

Spring 2016

# The effect of cross-cultural differences on team performance within an educational setting: A mixed methods study

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The Effect of Cross-Cultural Differences on Team Performance Within an  
Educational Setting: A mixed methods study

Sevinj Iskandarova

A thesis submitted to the Graduate Faculty of

JAMES MADISON UNIVERSITY

In

Partial Fulfillment of the Requirements

for the degree of

Master of Science in Education

Adult Education/Human Resource Development

May 2016

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Dr. Diane Wilcox

Dr. Amy Thelk

## **Dedication**

To my two greatest heroes, my mother and father

Hər bir uğurumu iki doğma insana borcluyam:

atama və anama

Sizi sevirəm!

## **Acknowledgments**

I would like express my appreciation for individuals who without their help and support I would not have been able to complete this work. First and foremost, I would like to thank my advisor, Professor Oris Griffin McCoy, who has put a great deal of her time and effort into the guidance of this work. Dr. Griffin supported me academically and guided me as her daughter. Her office was always opened to help me solve any issues I uncounted during the program.

Next, I would like to convey my sincere thanks to Dr. Diane Wilcox for her support. From my first visit to James Madison University, Dr. Wilcox believed in, and supported me in reaching this goal. Her classes were a mix of challenge and joy for student who wanted to learn about instructional design and development.

Dr. Thall, a great inspirational teacher and leader provided me with the chance to glow and shine in the field, and I will not forget her continuous encouragement during every step of my academic career. Thank you!

A heartfelt thank you to Dr. Amy Thelk, my committee member and research consultant, for her expertise and continuous support of my research. Her valuable suggestions led to a greatly improved thesis. Thank you!

Dr. Michael Stoloff, thank you so much as it was an honor working with you on my research.

All LTLE faculty members: Thank you for being consistently supportive of my academic years at James Madison University!

Mrs. Sandra Gilchrist: Thank you, not only for being my supervisor but also for the moral support given to me every single day at James Madison University.

I cannot forget to thank Kristen Shrewsbury, one of the best members of the Writing Center at James Madison University. Without Kristen, my work would not have been well-written. Thank you!

Finally, I would like to thank you the professors who I interviewed for my research at James Madison University, for their time, patience and support.

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## **Abstract**

Faculty members' performance, experience, satisfaction while on a team, and their professional development were investigated to determine the benefits and challenges of cross cultural differences. The sample consisted of full- and part-time faculty members at James Madison University (JMU), located in Harrisonburg, Virginia. The purposes of this mixed methods study (online survey and one-to-one interview) were to determine and measure the effect of cross-cultural differences on team performance, highlight advantages and disadvantages of those cross-cultural differences within the team; and, apply the knowledge learned from this study to enhance team performance within an educational setting. The online survey assessed faculty performance while on a team. The results provided statistical evidence regarding the effect of multicultural team performance within an academic organization. The interview, the second step, provided more detailed information about the university's international faculty members' experiences on a multicultural team. By referencing these findings, educational institutions may improve organizational culture and provide a vision for increasing multicultural team performance. By highlighting the benefits and challenges of cross-cultural differences, educational administrators will gain greater knowledge in understanding and promoting more productive team performance. The study concludes by suggesting appropriate directions for future research.

*Keywords:* cross-cultural; workplace diversity; educational setting; educational setting culture; team diversity; multicultural team performance; teams

The Effect of Cross Cultural Differences on Team Performance within an Educational  
Setting

**Chapter I: Introduction**

**Background of the Study**

Today's educational institutions have moved to large-scale collaborations with local and global educational partners. This transition has helped to develop effective solutions to achieve equitable teaching and learning and has also played a critical role in influencing the development of new international educational policies (Center for Universal Education at Brookings, 2013). This transition has also increased monetary efficiency, programmatic and political sustainability, and enabled workforce stability (Broniatowski, Faith & Sabathier, 2006). Regardless of the global educational cooperation, councils on education have decided to change their strategies and "use various types of work groups and teams to get tasks done" (Mannix & Neale, 2005, p. 32). This change has required that the "diverse nature of workforce, and work teams with multicultural members" (Matveev & Nelson, 2004, p. 253) collaborate authentically. These new strategies have led to the development of cross-cultural perspectives and improved educational institutions' efficiency and effectiveness.

Mannix and Neale (2005) assert that diversity (e.g. demographic, cognitive, or personality) "reduce[s] discrimination and increase access to career opportunities, and enhance creativity and quality of team performance" (p. 32). At the same time, Mannix and Neale indicate that this diverse environment may also negatively affect people through "social integration, communication, and conflict in groups" (p. 32). To meet positive expectations, educational settings must address employee satisfaction by supporting and encouraging successful team performance. Employees must learn how to

address the challenges (e.g. deal with coordination and control issues; maintain communication richness; and, develop and maintain team cohesiveness) that arise when working with team members from different nationalities and cultural backgrounds (Hong, 2010; Matveev & Nelson, 2004). Some cultural differences such as verbal and non-verbal mannerisms and gestures should be avoided. Speaking in a neutral tone, and being aware of cultural differences when interacting, can help to foster effective business communications on multicultural teams. Multicultural team members possess “specific abilities such as cross-communication skills; knowledge of cultural beliefs and values; and dual cultural role repertoires” (Hong, 2010, p. 94). These competencies might also include “affective and behavioral skills such as empathy, human warmth, charisma, and the ability to manage anxiety and uncertainty” (Matveev & Nelson, 2004, p. 256).

Stahl, Maznevski, Voigt, & Jonsen (2010) noted that an important obligation of an educational institution is “to develop specific knowledge about the potential barriers and opportunities that cultural diversity offers” (p. 692). In order to determine the root causes of the effect of cultural diversity they also conducted a thorough investigation of the loss (groupthink and conflict) or gain processes (cohesion and creativity). This study significantly influenced team input, a variety of team processes, team performance, and output (Stahl et al., 2010).

	<b>Process Gain</b>	<b>Process Loss</b>
Convergence (align the team around common objectives, commitment, or conclusion)	Cohesion	Groupthink
Divergence (bring values and ideas into the team)	Creativity	Conflict

*Figure 1. Relationship between Cultural Diversity and Team Performance Model.*  
Chart adapted - Stahl, Maznevski, Voigt, and Jonsen`s (2010) Relationship between Cultural Centers Diversity and Team Performance Model (p. 692).

Stahl et al. (2010) also claim that cultural diversity influences teams in three different ways: similarity in attraction (being similar with people in terms of values, beliefs and attitudes); social identity and social categorization (categorize people into specific groups); and, information processing (problem-solving, creativity and adaptability) (p. 691).

By highlighting similarity attraction, social identity and social categorization, and information processing, leaders in educational settings are better able to define their educational institutions' culture and characteristics of faculty members, particularly as different types of diverse culture may influence team outcomes in different ways.

The following sections provide an overview of the study. They include the problem statement, the purpose of the study, the study's justification, research questions, hypotheses, assumptions, limitations and scope, significance of research, key terms and definitions that are related to cross-cultural differences on team performance in an educational setting.

### **Problem Statement**

According to Paunova (2014), "multicultural teams struggle with finding a mutual approach to people with different backgrounds and perspectives. These struggles usually lead to tension, hostility, lack of cooperation and poor communication, which ultimately undermine team performance" (p. 4). The struggles are often over "how culture is related to micro organizational phenomena (e.g. motives, cognition, and emotions), meso

organizational phenomena (e.g. teams, leadership, negotiation), macro organizational phenomena (e.g. organizational culture, structure), and the interrelationships among these levels” (Gelfand, Erez, Aycan, 2007, p. 480), and whether it can be statistically proven.

The lack of knowledge regarding cross-cultural differences impact on team performance is an essential factor that affects educational settings. As a result, the lack of knowledge will cause an ineffective work environment in cross-cultural team situations and the educational workforce may suffer. Educational institutions often fail in this step because they cannot control an employee’s motivation. “The cultural knowledge and awareness are necessary but not sufficient for performing effectively in a cross cultural setting, because an individual must also have the motivation to use the knowledge available” (Johnson, Lenartowicz, & Apud, 2006, p. 529).

Educational institutions are spending time and resources recruiting broadly talented faculty who will succeed at a high level of international collaboration. However, many cultural variables are implicated as significant cause problems and faculty works/projects. These cultural variables include “use of inappropriate team structures, inability to sustain stakeholder confidence and interest, volatility in project team dynamics, poor team integration and ineffective communication” (Cipulu, Ojiako, Gardiner, Williams, Mota, Maguire, Shou, Stamai & Marshal, 2012, p. 365). These unsuccessful interactions have high costs to institutions and can also “damage corporate reputations or [lose] future collaboration opportunities” (Black & Mendenhall, 1990, p. 114).

Inefficient methods and strategies have also negatively impacted multicultural teams within an educational setting. Teaching people to adapt to a new cultural environment is not an easy job. Most diverse workforces are suffering, as they continue

to receive insufficient training/orientation programming related to different cultures or, in some cases, no training/ orientation programs at all. According to a study conducted by the *Harvard Business Review* in 2015, “the educational settings cannot be achieved in a two-hour session, or by handing someone a book, a website, or a manual, to adapt people’s behavior across cultures. It’s a real skill that requires patience, practice, and perseverance” (p. 4).

These challenges present a serious problem to educational institutions as they seek to improve their presence in the international arena. Educational settings are demanding that their faculty members improve their skills to be successful in cross-cultural teams and increase educational benefits by attracting international faculty members.

### **Purpose of the Study**

The purpose of this study is to determine and measure the effect of cross-cultural differences on team performance, highlight advantages and disadvantages of those cross-cultural differences within the team, and to apply the knowledge learned from this study to enhance team performance within an educational setting. The sample consisted of full- and part-time faculty members at JMU. The findings may improve JMU’s organizational culture and provide a vision for increasing multicultural team performance. By highlighting the benefits and challenges of cross-cultural differences, the educational institution will possess greater knowledge in understanding and promoting a more productive team performance.

### **Justification of Study**

This study will benefit faculty members working on diverse teams. “Despite the

mounting volume of academic research on cross-cultural issues in educational settings, firms appear not to be doing enough to prepare” employees for working on a multicultural team (Johnson, Lenartowicz, & Apud, 2006, p. 526). Many studies (Chipulu et al., 2014; Johnson et al., 2006; and Black & Mendenhall, 1990) show the importance of this topic and not its relation to workplace diversity in the U.S.

The present research will examine the relationships among faculty members and focus on the skills, knowledge, and attitudes needed to work in a diverse workplace. In addition, the study will determine performance expectations and faculty members’ perceptions of cross-cultural environments and efficiency, as well as work performance on multicultural teams at JMU. In order for a positive multicultural work environment to exist, there must be experienced and trained faculty members who are able to manage effectively, resolve misunderstandings, and address political and sociocultural environmental issues (Johnson et al., 2006; Black & Mendenhall, 1990).

The satisfaction of faculty members is also important. In this case, the expected outcome from this approach might be improved faculty performance in classes and labs, higher research, productivity and higher academic ratings for the university. In addition, the information provided in this study will allow educational leaders to make inferences about their faculty members’ team performance based on their motivation, experience, and skills.

### **Research Questions**

This study investigates the effect of cross cultural differences on team performance within an educational setting, with the following research questions:

**RQ1:** What effect do cross-cultural differences have on JMU faculty members' approaches to multicultural team environments within an educational setting?

**RQ2:** What multicultural team experiences are JMU international faculty members reporting?

**RQ3:** What resources or strategies could improve team performance on a multicultural team within an educational setting?

**RQ4:** What results emerge from comparing the explanatory qualitative data about multicultural team experiences with outcomes from the quantitative data within an educational setting?

### **Hypotheses**

In addition to the research questions stated above, the following hypotheses were investigated:

**H1:** Faculty members at JMU will have strong working relationships across multicultural lines.

**H2:** Working in a cross-cultural environment enhances group ideas and increases exposure to diverse experiences in an educational setting.

**H3:** JMU faculty members' job performance positively correlates with each cultural intelligence scale aspect within a culturally diverse educational setting.

**H4:** JMU faculty members will report familiarity with cross-cultural training and different delivery methods.

These hypotheses assume that effective team performance in a multicultural environment will create ideas that will achieve optimal success.

### **Assumptions, Limitations and Scope**

For this study, I chose to use the instructional and administrative faculty members at JMU. I assumed that these instructional and administrative faculty members would be easily accessible and would be able to provide me with valuable responses. JMU has a significant number of both instructional and administrative faculty members, and is somewhat cultural diversity. The ethnic background of the JMU faculty is as follows: 79.3% are white, 4.24% African American, 5.12% Hispanic, 4.37% Asian or other (JMU Fast Facts, 2014). The participants represented both genders across all departments.

It is likely that the faculty member population at JMU will not provide generalizable responses for faculty populations at other universities. This generalization may only apply to similar nearby universities with the similar multicultural environments.

Mixed methods was consider to be the best method to use to research the questions, and the most effective way to collect research data in a two-part process (first quantitative and second qualitative). It would not be appropriate to use quantitative data alone to understand the problem, as it would present incomplete data. As stated by Creswell (2015), “[The] Quantitative research method does not adequately investigate personal stories and meanings or deeply probe the perspectives of individuals. Qualitative research does not enable us to generalize from a small group of people to a large population” (p.15). The combination of these research methods will provide more in-depth information and an opportunity to learn from individual perspectives. In this study, quantitative data were collected in JMU Qualtrics and made available to the instructional and administrative faculty members at JMU. Qualitative data were collected in one-to-one interview sessions that required participants to answer specific open-ended questions.

### **Significance of Research**

Many studies (Chipulu et al., 2014; Johnson et al., 2006; Black & Mendenhall, 1990) show that working in a diverse environment is important. This study will also contain information that is relevant to educational leaders in higher education. The study will, hopefully, allow these leaders to analyze the beneficial and challenging aspects of team performance within multicultural teams. Skill, knowledge, and attitude were considered the main principles when working in a diverse cultural background team but skill, knowledge and attitude also bring both positive and negative aspects to the team. It is assumed that all criteria of positive and negative approaches reflect an educational setting and the performance of faculty members, and subjectively define success and failure in achievement settings. There is a significant relationship between a diverse educational setting and faculty members' motivation to work in this setting (Levin, Walker, Haberler & Jackson-Boothby, 2013; Johnson, Lenartowicz, & Apud, 2006). Both international and local members of the specific educational institution bring along different personal styles and preferences for working within a multicultural team. Levin, Walker, Haberler and Jackson-Boothby (2013) mentioned that the diverse workplace calls for a common understanding of how to work collaboratively, while at the same time remaining sensitive to the many cultures within the group. Faculty members' good relations within a team or educational setting also affect students' successful engagement in a diverse environment.

In most cases, successful educational institutions that have an international presence respect cultural diversity, and benefit from developing an international faculty, thus increasing its reputation in a world ranking system.

### Key Terms and Definitions

The following table provides the keywords and definitions that will be used throughout this study.

Table 1: *Key Terms and Definitions*

Concept	Authors	Definition
Multicultural Team Performance	Kearney, Gebert, Voelpel, (2009, p. 581)	“by influencing the range of available task-relevant resources as well as how well team members communicate and cooperate with one another, team composition is believed to have a strong impact on team performance”
Cross-Cultural	Oxford Dictionary	“Of or relating to different cultures”
Cross Cultural Competence	Gertsen, (1990, p. 346)	“The ability of individuals to function effectively in another culture”
Workplace Diversity	Cross, Barbara, Bazron, Dennis, Isaacs, (1989, p. 7)	“a set of congruent behaviors, attitudes and policies that come together in a system, agency, or among professionals and enables that system, agency or those professionals to work effectively in cross cultural situations` intercultural communications competence”

Concept	Authors	Definition
Team Diversity	Bell, Villado, Lukasic, Belau & Brigs, (2011, p.711)	“Distributional difference among members of a team with respect to a common attribute”
Skill	Oxford Dictionary	“Expertness or practiced facility in doing something”
Cultural Intelligence	Johnson, Lenartowicz, Apud, (2006)	Appears to be concerned more with acquiring and practicing appropriate behaviors than with applying them in real-life situations
Cross-Cultural Adaptability	Keyyey & Meryers, (1999, p. 98)	“Cross-cultural adaptability inventory was developed to measure cross-cultural adaptability”
Conceptual Conditions	Johnson, Lenartowicz, Apud (2006)	Understanding cultural group`s value system and how these values are reflected in people`s behavior
Motivation	Oxford Dictionary	“The reason or reasons one has for acting or behaving in a particular way”

Concept	Authors	Definition
Cross Cultural Differences	Hong, (2010)	Refers to demographic, or personality diversity
Cultural Orientation	Matveev & Nelson, (2004)	To improve performance improvement, training, development, and excellence individually or in a group
Educational Setting	IRB for Social & Behavioral Sciences	“As any setting where one would go in order to have an educational experience”
Educational Setting Culture	Levin, Walker, Haberler& Jackson-Boothby, (2013)	As members of the group bring their cultural background they also bring along their personal styles and preferences for working with others
Cross Cultural Communication	Johnson et al., (2006, p. 586)	“To be appropriate and effective in the communication process that takes place between individuals from different national cultures”
Cross-cultural Training	Brislin & Yoshida, (1993)	“to prepare people for more effective interpersonal relations and for job success when they interact extensively with individuals from cultures other than their own”

Concept	Authors	Definition
Behaviorism	Ertmer & Newby, (2013, p. 48)	“Behaviorism focuses on the importance of the consequences of those performances and contends that responses that are followed by reinforcement are more likely to recur in the future”
Metacognition	Earley & Gison, (2002, p. 100)	“thinking about thinking or knowledge and cognition about cognitive objects”
Cognitive theory	Ertmer & Newby, (2013, p. 51)	“Cognitive theories stress the acquisition of knowledge and internal mental structures...[they] focus on the conceptualization of students’ learning processes and address the issues of how information is received, organized, stored, and retrieved by mind”

### Overview of the Study

The purpose of this mixed methods study (online survey and in-person interview) was to determine and measure the effect of cross-cultural differences on team performance; highlight advantages and disadvantages of these cross-cultural differences within the team; and, to apply the knowledge learned from this study to enhance team performance within an educational setting. This study first assesses the demographics of faculty members at JMU. An online survey was administered through Qualtrics survey

software, assessing faculty members' current level of multicultural knowledge in their work and training experiences. This method was used to collect detailed information on the targeted group's background and to better understand how faculty members' previous knowledge and work experience related to working on multicultural teams. Afterwards, face-to-face interviews were conducted with international faculty members at JMU. At this point, participants were asked to provide answers to a series of questions related to their experiences as part of a multicultural team at JMU.

