity and these were tested in models 1, 2 and 3 as shown in Table 4.8.4 below. In the first block, the control variables including team size, team tenure, task interdependence and task routineness were entered. Subsequently, in the next block, task conflict, affective conflict and conflict resolution were entered. Finally, in the third block, the interactions between task/affective conflict and conflict resolution were entered and the analysis was run. According to Table 4.9.3 below, for Team Creativity, Model 1

shows tests the effect of the control variables on team creativity. Model 2 shows that the independent variables (task conflict, affective conflict, and conflict resolution) explain 25.6% of the variance in team creativity (R^2 = .298, change in R^2 = .256, F = 21.567, change in F = 43.205, p < .001), and Model 3 shows the interactions between task/affective conflict and conflict resolution account for 0.4% of the variance in team creativity (R^2 = .302, change in R^2 = .004, F = 16.984, change in F = .960, p < .001).

The results, as shown in Table 4.8.4 below confirm the significant relationships between task/affective conflict and creativity as earlier discussed. Moreover, they also indicate contrary to expectations conflict resolution does not moderate the relationship between task conflict and creativity (β = .032, p > .1) or between affective conflict and creativity (β = -.071, p > .1).

Table 4.9.3

The Moderating Role of Conflict Resolution in the Relationship between Task/Affective Conflict and Creativity

	Team Creativity		
Variables	**Model 1** B(t-values)	**Model 2** β(t-values)	**Model 3** β(t-values)
Control Variables			
Team size	-.043(-.829)	-.006(-.123)	-.010(-.219)
Team Tenure	.068(1.311)	.074 (1.626)	.079 (1.718)
Task Routineness	-.070(-1.328)	-.094(-2.076)	-.095(-2.093)*
Task Interdependence	.192(3.681)***	.134(2.929)**	.138 (2.990)**
Independent Variable			
Task Conflict		-.159(-3.285)**	-.169(-3.428)**
Affective Conflict		-.132(-2.631)**	-.116(-2.241)**
Conflict Resolution		.399 (8.503)	.415(8.580)***
Interaction			
Task Conflict x Conflict Resolution			.032(.633)
Affective Conflict x Conflict Resolution			-.071(-1.383)
R^2	.042	.298	.302
Change in R^2	.042	.256	.004
F value	3.947**	21.567***	16.984***
F value change	3.947	43.205	.960
Degrees of Freedom	4/359	7/356	9/354

+p value <.1, *p<.05, **p<.01, ***p<.001

Note: Unstandardized regression coefficients were reported along with the t-values for each effect in brackets.

4.9 Chapter Summary

In this section, the procedure of data analysis and its results have been presented. It presented the procedure for data preparation, the results from the Exploratory and Confirmatory Factor Analyses, the demographic information of the respondents, results from the tests for reliability and validity and finally the results from the hypotheses tests. Subsequently, these results will be discussed, and the implications presented.

CHAPTER FIVE
DISCUSSIONS, IMPLICATIONS AND DIRECTIONS FOR FUTURE RESEARCH

5.0 Introduction

The purpose of this study was to examine how team member goal orientations influence the relationship between team diversity and team conflict and how both affective and task conflict translate into perceived team creativity. In this concluding chapter, a summary of the findings from the data analysis are presented and discussed. Moreover, the implications for further research and practice are also presented along with an outline of research recommendations. The limitations of the study are also discussed.

5.1 Summary of Findings

An objective of this study was to examine the effect of cognitive diversity on perceived team creativity as mediated by task conflict. The study also set out to examine how task and affective conflict affect team creativity. Moreover, the moderating role of team member goal orientations on the relationship between cognitive diversity and task conflict. 459 questionnaires were collected of which 372 usable questionnaires remained after cleaning the data.

The scale items in the data were then subjected to exploratory and confirmatory factor analysis in order to determine viable factors. Subsequently, the scores were aggregated and standardized in SPSS before proceeding to analyze the data using Hierarchical Linear Regression. Hierarchical Linear regression was used to test the hypothesized relationships among the variables within the model.

In terms of demographic characteristics of respondents, there were 273 males making up 73.4% majority of respondents as against 98 females making up 26.3%. Majority of the respondents (58.6%) were between the ages of 20 to 30 years old, while 27.2% of the respondents were within the age range of 31-40 years. 39 respondents, making up 10.5% of the respondents were 41 years and above, while only 3.8% were below 20 years of age. In terms of education, 12.9% held a postgraduate degree, 34.9% of respondents held a

Bachelors' degree, 17.5% held an HND/Diploma, while 33.6% held a senior high school certificate.

Regarding how long respondents had been on their teams, 53.6% had been on their teams for up to 3 years. 26.3% had team tenure of 4-6 years, while 8.3% had been on their teams for 7-10 years. Finally, 11.6% had a team tenure of more than 10 years. In terms of team size, 12.1% belonged to teams of up to 3 members, 21% belonged to teams comprising 4-6 members, 25.3% were from teams made up of 7-10 members and finally, 41.7% were from teams made of up 11 team members or more.

An exploratory factor analysis (EFA) was conducted on all scaled items in order to determine the factor structure. 9 items had to be iteratively dropped because of cross-loadings or loadings lower than 0.5. These factors included the three items making up the Ethnic Diversity scale, the three items for the task complexity scale, and one item each on the Learning Avoidance, Learning Approach, and the Affective conflict scales. Finally, an acceptable structure was obtained, and 11 factors were extracted loading onto Cognitive diversity, task conflict, affective conflict, Learning Approach, Learning Avoidance, Performance approach, Performance avoidance, team creativity, task interdependence, task routineness and conflict resolution. The Kaiser-Meyer Olkin Measure of Sample Adequacy stood at .720 which was acceptable since it was above the 0.6 threshold.

Furthermore, a confirmatory factor analysis (CFA) was also conducted. The Rotated Component Matrix from the EFA was used to build the CFA model using the Pattern Matrix Model Builder plugin in Amos. Tests were run to determine how well the observed variables load onto their respective latent variables. Items that showed an insignificant relationship with the latent constructs were dropped along with those showing standardized estimate scores of less than 0.5. At this stage, the other two items of the Learning Avoidance construct had to be dropped because they failed to meet those thresholds. Moreover, one item from the Task Routineness construct was also dropped for similar reasons.

Subsequently, reliability tests for the various scales were conducted in SPSS. All constructs were reliable since the Cronbach's alpha coefficient for each exceeded the 0.7

threshold by Nunally (1978). Validity tests were conducted using the Standardized Estimate figures obtained from the Confirmatory Factor Analysis. This was done by computing the Average Variance Extracted (AVE). By this approach, constructs must have a score of at least 0.5 to be valid. After dropping one item each for the Cognitive diversity and Performance Avoidance construct, all constructs were found to be valid as the AVE scores stood at 0.5 or greater.

To test the hypotheses, hierarchical linear regression was employed using the SPSS. Moreover, the Process Hayes plug in in SPSS was also used to test the mediating role of task conflict in the diversity-creativity relationship. Findings indicate that there is a positive significant relationship between cognitive diversity and task conflict. Secondly, a positive significant relationship was also found between cognitive diversity and affective conflict. Also, a significant negative relationship was found between task conflict and perceived team creativity. Similarly, a negative significant relationship was also found between affective conflict and perceived team creativity.

The researcher also examined the moderating role of team member goal orientations (Learning approach, performance approach and performance avoidance) on the relationships between cognitive diversity and task/affective conflict. Findings indicate that there is a negative but significant moderating impact of the Learning approach goal orientation on the positive relationship between cognitive diversity and task conflict. Similarly, the performance approach goal orientation also negatively moderates the relationship between cognitive diversity and task conflict. However, the findings did not provide evidence that the performance avoidance goal orientation significantly moderates the relationship between cognitive diversity and task conflict. The moderating role of the goal orientations was also tested on the relationship between cognitive diversity and affective conflict. Again, findings here do not provide evidence that the learning approach, performance approach and the performance avoidance goal orientations significantly moderate the relationship between cognitive diversity and affective conflict. Although insignificant, the trend of the effects for both the learning approach and the performance approach goal orientations were in the expected direction, and these effects may prove significant with larger samples.

Finally, the mediating roles of task and affective conflict in the diversity-creativity relationship were tested using Process Hayes. Findings indicate that both task and affective conflict fully mediate the relationship between cognitive diversity and creativity. Out of the 12 remaining hypothesized relationships tested, six were supported.

To gain further insight into the nature of the findings, additional tests which were not hypothesized were conducted. In the first place, the relationship between task and affective conflict was tested, and findings indicate a significant positive relationship. Moreover, task conflict was found to mediate the relationship between cognitive diversity and affective conflict. In other words, cognitive diversity affects affective conflict through the mediating influence of task conflict. The role of conflict resolution in decoupling task and affective conflict was also tested, and findings indicate that conflict resolution significantly moderates the relationship between task and affective conflict, such that when conflict resolution is high, the link between task and affective conflict is weakened. Interestingly, conflict resolution was not found to significantly moderate the relationships between task/affective conflict and group creativity.

5.2 Discussions

In the following section, the various hypotheses tested in this study are discussed as they relate to the literature.

5.2.1 The Effect of Cognitive Diversity on Task Conflict

This study hypothesized a positive relationship between cognitive diversity and task conflict. This hypothesis was supported by the data, confirming that task conflict rises with cognitive diversity within teams. Cognitive diversity, the 'perceived differences in thinking styles, knowledge, skills, values and beliefs among individual group members' (Shin et al. (2012, p. 197), often arises from team members' differences in experiences, education and expertise. Drawing on the information processing theory, this study argued that these differences often lead to different knowledge, perceptions, and opinions with regards to the task at hand and this increases the likelihood of debates and deliberations with regards to the task at hand. When group members hold different types of information from different domains owing to their differential experiences, education, and expertise,

they and are likely to discuss information directly relevant to the task at hand as this is what influences their perception of task demands (Pelled et al. 1999).

Moreover, diverse groups tend to have a wider social network and this makes available to the group access to new information that may further enhance information elaboration(Guillaume et al., 2015; van Knippenberg et al., 2004; West, 2002).

These results confirm the findings by Olson et al. (2007) and Chen et al. (2019) which indicate that cognitive diversity drives task conflict. Similarly, Jehn et al. (1999) found that informational diversity, defined as 'differences in knowledge bases and perspectives' (pg. 743) was positively related to task conflict in workgroups. Thus, this study confirms that task conflict is more likely in more cognitively diverse groups.

5.2.2 The Effect of Cognitive Diversity on Affective Conflict

A positive relationship was also hypothesized between cognitive diversity and affective conflict, and the data provides support for this relationship. On the basis of the social categorization processes, it was argued that differences in perceptions and opinions resulting from cognitive diversity may provide a ready basis for group members to categorize themselves versus others different from them in that regard (Guillaume et al., 2015; van Knippenberg et al., 2004). The result of this categorization is intergroup bias which causes members within subgroups to pit themselves against others considered in the outgroup in a bid to be superior(Pelled, 1996). The similarity-attraction theory (Byrne, 1971) also suggests that members of the in-group are less likely to be receptive and more critical of perspectives from others classified into the outgroup and would prefer to work with those they consider similar to them. The result is that there is antagonism and hostility, and these may lead to affective conflict within groups. The confirmation of this hypothesis lends support to the Cronin and Weingart's (2007) proposition that functional diversity may lead to affective conflict. These findings are also consistent with the findings of Chen et al. (2019). Moreover, that cognitive diversity is positively related with both task and affective conflict debunks the theories underlying diversity typologies that posit that certain types of diversity lead desirable outcomes, while others do not. Per the diversity typologies, cognitive diversity is a deep-level diversity attribute and should lead to task conflict and not affective conflict (Guillaume et al., 2012). Given that results

indicate that it leads to both task and affective conflict lends support to the Categorization Elaboration Model which argues that any types of diversity may lead to either positive or negative consequences (Guillaume et al., 2015; van Knippenberg et al., 2004).

5.2.3 The Moderating Effect of the Learning Approach Goal Orientation on the Cognitive Diversity-Task Conflict Relationship.

The Learning Approach goal orientation was expected to positively moderate the positive relationship between cognitive diversity and task conflict. However, although this goal orientation was found to moderate the diversity-task conflict relationship, the moderating influence was negative. In other words, when team members had a high learning goal orientation, the relationship between cognitive diversity and task conflict tended to be more negative rather than positive. The learning approach goal orientation is characterized by a desire to improve upon oneself by increasing knowledge and skill (Dweck, 1986; VandeWalle et al., 2001). Team members with a high learning approach goal orientation are more likely to see diversity as an opportunity to learn from the different perspectives within the team. This desire to learn and improve is likely to motivate them to explore the diverse perspectives that come with a cognitively diverse group in a bid to thoroughly understand underlying assumptions (Pieterse et al., 2013). High learning approach has also been associated with feedback seeking behavior which in turn is expected to enhance information exchange and elaboration which are key to task conflict it has been found that the learning orientation in general is positively related to seeking feedback, whether positive or negative(Payne et al., 2007; VandeWalle & Cummings, 1997). Moreover, the learning approach goal orientation has been associated with deep information processing which is characteristic of task conflict (Elliot and McGregor 2001). Thus, the learning approach goal orientation was expected to have a positive moderating influence on the relationship between cognitive diversity and task conflict. However, this study reports a negative moderating influence, suggesting that under high levels of the learning approach goal orientation, cognitive diversity will lead to less task conflict. These findings are inconsistent with the findings of Gong et al. (2013) and Pieterse et al. (2013) who found that under high levels of learning approach goal orientation, information exchange and information elaboration would be enhanced.

The results therefore suggest that the learning approach goal orientation on its own may not always enhance outcomes, particularly in the case of group conflict. While group members high on the learning approach goal orientation may want to learn from others different from themselves in order to improve, if they are not equipped to deal with the pitfalls that cause task conflict to degenerate into affective conflict, the negative effects of affective conflict will serve to diminish task conflict.

Post-hoc analyses indicate a positive correlation between task and affective conflict, corroborating Amason (1996) and Medina et al. (2005). Moreover, task conflict was found to mediate the relationship between cognitive diversity and affective conflict. In other words, cognitive diversity leads to affective conflict, but this effect is explained by the mediating influence of task conflict and this also corroborates Mooney et al. (2007).

Amason (1996) posits that during task conflict, affective conflict is often triggered unintentionally. According to Medina et al. (2005), task conflict may backfire by increasing affective conflict. Their study reveals that affective conflict mediates the relationship between task conflict and negative affective reactions. This is because, in the course of task conflict, there is the potential for criticisms to be taken personally, leading to affective conflict (Pelled, Eisenhardt, et al., 1999b). Team members may perceive disputing views presented by others as disrespectful of their own judgment and may therefore take offence at statements intended to be functional, breeding anger and resentment in the process. This phenomenon is what has been described by Simons and Peterson (2000) as misattribution and results from this biased information processing. When task disagreements are thus taken as personal criticisms, affective conflict could be the result.

Moreover, as team members deliberate on issues, one's strong feelings about their position may make them intolerant and impatient with dissenting views (Mooney et al., 2007; Pelled, Eisenhardt, et al., 1999b). This may reflect in the use of language that may be perceived as disrespectful by other team members (Simons & Peterson, 2000). Team members on the receiving end may feel hurt and offended and want to retaliate. This has the potential to turn a cognitive disagreement into an emotional one (Mooney et al., 2007;

Pelled, 1996; Simons & Peterson, 2000). Thus, where task conflict is high, affective conflict is also likely to be high as in seen from the findings of this study.

The presence of affective conflict thus triggered may however suppress any further task conflict. According to van Knippenberg et al. (2004), social categorization processes may interfere with information elaboration. Affective conflict causes group members to focus on each other rather than on the task at hand, and as such, information processing is limited (De Dreu & Weingart, 2003). Moreover, anxiety, which is associated with affective conflict has been found to hamper cognitive processes (Amabile et al., 2005; Anderson et al., 2014). Animosity may also cause group members to hold back potentially relevant information which are key to task conflict (Pelled, 1996; Simons & Peterson, 2000). Additionally, Amason (1996) indicates that affective conflict hinders decision quality.

Thus, while the learning approach goal orientation might initially improve task conflict among cognitively diverse groups, the strong relationship between task and affective conflict suggests that task conflict quickly degenerates into affective conflict, which in turn suppresses any further task conflict, hence an ultimately negative impact of the learning approach goal orientation on the relationship between cognitive diversity and task conflict. This is consistent with the findings of Bunderson & Sutcliffe (2003) who found that the learning orientation is not always beneficial to outcomes. Thus, other boundary conditions, such as those that mitigate the degeneration of task conflict into affective conflict, may need to be considered within diverse groups in addition to the learning approach goal orientation in predicting task conflict.

Nevertheless, these findings also lend credence to the application of the Motivated Information Processing theory within workgroups, and particularly within the context of diversity and conflict. By showing that the Learning Approach goal orientation influences the relationship between diversity and task conflict, it shows that group members' personal motivation factors influence how they process information within diverse groups. Moreover, it also confirms the tenets of the CEM as it shows that individual factors such as motivation influences the impact of diversity on information processing.

5.2.4 The Moderating Effect of the Learning Approach Goal Orientation on the Cognitive Diversity-Affective Conflict Relationship.

Moreover, the learning approach goal orientation was expected to negatively moderate the positive relationship between cognitive diversity and affective conflict. In other words, affective conflict resulting from cognitive diversity was expected to be lower under high levels of the learning approach goal orientation. Because the learning approach goal orientation has been associated with deep information processing, categorization and stereotyping effects which are associated with shallow information processing was expected to be lower (Dweck, 1999; Elliot and McGregor, 2001; Pieterse et al., 2013). As such affective conflict resulting from intergroup bias and hostility was expected to be lower under a high learning goal orientation.

Additionally, since the learning approach goal orientation is concerned with improving upon oneself, individuals are more likely to see diversity as an opportunity to learn from the diverse perspectives and information within the group. They are therefore less likely to see others different from themselves as opponents. They are also therefore more likely to be more respectful of divergent opinions expressed within the group. As such, the categorization processes that engender affective conflict are likely to be weakened under a high learning approach goal orientation.

The findings however indicate an insignificant moderating effect of the learning approach goal orientation on this relationship. Although the data does not provide sufficient evidence that the learning approach goal orientation significantly moderates the relationship between cognitive diversity and affective conflict, this does not necessarily mean that it does not. An examination of the effect does indicate a negative effect as hypothesized which may be significant given a much larger sample.

5.2.5 The Moderating Effect of the Performance Approach Goal Orientation on the Cognitive Diversity-Task Conflict Relationship

The performance approach goal orientation was hypothesized to negatively moderate the relationship between cognitive diversity and task conflict. Findings indicate that this hypothesis was supported.

In the first place, individuals high on the performance approach goal orientation tend to be very competitive (Pieterse et al., 2013) and may be wary of seeking information from others as this may be interpreted to mean that one is not as able as others and may be deficient in certain respects (Janssen & Prins, 2007; Payne et al., 2007). This is likely to limit information seeking behavior.

Additionally, even when group members with a high performance approach orientation appear to seek information from others, they tend to prefer information that confirms their belief of superiority and competence rather than negative feedback (Janssen & Prins, 2007; VandeWalle, 2003). This is largely due to its roots in entity theory and causes performance approach goal-oriented individuals to perceive negative feedback as negative appraisals of their ability and knowledge as compared to others. As a result, even when individuals with a high-performance orientation may want to seek information to enhance their performance, this desire tends to clash with their concern to not appear deficient or incompetent before others. Put differently, performance approach oriented group members tend to associate seeking information for self-improvement with self-presentation costs (VandeWalle, 2003). This tendency is likely to discourage such group members from expressing views that they believe might be unpopular in their groups. Ultimately, the amount and diversity of information shared may be limited, and this suppression of dissent is detrimental to task conflict.

Moreover, performance approach orientation has been found to be unrelated to deep-level information processing (Elliot & McGregor, 1999; Pieterse et al., 2013). Group members with a high performance approach orientation tend to be more interested in performing better than others and may not be as interested in understanding the task and its demands (Dierdorff & Ellington, 2012). This is again likely to hinder task conflict.

The results therefore support findings by other scholars such as Janssen & Prins, (2007) who found a negative relationship between the performance approach goal and seeking self-improvement information. This is also consistent with the claims of DeGeest and Kristof-Brown (2017). Moreover, VandeWalle & Cummings, (1997) found a negative relationship between the performance orientation and feedback seeking behavior.

Once again, this lends support to the use of Motivated Information Processing theory and the CEM within workgroups as it shows that personal motivational factors do influence the process by which diversity translates into task conflict.