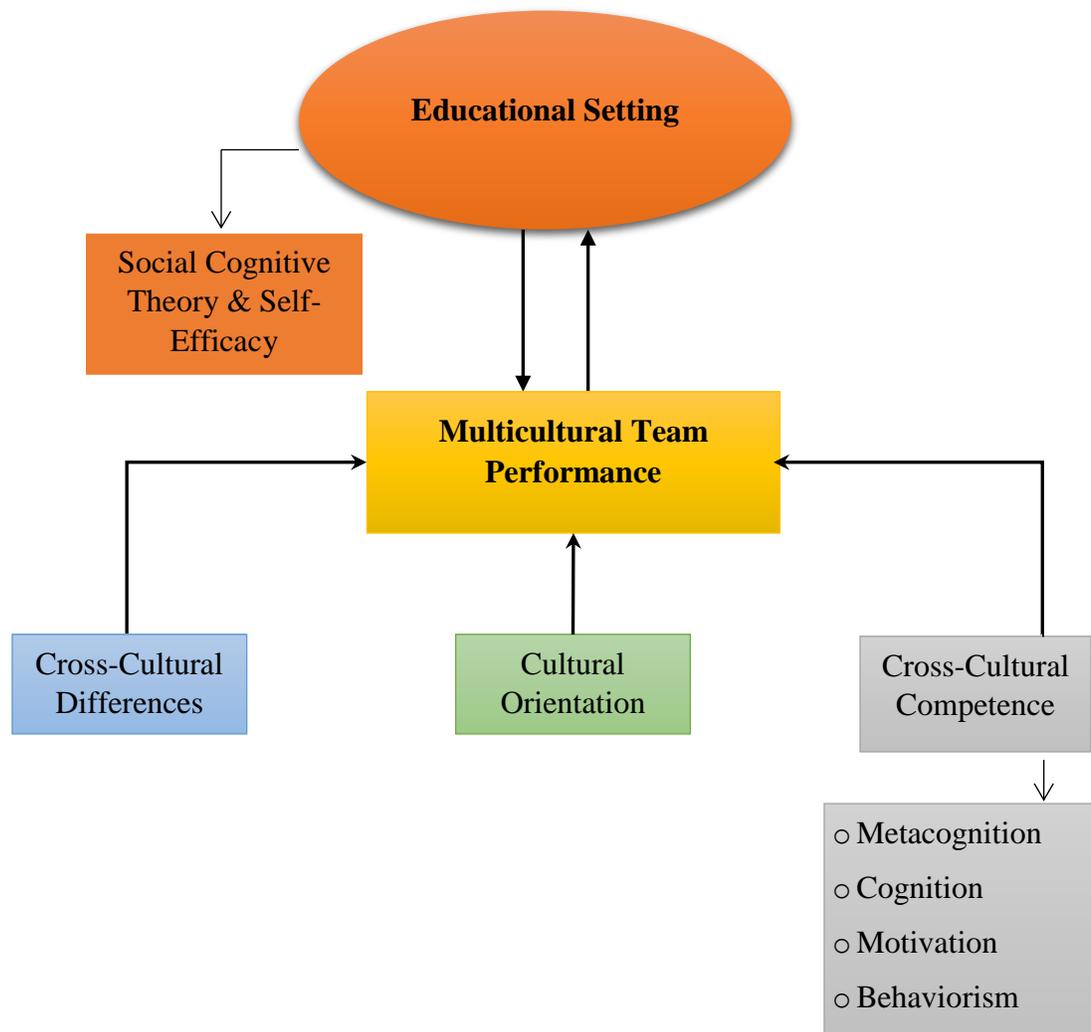
## Chapter II: Literature Review

The literature review of “The Effect of Cross-Cultural Differences on Team Performance within an Educational Setting” research study begins with an in-depth explanation of the study’s conceptual and theoretical frameworks. The frameworks will then provide an overview of the study’s major components and research questions. The literature review also discusses how theory influenced the direction of the study and how it will be incorporated into the analysis, design and development phases of the research. A review of previous research is presented to support the frameworks’ rationale. The literature review concludes by identifying a gap in the current literature. Metacognitive and cognitive learning theory, theory of motivation, behavioral learning (behaviorism), and social learning theory are a large part of the literature on the effect of cross-cultural differences on team performance within an educational setting. Literature on these topics served as a gateway for researchers in understanding the benefits and challenges of cross cultural differences, educational setting, and promotion of more productive team performance.

The quest for a definition of “cross-cultural differences” led to researching specific literature databases in the fields of business, education, humanities and social sciences. Several different keywords were used forming combinations of the terms “cross-cultural”, “workplace diversity”, “educational setting”, “educational culture”, “team diversity”, and “multicultural team performance”. The results of how these terms were defined in the literature are grouped into five categories: 1) cross-cultural differences 2) cultural orientation 3) cross-cultural competence 4) multicultural team performance, and 5) educational setting.

### Conceptual and Theoretical Framework

The conceptual and theoretical framework depicted in Figure 2 shows the relationship between the five main topics presented in the literature review.



*Figure 2. Conceptual and Theoretical Framework*

The above framework explains the relationship among cross-cultural differences, cultural orientation, and cross-cultural competence and their effect on multicultural team

performance within an educational setting. The literature on these topics reveals that theory is, indeed, a critical component to understanding the effect of cross-cultural differences on multicultural team performance.

### **Social Cognitive Theory**

Bandura's Social Cognitive Theory (1977) postulates that most human learning occurs through observing others. Bandura's Social Cognitive Theory consists of cognitive, motivational, affective, and modeling processes used by individuals in learning. Other components to Bandura's (1978) Social Cognitive Theory include reciprocal determinism, modeling, self-instruction, self-regulation and perceived self-efficacy.

**Reciprocal Determinism.** Bandura (1978) explained that reciprocal determinism is a self-regulatory process that analyzes personal development and transactions and collaborating functions of organizational and social systems. Bandura (1978) uses Social Learning Theory to express the fact that people learn much of their behaviors in a social context through imitation of others. According to Bandura's social learning theory, the triadic reciprocal connection identifies how personal, behavioral and environmental factors encourage learning. This connection has a number of defining features including the recognition of the bi-directional relationship between the factors. This reciprocal process has important implications for educational institutions because once faculty members learn the correct skill or behavior; he is more likely to autonomously repeat that skill or behavior. And encouragement from a mentor, supervisor or peer may also increase a faculty member's own confidence, until the new faculty members can create their own mastery experiences and feel competent in them. Through this encouragement

all faculty members in the educational institution are achieving success and social modeling, increasing the self-efficacy of all faculty members in the work environment.

**Self-instruction and Perceived self-efficacy.** Self-instruction and perceived self-efficacy play an important role in faculty members' decisions and achievements. Because, today, educational institutions are large diverse social groups where faculty members of these institutions may interact and observe the behaviors of their peers in various settings. Perceived self-efficacy can be defined as "belief about one's capabilities to learn or perform behaviors at designated levels" and can affect performance when completing tasks. (Zimmerman & Schunk, 2001, p.126; Bandura, 1982). People learn in two ways: 1) learning by doing - people receive feedback and engage in practice 2) learning by observing others - people observe and listen without directly experiencing. If an individual is working towards a goal or checking items off a list, he/she tends to have a more enhanced and positive self-efficacy (Bandura, 1991). This study demonstrates that learning occurs through observation and imitation of peers and also supports the importance of a cross-cultural environment. Having positive reinforcements help faculty members to work effectively and efficiently as they observe and learn positive behaviors and skills when working in diverse groups.

**Modeling process.** Modeling process can also motivate personality as they interact with internal processes such as the environmental, behavioral, and psychological (Bandura, 1977). Models serve very important functions such as: response facilitation, inhibitions/disinhibition and observational learning. Response facilitation serves as a motivational role. For instance, if a faculty member observes his/her colleague performing a task this observation results in positive feedback. Observational learning is

comprised of four components: attention, retention, production, and motivation (Bandura, 1986). Attention is important and highly functional; retention is increased through mental storing of practiced actions; production involves retrieving the stored information and translating it to perform a behavior; motivation is important for individuals to feel that they are important (Schunk, 2002). Therefore, to avoid negative outcomes, the faculty members, individually or in a group need to perform successfully to achieve the best outcomes. To achieve positive outcome also requires educational institutions to focus on faculty members' motivation when they are having trouble working in a diverse group.

**Self-regulation.** Self-regulation is about choice and the options of choices available (Bandura, 1986; Schunk, 2002). Self-regulation has three parts: self-observation (or self-monitoring), self-judgment, and self-reaction (Bandura, 1986, 1991; Schunk, 2002). Self-observation (self-mentoring) involves monitoring personal performances; self-judgment involves comparing present and past performance; and, self-reaction involves working toward an attainable goal (Bandura, 1991; Schunk, 2002). Self-regulated learning is essential for growth, this growth may come through goal setting and receiving feedback (Bandura, 1991).

### **Sociocultural Approaches to Learning and Development**

In late 1920s and early 1930s, Vygotsky (1981) and his Russian collaborators were the first to systematize and apply sociocultural approaches to learning and development. The bases of their argument are that human activities take place in a cultural context, they are “mediated by language and other symbol systems, and can best be understood when investigated in their historical development” (John-Steiner & Mahn, 1996, p. 191).

Although Vygotsky died at an early age his work continues to influence how past and present scholars and educators view and understand his work. Wertsch (1991), using Vygotsky's writings, sought to clarify that the nature of the interdependence between individual and social processes in the construction of knowledge can be clarified by examining three major themes. Those themes are: 1) Social sources of development - individual development, including higher mental functioning has its origins in social sources; 2) semiotic mediation - human action, on both the social and individual planes, is mediated by tools and signs; and, 3) genetic analysis - the first two themes are best examined through genetic, or developmental, analysis (John-Steiner & Mahn, p.192).

*Social sources of development.* Individual development relies on the transmitted experiences of others. Learners usually depend on others while doing the activity and learning new experiences. Supporting new learners in a cross-cultural environment brings opportunities to observe varied experiences and challenging situations. Through this method learners become skilled practitioners in their field (John-Steiner & Mahn, 1996).

*Semantic mediation.* Semantic mediation is key to all aspects of knowledge construction (John-Steiner & Mahn, 1996). According to Vygotsky (1981), language, mnemonic techniques, writing, and other types of symbols connect the internal with the external the social and the individual. These tools are essential to the appropriation of knowledge through representational activity by the developing individual (John-Steiner & Mahn, 1996).

*Genetic analysis.* John-Steiner and Mahn (1996) noted that Vygotsky used genetic analysis to examine the origins and the history of phenomena, focusing on their interconnectedness, "to develop his theoretical framework and guide his research" (p.

194). This analysis may be key in understanding how individuals function in a cross-cultural environment, and in a socially and culturally shaped context.

Vygotsky also investigated and analyzed the dialectical notion to examine if speech played an essential role in an individual's development. He described "mind and matter, language and thought, external and inner speech, nature and culture and social and individual processes in the construction of knowledge" (John-Steiner & Mahn, p.195). The aim of this research is to weave together ideas and strategies that will enhance cross-cultural communication and build team cohesiveness for faculty working on cross-cultural teams. Vygotsky's (1991) work provides a frame for shaping and understanding social and cultural factors individuals must recognize in order to be effective in building diverse teams in educational settings.

### **Educational Setting**

Educational setting is also a main component in the framework, and it affects multicultural team performance. Educators are simultaneously teachers and students, who are considered lifelong learners. Students and lifelong learners often share a common space and are encouraged to learn from one another. Learning from one another is easier said than done. As the world becomes more diverse and more complex, the work of performing the task becomes more challenging. For example, today's workgroup might consist of people working collaboratively on a single project, but the workers might be in many different locations around the world. Or, the workgroup might be in a common space but the members of the group represent many cultures and nationalities. These situations call for a common understanding of how to work collaboratively while at the same time remaining sensitive to the many cultures within the group. While members of

the group bring their cultural background to the conversation, they also bring along their personal styles and preferences for working with others (Levin, Walker, Haberler & Jackson-Boothby, 2013).

Exposure to diverse experiences not only benefits members of the group; these experiences benefit everyone. The majority culture gains familiarity with new ways of thinking and the minority culture receives an education that legitimizes their presence in higher education. Levin, Walker, Haberler, and Jackson-Boothby (2013) noted that perhaps, faculty must work to understand a diversity of personal and professional identities. “Faculty can be powerful advocates for institutional change and pivotal figures in a college’s commitment to diversity” (Levin et al., 2013, p. 59). Umbach (2006) and Bernal and Villialpando (2002) also mentioned that faculty in a diverse environment, using active and collaborative teaching techniques, interact with students more often. These studies acknowledge that diverse educational experience, diverse faculty members, and diverse activities benefit all students, not only by sharing diverse backgrounds, but also through students gaining familiarity with new ways of thinking and learning about cultures different from their own.

### **Multicultural Team Performance**

**Team and Cultural Knowledge.** The crucial point discussed in this study is the multicultural team and team performance. In order to provide high quality team performance in a multicultural team, teams must be motivated and enthusiastic. Otherwise, team members are likely to face uncertainty, which might negatively impact team performance and team members’ satisfaction levels (Unger-Aviram & Erez, 2015).

**Cultural Knowledge.** As institutions continue to build cross-cultural knowledge, it is essential that they develop a systematic approach for those working on multicultural teams in order to avoid misunderstandings. By gaining an understanding of cultural knowledge and by sharing values and norms, team members may take these shared values and norms into consideration when working on a multicultural team and assisting multicultural team members in meeting team objectives.

**Multicultural team performance.** Matveev and Nelson (2004) suggest that teams can perform better in multicultural environments. This idea shifted from the last decade of research to current research studies. Several studies (e.g. Kearner et al., 2009, Chipulu et al., 2014, & Park, Soitzmuller & DeShon, 2013) demonstrate that team performance in multicultural environments, brings a combination of high interpersonal skills, high team effectiveness skills, and an ability to manage cultural uncertainty. In Matveev and Nelson's (2004) study, cross-cultural communication was considered a vital tool to achieving higher team performance. These research studies also indicated that multicultural team performance affects communication and relationships in a good way and helps to ease decision making.

In 2006, Gelfand, Erez and Aycan noted that high task orientation and low socio-emotional behaviors are important for group success in a team's performance. They also found that social influence processes in teams also vary across cultures. If a person is unable to solve problems outside of the company, this will be a factor inside the company during team cooperation. Team arrangement or grouping is also believed to have a strong impact on team performance.

The effectiveness with which team members are able to communicate and cooperate with one another determines how productive the team will be. Team arrangement requires specific prediction to certain personality traits, because team members` personalities have beneficial or detrimental effects on team performance.

**Team Dynamic, Process Losses & Process Gains.** In order for team members to meet team qualities and team outcomes, it is crucial that the team achieve adaptive and innovative team performance. A challenge for multicultural team members is in connecting team-level objectives with cultural values.

At the beginning of this study positive and negative effects of multicultural team performance were mentioned. Stahl et al. (2010) identified three approaches that categorized the positive and negative effects of a multicultural team: “similarity attraction theory, social identity and social categorization theory, and information processing theory” (p. 692). Similarity attraction theory and social categorization theory underline the negative effects that are due to direct relation with social process. One of the main challenges considered is stereotype, which may result in conflict within a multicultural group. Stahl et al., (2010) also mentioned “diversity’s effect on teams is negative, because it makes social processes more difficult” (p. 691).

Stahl et al. (2010) also highlighted the importance of having multicultural teams because “diversity brings different contributions to team” (p. 691). This approach underlines a third category, “information processing theory” (p. 691). In addition, Stahl et al. (2010) notes that diverse teams can provide members a broad variety of information, tap into a broader range of networks and perspectives, and teach numerous, fruitful problem-solving approaches.