5.2.6 The Moderating Effect of the Performance Approach Goal Orientation on the Cognitive Diversity-Affective Conflict Relationship.

The performance approach goal orientation was expected to strengthen the negative relationship between cognitive diversity and affective conflict. The performance approach goal orientation is concerned with demonstrating competence and receiving favorable appraisals from others. It is also associated with surface information processing such as categorizations (Elliot & McGregor, 2001; Pieterse et al., 2013). This is likely to reinforce the categorization effects of diversity which leads to affective conflict. Under a high performance approach orientation, group members that categorize others different from themselves into an outgroup are likely to be even more competitive as they strive to demonstrate superiority over other subgroups within the workgroup (Pieterse et al., 2013). Thus, the performance approach orientation was expected to strengthen the cognitive diversity-affective conflict relationship. The findings however do not provide significant evidence for this moderating effect. Although the effect was insignificant, it was in the positive direction as hypothesized and the effect may be significant given a larger sample.

5.2.7 The Moderating Effect of the Performance Avoidance Goal Orientation on the Cognitive Diversity-Task Conflict Relationship

This study also investigated the moderating role of the performance avoidance goal orientation in the cognitive diversity-task conflict relationship. A negative moderating influence was predicted. The performance avoidance goal orientation is concerned with avoiding negative evaluations from others. Thus, persons high on this goal orientation therefore strive to avoid mistakes and criticism. As such group members may hold back relevant information if they suspect that it will be unpopular with the other group members (Gong et al., 2013). Moreover, they are more likely to be averse to new ideas as they prefer to stick with the known and familiar as this gives them a sense of greater control (VandeWalle & Cummings, 1997).

Moreover, this goal orientation has been associated with negative affect such as anxiety and fear and these impair cognitive function. Altogether, this goal orientation is likely to limit the amount of information exchanged within groups as well as diminish the quality of information processing. However, this hypothesis was not supported as the relationship was not significant.

Although insignificant, it is interesting to note that the effect showed a trend in the positive, rather than in the negative direction as expected. If findings had been significant, this would mean that when group members have a high-performance avoidance goal orientation, information elaboration resulting from cognitive diversity is enhanced rather than diminished, leading to increased task conflict. This is contrary to the findings Elliot and McGregor (2001) who found a significant negative relationship between this goal orientation and deep information processing. This may suggest, with caution, that the performance avoidance goal orientation may not always be detrimental particularly in translating cognitive diversity into task conflict. Further research may help clarify this.

5.2.8 The Moderating Effect of the Performance Avoidance Goal Orientation on the Cognitive Diversity-Affective Conflict Relationship.

This study predicted a positive moderating effect of the performance avoidance goal orientation on the positive relationship between cognitive diversity and affective conflict. In other words, categorization effects resulting from cognitive diversity were expected to be strengthened under a high-performance avoidance goal orientation. According to Pieterse (2013), categorization and stereotyping are strongly related to this goal orientation. The performance-avoidance orientation has also been associated with negative affect such as emotionality, anxiety, fear, and worry (Elliot & McGregor, 2001).

Generally, people tend to take criticism as a challenge to their competence (Tjosvold, 1991). This is likely to be more pronounced under a high performance avoidance goal orientation as research has shown a negative relationship between the performance avoidance orientation and feedback seeking behavior because of the fear of receiving negative feedback (Cellar et al., 2011; VandeWalle & Cummings, 1997). Thus, criticisms and debate are more likely to be taken personally, breeding anger and resentment towards others with different views, and such negative affect has been found to also impair

cognitive processes. Altogether, these effects of the performance avoid orientation is expected to increase affective conflict resulting from diversity.

Findings, however, indicate an insignificant moderating effect of the performance avoidance goal orientation on the relationship between cognitive diversity and affective conflict. While this is contrary to findings from Pieterse (2013), it is consistent with findings from Sins et al. (2008) who also found no significant relationship between the performance avoidance goal orientation and surface processing. It is interesting to note though that the regression model shows a positive and significant correlation between the performance avoidance goal orientation and affective conflict. However, it appears when in interaction with cognitive diversity, the effect becomes insignificant, and the trend is in the opposite direction. A possible explanation could be that when cognitive diversity is high, categorization effects are weaker probably because there do not exist enough dominant subgroups to classify group members into. Further research into other potential boundary conditions may help clarify this.

5.2.9 The Effect of Task Conflict on Team Creativity

Based on the information processing theory, task conflict was hypothesized to have a positive relationship with perceived team creativity. This is because task conflict promotes greater understanding of the task and facilitates information exchange. These, in turn, enhance problem solving, idea generation and decision making (Chen et al., 2019; De Dreu & Weingart, 2003; Yong et al., 2014). Thus, in the course of task conflict, group members tend to engage in deeper and more elaborate of information and this encourages learning, creativity and innovation (De Dreu & Weingart, 2003; Jehn, 1995). However, the findings indicate a negative, rather than positive relationship between task conflict and team creativity.

While this appears contrary to previous research (Chen et al., 2019; De Clercq et al., 2015; Farh et al., 2010; Um & Oh, 2021; Yong et al., 2014), it is consistent with the reviews by De Dreu and Weingart (2003) and De Wit et al. (2012). According to De Wit et al. (2012), one factor that could account for the negative impact of task conflict on group creativity could be the strong correlation between task and affective conflict. According to Medina et al., (2005), and as earlier explained, high levels of task conflict

may trigger high levels of affective conflict and this may in turn hamper desirable outcomes such as creativity. In other words, these findings show that if high levels of affective conflict accompany task conflict, perceived creativity is likely to be hampered.

These results also corroborate Bang & Park, (2015) who argued that when subjective evaluations of team outcomes (such as those by team members) are used, the impact of task conflict on team outcomes may be more negative as perceptions may be influenced by the emotional state of team members. Findings from their study confirm this. In the same direction, Jehn (1997) also argued that when subjective measures of performance are used, there is likely to be a negative and linear relationship between task conflict and team performance. Additional support is found in the work of Kurtzberg, (2005) whose study shows cognitive diversity in groups may lead to negative affect, which in turn leads to lower perceptions of creativity in groups.

5.2.10 The Effect of Affective Conflict on Team Creativity

Affective conflict was hypothesized to have a negative impact on team creativity. The results confirm this hypothesis. This therefore lends support to the information processing perspective that predicts that affective conflict would lead to reduced creativity. Following the information processing theory, the presence of affective conflict hinders creative group processes as information exchange and processing are limited. This is because affective conflict causes team members to focus on each other rather than on the tasks of the group. Moreover, the animosity and resentment that come with affective conflict may cause group members to hold back potentially relevant information that may enrich information processing. This makes affective conflict undesirable for all group outcomes including team creativity. This confirms findings from other studies such as those by Chen et al. (2019) and Yong et al. (2014) which found that affective conflict hinders creativity. Um & Oh (2021) also found a negative relationship between affective conflict and new product performance. The study by Jehn & Mannix (2001) also confirm a negative relationship between relationship conflict and group performance. Additionally, other studies also show that where negative affect exists in groups, team members tend to have less favorable perceptions of group outcomes such as creativity

and performance (Bang & Park, 2015; Kurtzberg, 2005). Thus, where there is increased affective conflict, group creativity is lowered.

5.2.11 The Mediating Role of Task and Affective Conflict in the Cognitive Diversity-Creativity Relationship

This study also argued that cognitive diversity would affect team creativity through the mechanisms of task and affective conflict. The mediation analysis confirms this as results indicate that both task and affective conflict fully mediate the relationship between cognitive diversity and creativity. This is consistent with the tenets of the CEM(Guillaume et al., 2015; Van Knippenberg et al., 2004), which emphasizes the important role of information processing in harnessing diversity as an informational resource, and shows that the impact of diversity as moderated by the goal orientations is fully mediated by task and affective conflict. These corroborate the findings of Chen et al. (2019) who found that task reflexivity and relationship conflict mediate the relationship between cognitive diversity and innovative behavior. Furthermore, the findings confirm the claims of the CEM which argues that the impact of diversity on group outcomes depends on the presence of moderators and/or mediators (van Knippenberg et al., 2004). While results indicate that task conflict indeed mediates between cognitive diversity and creativity, the mediating role was negative rather than positive. Again, this may be due to the strong correlation between task and affective conflict discussed earlier and these findings corroborate the studies by Bang & Park (2015) and Jehn (1997).

5.3 Theoretical Implications

The findings from this study hold important theoretical implications for workgroups in organizations and for team diversity research in general. These implications are subsequently discussed.

The findings of this study resonate with the propositions of the CEM on four levels. In the first place, it shows that cognitive diversity has zero direct effect on creativity, and that certain conditions and mechanisms (task/affective conflict and goal orientations in this study) release the potential of cognitive diversity for group creativity. Secondly, the results show that cognitive diversity is positively related to both task and affective

conflict, and this confirms the argument of the CEM that contrary to the suppositions of diversity typologies, any diversity attribute can lead to both desirable and undesirable outcomes. While this has been found to be true in other studies, this study extends previous research by showing that this is also applicable within the context of workgroup conflict. Third, the CEM emphasizes the important role of moderators and mediators in determining the impact of diversity on outcomes. Consistent with the important role the CEM assigns mediators as vehicles through which diversity translates into outcomes, this study shows full mediating effect of both task and affective conflict. Fourth, the CEM also emphasizes the important role of moderators in translating diversity into outcomes. This study confirms this and extends previous research by showing that team member goal orientations also influence the relationship between cognitive diversity and information processing (task conflict).

Secondly, the study confirms the relevance of the Motivated Information Processing theory within the context of diversity and conflict, as results indicate that team member goal orientations, a personal motivation factor, influences how diversity affects task conflict.

Furthermore, the unexpected negative moderating effect of the Learning Approach goal orientation suggests that contrary to what most studies have found that goal orientation may not always have positive effects, particularly within the context of group conflict. As previously discussed, in the context of group conflict, other boundary conditions may have to be considered along with the Learning Approach goal orientation in predicting desirable outcomes, especially those that equip group members to keep group conflicts functional.

Moreover, this study has shown that task conflict may not always be beneficial to group creativity. Given that affective conflict also had a negative impact on creativity appears to suggest that all conflict is bad bringing us full circle to the claims of very early research on group conflict. However, given that substantial research has shown task conflict to be beneficial to creativity suggests that the information processing perspective that predicts that task conflict will enhance creativity must take into consideration other boundary conditions.

Within the context of group conflict, given the tendency to have affective conflict accompanying task conflict highlights the importance of simultaneously considering factors that help to decouple task and affective conflict. As the post-hoc analyses indicate, conflict resolution may play a key role in that regard. This suggests that in setting up diverse teams, attention must be paid to effective conflict resolution in order to mitigate the extent to which task conflict leads to affective conflict. Other factors that help decouple task and affective conflict must also be considered as potential boundary conditions. Additionally, factors that may moderate the relationship between task/affective conflict and creativity, such as organizational culture must also be considered. This is especially important given that conflict resolution was found to have no moderating impact on that relationship.

As Prause & Mujtaba (2015) indicate,

Conflict is a multilevel and complex phenomenon that most of the time cannot be satisfied with only one strategy but requires a compound set of steps and components. It also challenges managers to incorporate all the techniques and strategies successfully to find a better solution for the conflicts of their employees and organizations (pg. 18).

This suggests that conflict among workgroups needs to be tackled on various fronts to be properly managed. No single approach is likely to achieve the desired results.

Additionally, given that the Learning Avoidance goal orientation had to be dropped at the preliminary data analysis stage calls into question the robustness of the measure. Compared to the other goal orientations, the Learning Avoidance goal orientation is the least examined in the goal orientation literature. Contrary to studies by Baranik et al.'s (2010) argument about the conceptual and empirical distinctness of the Learning Avoidance goal orientation, this study suggests that the measure may need to be revised to enhance robustness, especially across contexts. This may explain why many studies have not considered that goal orientation, preferring to concentrate on the other three, while others have not bothered to distinguish between the Learning Approach and the Learning Avoidance, reflecting the belief that the Learning orientation has an approach form of regulation.

Relatedly, the Ethnic Diversity measure was also dropped at the preliminary data analysis stage, calling into question the robustness of the measure used. The measure used in this study was based on measures developed in other contexts. As such, future research could investigate developing a stronger measure for Ethnic Diversity, especially for the African context.

5.4 Practical Implications

In the first place, cognitive diversity among workgroups is beneficial as it engenders task conflict. Cognitive diversity is often as a result of varied expertise, education and experiences. As such, in the constitution of workgroups, employers must ensure that there is adequate diversity in those respects to ensure acceptable levels of task conflict. This therefore validates the setting up of cross-functional teams in organizations for creative purposes. Differences in employees' education, expertise and experience truly inform the perspectives team members bring to their work, thereby enhancing task conflict within such workgroups.

However, cognitive diversity also engenders affective conflict, and this may occur in two main ways. In the first place, as seen in this study, cognitive diversity may directly lead to affective conflict due to categorization effects. This confirms that diversity is indeed a double-edged sword, capable of both desirable and undesirable consequences. Additionally, cognitive diversity may also lead to affective conflict through the mediating influence of task conflict, such that affective conflict may also be triggered during task conflict. Since affective conflict is undesirable in workgroups, measures adopted to manage it should address these two mechanisms by which affective conflict is engendered. Thus, factors that minimize the categorization effects of diversity as well as those that minimize the degeneration of task conflict into affective conflict should be simultaneously considered.

Additionally, the learning approach goal orientation among group members does not always ensure desirable outcomes as this study has shown, and this may be especially true for group conflict situations. This does not necessarily mean that the learning approach goal orientation is detrimental to group processes. Rather, this may indicate the need to consider other factors in addition to fostering this goal orientation. Since goal

orientations can be triggered by achievement settings, as managers seek to foster this goal orientation, there must be other mechanisms in place to ensure that group members are equipped to keep conflicts functional. If not, the learning approach goal orientation among group members will do more harm than good.

Relatedly, the performance approach goal orientation among group members may be detrimental to task conflict as shown in this study. As such, discouraging the performance approach goal orientation among group members may help groups realize the positive benefits of diversity. Factors that may help encourage the learning approach goal orientation while discouraging the performance approach goal orientation include promoting personal and group development, de-emphasizing competition, and creating an environment of safety in which mistakes are learning opportunities rather than as offences. Additionally, training programmes and effective feedback and compensation systems may also be useful in this regard.

This study also shows that task conflict does not always enhance group creativity. This suggests that managers need to reconsider the overly optimistic perception of task conflict. Indeed, managers go great lengths to ensure diversity within workgroups because of the promise of task conflict which is expected to enhance creative outcomes. As this study shows, task conflict may not always enhance creative outcomes, particularly when it is closely associated with affective conflict. This gives rise to the need to consider other boundary conditions such as those that help minimize the extent to which task conflict leads to affective conflict. Potential factors in this regard may include collaborative skills, value for divergent thinking and conflict resolution. Other factors to consider may be conditions under which task conflict will enhance group creativity.

Moreover, despite the considerable evidence that affective conflict is detrimental to group creativity, there are certain studies that indicate that under certain conditions, affective conflict may be beneficial to group creativity. For instance, a study by George & Zhou (2002) based on the mood-as-input model indicates that negative affect may enhance creative performance when employees perceived that creative performance was recognized and rewarded and when clarity of feelings was high.

Finally, this study shows the importance of investigating group outcomes and dynamics from an individual team member's perspective. While this approach may yield results different from those reported by more 'objective' measures, the perspective still provides critical insights into effective group functioning. Creativity, particularly on the group level is indeed complex and multifaceted and a comparison of objective and subjective approaches reveals that no single approach completely defines it (Kurtzberg, 2005). While objective approaches may show more favorable assessments of group creativity, if team member perceptions are negative, following the logic of the social identity theory, it will have a negative impact on subsequent group functioning and ultimately hamper group effectiveness and creativity (Guenter et al., 2016; Hirst et al., 2009). The study therefore calls on practitioners to address individual team member concerns even while continuing with group level interventions.

5.5 Directions for Future Research

In the first place, while this study provides important insights into group functioning from the individual perspective, it is doubtful that it provides a comprehensive view of group activity leading to group creativity. Future research could examine more objective approaches to measuring team creativity and this approach could be compared with the approach of the current study to draw important inferences for a more comprehensive understanding of creativity within the workgroup setting.

A further limitation of this study is that the sample comprised members of workgroups across various organizations. While this has provided useful insights into workgroup functioning and creativity, it might be interesting to investigate these relationships among new product development teams and top management teams.

Moreover, from the findings of this study, it appears that the decoupling of task and affective conflict is key to reaping the benefits of task conflict within workgroups. Future research could explore the role of factors such as collaborative skills, interpersonal skills, and value for divergent thinking in this regard, but from the perspective of individual group members.

Additionally, future research could examine how the learning approach goal orientation would interact with these other factors in predicting task conflict within groups, given that that goal orientation on its own may not always predict desirable outcomes.

Given that both the Learning Avoidance, Task Complexity and Ethnic diversity measures had to be dropped indicates that this study was unable to examine their effects in the hypothesized relationships. Future research could employ more robust measures for these constructs in investigating how they affect the process through which diversity translates into creativity through conflict.

5.6 Study Limitations

This study, as is the case with all others, faced certain limitations.

In the first place, the data collection proved challenging as this was during the onset of the COVID-19 crisis. At this time, many organizations had been hit by the constantly evolving demands of the season and appeared to be scrambling for some equilibrium. As such, some organizations declined to participate or were not able to participate as much as anticipated. Moreover, data collection took longer than expected since team members were not readily available due to the shift system adopted by several organizations in response to the COVID-19 crisis. For those that were not reachable in person, e-versions of the questionnaire were sent. Nevertheless, obtaining filled responses took time and several follow-up attempts.

Additionally, there were some respondents that were hesitant to participate because they feared being victimized for giving true assessments of the dynamics and creativity of their respective groups. The researcher took the time to explain and to convince such respondents of the purely academic nature of the survey while assuring these respondents of anonymity and confidentiality. Nevertheless, some still declined to participate.

Moreover, this study employed cross-sectional data, and this might make causal interpretations difficult. A longitudinal approach might be useful in order to observe how these team dynamics change over time. Most participants in this study (53.6%) had a team tenure of up to 3 years. This suggests that participants were from relatively young teams. The findings from Pelled et al. (1999) as well as Jehn and Mannix (2001) indicate that

group longevity may influence group dynamics, and it will be interesting to see how the nature and degree of conflict are affected by the mere passing of time from the individual team member perspective.

Furthermore, this study collected data from group members, and this is relatively more subjective data. While this has proved useful, other studies could use more objective measures in future research.

The data collected in this study was from both online and paper-based questionnaires. While the means of the variables across both means were similar, this was not true for all variables. As such, the data from both sources was put together and processed for analysis. The researcher acknowledges the possibility of bias due to those variables that had different means across mode of data collection.

Furthermore, the roles of the Learning Avoidance goal orientation and Ethnic diversity in the relationships between diversity and conflict as mediated by conflict could not be investigated as originally intended. This was because these had to be dropped at the earlier stages of data analysis.

There is also the risk of common method variance since all the data used in this study was collected using a single instrument. Bivariate correlations may be inflated by common method variance. Although this risk exists, this is not likely to affect the data collected given the rather complex relationships investigated in this study. The interrelationships of interest were such that respondents could not easily provide socially desirable responses which would in turn lead to rather spurious results.

5.7 Conclusions

This study set out to investigate the impact of workgroup diversity on perceived group creativity. It investigated the mediating role of task and affective conflict as well as the moderating role of team member goal orientations. A quantitative approach was adopted and data from 372 members of workgroups across 40 organizations was used to test the hypotheses formulated. Findings indicate support for six out of 12 hypotheses and this chapter has discussed these findings as they relate to the literature. Implications for

practice, the limitations of the study as well as directions for future research have been discussed in this concluding chapter.

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APPENDIX

RESEARCH QUESTIONNAIRE

Dear Sir/Madam,

I am a student pursuing a doctoral degree in Business Administration with the Nobel International Business School. As part of my studies, I am conducting a study titled '*Diversity, Conflict and Team Creativity: The Moderating Role of Team Member Goal Orientations'*.

Kindly complete this questionnaire designed to collect data for this study and rest assured that all information given will be used solely for academic purposes and treated with utmost confidentiality.

Many thanks for participating in this study.