### **Cross-cultural Differences**

Cross-cultural differences have been explored in research conducted by Hong (2010). Cross-cultural differences represent employees working in multi-national corporations. In Hong's framework (2010), cross-cultural differences display demographic or personality diversity and build specific cultural knowledge. This knowledge includes cross-cultural communication and behavioral adaptability skills. Hong also defined "cross-cultural communication skills as the attitude to communicate appropriately and effectively in a given situation both verbally and non-verbally in a cross-cultural context" (Hong, 2010, p. 101). Furthermore, "behavioral adaptability refers to one's ability to appreciate and detect culturally specific aspects of social behavior" (Hong, 2010, p. 101). Hong goes on to explain in his study that "major challenges to multicultural team effectiveness include different communication styles such as direct versus indirect communication and trouble with accents and fluency" (p. 101). His findings and recommendations indicate that if a team with a high level of cross-cultural communication recognizes different communication styles, that team will be patient and demonstrate flexibility while also focusing on the team's goal. In the table below, Hong (2010) describes some of the benefits and challenges of working with multicultural colleagues:

Table 2: Benefits of Working of Multicultural Colleagues

Benefits of Working with Multicultural Colleagues	Challenges of Working with Multicultural Colleagues
<ul style="list-style-type: none"> <li>• Enhanced team capabilities to perform effectively in the future</li> <li>• Shared understanding</li> <li>• Social integration</li> <li>• Mutual trust</li> <li>• Creativity</li> <li>• Build interpersonal skills</li> <li>• Communication Effectiveness</li> <li>• Increased adaptability</li> <li>• Variety of viewpoints</li> </ul>	<ul style="list-style-type: none"> <li>• Unsuccessful management in a diverse workplace</li> <li>• Different accent</li> <li>• Various attitudes</li> <li>• Communication style</li> </ul>

Hong suggested that adaptation, structural intervention and managerial intervention strategies to solve these problems (2010, p. 104). Other researchers, such as Chipulu et al., (2012) have also referenced these benefits in a cross-culturally different environment.

**Cultural Orientation**

Cultural orientation displays context richness, power distance, uncertainty avoidance, and performance orientation. As highlighted by Gastil, Braman, Kahan, & Slovic (2012):

Cultural orientations have clear, strong, and predicted effects on each policy issue; those effects are substantially stronger than those obtained by the liberal-conversation measure; and, culture’s impact diminishes only slightly at lower levels of political knowledge, whereas one’s political self-identification generally becomes an insignificant predictor at a low level of political knowledge ( p. 711).

Matveev and Nelson (2004) sought to understand whether the culture values individual goal or group goals. They reported that cultures that prefer group goals exhibited more emotional dependency on the team and were more conforming, orderly, traditional, team-oriented, and particularistic. On the other hand individualistically oriented cultures such as the United States, value autonomy, self-interest and performance. However, collective cultures such as Japan, Sweden, and Russia, value cooperation and satisfaction. Given these differences in orientation, group members may face challenges in developing a productive team, especially when seeking to dividing responsibilities.

Furthermore, Matveev and Nelson (2004), referring to Javidan and House (2001), noted that “performance orientation refers to the degree to which a culture rewards its members for performance improvement and excellence” (p. 259). Cultural orientation plays an important role in developing teams and making decisions. Cultural orientation makes clear the individual’s background, such as “group-versus-individual-decision making” (Matveev et al., 2004, p. 260). Understanding individuals from culturally different backgrounds often increases productivity while working on a multicultural team. Cultural orientation is essential for group achievements, understanding, and rule adherence, regulation, and clarity (Matveev et al., 2004).

### **Cross-cultural Competence**

Cross-cultural competence “is a set of congruent behaviors, attitudes and policies that come together in a system, agency, or among professionals and enables that system, agency, or those professionals to work effectively in cross-cultural situations” (Johnson, Lenartowicz & Apud, 2006, p. 529).

Cross-cultural competency continues to be discussed throughout the literature. Many scholars (e.g. Matveev & Nelson, 2006; Stahl, Maznevski, Voigt, & Jonsen, 2010) have come up with a plethora of definitions for describing cross-cultural competencies as a behavior, knowledge, and/or skill. Johnson, Lenartowicz and Apud (2006) noted that the interest in cross-cultural competence in the workplace was triggered by the federal government's attempt to regulate minority populations in relation to public health and education. On the other hand, Johnson, Lenartowicz and Apud (2006) report that cross-cultural competency is simply a natural extension for examining the challenges in communication among people from different cultural backgrounds.

Not only is cross-cultural competency being talked about within the field of education, it is also seen as critical for success when conducting international business (Johnson, 2006; Caliguiri & Tarique, 2012). Cross-cultural competence has been recognized as the major issue when doing business with individuals from another culture (Gertsen, 1990; Caliguiri & Tarique, 2012). Cultural competency, while not necessary to be successful, is important if an organization wants to be inclusive and participate in international and domestic partnerships.

Cross-cultural competence is also related to cultural intelligence. Cultural intelligence "reflects a person's capability to adapt as (s)he interacts with others from different cultural regions" (Earley, 2002, p. 283). According to Earley, four components of cultural intelligence metacognition, cognition, motivation, and behavior are important for working on multicultural teams.

Early's view of cultural intelligence is consistent with the definition of cultural intelligence described by Thomas and Inkson (2004) who believe that one is culturally

intelligent when their thinking is open and flexible when learning about another culture. This openness leads them to be sympathetic to the culture and their behavior is more skilled and appropriate when interacting with others from the nation.

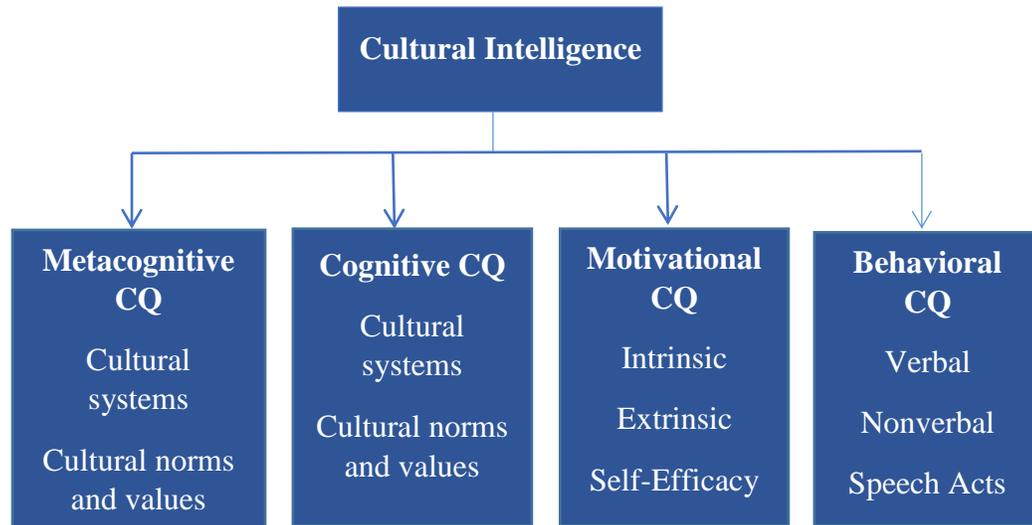
Earley and Ang (2003), as well as Thomas and Inkson (2004), identified the definition of cultural intelligence as the capability of people communicating with colleagues and managing situation within a multicultural setting in an effective way. Cultural intelligence is not just about having the behavioral repertoires, but also about how to learn these repertoires (Earley & Ang, 2003). Johnson et al. (2006) noted that the behavioral component of cultural intelligence is concerned with acquiring and practicing appropriate behaviors rather than with applying them in real-life situations. In other words, cultural intelligence helps and guides individuals towards developing their overall perspective within a multicultural environment rather than anticipating that the individual will learn and be independently familiar with the norms, values, and practices of different cultures.

Cultural intelligence (CQ) is also known as part of one's intelligence quotient (IQ), which is a way to measure an individual's intellectual capabilities. Cultural intelligence, also considered EQ - emotional intelligence, is used to measure emotional sensibility. Cultural intelligence does not address the individuals' emotions; it focuses instead on leadership ability and its function in the group.

In 2004, Thomas and Inkson proposed a three part model: knowledge, mindfulness, and behavioral skills. However, in 2010, Livermore suggested an alternative view: CQ drive, CQ knowledge, CQ strategy, and CQ action. Cultural intelligence has

both process and content features: metacognition, cognition, motivation, and behavior facets that are derived from the four dimensional model. (Livermore, 2010).

The below chart represents this model visually.



*Figure 3.* The Sub-Dimensions of the Four-Factor Model of Cultural Intelligence.

Chart adapted from Van Dyne and Ang. (2008, p. 134). Technical Report. Cultural Intelligence Center.

The above chart was adapted from a technical report written by Van Dyne and Ang. (2008) where they identified and divided the Four-Factor Model of Cultural Intelligence. The leader's ability to strategize when crossing cultures is referred to as Metacognitive CQ. Cognitive CQ refers to the leader's ability to understand culture and culture's role in conducting business and interacting across cultural contexts. The leader's level of interest, drive and energy to adapt cross-culturally is referred to Motivational CQ. Finally, behavioral CQ refers to the leader's ability to act appropriate in a range of cross-cultural situation (Van Dye et al., 2008).

These indicators will assist in measuring the survey and interview parts of this study. In order to gain a complete understanding of the positive and negative effects of cross-cultural differences on team performance, the 4 factor model of intelligence might be a great evaluation tool to identify missing parts.

**Metacognition.** Metacognition refers to “thinking about thinking or knowledge and cognition about cognitive objects” (Earley & Gison, 2002, p. 100). Metacognition helps and guides individuals to be aware of another’s culture before communicating and interacting with them.

According to Flavell’s model (1979), metacognition has four classes. These classes are known as metacognitive knowledge, metacognitive experience, tasks and goals, and strategies or actions. Within each of these, he identified the four classes’ phenomena and relationships that directly correlate with cultural intelligence. Flavell (1979) believed that metacognitive knowledge is used to achieve the goals and sub-goals and refers to individuals’ belief. Metacognitive knowledge is also divided into three parts: knowledge about the people (person variables), knowledge about task variables, and knowledge about strategy variables (para. 9). Metacognitive experience always identifies current presses, providing feedback related current process, expectations and future progress (para. 11). Metacognitive tasks and goals guide individuals to achieve the purpose of the goal. Metacognitive tasks and goals are usually used for getting more information about the process, and provide knowledge about task difficulty and completion levels (para. 12). Metacognitive strategies or actions involve identifying goals, sub-goals and the process related to the achieving the goal (para. 13).

Those processes that individuals use to organize and comprehend cultural knowledge is called metacognitive CQ and focuses on higher order cognitive processes. Associated capabilities include observing and revising mental models of cultural norms and behaviors (Eisenberg, Lee, Bruck, Brenner, Claes, Mironski & Bell 2013). Others writing about Metacognitive CQ (Dyne, Ang & Livermore 2009) add that it includes awareness, planning, and checking, where awareness means being in tune with what's going on in one's self and others; planning is taking the time to prepare for a cross-cultural encounter – anticipating how to approach the people, topic, and situation; and finally, checking is the monitoring we do as we engage in interactions to see if the plans and expectations we had were appropriate.

**Cognition.** “Cognitive theories focus on the conceptualization of individuals’ learning processes and address the issues of how information is received, organized, stored and retrieved by the mind” (Ertmer & Newby, 2013, p. 51). Cognitivist’s main concern is about learning and how the information is obtained by learners. Cognitivism supports environmental events and maintains the learning process. Shuell (1986) says, the cognitive approach involved the mental activities of the learner that lead up to a response. It then acknowledges the processes of mental planning, goal-setting, and organizational strategies. Because cognitive theory focused on mental structures, it explains the complexities of learning such as reasoning, problem solving, and information processing (Schunk, 1991; Ertmer & Newby, 2013). In sum, the goal of Cognitive CQ is to understand cross-cultural issues and differences, and to sets cultural norms and values within different cultures (Dyne, Ang & Livermore, 2010).

**Motivation.** “Motivation is the process of instigating and sustaining goal-directed behavior” (Schunk, Pintrich & Meece, 2008, p. 346). Motivation is defined as “the reason or reasons one has for acting or behaving in a particular way” (Oxford dictionary). As Schunk (2012) succinctly put it, motivation is a concept that helps us to understand why people behave the way they do. Motivation theory focuses on the goals and needs of individuals. Motivation is not observed directly, but rather inferred from behavioral indexes such as verbalizations, task choices, and goal-directed activities. There are three type of motivation: intrinsic motivation, extrinsic motivation, and amotivation.

Intrinsic motivation refers to engaging in an activity for no obvious reward (Deci, 1975). Schunk (2012) added that the importance of intrinsic motivation for learning relates positively to cognitive processing and achievement. On the other hand, intrinsic motivation is related to internal feelings and motivates people to accomplish the task successfully. Faculty members experience intrinsic motivation through the inherent satisfaction experienced when working on a team without feeling any pressure. Extrinsic motivation is related to external factors that people want to achieve or the avoidance of punishment. An example of extrinsic motivation is an award for faculty members’ good performance. A lack of motivation occurs when the individual is not active and has no direction, for example when an employee simply is not interested in the work he does.

Researchers (Judge, 1997; Erez & Judge, 2001; and, Judge & Bono, 2001) indicated that core self-evaluations represent one`s appraisal of people, events and things in relation to self. They found that the core self-evaluation is a strong dispositional predictor of job satisfaction. The four traits are identified as: self-esteem, locus of

control, neuroticism, and generalized self-efficacy. Core self-evaluations and individual's performance are considered motivational traits which effect group work and team performance (Latham & Pinder, 2005)

Motivation CQ focuses on level of interest, and energy to adapt cross-culturally. To be able to personally engage and adapt with a different culture is one of the factors of cultural intelligence. This motivation level drives individuals to higher and more effective team performance in a culturally diverse environment.

**Behaviorism.** Skinner (1971), explained that a behavioral approach to education was crucial for the survival of human beings and societies. By arranging the environment to bring about desired behavior, he thought we could control how people behave and thus develop a better society (p. 26).

The focus of behaviorism is on the importance of consequences and contends that responses that are followed by reinforcement are more likely to recur in the future (Ertmer & Newby, 2013). Behaviorism explains environmental events, intellectual and mental procedures are not important to explain generalization of behavior (Schunk, 2012).

The present study is looking for faculty members' work-related behaviors with or without participation in specific training related to a diverse environment. Through data collection and analysis, the researcher will highlight the importance of faculty members' behavior when working on a culturally diverse team.

Role change is an observable behavior that enables one to effectively adapt to the social environment. This process is defined as "re-socialization" of behavior. The re-socialization process involves three transitional stages: 1) re-experiencing; 2)

relinquishing; and, 3) re-negotiating (Leung, Chan, and Lee (2003). Re-experiencing is where team members may start to modify their existing roles after they personally feel disconnected with the insufficiency of their existing roles; the tendency to protest and justify their existing role and behavior is called Relinquishing; and finally, the process of negotiation to replace those roles and behaviors that have been relinquished is called Re-negotiating.

The aforementioned, three transitional stages guide team members to improve their experience based on their real setting, re-establish certain new roles for themselves, and maintain an interest in the new roles that (s)he is about to adopt. If this process is successful the practice might provide certain valuable situations for other team members to undertake the role change process (Leung et al., 2003).

Ident Behavioral CQ refers to verbal or non-verbal actions used appropriately in a multicultural environment. The main focus is the leader and leaders' ability to perform accurately within a multicultural environment. This ability focuses on using correct and academic words when talking with team members, speaking tone, body language, and so on.

### **Research Gap**

Unger-Aviram et al. (2015) noted that researchers have worked diligently to acquire a better understanding of the procedures and methods that affect performance on a cross-cultural team. Other studies addressed benefits of a multicultural team: team motivation, team needs, team goals, and team efficacy in a multicultural environment (Kearney, Gebert & Voelpel, 2009; GePark, Spitzmuller, SeShon, 2013). These researchers have

shown that team performance generally can be very successful in a multicultural environment (Johnson, Lenartowicz & Apud, 2006; Chipulu et al., 2012; Levin, Walker, Haberler & Jackson-Boothby, 2013).

Although these studies yield sufficient outcomes related to team performance in cross-cultural settings, the proposed study will explore the perception of faculty regarding cross-cultural environments and efficiency, and work performance on multicultural teams.

There does not appear to be an abundance of current research that explains the methods of increasing diversity in work environment utilizing the multicultural members' performance on the team in an educational setting. High-level team performance in a multicultural team within an educational setting increases the value of the institution, faculty satisfaction, and engages "team members in a particular situation and guide social interactions" (Unger-Aviram et al., 2015, p. 2).

### Chapter III: Methodology

The purpose of the research study was to determine and measure the effect of cross-cultural differences on team performance, highlight advantages and disadvantages of those cross-cultural differences within the team, and to apply the knowledge learned from this study to enhance team performance within an educational setting. The variables of personal influences, satisfaction, and experience were used to determine the cross-cultural team effectiveness. Quantitative measures of faculty members' influence, satisfaction, and experiences were analyzed using SPSS, and qualitative survey and interview question responses were analyzed using QSR NVivo.

The following chapter will clearly define the rationale, and methodological procedures that the researcher used to collect and analyze data, design instruments, and determine the sample. In addition to generalization, limitations, variables, justification of statistical techniques and protection of human subject will be addressed. This study sought to answer the question: "What is the Effect of Cross Cultural Differences on Team Performance within an Educational Setting?"

This study investigates the following research questions:

**RQ1:** What effect do cross-cultural differences have on James Madison University (JMU) faculty members' approaches to multicultural team environments within an educational setting?

**RQ2:** What multicultural team experiences are JMU international faculty members reporting?

**RQ3:** What resources or strategies could improve team performance on a multicultural team within an educational setting?

**RQ4:** What results emerge from comparing the explanatory qualitative data about multicultural team experiences with outcomes from the quantitative data within an educational setting?

The variables are displayed below in Table 3.

Table 3: *Variables.*

<ul style="list-style-type: none"> <li>• Faculty member position (the instructional and administrative)</li> <li>• Position type (full/part time member)</li> <li>• Faculty members' gender</li> <li>• Faculty age</li> </ul>	<ul style="list-style-type: none"> <li>• Personal perspective</li> <li>• Personal experience</li> <li>• Personal satisfaction</li> <li>• Personal development</li> </ul>
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### **Research Approach**

As a mixed-methods study, this research used both qualitative and quantitative methods to gather data. Qualitative data were collected after the quantitative data to aid in explaining the results obtained. Creswell (2015) notes that mixed-method research is commonly using to investigate the answer of research questions from different approaches. Specifically, the mixed-method study guides the researcher in a particular line to ensure the collected data are accurate. The mixed-methods approach is “a procedure for collecting, analyzing and mixing or integrating both quantitative and qualitative data at some stage of the research process within a single study” (Creswell, 2015, p. 69).