DEMOGRAPHIC INFORMATION

1. Gender [ ] Male [ ] Female

2. Age [ ] Under 20 years [ ] 20-30 years [ ] 31-40 years [ ] Above 41 years

3. Education [ ] Secondary and below [ ] HND/Diploma [ ] Bachelor [ ] Post-graduate
   [ ] Other (please specify)……...

4. What is the name of your workgroup/unit? Please specify

   …….

SECTION A:

Please indicate (using a tick) the extent to which members of your work team differ with regards to the following.

1 = To a very small extent, 2 = To a small extent, 3 = To a moderate extent, 4 = To a large extent, 5 = To a very large extent.

	1 To a very small extent	2	3	4	5 To a very large extent
To what extent do the members of your workgroup differ in their way of thinking?	1	2	3	4	5
To what extent the members of your workgroup differ in their knowledge and skills?	1	2	3	4	5
To what extent the members of your workgroup differ in how they view the world?	1	2	3	4	5
To what extent the members of your workgroup differ in their beliefs about what is right and wrong?	1	2	3	4	5

Please indicate how often you encounter the following situations in your workgroup (1 = Never, 2 = Rarely,
3 = Sometimes, 4 = Very often, 5 = Always)

	1 Never	2	3	4	5 Always
We often disagree about opinions regarding the work being done	1	2	3	4	5
We have conflicting ideas regarding our work in my work unit.	1	2	3	4	5
We disagree about how to do our work in my work unit.	1	2	3	4	5

Please indicate the extent to which you agree with how well the following statements describe you, whereby
1 = Completely false, 2 = Largely false, 3 = Somewhat false, 4 = Somewhat true, 5 = Largely true, 6 = Completely true

	1 Completely false	2	3	4	5	6 Completely true
I am willing to select a challenging work assignment that I can learn a lot from.	1	2	3	4	5	6
I am willing to take risks at work if it will develop my work ability.	1	2	3	4	5	6
I often look for opportunities to develop new skills and knowledge.	1	2	3	4	5	6
I enjoy challenging work if it will teach me something new.	1	2	3	4	5	6

Please indicate how often the following situations occur in your workgroup (1 = Strongly Disagree, 2 = Disagree,
3 = Neutral, 4 = Agree, 5 = Strongly Agree)

	1 Strongly Disagree	2	3	4	5 Strongly Agree
The personal relationships in the team are always strained	1	2	3	4	5
Some team members visibly dislike each other	1	2	3	4	5
The tension between my team members is sometimes painful	1	2	3	4	5

	1 Strongly Disagree	2	3	4	5 Strongly Agree
My workgroup has members from different Ghanaian ethnic backgrounds	1	2	3	4	5
My work unit is ethnically diverse	1	2	3	4	5
My group members speak different native languages.	1	2	3	4	5

Please indicate the extent to which you agree with how well the following statements describe you, whereby
1 = Completely false, 2 = Largely false, 3 = Somewhat false, 4 = Somewhat true, 5 = Largely true, 6 = Completely true

	1 Completely false	**2**	**3**	**4**	**5**	**6 Completely true**
I am concerned that I may not be able to do my work satisfactorily.	**1**	**2**	**3**	**4**	**5**	**6**
I just hope I am able to maintain enough skills so I am competent at my job.	**1**	**2**	**3**	**4**	**5**	**6**
I am often worried that I may not have enough skills to do my work well.	**1**	**2**	**3**	**4**	**5**	**6**

Please indicate how well your team scores on the following statements, indicating your assessment using
1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Very good, 6 = Excellent, 7 = Exceptional.

	1 Very Poor	**2**	**3**	**4**	**5**	**6**	**7 Exceptional**
How well does your team produce new ideas?	**1**	**2**	**3**	**4**	**5**	**6**	**7**
How useful are those ideas?	**1**	**2**	**3**	**4**	**5**	**6**	**7**
How creative do you consider your team to be?	**1**	**2**	**3**	**4**	**5**	**6**	**7**

How significant are those ideas to your organization?	**1**	**2**	**3**	**4**	**5**	**6**	**7**

Please indicate the extent to which you agree with how well the following statements describe you, whereby
1 = Completely false, 2 = Largely false, 3 = Somewhat false, 4 = Somewhat true, 5 = Largely true, 6 = Completely true

	1 Completely false	**2**	**3**	**4**	**5**	**6 Completely true**
I like to show that I can perform better than my coworkers	**1**	**2**	**3**	**4**	**5**	**6**
I prefer to work on projects where I can prove my ability to others	**1**	**2**	**3**	**4**	**5**	**6**
I try to figure out what it takes to prove my ability to others at work	**1**	**2**	**3**	**4**	**5**	**6**
I enjoy it when others at work are aware of how well I am doing.	**1**	**2**	**3**	**4**	**5**	**6**

Please indicate the extent to which you agree with the following statements, where **1= Strongly Disagree, 2 = Disagree,**
3 = Neutral, 4 = Agree, 5 = Strongly Agree.

	1 Strongly Disagree	**2**	**3**	**4**	**5 Strongly Agree**
I cannot accomplish my tasks without information or materials from other members of my team.	**1**	**2**	**3**	**4**	**5**
In my workgroup, we depend on each other for materials or information to do our individual work.	**1**	**2**	**3**	**4**	**5**
Within my team, jobs performed by team members are related to one another	**1**	**2**	**3**	**4**	**5**

Please indicate the extent to which you agree with how well the following statements describe you, whereby
1 = Completely false, 2 = Largely false, 3 = Somewhat false, 4 = Somewhat true, 5 = Largely true, 6 = Completely true

	1 Completely false	2	3	4	5	6 Completely true
I would avoid taking on a new task if there was a chance that I would appear rather incompetent to others.	1	2	3	4	5	6
Avoiding a show of low ability is more important to me than learning a new skill.	1	2	3	4	5	6
I prefer to avoid situations at work where I might perform poorly.	1	2	3	4	5	6
I'm concerned about taking on a task at work if my performance would reveal that I had low ability.	1	2	3	4	5	6

Please indicate how well your team scores on the following statements, indicating your assessment using the
following scale: **1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Very good, 6 = Excellent, 7 = Exceptional**.

	1 Very Poor	2	3	4	5	6	7 Exceptional
How well do you think your work unit performs?	1	2	3	4	5	6	7
How would you rate the effectiveness of your work unit?	1	2	3	4	5	6	7
How would you assess the productivity of your work unit?	1	2	3	4	5	6	7
How do you find the quality of work done by your work unit?	1	2	3	4	5	6	7
How well is your unit able to attain assigned goals?	1	2	3	4	5	6	7

Please indicate the extent to which you agree with the following statements using the following scale:
1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

	1 Strongly Disagree	2	3	4	5 Strongly Agree
Our work as a group is usually mentally demanding.	1	2	3	4	5
Our work involves complex problem solving.	1	2	3	4	5
Our work requires professional knowledge and expertise	1	2	3	4	5
Our work as a group is very routine	1	2	3	4	5
We encounter a lot of repetitive tasks in a normal working day	1	2	3	4	5

The methods we follow in our work are about the same for all types of work	**1**	**2**	**3**	**4**	**5**
I feel like we do the same thing over and over again.	**1**	**2**	**3**	**4**	**5**

Please indicate the extent to which you agree with the following statements using the following scale:

1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

	1 Strongly Disagree	**2**	**3**	**4**	**5 Strongly Agree**
Emotional conflicts are usually discussed and resolved in my work unit	**1**	**2**	**3**	**4**	**5**
This team knows what to do when conflicts between team members arise.	**1**	**2**	**3**	**4**	**5**
This team is able to avoid the negative aspects of conflict before they occur.	**1**	**2**	**3**	**4**	**5**
If conflict arises on this team the people involved in the conflict initiate steps to resolve the conflict immediately.	**1**	**2**	**3**	**4**	**5**

SECTION B:

5. Which ethnic group do you identify with? [ ] Akan [ ] Mole-Dagbani [ ] Ewe [ ] Ga-Dangme [ ] Guan [ ] Gurma [ ] Other ……
6. How many ethnic groups are represented in your workgroup?…….
7. How many foreign nationals are represented in your workgroup?.....

8. How long have you been in this workgroup? [ ] 0-3 years [ ] 4-6 years [ ] 7-10 years [ ] Above 10 years

9. How many are you in your workgroup? [ ] 1-3 members [ ] 4-6 members [ ] 7-10 members [ ] 11 and above

10. My group members and I form a recognizable unit in my organization. True/False
11. What is the name of your workgroup/unit? Please specify …….

THANK YOU SO MUCH!

Figure 4.2

Histogram for Models 1, 2 and 3

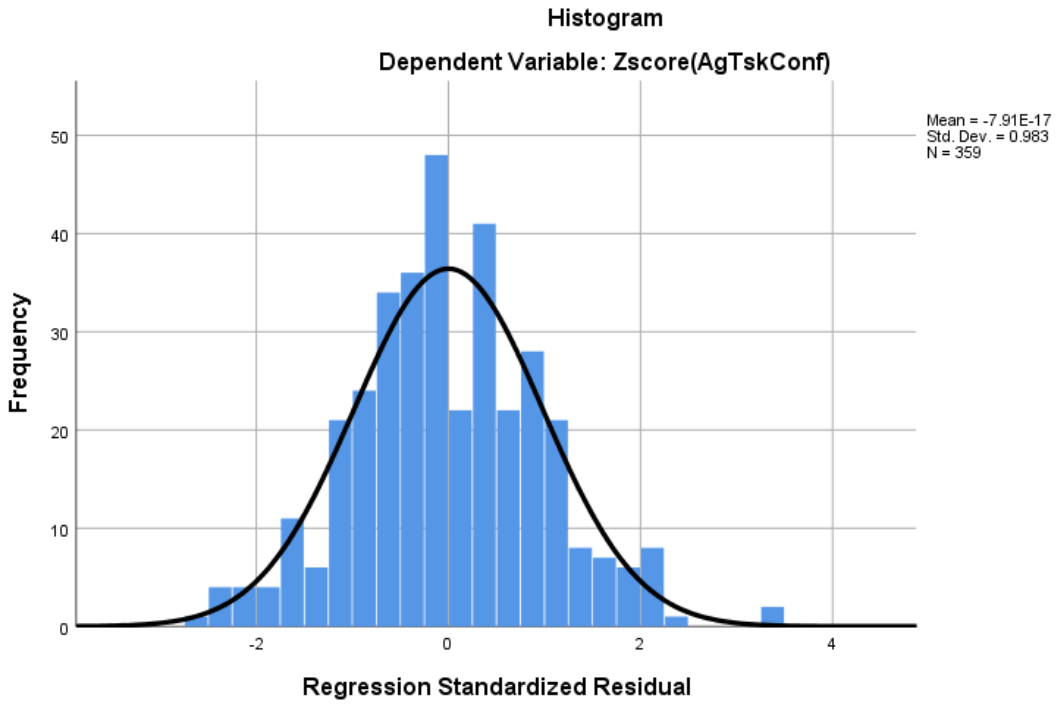

Figure 4.3

Normal Probability Plot for Models 1, 2 and 3

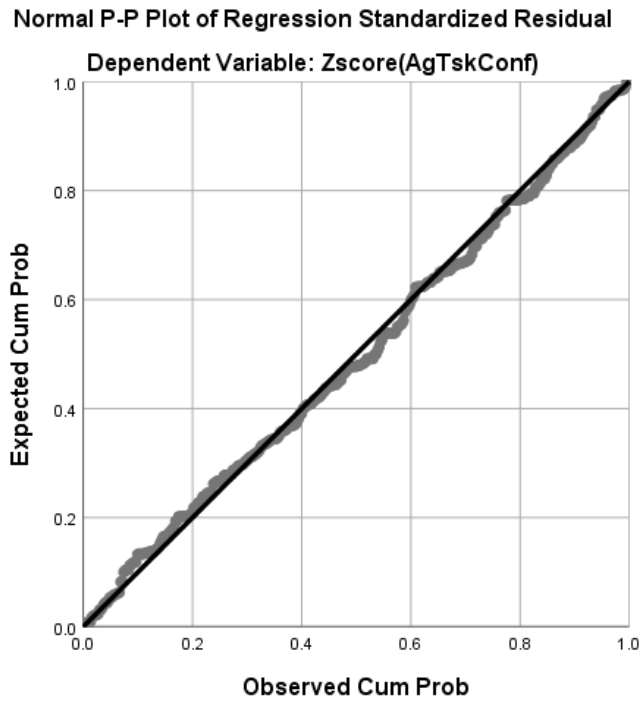

Fig. 4.4
Scatter plot for Models 1,2 and 3

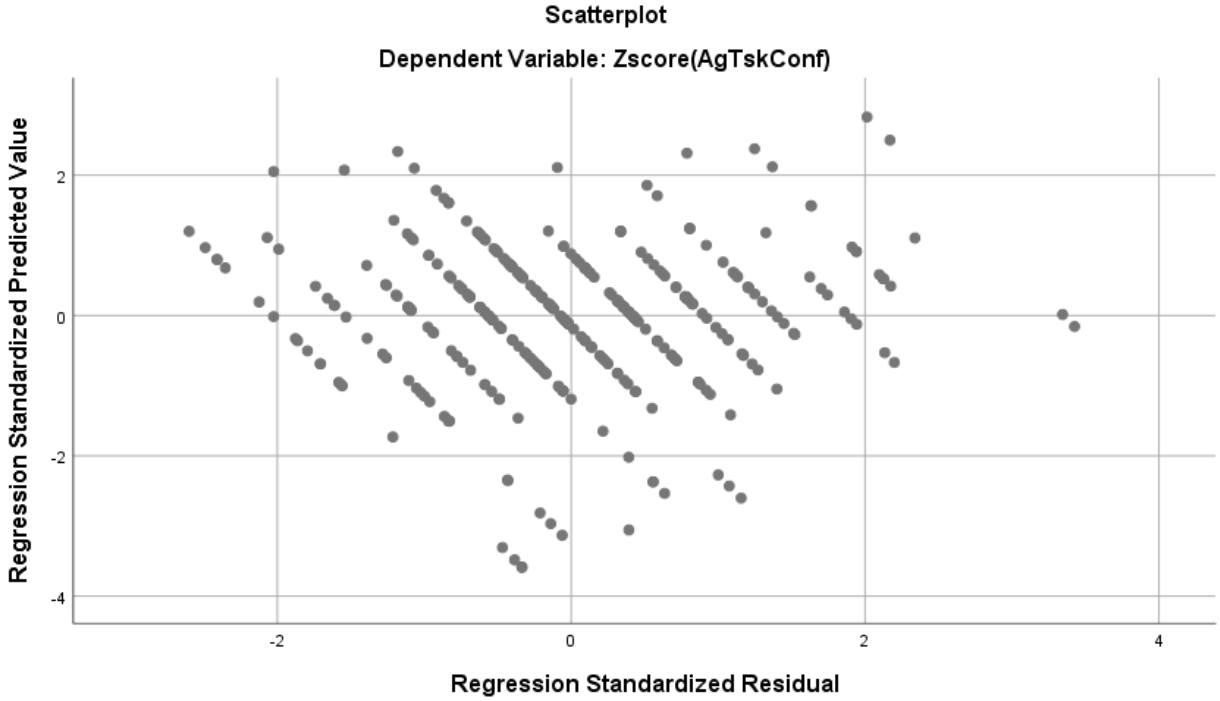

Fig. 4. 5
Histogram for Models 4,5 and 6

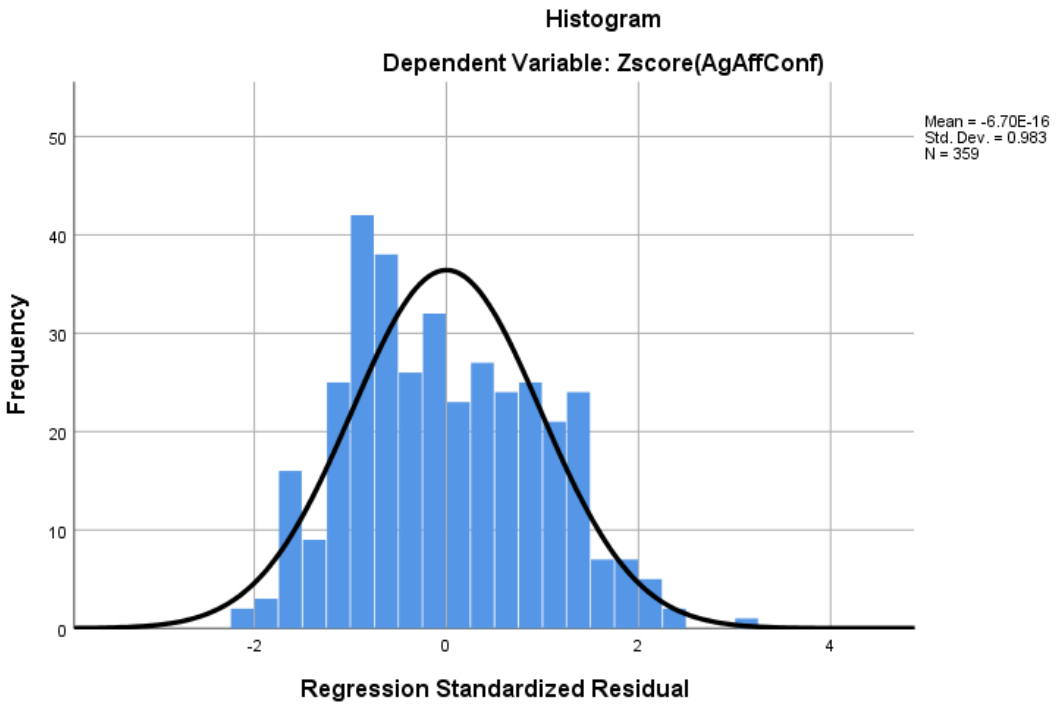

Fig. 4.6

Normal Probability Plot for Models 4,5 and 6

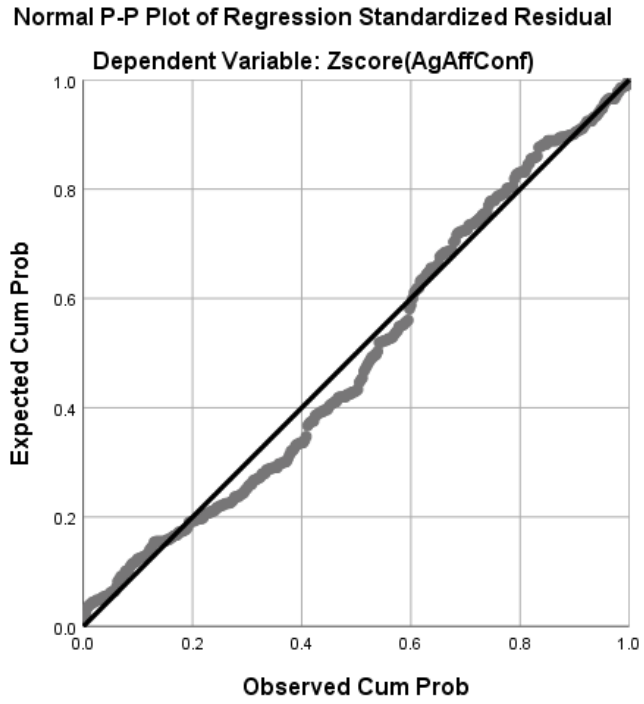

Fig. 4. 7
Scatter plot for Models 4, 5 and 6

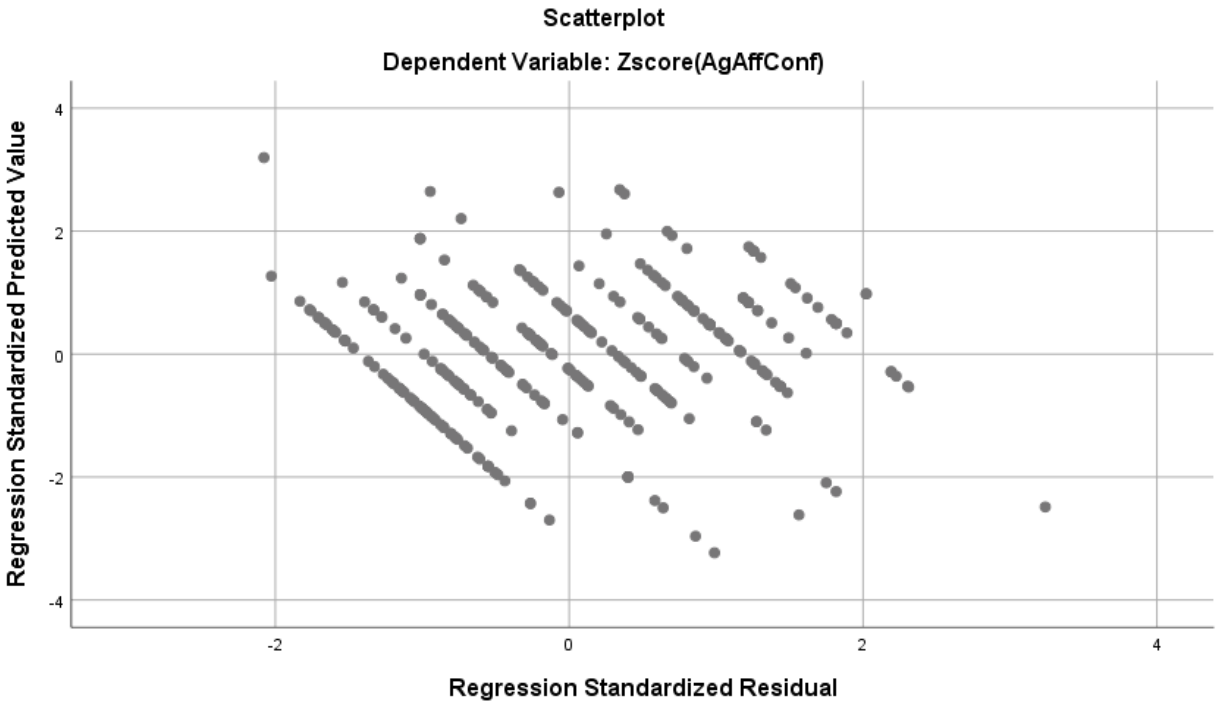

Fig. 4.8

Histogram for Models 7, 8 and 9

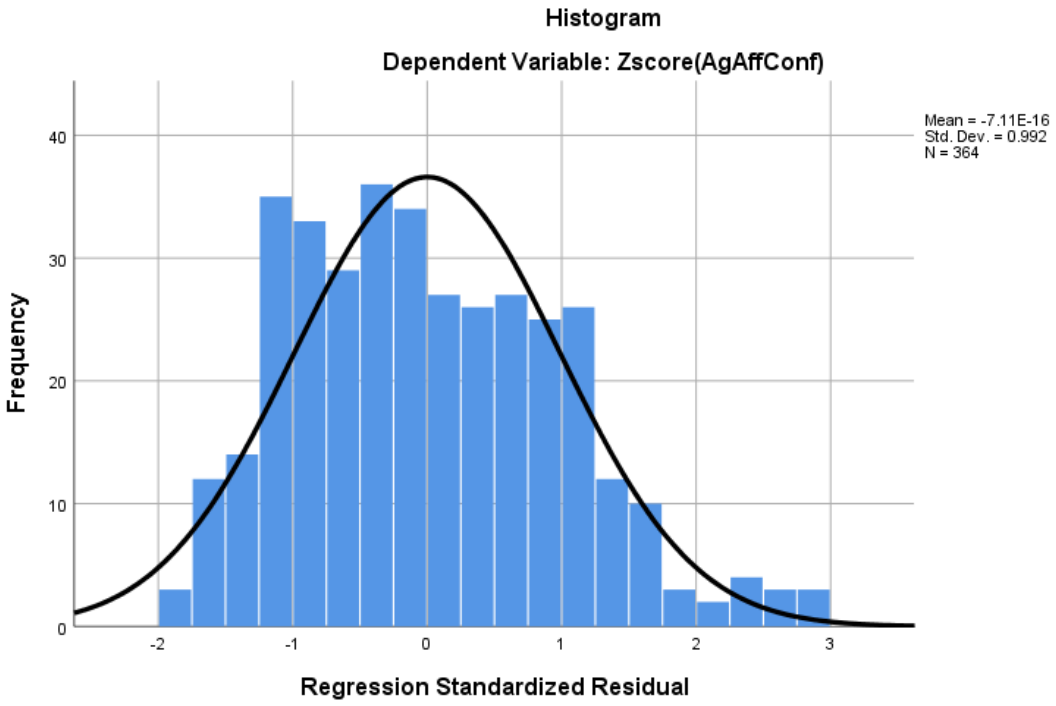

Fig 4. 9

Normal Probability plot for Models 7, 8 and 9

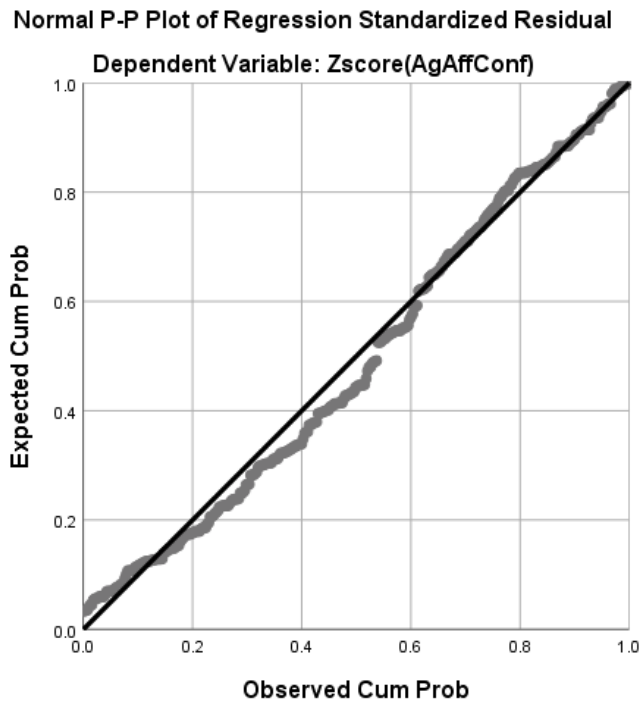

Fig. 4 .10
Scatter plot for Models 7, 8 and 9

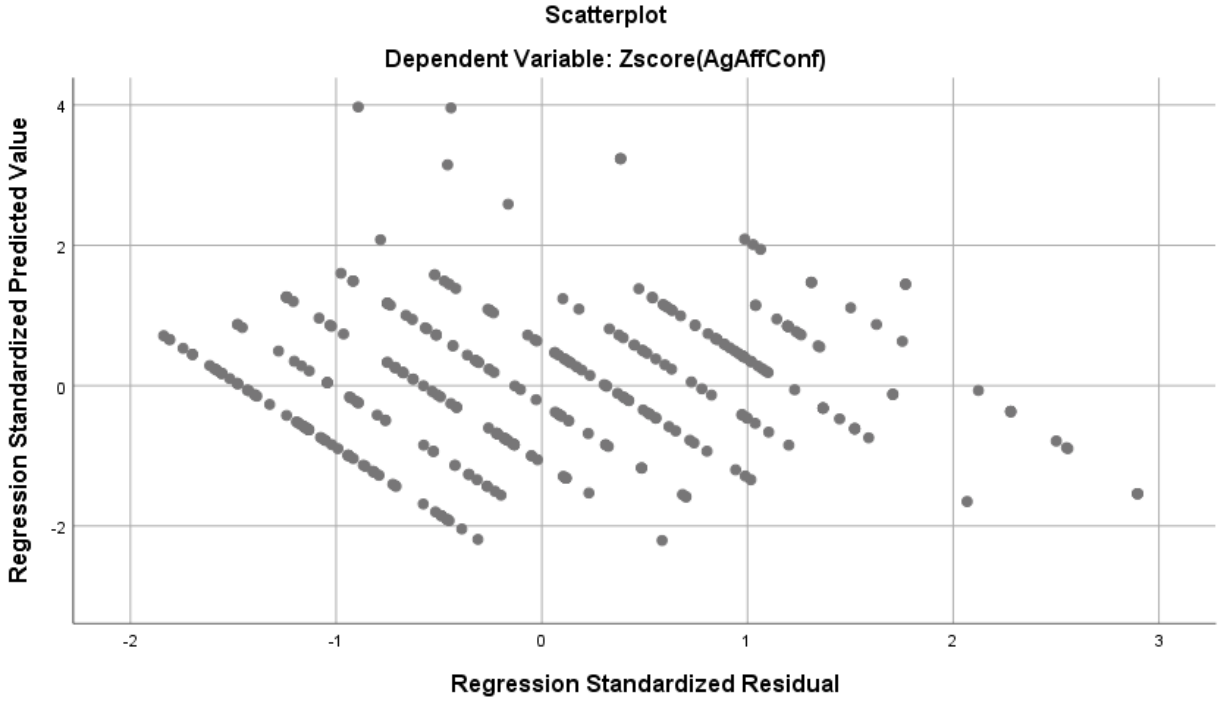

Fig. 4.11

Histogram for Models 10 and 11

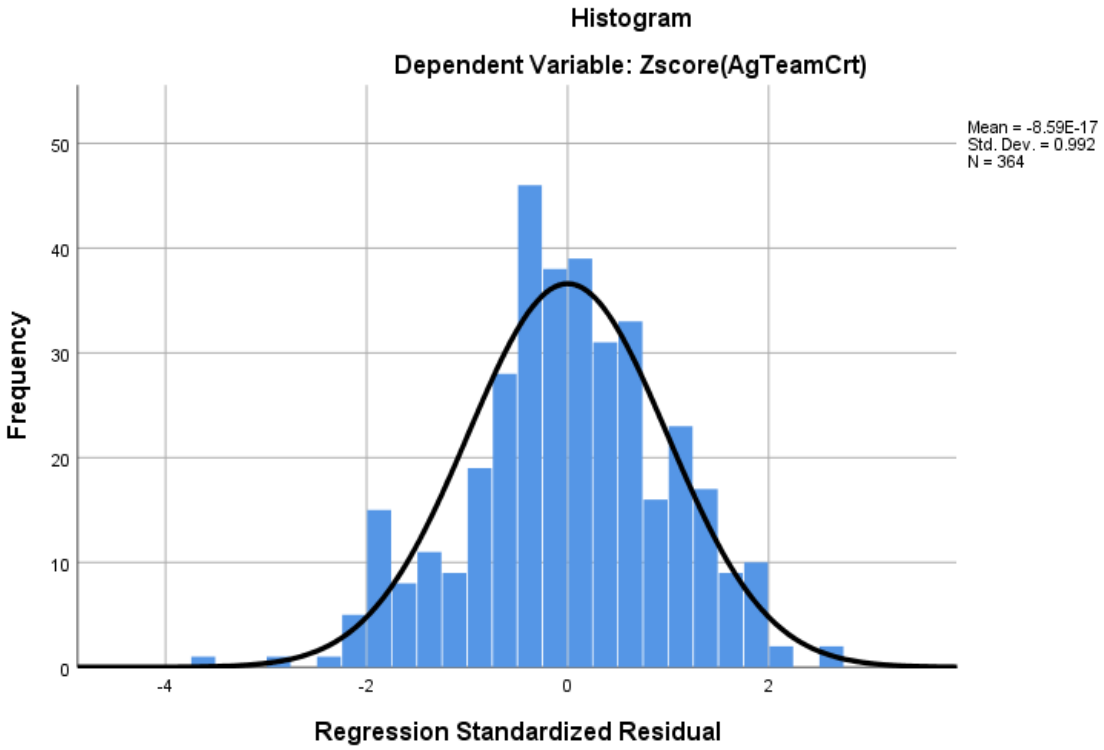

Fig. 4.12

Normal Probability Plot for Models 10 and 11

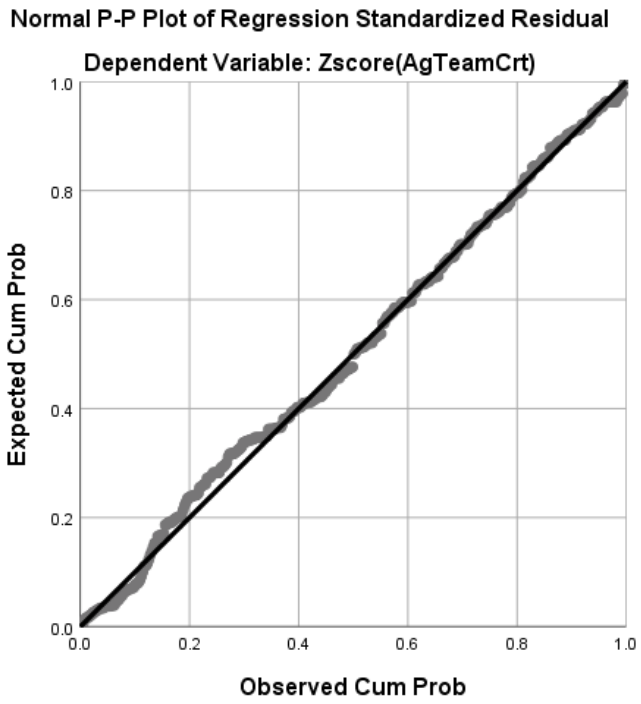

Fig. 4. 13

Scatter plot for Models 10 and 11

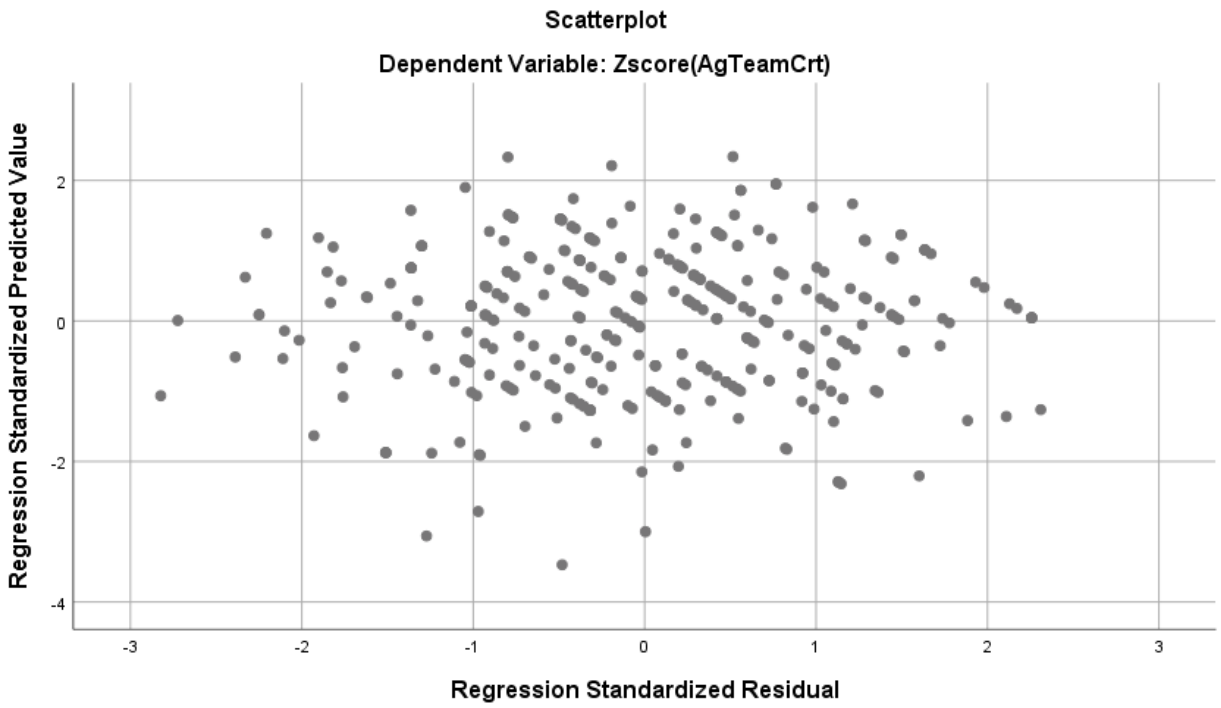
Scatterplot
Dependent Variable: Zscore(AgTeamCrt)
Regression Standardized Predicted Value
2
0
-2
-4
-3
-2
-1
0
1
2
3
Regression Standardized Residual

Table 4. 7

Harman's One Factor Test

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.773	15.601	15.601	5.083	13.737	13.737
2	4.897	13.236	28.838			
3	2.598	7.021	35.859			
4	2.454	6.632	42.490			
5	2.134	5.768	48.259			
6	1.866	5.042	53.301			
7	1.647	4.450	57.751			
8	1.464	3.958	61.709			
9	1.237	3.342	65.051			
10	1.171	3.164	68.215			
11	1.138	3.075	71.290			
12	.925	2.500	73.790			
13	.835	2.256	76.046			