Mixed-methods design is one of the most popular research designs in academia (Creswell, 2015). According to Creswell (2015) a mix method connects “quantitative and qualitative data to facilitate conversation about differences in thinking” (p. 25). Diverse participants and/or diverse populations bring to the study a unique aspect and perspective such as local and/or cultural norms. Since the present research studied faculty from a

variety of cultural backgrounds and their cultural norms and performance in a diverse environment, mixed-methods research was the best way to address the respondents' subjective approach, opinions, feelings and conceptions about cross-cultural difference on team performance. Using a combination of quantitative and qualitative data, the researcher was able to obtain a more holistic picture of this study. The following sections provide a more detailed description of the research design and instrumentation, sampling methods, and data collection.

Using both quantitative and qualitative analysis, the researcher provides the foundation for understanding faculty perceptions and the issues of multicultural team performance.

### **Research Design**

A sequential, explanatory mix-methods design was used to uncover the perceptions of faculty, their experiences within multicultural teams, and the “benefits” and “challenges” of being part of a multicultural team at JMU. These methods provided more insight into the faculty's experience and performance on a diverse team. An explanatory sequential design is one of the core design types of mixed method study (Creswell, 2015). An explanatory sequential design uses quantitative data as the initial steps, followed by qualitative data. This design type focuses on the two different phases and their step-by-step analysis merging of all the data into a final product. An explanatory sequential mixed-method design type also has some challenges such as implementation, which often takes a long time, and determining which “quantitative result needs further explanation” (Creswell, 2015, p. 38).

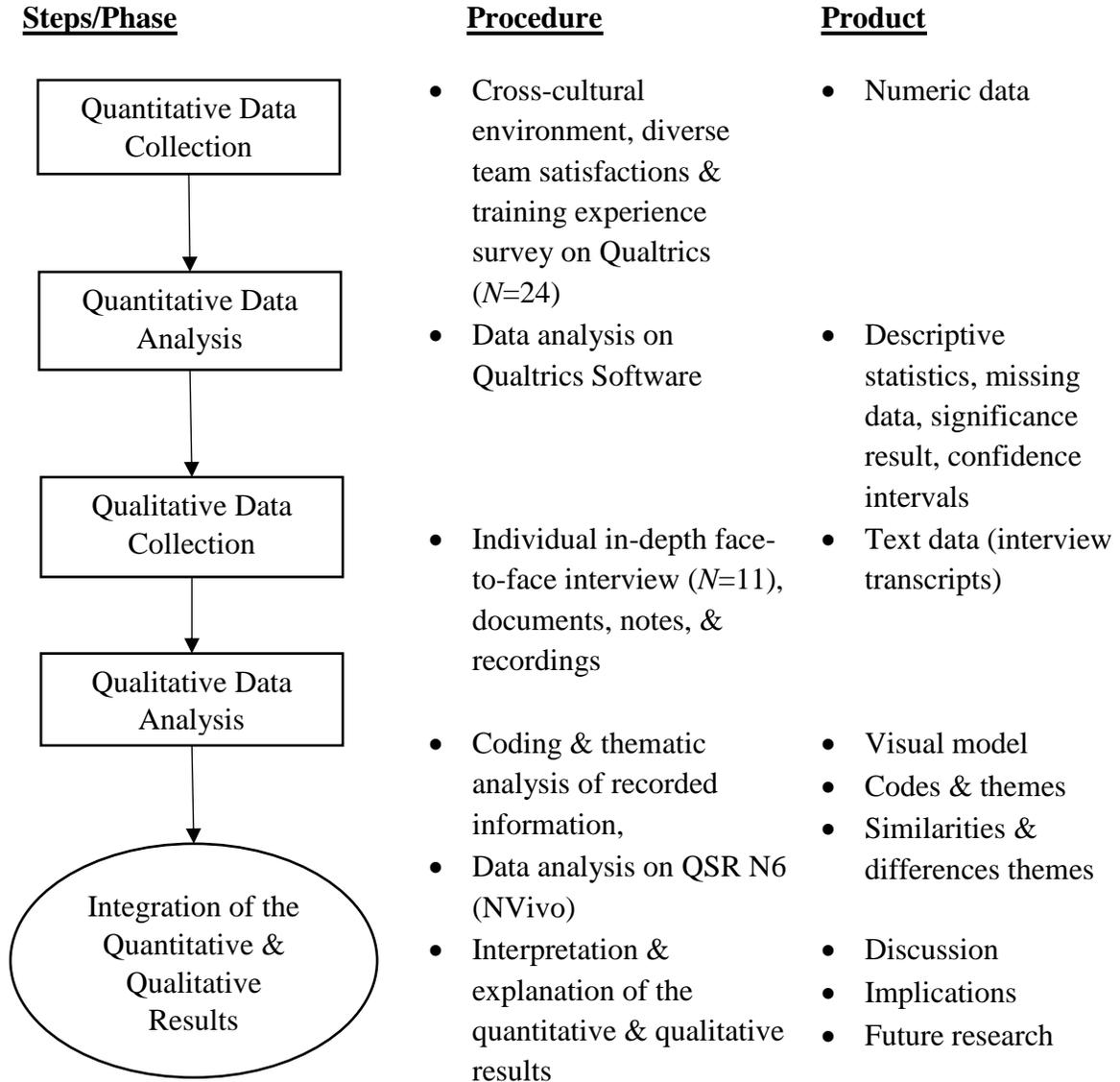


Figure 4. The Mixed Methods Sequential Explanatory Design Procedures' Visual Model (Creswell, 2015, p. 60).

**Population and Sample**

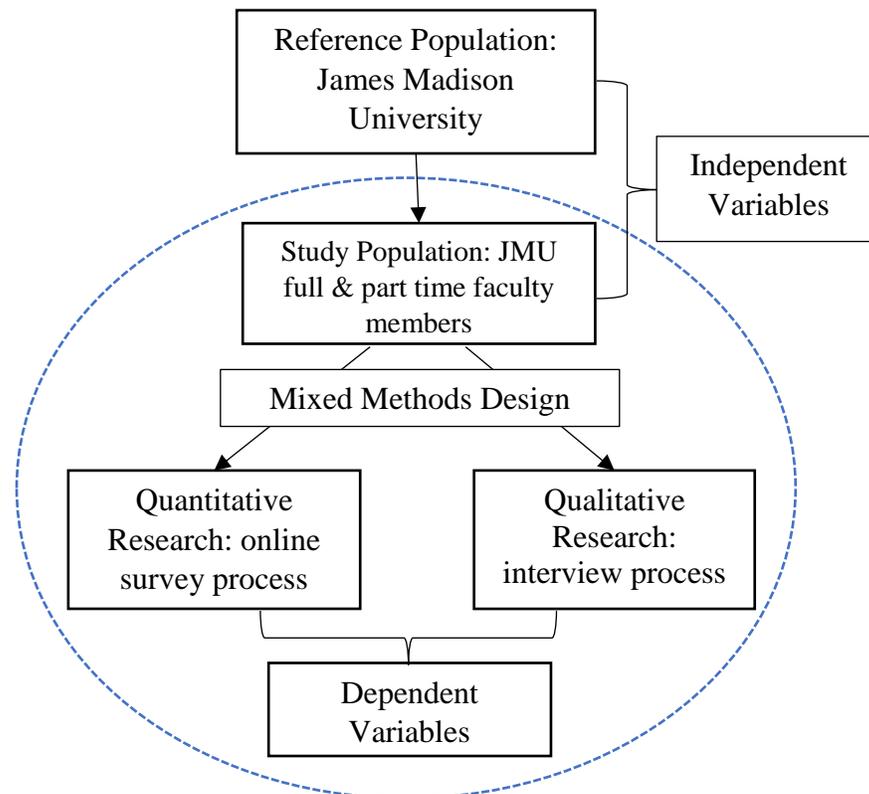
A self-selected sample of JMU faculty members participated in this study. JMU is a public university, located in Harrisonburg, Virginia, USA, and consists of seven colleges: College of Arts and Letters, College of Business, College of Education, College

of Integrated Science and Engineering, College of Science and Mathematics, College of Health and Behavioral Studies, and the College of Visual and Performing Arts. Based on the JMU Factsheet (2014), the number of faculty members at JMU is nearly 960 full-time instructional faculty members and 430 part-time instructional faculty members. The ethnic background of the JMU faculty is as follows: 79.3% are white, 4.24% African American, 5.12% Hispanic, 4.37% Asian and other. The survey was distributed to a purposive sample of JMU faculty members who had experience on multicultural teams or were from another country. Participants were male and female faculty members across all colleges. All faculty members at JMU were encouraged to complete the survey in order to obtain a large sample.

Participation in the study was voluntary and participants were able to withdraw at any time without repercussion. The anonymous survey included a cover letter with the researcher's name and phone number, statements about consent, and an online link to the Qualtrics survey. The cover letter, consent form, and survey link were sent to faculty members using the university's bulk email system. Interview participants were asked to volunteer based on their work and team experience within multicultural environments, being from a country, other than the U.S. and working in different departments at JMU. In addition, the interview participants were from different age groups, since the researcher also wanted to classify generational approaches toward team performance on a multicultural team.

Despite the fact that random sampling is a common methodology for generalizing results and finding conclusions, it is still challenging to accomplish, especially in education research (Fraenkel, Wallen, & Hyun, 2012). In this study, generalizing the data

was not a goal of the study. Therefore, random sampling was not used as a research protocol, as purposive sampling better met the study's objectives. The data collected were sufficient for validation of the results and conclusions. In addition, the collected sample was appropriate for this study.



*Figure 5.* Accurate Estimate of Methods, Variables and Population (Fraenkel & Wallen, 2014).

### **Instrumentation**

The main objective responses were collected through a survey (quantitative data), and subjective more personalized data were obtained through the interviews. Both survey and interview questions were established based on the research questions and hypotheses. The two approaches for gathering the data engage each other in an efficient way and improve the validity and reliability of the data.

**Survey.** As a first step of the mixed-method data collection, quantitative data (online survey) were collected and analyzed. An online survey was the most effective way to reach a large number of people. The researcher chose JMU's Qualtrics survey system to collect quantitative data for this study. Qualtrics has a variety of options such as skip logic in questions, a variety of different question formats, and page break options that help to guide researchers in survey design. Currently, Qualtrics is the university authorized survey tool at JMU.

The online survey was open, from September 7<sup>th</sup>, 2015, until October 7<sup>th</sup>, 2015. The survey was sent out through bulk email to all JMU instructional, and administrative full- and part- time faculty members. It contained 27 close-ended questions. Because the survey was distributed through bulk email to JMU faculty members, every email was identical, with the same subject line and body. The initial email was sent to all JMU faculty members on September 7<sup>th</sup>, 2015 and reminder emails were sent to all JMU faculty members on September 21<sup>st</sup>, 2015.

Quantitative data analyses were displayed as descriptive statistics and were aggregated using Qualtrics. Descriptive statistics and visual representations presented the average number of faculty members, the average faculty's age, and working status. Once the data were collected, they were analyzed in SPSS<sup>®</sup> and the results were provided in tables and charts.

The questions in the study surveyed the participants on demographics such as age, language knowledge, and work experience in USA. The researcher also wanted to measure respondents' experiences related to working as a team member in a cross-cultural environment; motivation as a faculty member in a diverse educational setting;

effectiveness of working on a multicultural team; knowledge of the cultural values in a multicultural team, attitude toward cross-cultural conflicts in an educational setting; and, their familiarity with cross-cultural trainings and delivery methods.

Sample items include (see all survey questions Appendix B):

*Define the demographics of participants.*

Q5. How many years of experience do you have with US culture?

Q6. How long have you been working at JMU?

*Cultural Understanding Level.*

As mentioned above, cultural intelligence measures the “cultural understanding at an individual level” (Lee & Qomariyah, 2015, p. 376). Earley and Ang (2003) developed a Cultural Intelligence (CQ) measurement tool to guide individual action within a multicultural team effectively and lead group members to understand and better familiarize themselves with different cultures. Ng & Earley (2006), identified three core elements of CQ: cognition (thinking, learning, and strategizing); motivation (efficacy and confidence, persistence, value congruence and affect for the new culture); and, behavior (social mimicry, and behavioral repertoire). Some of the survey questions (see Appendix B) of the proposed study have been designed to measure faculty members’ cultural understanding level at JMU based on the essential components of cultural intelligence (metacognition, cognition, motivation and behavior).

**Interview.** The qualitative - interviews were used to explore international faculty members’ experiences in a diverse educational setting, their behavior on a diverse team, and any suggested strategies or methods for performing in diverse team/educational setting. The interview was conducted to gain detailed information about the adaptation

strategies of the university toward the new international faculty members and potential challenges with this process. The qualitative data collection was the second step of the study and all questions were designed to measure international faculty members' subjective approaches regarding multicultural team performance. The qualitative data included face-to-face interviews and consisted of eleven questions related to cross-cultural experiences and the benefits and challenges of cross-cultural teams. The format of the interview was chosen purposely, in order to encourage faculty members to provide detailed responses about the questions and for the researcher to learn the participants' subjective opinions and personal experience. The duration of the interview was 20-25 minutes. The participants were specifically selected from among the international faculty members at JMU, as this research study attempted to understand and highlight the benefits and challenges of cross cultural differences and provide more detailed information and strategies about productive team performance in educational settings. Eight international faculty members from different colleges with different levels of work experience were selected for the interview protocol. A consent letter explaining the study's purpose, risks, confidentiality, and anonymity was provided to participants. The interview used open-ended questions that required a qualitative data analysis process involving analysis and identification of themes, and coding of these themes into data that were summarized visually or numerically. The interview questions were divided into six parts to lead the conversation in a logical manner: Introduction, Experience, Resources, Constraints, and Strategies for Success, and Conclusion.

Sample items include (see all interview questions in Appendix C):

***Resources.***

1. Are you aware of any training that has helped you to perform better in a current work environment?

***Strategies for Success.***

2. What strategies or advice might you give to others to help them cope in a similar situation to yours?
3. What resources or supports do you think could be offered-formally or informally-to make your experience as an international faculty member?

To address construct validity and reliability, the questions were discussed with some of the expert educational professors. Among these experts are Dr. Oris Griffin McCoy, Dr. Amy Thelk and Dr. Michael Stoloff, all of whom serve as faculty members at JMU. These faculty members were asked to provide feedback on the instruments' content and format.

**Role of the Researcher**

The researcher had an important role in the analysis, design, development, implementation and evaluation phases of the proposed study. As an initial stage, the researcher worked with her professor to determine the research time line and research method. Once the timeline was determined, the researcher began to design the survey questions and interview questions. The questions were submitted for review by professors. The professors checked each question and made sure that the questions were consistent with the proposed study's purpose, research, and questions.

Once the questions were approved, the researcher built the survey in the Qualtrics system. After the completion the survey, the researcher submitted the paper to the Institutional Review Board (IRB). After confirmation by the IRB, the researcher sent the survey questions out through the JMU bulk system. Once the survey closed, the researcher reviewed the initial report in Qualtrics and eliminated incomplete responses prior to transferring the data to SPSS for analysis. The results were published as bar graphs and charts. Once the researcher had completed analyzing the quantitative data, she held individual interviews with eight international faculty members. After finishing the interviews, the researcher coded the interview responses and finalized responses were placed in bar graphs and charts. As a final step, the researcher compared the qualitative and quantitative results.

### **Limitations**

**Difference in Sample Numbers.** There were differences in the numbers of faculty members who responded to the survey questions. Although the number of faculty members at JMU is nearly 960 full-time instructional faculty members and 430 part-time instructional faculty members, the number of total respondents was 236, which is a response rate of 17%. The response rate may have been effected by the times of the survey. September was a busy month for the faculty members since the semester had just started.

**Attrition.** Out of 236 participants who decided to take survey, 224 successfully completed the survey. The raw data showed that eight participants had given consent for participation in the survey by clicking continue to the survey button and starting; however, after the first question, they closed the survey. The first step of the survey

provided clear instructions and mentioned that, if the participant did not want to continue the survey, to please select the “Exit the Survey” button before starting. It is assumed that these participants may have accidentally gotten distracted from continuing the survey, since the consent letter also mentioned that “the participation is completely voluntary and if the participant decides to stop it any time during the research survey” (see the consent letter for this study in Appendix A). There were two participants who selected other options and mentioned staff as their current position. Since the study addressed only faculty members, these two responses were eliminated when analyzing the raw data. It is possible that these participants received the survey email because of they were previously part-time faculty.

### **Data Collection and Procedure**

As mentioned, the instruments used for the data collection in this study were a survey and individual interviews. The survey was sent to all part- and full-time faculty members at JMU. To calculate the ratio of part-time to full-time faculty, participants were asked whether they were full-time or part-time faculty. Participants were reminded that the survey was optional and that there were no consequences for not taking or completing the survey. It was also mentioned that there was no risk involved in completing the survey and that the results could not be associated with specific faculty members. All completed surveys were kept on a password-protected computer at Memorial Hall. Once the quantitative data were analyzed, the researcher destroyed all survey data. After the collection and analysis of quantitative data were completed, the qualitative data (interview) collection started. The meetings with interviewees were by

appointment, at their offices. As a last step, both quantitative and qualitative data were integrated to explain the differences and similarities between them.