14	.736	1.988	78.034			
15	.670	1.811	79.845			
16	.623	1.683	81.529			
17	.591	1.597	83.126			
18	.552	1.493	84.618			
19	.543	1.467	86.086			
20	.474	1.282	87.367			
21	.438	1.184	88.551			
22	.426	1.152	89.704			
23	.384	1.037	90.741			
24	.374	1.011	91.752			
25	.342	.925	92.676			
26	.322	.869	93.546			
27	.301	.814	94.360			
28	.286	.772	95.132			
29	.272	.736	95.868			
30	.267	.721	96.590			
31	.234	.633	97.223			
32	.222	.600	97.823			
33	.209	.566	98.389			

Total Variance Explained						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
34	.168	.454	98.843			
35	.155	.420	99.263			
36	.149	.402	99.665			
37	.124	.335	100.000			

Table 4.9

Variance Inflation Factors

Model		Collinearity Statistics	
		Tolerance	**VIF**
1	(Constant)		
	Task Interdependence	.966	1.035
	Task Routineness	.967	1.034
	Conflict Resolution	.961	1.041
	Team Size	.978	1.022
	Team Tenure	.981	1.019
2	(Constant)		
	Task Interdependence	.820	1.220
	Task Routineness	.937	1.067
	Conflict Resolution	.866	1.155
	Team Size	.960	1.041
	Team Tenure	.978	1.023
	Cognitive Diversity	.830	1.204
	Performance Avoidance	.916	1.092
	Performance Approach	.806	1.241
	Learning Approach	.743	1.347
3	(Constant)		
	Task Interdependence	.805	1.242
	Task Routineness	.924	1.082
	Conflict Resolution	.858	1.166
Model		Collinearity Statistics	
		Tolerance	VIF
3	Team Size	.954	1.048
	Team Tenure	.974	1.027
	Cognitive Diversity	.752	1.330
	Performance Avoidance	.884	1.132
	Performance Approach	.783	1.277
	Learning Approach	.643	1.555
	Cognitive Diversity x Performance Avoidance	.907	1.102
	Cognitive Diversity x Performance Approach	.869	1.151
	Cognitive Diversity x Learning Approach	.751	1.332