### **Internal and External Validity, Researcher Bias, Reliability and Generalizations**

**Internal Validity.** The purpose of internal validity is to make sure that any instrument used in research measures the variables that it is intended to measure. McDavid et al. (2013) argue that this component necessarily includes “an important judgmental component to it: Does a certain measurement procedure make sense, given our knowledge of the construct and our experience with measures for other constructs?” (p. 154).

My mixed-methods research design measured similar variables with both quantitative and qualitative questions, thus demonstrating continuity across answers within the survey.

**External Validity.** According to Fraenkel et al., (2014), the ability to generalize to a larger population is known as external validity. Getting sufficient demographic data and taking steps to reduce nonresponse can assist in reducing the threat of external validity. While I gathered demographic information that was relevant to my research questions and collected additional information during the interviews, I could have gathered additional information and I could have sent additional reminders to increase my response rate before the survey was closed. For these reasons, external validity may be questionable; nonetheless my findings will be useful to JMU as the population of faculty becomes more diverse.

**Research bias.** The researcher bias in this study was minimized by the use of an online survey that was directly provided to participants through Qualtrics. However, a

researcher bias may have still been present due to the phrasing of the question. In order to avoid as much research bias as possible, all participants were administered the same survey instrument. Participants' responses were evaluated using the same analysis techniques and standards.

Also, to account for researcher bias, the researcher tried to ask a balance of questions, to discern through participants' responses what their perceptions were, rather than what they were anticipated to be. This was especially important to consider during the coding and analyzing of the data. Asking the same interview questions during every interview enhanced the reliability, and listening to the interview tracks and reading the transcriptions for accuracy confirmed this.

Finally, researcher bias likely played a role in the development of my survey instrument and may have influenced the analysis of my results. However, this bias could be more of a benefit in this circumstance, since as an international student; I too work in groups within an academic setting. I am familiar with the issues facing international individuals because of my personal experience of being an international student.

According to McDavid et al. (2013), "some of what we bring with us to an evaluation is tacit knowledge--it is knowledge based on our experience, and it is not learned or communicated except by experience" (p. 11); this is not necessarily a negative influence.

Nevertheless, I took steps to minimize these biases. I pilot tested my survey with faculty and staff in the College of Education, as well as with a few international faculty across the JMU campus. I also followed procedures recommended by the IRB and the literature.

**Reliability.** To account for reliability in the study, the researcher included an 8-point Likert scale in the survey. Preston and Colman found that “the rating scales that yielded the least reliable scores turned out to be those with the fewest response categories the most reliable scores were derived from scales with 7, 8, 9, 10 response categories” (2000, p. 11). Their study showed “validity coefficients were generally higher for scales with five or more response categories.” (Preston & Colman, 2000, p. 11).

The threats to validity and reliability included participant bias and external factors. Participant bias includes reluctance to answer the survey questions honestly, or interview questions, which could skew how effective the assessment was. There also could have been biases from participants regarding team member performance, or satisfaction at work that may have affected the validity and reliability of the interview answers. External factors included job or task shift within the team or workplace, mood or outside influences during the assessment or interview questions, team dynamics, workplace satisfaction, and team tasks. For example, if the participants were not honest with themselves or the researcher, the results may not be reliable or valid, or if there are other influences at work whether it be personality within the team or the task they are assigned during that time, that may affect perception of how the work is going, and in turn the impact may be hard to determine.

By developing a survey that employs quantitative and qualitative questions, the researcher was able to collect numeric data and then explain the results with the qualitative questions.

**Generalizations.** Since the study focused on an education setting, faculty members, their performance, and their satisfaction, the findings were only generalizable

to similar academic institutions. Using the JMU population as a sample was purposive and specific. Therefore, generalizations may apply to nearby university settings with similar multicultural environments, but it may not extend to additional states, or to universities larger or smaller than JMU. The researcher hopes that the findings will help administrators understand and become familiar with multicultural team strategies and encourage the creation of greater ideas that will achieve the highest success.

### **Justification of Statistical Techniques**

The combinations of quantitative and qualitative methodologies were used to collect the data for this study. All survey questions were developed in Qualtrics. Once the responses were gathered, the data for the survey were analyzed using SPSS, and the data from the interviews were coded and analyzed through QSR N6 (NVivo), a qualitative system matching the specific coded words. Findings will be provided as statistical data to JMU and will also guide faculty members of the institution towards being successful in a multicultural team performance.

### **Protection of Human Subjects**

To ensure validity and reliability during the online survey, the responses were kept anonymous and in the strictest confidence. All collected data were anonymous. The survey did not require the participants' names, or email addresses and contained a cover letter (see Appendix A) asking for the individual's voluntary participation in the survey. If the participants agreed to participate, they were asked to click on the link to take the survey. The data were stored in the Qualtrics survey database system, and only the researcher had access to the required password.

The interviews were by appointment and the questions focused on the orientation program for new faculty members at JMU. To ensure validity and reliability during the interviews, all required documents were given to participants (i.e. the IRB guidelines, confidentiality clause, brief overview of the study, questions which were asked). The interview data were kept under lock in Memorial Hall. All recordings for interviews were deleted and the note papers were shredded upon completion.

Chapter IV provides a more in-depth overview of the data analysis steps, findings, and processes. Both quantitative and qualitative data results are presented.

### **Chapter IV: Data Analysis**

A mixed-methods design was selected to analyze the findings and strengthen the conclusions of the study. There were two parts to the data analysis: quantitative data analysis and qualitative data analysis using the interviews with international faculty members at JMU. The quantitative data were first analyzed to create a foundation, and the qualitative data were analyzed to better explain the quantitative data.

The study obtained a sufficient number of participants for both quantitative and qualitative data analysis. The quantitative data were analyzed using SPSS, version 22.0. The study was not limited only to the faculty members' achievements, satisfaction, and performance, but also included their concerns about the team.

#### **Findings**

The research was conducted on faculty members at JMU and the results addressed their performance, satisfaction, perceptions, and professional development as a result of working on a multicultural team. The results obtained outline cross-cultural differences in team performance and the critical and/or challenging aspects of working on a multicultural team. The survey completion rate was 82%, the error data yielded  $\approx 4\%$ . Full-time and part-time instructional and administrative faculty members were selected to receive the survey questions; however, full-time instructional and administrative faculty members were the target population. The data were analyzed according to faculty members, department, age, their experience and satisfaction with achieving meaningful outcomes from working in groups.

**Overview of Population.** To better understand the study, the target population, and diversity range, the researcher requested 10 years of data reports (between 2005-2015) on international faculty members from the JMU Human Resource's (HR) Department. The request was submitted officially through the HR webpage after gaining approval from the Institutional Review Board (IRB). The data were categorized by college and year. JMU has seven colleges: College of Arts and Letters; College of Business; College of Education; College of Health and Behavioral Studies; College of Integrated Science and Engineering; College of Science and Math; and College of Visual and Performing Arts. The category "others" was created to include various centers and offices that were not located within the JMU Colleges, such as the Center for Instructional Technology (CIT), Center for Assessment and Research Studies (CARS), and the Office of International Programs (OIP). Below, Figures 6 and 7 report the number of full-time and part-time faculty members at JMU in 2015. See 2005-2015 individual reports in Appendix E.

The Human Resource department defines an international faculty member as a visa holder or a temporary resident. However, the quantitative survey asked, "Are you considered international faculty?" and faculty members may have answered in the affirmative although they were not visa holders or temporary residents (i.e. they were born and raised in another country). The qualitative data differentiates between self-identified international faculty members and Human Resources designated international faculty members.

### FULL-TIME INTERNATIONAL FACULTY MEMBERS

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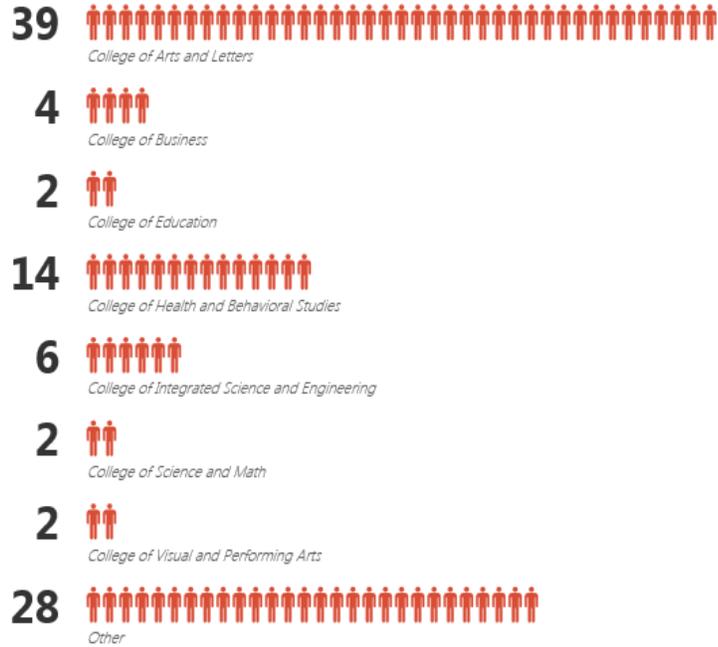


Figure 6: Number of Full-Time International Faculty Members at JMU in July, 2015 Report.

### PART-TIME INTERNATIONAL FACULTY MEMBERS

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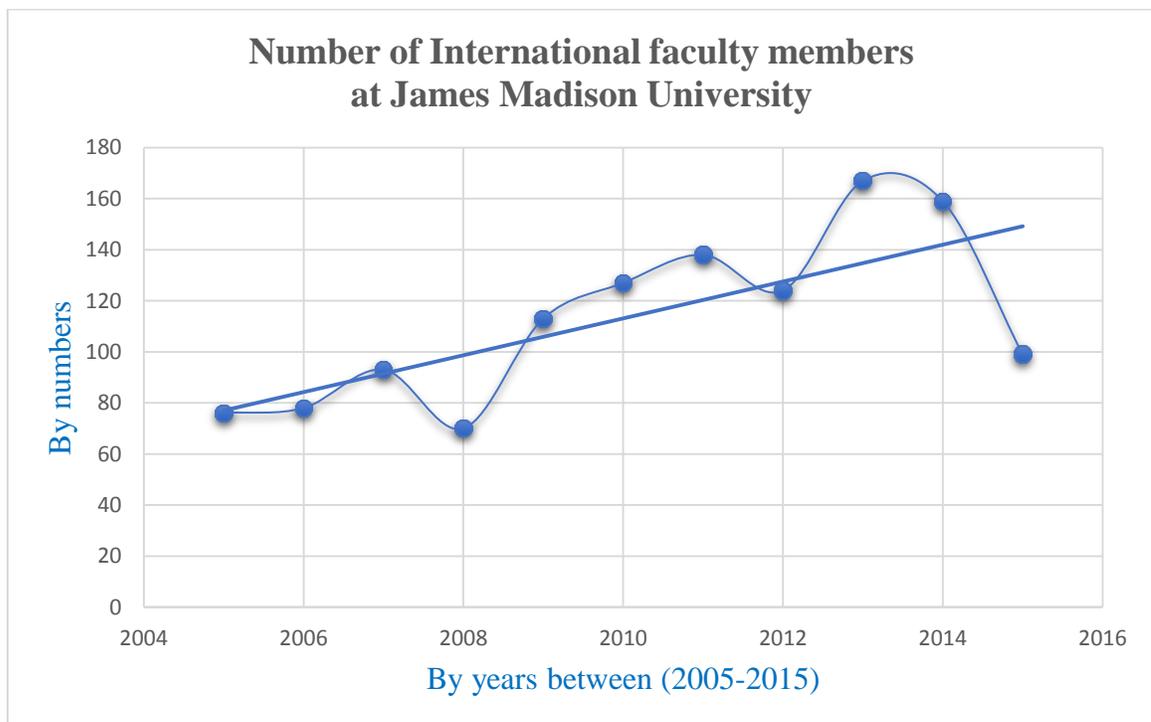


Figure 7: Number of Part-Time International Faculty Members at JMU in 2015 Report.

Figure 7 also displays faculty members' official status (visa holder or temporary resident). In addition, two part-time faculty members were hired as part-time international faculty members. However, this part-time position was considered a second

job within a specific department because, by law, international faculty members cannot be hired on part time due to visa issues.

Figure 8 displays a 10-year range (2005 to 2015) of international faculty members at JMU. The line graph compares the number of international faculty members year by year. It is clear that the current diversity portion is significantly higher than 2005. In 2013, the number of international faculty members showed a dramatic increase, from 120 international faculty members within the previous year, to about 180 members. It is relevant to note that the number of yearly international faculty members increased gradually based on the department's needs and requirements.



*Figure 8:* Number of International Faculty Members at JMU over the Last 10 Years: 2005-2015.

**Quantitative Data Analysis.** Data were collected from September 7<sup>th</sup>, 2015, to October 6<sup>th</sup>, 2015; 226 faculty members, across seven colleges, from all offices, and centers at JMU, responded to the survey. All participants received an email about confidentiality and the purpose of the study and were given a link directing them to the Qualtrics survey. Participating in the survey was entirely voluntary, and anyone with questions or concerns was instructed to contact the researcher or her advisor. The quantitative findings for this study were analyzed using all valid survey responses, ( $N=224$ ; See table 4). The current status of faculty members was categorized as full-time and/or part-time instructional faculty and full-time and/or part-time administrative faculty. Because the focus of the study was on full-time faculty members, those who identified as part-time faculty members were not eligible to continue the survey. The survey also recorded two other responses and these mentioned full-time staff. These two responses were also considered invalid for the study. The number of total invalid responses or missing data was  $\approx 4\%$ .

Table 4: *Total Number of Participants*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Continue to the survey	226	98.3	98.3	98.3
	Exit the survey	4	1.7	1.7	100.0
	Total	230	100.0	100.0	

52.3% of participants selected the option “Female”, 44.6% selected the option “Male”, and 3.1% chose not to respond. Around 88% of the participants were “National Faculty Members,” and 25 people, or 12.8%, identified themselves as “International

Faculty Members”. “International Faculty Members” option was chosen by faculty members who no longer considered by HR as international faculty because they now have citizenship within the U.S, but faculty members consider themselves international faculty because they were born, raised in another country.

Because the study’s focus was on faculty members, “Select your current status” was one of the key questions. Almost 90 percent (88.5%) full-time instructional and administrative faculty members’ participated, and 25 people, or 10.6%, selected part-time instructional or administrative faculty members. Below, Table 5 displays the detailed demographic explanation of survey responses by percentage.

Table 5: *Demographic Explanation of Survey Responses*

<b>Basic Demographics</b>		<b>By percentage</b>
Gender	Male	44.6%
	Female	52.3%
	Other/Choose not to respond	3.1%
	Total:	224 respondents
Status	National faculty members	87.2%
	International faculty members	12.8%
Work Status	Full-time faculty members	88.5%
	Part-time faculty members	10.6%
	Other = staff (Since the study focus on faculty members, staff responses did not considered for the study & the study only continued with 224 participants and N≈ 4% invalid responses)	2 people=0.9% considered invalid

Language	Minimum & Maximum Language Speaking	1 to 7
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Table 5 displays overall minimum, maximum, average, and standard deviation numbers of faculty members by their age, experience with U.S. culture, and how long they have been working at JMU. As shown in table 5, the faculty members varies; the average age is 46 years, the minimum age is 25 years, and the maximum age is 89 years. The number of years “Working at JMU” is also important for this study.

<b>Participants by age, experience with U.S. culture and number of years working at JMU</b>				
	<b>Minimum</b>	<b>Maximum</b>	<b>Average</b>	<b>Standard Deviation</b>
<b>Age</b>	25 years old	89 years old	46.6 years	13.1
<b>Experience with U.S. culture</b>	4 years	89 years	42.8 years	15.0
<b>Working at JMU</b>	1 month	47 years	10.2 years	8.3

*Figure 9: Statistical Result by Age, Experience with U.S. Culture & Working at JMU*

**Faculty members’ perspective.** The vast majority of faculty members (91.6%) reported that they have worked with different cultural department members and/or co-workers on a team. By contrast, less than 10 percent (8.4%) have never worked in a multicultural team. According to the study, the faculty members’ perspective is needed to

better understand the benefits or challenges of multicultural teams. In the literature review in Table 2, the researcher displayed five benefits and four challenges of being part of a multicultural team for the faculty members to confirm or deny.

Figure 10 shows that the survey respondents’ number-one, reported benefit of working on a multicultural team was “to create a shared understanding” (54.8%), number-two was “to develop mutual trust” (51.3%). “To widen cultural knowledge” was number-third (43.9%), “to build interpersonal skills” was number-fourth (43.5%) and “to socially integrate” was number-fifth (37.4%) reported benefit of working on a multicultural team based on participants’ response. More than half of participants agreed that, while they were working in a multicultural team, the team was able to create a shared understanding. Figure 10 reports the five main “benefits” by percentage based on participant responses.

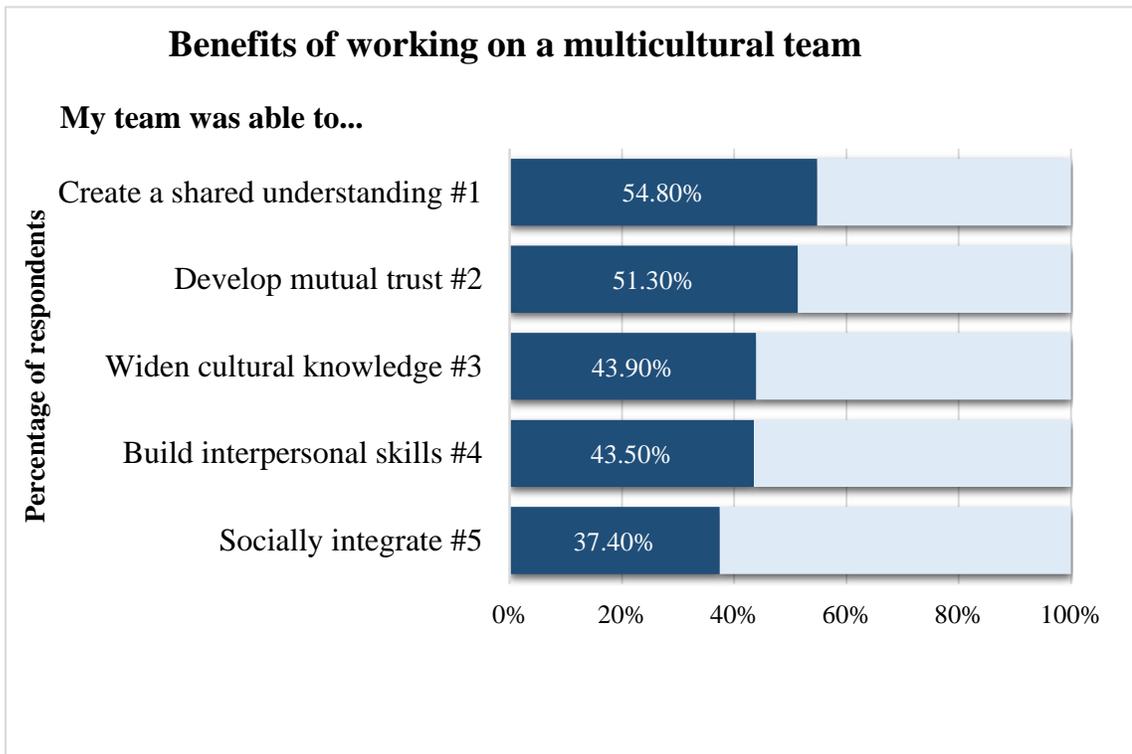


Figure 10: Faculty Perspectives on Selected Top Benefits of Working on a Multicultural Team.

Faculty members’ challenges while working on a multicultural team were also analyzed. The findings show that the number-one challenge is communication style. Slightly less than half of faculty members (37 %) agree that, while working on a multicultural team, communication style was the first obstacle hindering productivity, and accent was the second, relatively close at 35%. Having challenges while working on a multicultural team can be an issue when it comes to achieving team and institution success. Figure 11 displays the five main challenges of working on a multicultural team.

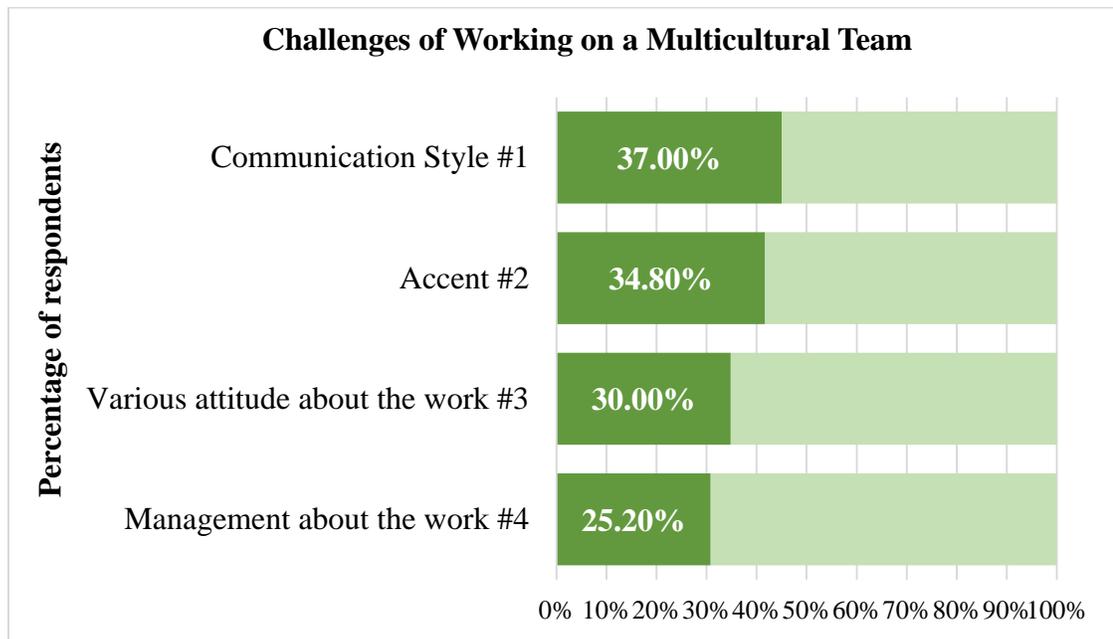


Figure 11: Faculty Perspectives on the Selected Top "Challenges" of Working on a Multicultural Team.

Faculty perceptions toward their current work environment were also evaluated. Respondents were asked to select from a scale of six possible answers (Strongly Disagree, Agree, Not sure/ Not applicable, Agree, Strongly agree) when rating questions

related JMU’s support of culturally diverse work environment. The scale result demonstrated that faculty members feel encouraged by having culturally diverse co-workers, and that, also, the institution highly respects and values differences. On average, faculty members expressed positive feelings by selecting “Agree” and “Strongly agree” options when answering questions about working in culturally diverse environments (76.30%) and with culturally diverse co-workers (55.9%). The data indicated that more than half of the participants (57.3%) agreed that JMU values cultural diversity.

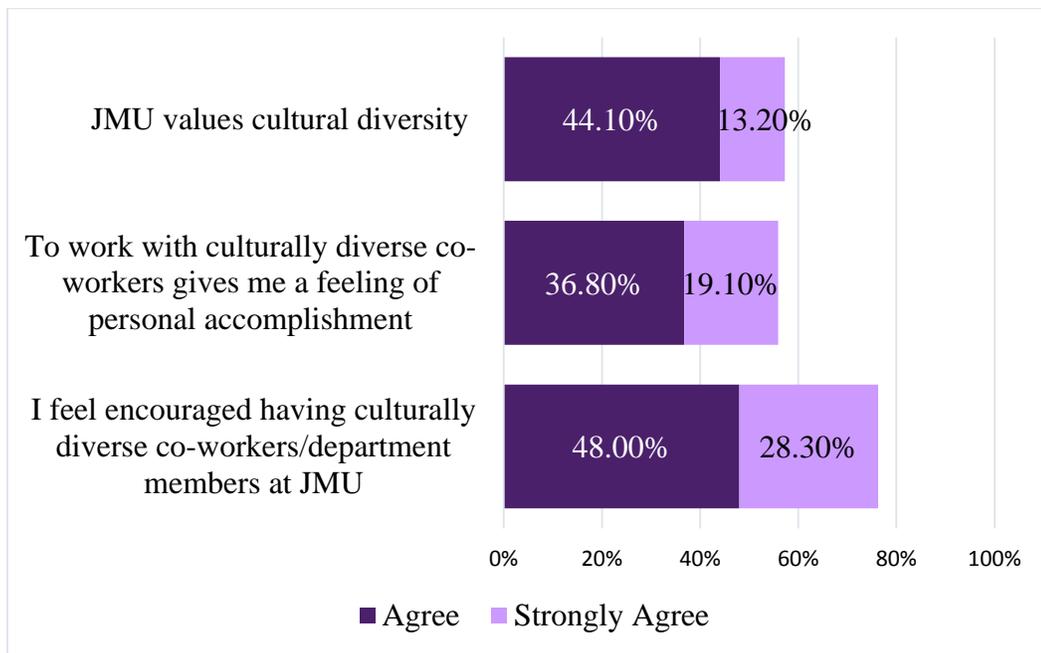


Figure 12: Faculty Perspective on Given Statements

It is worth mentioning that over a quarter of faculty members believe that it is very important to recognize a conflict between multicultural team members in order to work effectively on a multicultural team (Figure 13). Faculty members rated the level of importance on a 6 point scale with the highest being considered “Very Important”, the least being “Not Sure/Not applicable”. The scale given to participants was “Very

important”; “Important”; "Moderately important"; "Slightly important"; “Not important”; and, “Not sure/ Not applicable”. By comparing the very important and not important rates, less than 10% of participants indicated that their job descriptions do not require them to work effectively within multicultural teams (8.6%) and recognized a conflict between multicultural team members (7.9%).

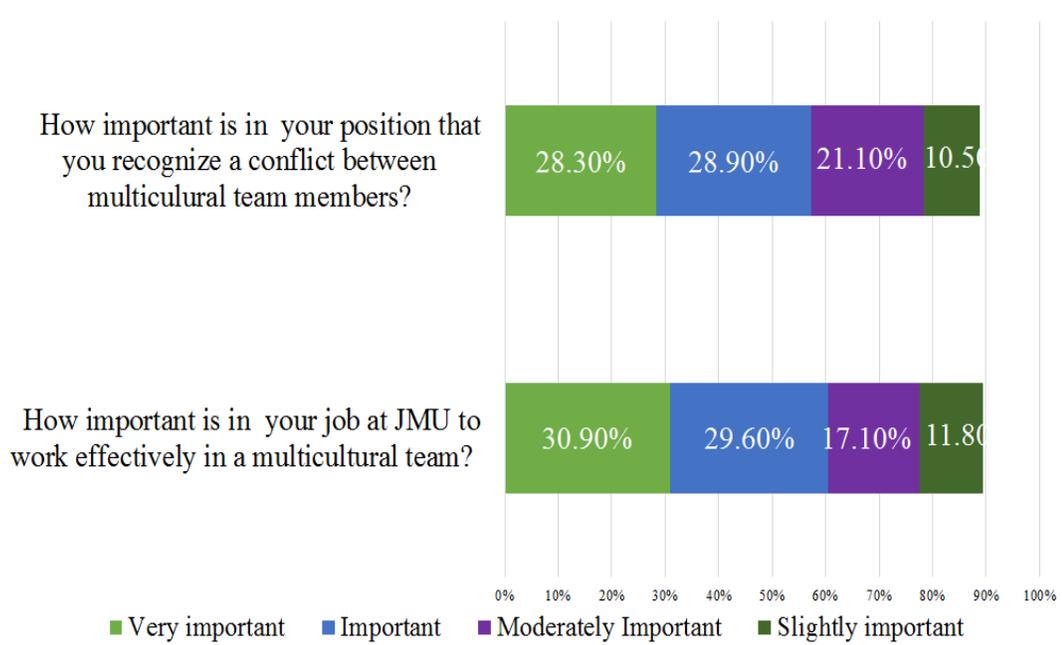


Figure 13: Faculty Rate the Level of Importance on Given Each of the Statements

**Faculty members’ experience.** Although a large number of the participants in this study are knowledgeable about cultural knowledge, skills, and capabilities, less than half classified themselves as strongly confident in those mentioned capabilities.

In order to measure the faculty members’ experience related to cultural intelligence factors such as motivation, behavior, cognition, and metacognition, the study has adopted and adapted the “Cultural Intelligence Scale” (CQS) by Van Dyne, L., Ang, S., & Koh, C. (2008, p.20). The original version of CQS has 20 questionnaire items;

however, only 16 questions were used to measure the faculty members’ experience for this study. The series of scaled answers were from (1) Strongly Disagree to (6) Strongly Agree. Figure 14 shows the percentage of responses from faculty members’ who agreed and strongly agreed with the given statement related to their cultural knowledge and skills. These given statements evaluated the participants’ metacognitive cultural intelligence scale (CQS). The greatest number of participants reported feeling confident when interacting with people who have a different cultural background (88.3%) and with a culture that is unfamiliar to them (83.3%). Similarly, slightly less than 90% of overall participants (84.9%) also reported that “they are conscious of the cultural knowledge they apply to cross-cultural interactions”, and 82% of these participants agreed “they check the accuracy of their cultural knowledge as they interact with people from different cultures”.

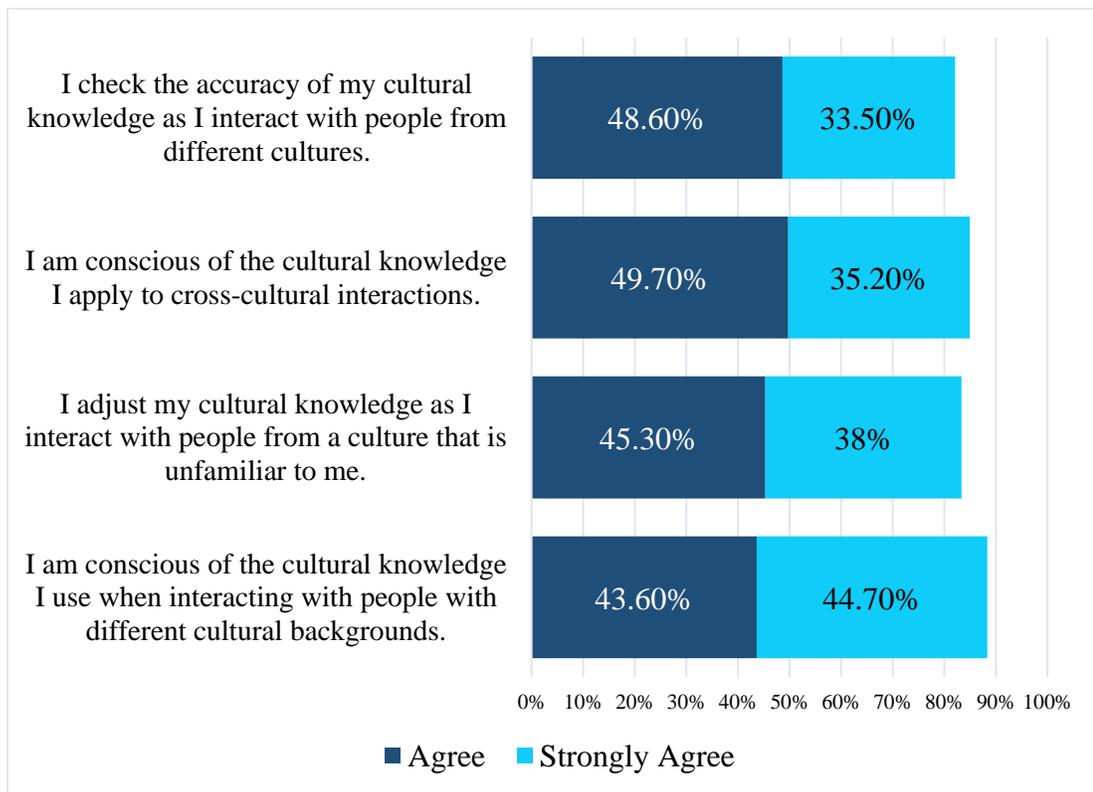


Figure 14: Metacognitive Cultural Intelligence Scale Level for Faculty Members.

Figure 14 shows the faculty members' responses and the percentage of faculty members whose responses were related to the Cognitive Cultural Intelligence level. The questions had 5 point scale options available for participants; these options were: "Most of the time", "Often", "Sometimes", "Rarely", and "Never". It was surprising that nobody selected "Never" as an answer; and, the "Rarely" option rate was less than 4%. Thus, the chart was built based on the responses that were selected from the 4 options. The data indicate that professors at JMU have the cognitive knowledge related to these components. In addition, cognitive knowledge also has a huge effect on achieving high team performance and faculty members' effective role in an educational setting. When asked about their cultural intelligence (Figure 15: Cognitive Cultural Intelligence Scale), it is significant that more than a quarter of the respondents selected "Most of the time" (32.7%) they are satisfied communicating with culturally diverse people. Thirty-six percent also responded that they are aware that their cultural experiences may be different and that they pay more attention while interacting on culturally diverse teams. With regard to gender roles, over half (51%) of the respondents are aware that these roles may vary among people from diverse cultural backgrounds. Finally, faculty reported that when they interact on multicultural teams their experiences may be very different from the experiences of their teammates.

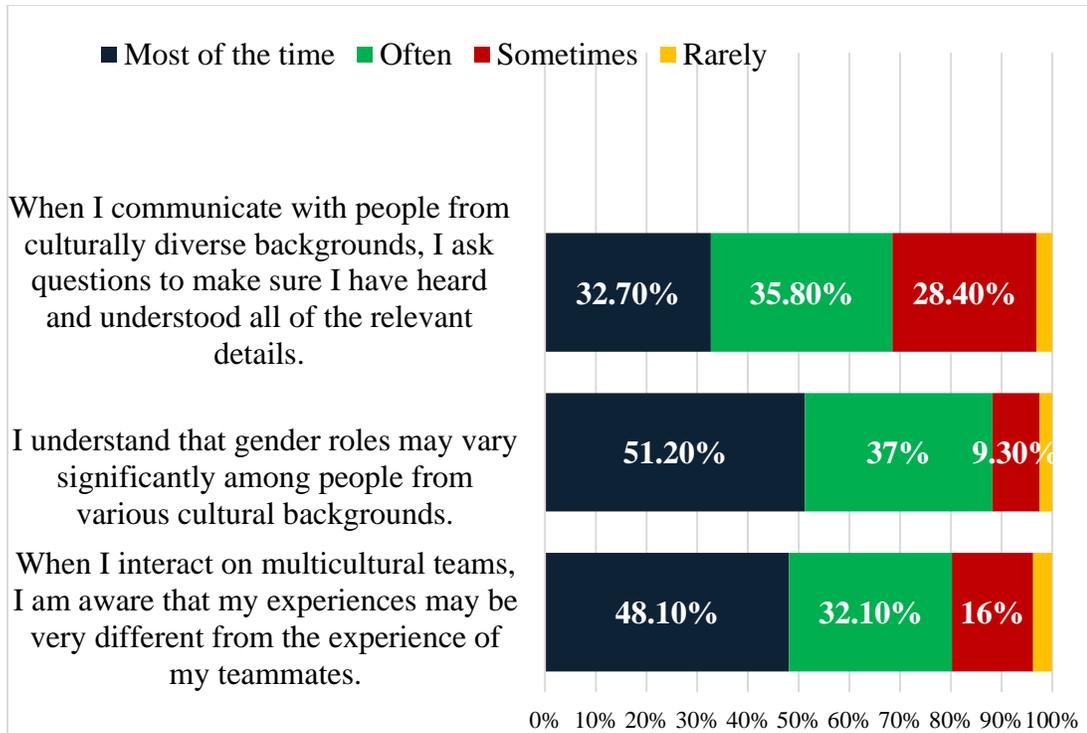


Figure 15: Cognitive Cultural Intelligence Scale Level for Faculty Members.