4.	(Constant)		
	Task Interdependence	.966	1.035
	Task Routineness	.967	1.034
	Conflict Resolution	.961	1.041
	Team Size	.978	1.022
	Team Tenure	.981	1.019
5.	(Constant)		
	Task Interdependence	.820	1.220
	Task Routineness	.937	1.067
	Conflict Resolution	.866	1.155

	Team Size	.960	1.041
	Team Tenure	.978	1.023
	Cognitive Diversity	.830	1.204
	Learning Approach	.743	1.347
	Performance Approach	.806	1.241
	Performance Avoidance	.916	1.092
6.	(Constant)		
	Task Interdependence	.805	1.242
	Task Routineness	.924	1.082
	Conflict Resolution	.858	1.166
	Team Size	.954	1.048
	Team Tenure	.974	1.027
	Cognitive Diversity	.752	1.330
	Learning Approach	.643	1.555
	Performance Approach	.783	1.277
	Performance Avoidance	.884	1.132
	Cognitive Diversity x Learning Approach	.751	1.332
	Cognitive Diversity x Performance Approach	.869	1.151
	Cognitive Diversity x Performance Avoidance	.907	1.102
7.	(Constant)		
	Task Routineness	.984	1.017
	Task Interdependence	.985	1.015
	Team Tenure	.993	1.007
8.	(Constant)		
	Task Routineness	.972	1.029
	Task Interdependence	.976	1.025
	Team Tenure	.973	1.027
	Task Conflict	.958	1.044
	Conflict Resolution	.949	1.054
9.	(Constant)		
	Task Routineness	.960	1.042
	Task Interdependence	.969	1.032
	Team Tenure	.969	1.032
	Task Conflict	.945	1.058
	Conflict Resolution	.947	1.056
	Task Conflict x Conflict Resolution	.961	1.041
10	(Constant)		
	Task Interdependence	.984	1.016
	Task Routineness	.973	1.027
	Team Size	.985	1.015
	Team Tenure	.988	1.012
11	(Constant)		
	Task Interdependence	.946	1.057
	Task Routineness	.972	1.029
	Team Size	.975	1.025
	Team Tenure	.965	1.036
	Affective Conflict	.816	1.225
	Task Conflict	.850	1.176