The third part of the CQ scale is motivation level. “Self- efficiency and intrinsic motivation play an important role in CQ because successful intercultural interaction requires basic sense of confidence and interest in novel settings” (Van Dyne, et.al, 2008, p.17). The statements asked faculty to rate their motivation to interact with other cultures. Figure 16 listed three main statements to calculate motivational CQ to better understand the faculty members’ experience on team. One of the important factors for JMU as an academic institution is that approximately seven in ten faculty member are pleased with and enjoy being part of a diverse environment, and appreciate interacting with team members from different cultural backgrounds. In addition, slightly more than forty percent of faculty (40.2%) reported that they are generally motivated to socialize with faculty from unfamiliar diverse cultural backgrounds.

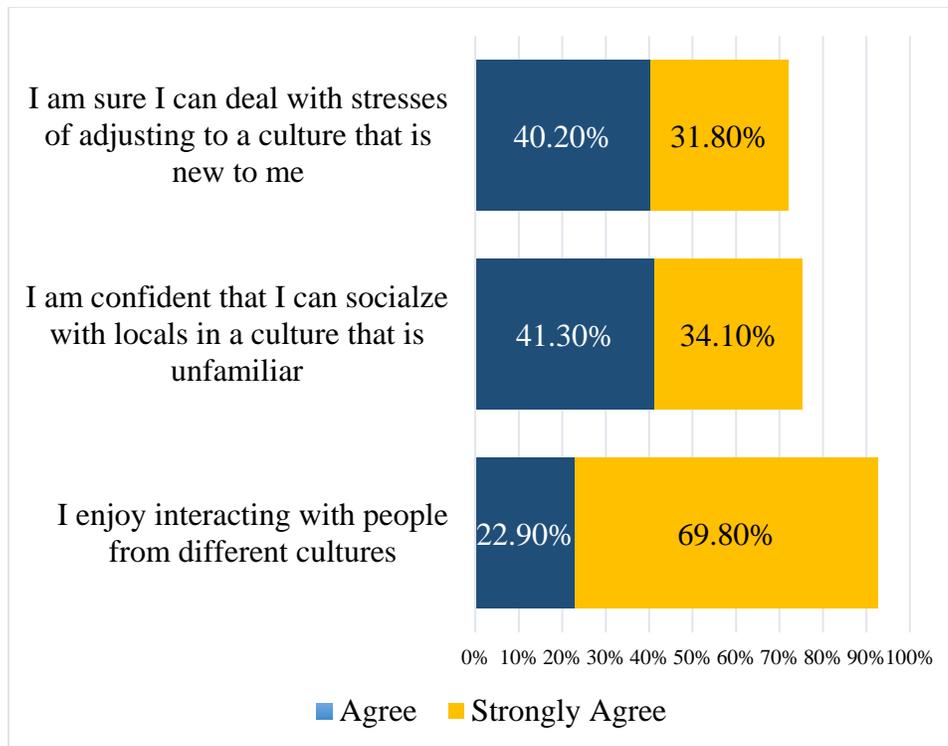


Figure 16: Motivational Cultural Scale Level for Faculty Members.

The next survey question measured the participants' behavioral knowledge in an educational setting based on the Cultural Intelligence Scale. "Behavioral CQ is an individual's capability to exhibit appropriate verbal and non-verbal actions when interacting with people from different cultural backgrounds" (Van Dyne et al., 2008, p.17). To better understand the JMU faculty members' behavioral knowledge; five statements were listed (Figure 17). Speaking or communicating among faculty members is the main behavioral factor that varied (54.70% Agree; 34.10% Strongly Agree) within a multicultural team and/or when communicating with people from diverse cultural backgrounds and/or faculty colleagues. As demonstrated in Figure 17 the bar chart shows that more than 30% of the faculty agreed that they will change their verbal and/or non-verbal behavior when participating on a multicultural team and/or connecting with someone from a culturally diverse background.

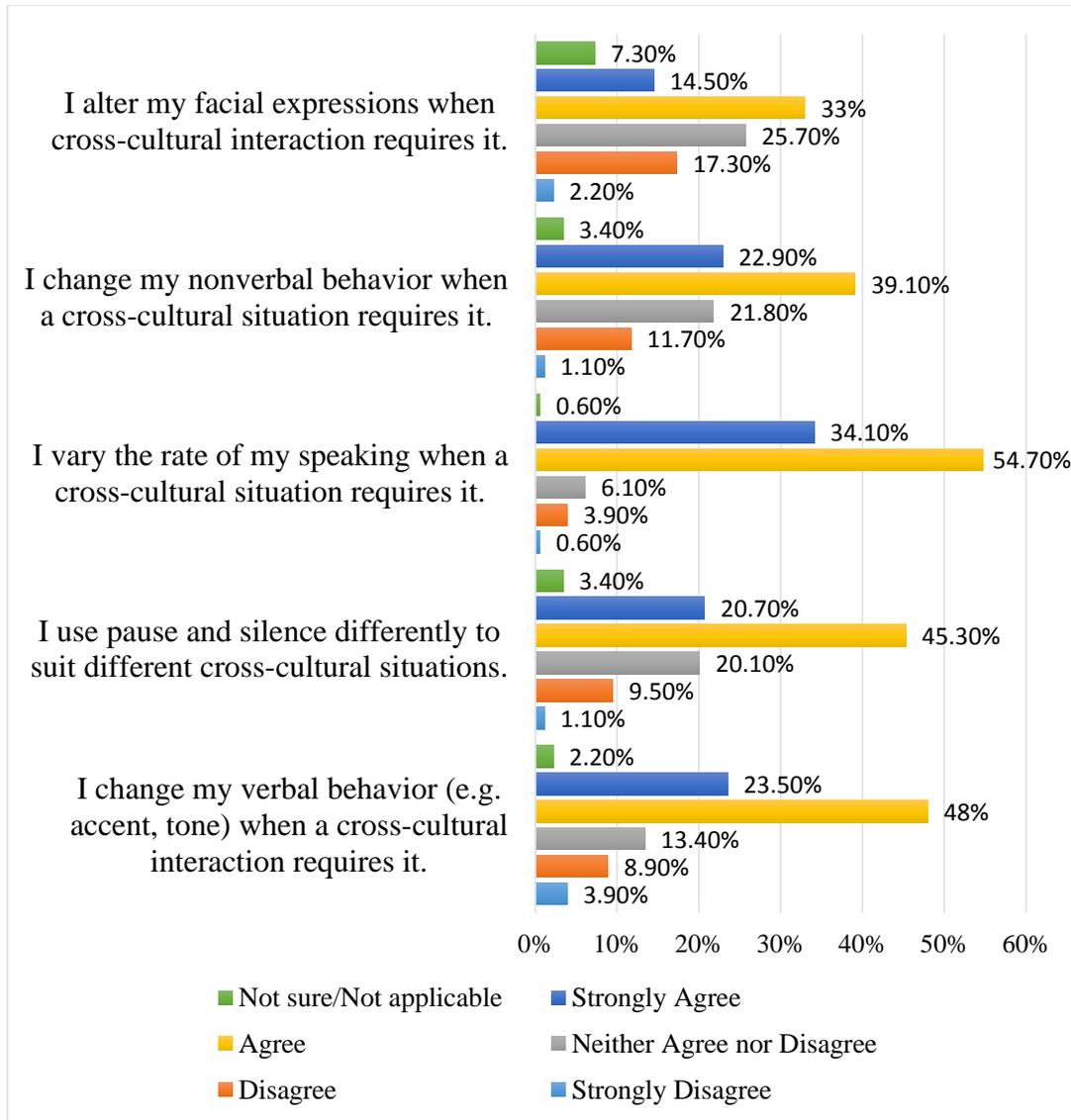


Figure 17: Behavioral Cultural Scale Level for Faculty Members.

**Faculty members’ satisfaction level.** Faculty members reported satisfaction in the following questions: “To share and gain knowledge in a multicultural team”; “To be involved in a project that has multicultural co-workers”; and, “Overall satisfaction with team productivity”. According to the data, participants were satisfied when working within multicultural teams and with that teams’ productivity. The bar chart in Figure 18 shows this satisfaction level by percentage based on faculty members’ involvement in

projects with culturally diverse co-workers and the knowledge that was gained and shared while on that team. It is clear that faculty members' satisfaction was consistent with the study's assumption that faculty members were approaching their work experience with a multicultural team optimistically (47.7%). Overall satisfaction was determined by the four statements with a 7 point scale variant (1) Dissatisfied) and (7) Very Satisfied. Not surprisingly, over 45% of respondents were satisfied with being part of a multicultural team. Between 12% -15% (percentages change depending on the statements) were neutral on exchanging knowledge within a diverse cultural team, while 1.3% were opposed to positive satisfaction options. The reason "Dissatisfied" or "Very dissatisfied" may have been chosen, was that these faculty members did not have enough opportunities to work on a multicultural team. Another possibility may be that these faculty members were not involved in any projects that have members from culturally diverse backgrounds, or that their job position does not necessitate then to work with a multicultural team.

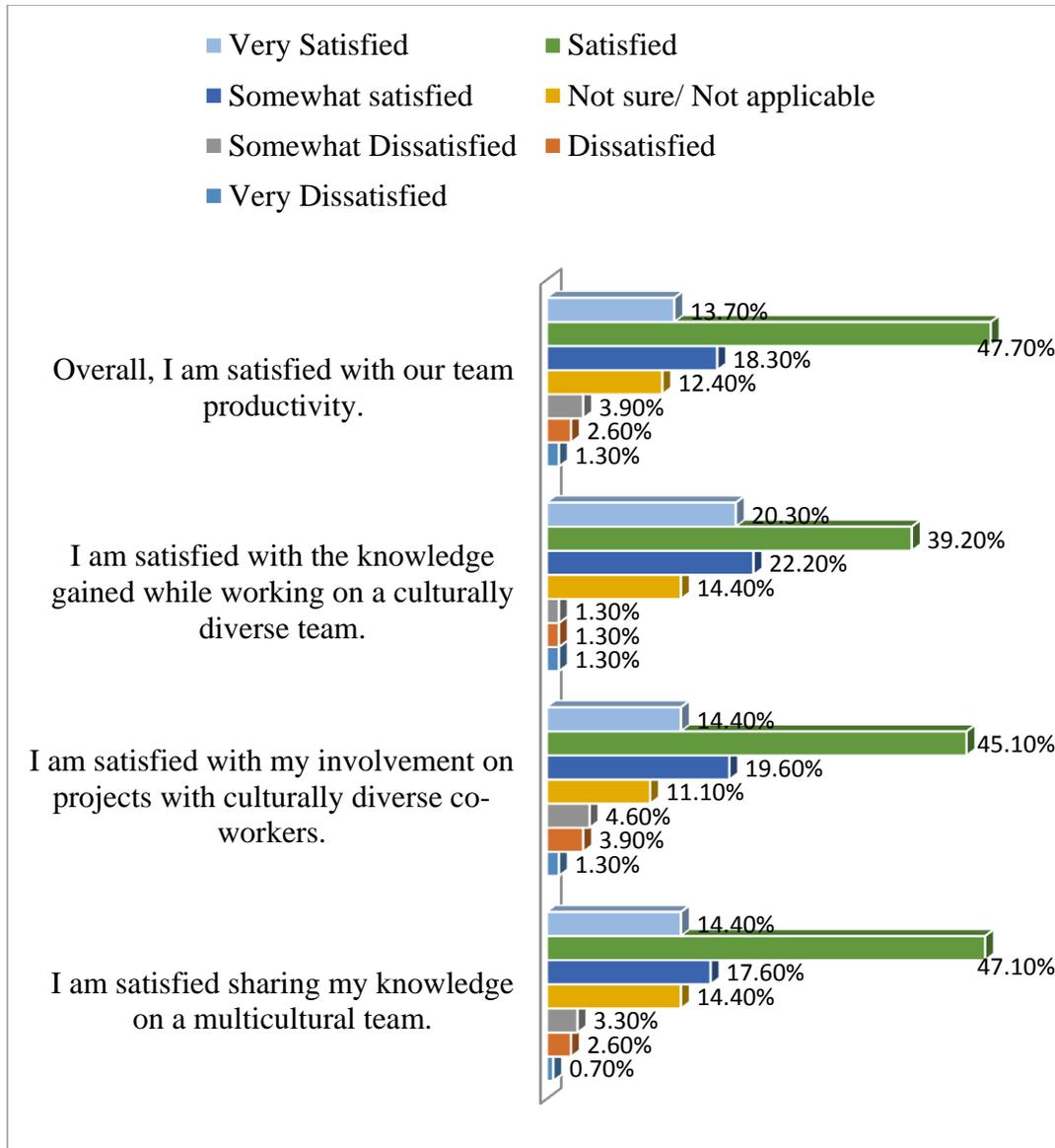


Figure 18: Satisfaction with Multicultural Teams.

**Professional development.** Faculty members reported that cross-cultural training is effective in understanding workplace issues regarding cross-cultural diversity, and increasing confidence, knowledge, and communication skills in diverse work environments.

The next survey question asked if faculty members addressed their approach by selecting a series of options (“Very important”, “Important”, “Moderately important”,

“Slightly important”, “Not important”, “Not sure/not applicable”) regarding the cross-cultural training program. The literature mentioned that cross-cultural training is one way to increase the cultural knowledge within an educational setting and train faculty members to decrease, or resolve, challenges that appear when working with individuals from culturally diverse backgrounds. One in three faculty members (34%) mentioned that having cross-cultural training was “Very important” and 28% mentioned that it was “Important”. By contrast, very few faculty members rated that this training was “Not important” (3%) or selected the “Not sure/Not applicable” option (7%). Despite these “Not important” and/or “not sure/not applicable” variants, Figure 19 demonstrates that overall, faculty members think that cross-cultural training is important for educational settings.

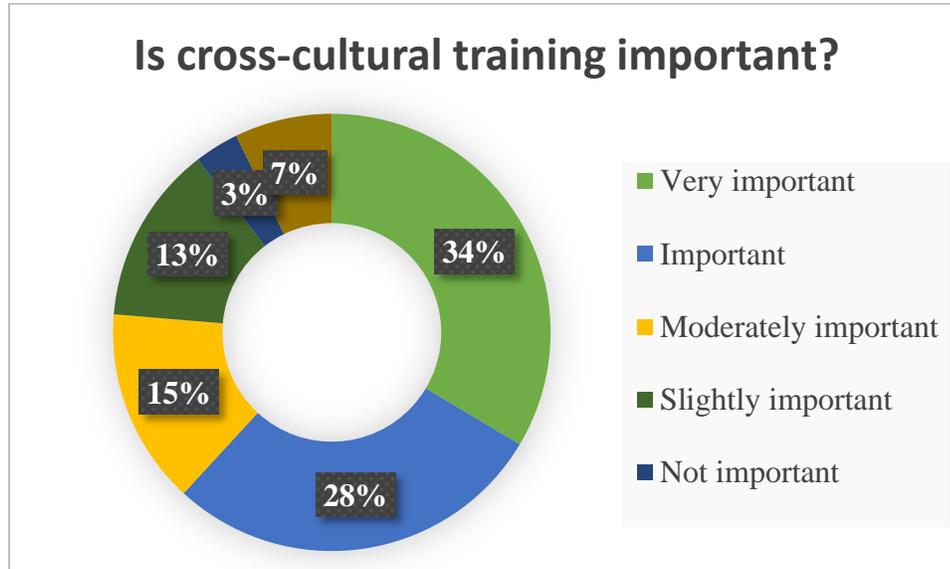
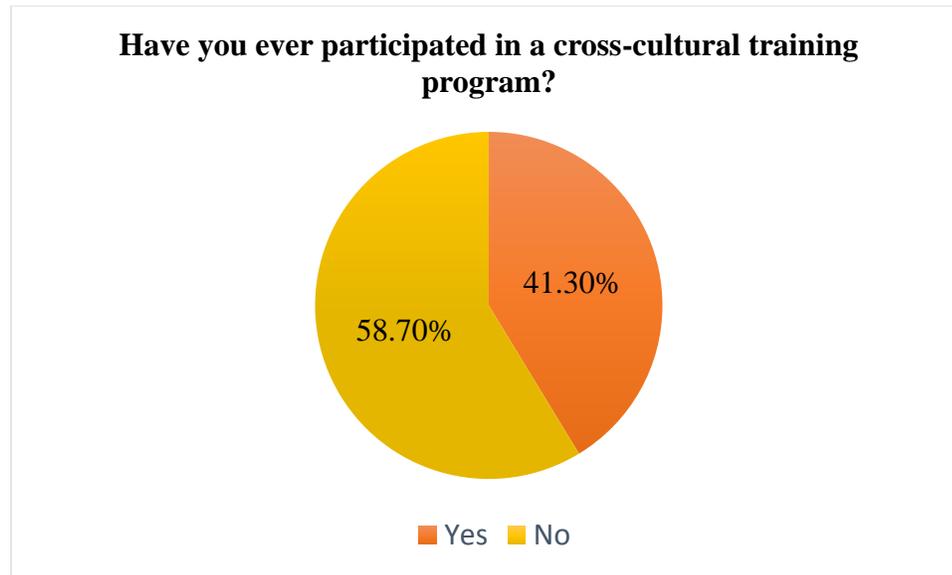


Figure 19: Importance of a Cross-Cultural Training Program.

The next question was created purposely to identify those participants' who had participated in cross-cultural training and obtain their feedback, comments, and experience about the cross-cultural training. If faculty members selected “Yes”, the

question directed them to the next question; however, if they selected “No”, the survey was completed. Taking a closer look at Figure 20, it is obvious that more than half of respondents have never participated in a cross-cultural training program.



*Figure 20: Rate of Participation in Cross-Cultural Training.*

General characteristics among the “Yes” variant selected respondents (41.3%):

- 40% were male; 60% were female
- Minimum work experience at JMU was 1 month
- Maximum work experience at JMU was 47 years
- Average work experience at JMU was 15 years
- 13% were international faculty members; 87% were national faculty members
- The last time respondents attended cross-cultural training was reported as 2-3 years ago; respondents who attended cross-cultural training more than 5 years ago equal = 31.9%
- The format of the cross-cultural training was a short lecture
- Delivery format was actually interactive

- For the future, the preferred method selected was “Interactive Discussion”

Faculty members reported interest in, supported the idea for, and preferred to participate in cross-cultural training, even though some participants may have already attended one before. Furthermore, the data also demonstrated that there is a need for cross-cultural training for faculty members. The bar chart in Figure 21 shows the variability in participation in cross-cultural training programs. The chart also shows how training may help and benefit the respondents. As the literature mentioned, cross-cultural training may benefit cross-cultural environments by improving the multicultural team performance to achieve desired outcomes.

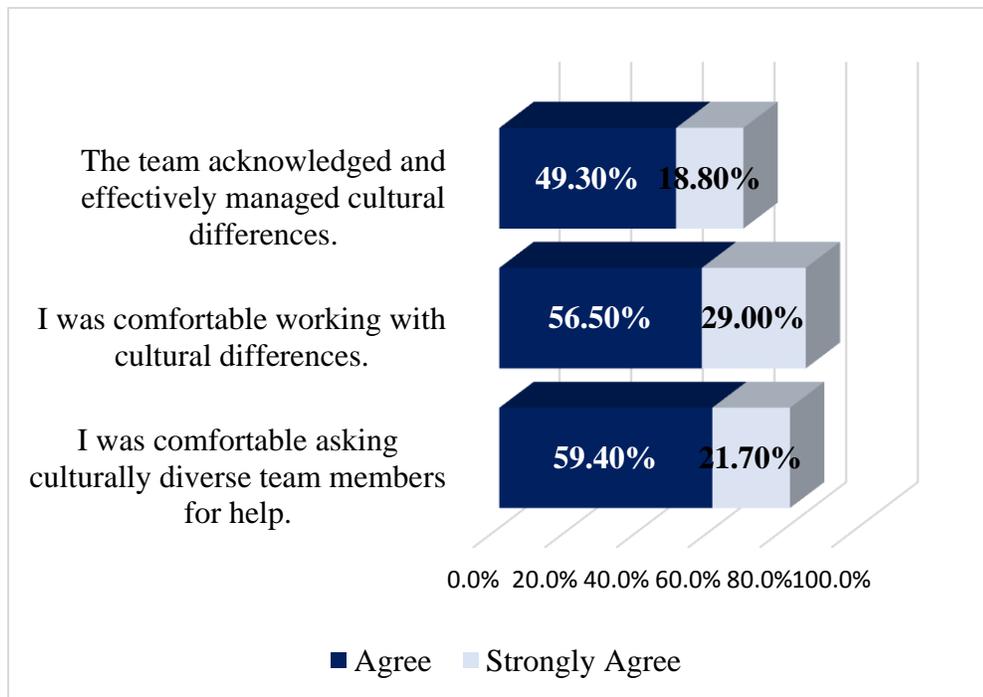


Figure 21: Agreement Rate of Faculty Members after Participating in a Cross-Cultural Training.

Although Figure 22 shows that the respondents were not satisfied with the effectiveness of their training, the vast majority reported that the cross-cultural training

program was “somewhat effective.” This item demonstrates that the quality of training is also important. The data clearly show that the quality of cross-cultural training was lacking and that this gap needs improvement.

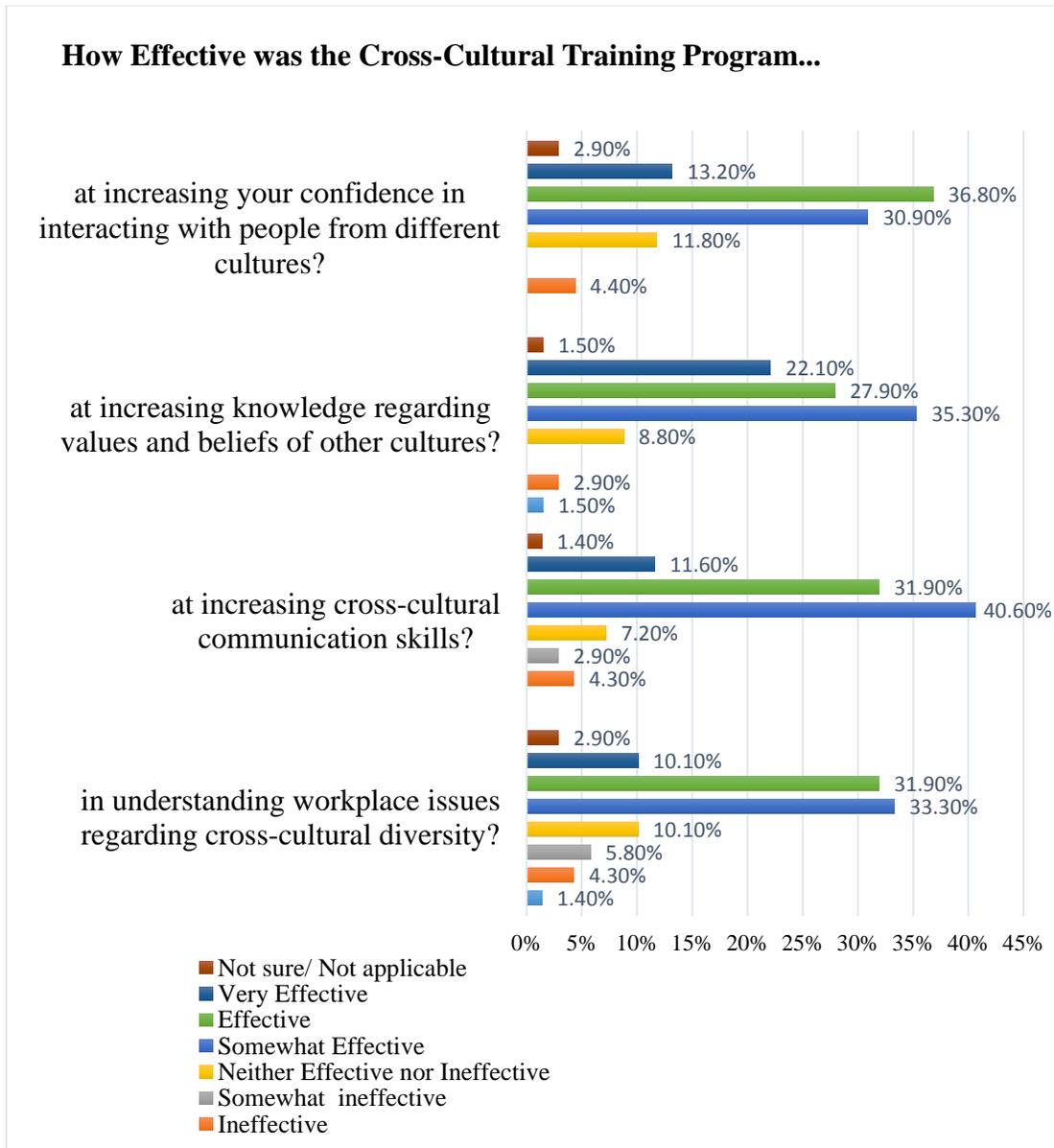


Figure 22: The Effectiveness Rate of Cross-Cultural Training.

**Qualitative Data Analysis.** This study involved open-ended questions that were analyzed through coding and emergent themes. The purpose of the qualitative data

analysis was to understand, better examine, and present ideas on the faculty's experiences, perceptions, satisfaction, and professional development when working with individuals from culturally diverse backgrounds.

In order to analyze the data, the audio recordings of the interviewed participants were transcribed. There were eight interviewees and all audio recording were changed to a monotone voice in order to protect their confidentially and anonymity. No videos were recorded for this study. The components were grouped by themes and subthemes. Themes were considered the main ideas of the study and sub-themes were generalized to support the themes. Through themes and sub-themes, the study's purpose and problem were supported.

Table 6 shows the qualitative interview analysis collected from the eight international faculty members. The participants differed in terms of cultural background, work experience, and gender. The participants also represented different departments and colleges at JMU. Their responses have been categorized to answer the given research questions and to display meaningful results.

Table 6: *Thematic Framework for Qualitative Responses.*

<b>Themes &amp; Sub-themes</b>	<b>Definition</b>	<b>Related Themes</b> (Generated from results)
<b>Experience working with culturally diverse faculty</b>	How do faculty members experience being in a	Constraints Problem focused

<p><b>members:</b></p> <ul style="list-style-type: none"> <li>• Negative effects: cultural socialization problems, mismatched ideas</li> <li>• Positive effects: creates big picture, brings strength to the group</li> </ul>	<p>multicultural team and how does cross-cultural differences affect the team performance?</p>	<p>strategies  Additional support</p>
<p><b>Personal comfort in dealing with cross-cultural differences:</b></p> <ul style="list-style-type: none"> <li>• Different expectations</li> </ul>	<p>How does cross-cultural difference affect faculty members individually?</p>	<p>Constraints</p>
<p><b>Constraints:</b></p> <ul style="list-style-type: none"> <li>• Language constraints</li> <li>• Culture constraints</li> <li>• Time constraints</li> </ul>	<p>What are the main effects of constraints on faculty members?</p>	<p>Problem focused strategies</p>
<p><b>Problem focused strategies:</b></p> <ul style="list-style-type: none"> <li>• Stress &amp; pressure</li> <li>• Mentor Support</li> </ul>	<p>How do faculty members solve their challenges when they experienced?</p>	<p>Constraints</p>

<ul style="list-style-type: none"> <li>• Social activities</li> </ul>		
<p><b>Additional support:</b></p> <ul style="list-style-type: none"> <li>• Training</li> <li>• Peer support</li> <li>• Handbook</li> </ul>	<p>What specific support would be beneficial to improve faculty members’ cross-cultural experience and improve team performance?</p>	<p>Personal comfort of dealing with cross-cultural differences</p>

After building the thematic framework for the qualitative responses in Table 6, the analysis continued to provide examples from interview responses that support the research ideas and hypotheses. The qualitative responses supported the four main variables that were analyzed in the quantitative section; these were faculty perspective, experience, satisfaction and professional development.

Table 7: *Coding of Qualitative Themes by Participants' Responses*

Themes & Sub-themes	Responses from Interviewees
<b>Experienced faculty working with culturally diverse faculty members:</b>	
<p><b>Negative effects</b>  (mismatched ideas)</p>	<p>“It is hard to understand the logic of the conversation because of limited cultural knowledge background.”</p> <p>“Sometimes the individuals are not so open or not flexible with the changes. This is mainly personal</p>

	<p>differences based on with cultural background.”</p> <p>“Sometimes people think that their own perspective is the only right solution. In this case, cultural differences can get in the way because everyone protects his/her culture and issues can arise that way. If so, it won’t be pleasant.”</p>
<p><b>Negative effects</b> (cultural socialization problems)</p>	<p>“I did not have any issues myself, but I see that, on some occasions, issues are raised because of multicultural issues, and these issues won’t rise if the faculty were involved in multicultural projects or having cultural collaborations.”</p> <p>“Acceptance of international faculty members by national faculty members is an issue.”</p> <p>“Many of faculty members express themselves most of the time, but not in a verbal sense.”</p> <p>“Body language or verbal communication plays an important role, and it especially affects team dynamic.”</p> <p>“I decided not to get involved in one project because I did not want to have difficulty with my colleagues.”</p>

<p><b>Positive effects</b>  (shows the big picture)</p>	<p>“By sharing our experience in a multicultural team, it becomes a lot easier to build significant concepts for a specific project.”</p> <p>“I think I am positive addition to the team, since I am part of another culture and more aware about the different cultures. This experience more often helps to handle the specific issues in the team project.”</p> <p>“Different approaches actually can consider more tools to handle the situation in a better way.”</p>
<p><b>Positive effects</b>  (brings strength to the group)</p>	<p>“My diverse background and diverse cultural knowledge brings strengths to the team.”</p> <p>“I have advantages by being an international member in the work environment, because of my background. This also helps me to have special sensitivity to handle the cultural situation in a good way. ”</p>
<p><b>Personal comfort of dealing with cross-cultural differences:</b></p>	
<p>Different expectations</p>	<p>“Since I came from a different culture and with a different cultural background, I have had challenges in adapting to the new culture and understanding the cross-cultural differences.”</p>

	<p>“I learned a lot by working in a multicultural environment! Specially, I was challenged to keep up with higher expectations.”</p> <p>“I try not to involve cultural issues and create an unwanted situation.”</p> <p>“Having cultural sensitivity to help the individual to deal with cross-cultural differences.”</p>
<b>Constraints:</b>	
Language constraints	“Culture is one factor, although language is another factor and challenge when working in multicultural team.”
Cultural constraints	“When I was a fresh faculty member, I hesitated to become involved in the team. It was not easy for me to be part of the team or be a volunteer on any project.”
Time constraints	“Last year I wanted to attend a cross-cultural training but could not because of my work hours. I would like to be able to attend these type of trainings formally.”
<b>Problem focused strategies:</b>	
Stress & pressure	“Do not give up! To understand cross-cultural

	<p>differences are important and we need to balance between the differences.”</p> <p>“Keeping an open mind, being open to cultural differences, and learning about different cultures are the optimal way to handle stress and pressure in a multicultural team.”</p> <p>“Before handling any stress and pressure, do research on how your colleagues approach the problem, on how everybody is feeling about the method which you are using.”</p>
Mentor Support	<p>“If you talk, let people know about your feelings, explain yourself, mention the issues that you have, people most probably would be sensitive your issues, problems that helps the situation.”</p>
Social activities	<p>“I believed more social activities for the colleagues would be helpful that people relax little bit, talk each other and understand each other background; that would help better understanding each other in general.”</p>
<b>Additional support:</b>	
Training	<p>“Training would be a good idea with more cultural</p>

	<p>considerations”</p> <p>“Training would be one good option for a fresh faculty member.”</p> <p>“When I came to JMU 20 years ago, we had limited training related to cultural diversity. I think intense cultural training would be a great idea”.</p> <p>“Cultural training for both national and international faculties together would be good idea. I would love to see that!”</p>
Peer support	<p>“Peer support is one good supportive way due to various situations and challenges.”</p>
Handbook	<p>“To write a handbook and explain the ways or methods how to deal with various cultural situations would be helpful.”</p>

## **Chapter V: Conclusions and Recommendations**

Chapter IV described clearly and in detail both the quantitative and qualitative data analysis used for this study. The general findings visualized the diversity rate by department and college at JMU, and the chapter continued with a quantitative analysis. The quantitative questions were analyzed using the demographics of faculty members and followed the four main key variables: faculty perspective, experience, satisfaction, and professional development. Overall, faculty members at JMU have clearly reported that metacognitive, cognitive, motivational, and behavioral levels of cultural knowledge might improve the faculty satisfaction rate when working with faculty from culturally diverse backgrounds. They were also open to developing their professional capabilities by joining actual, interactive cross-cultural training and increasing their own confidence, knowledge, and communication skills regarding diverse work environments. The findings also identified and explained faculty members' number one benefit (to create a shared understanding; Figure 10) and number one challenge (communication style; Figure 11) with working on a multicultural team within an educational setting. This strategy might support team leaders and the institution in taking a closer look at the gap and the purposeful steps needed to manage it.

The qualitative data analyzed were consistent with the quantitative data analysis. It is imperative to mention that the qualitative interview data supported the survey responses and provided a more comprehensive picture of the study. The qualitative section explored four key variables (faculty perspective, experience, satisfaction and professional development) and from this derived additional themes and sub-themes (experience working with culturally diverse faculty members, personal comfort in dealing

with cross-cultural differences, the constraints, problem focused strategies, and additional sources).

### **Implication for Practice**

This section continues with suggestions for understanding and promoting a productive team performance in a multicultural environment, which was one of the main goals for the study. In analyzing the findings, a number of implications emerged for encouraging productive teams and team performance, especially when working with faculty from culturally diverse backgrounds.

The first research question was, “What effect do cross-cultural differences have on James Madison University (JMU, Harrisonburg, Virginia, USA) faculty members’ approaches to multicultural team environments within an educational setting?”. According to faculty responses, JMU supports a diverse environment within an educational setting, and the data from the JMU Human Resources office (between: 2005-2015) supports this fact. In addition, JMU values cultural diversity as an important factor, and half of the respondents confirmed this factor. JMU offers diversity and multicultural training, educational presentations and conferences in an effort to increase cultural knowledge among its faculty members. As a result of the survey and interview responses, potential gaps were revealed related to the quality of the training. JMU should address this gap, and improve the quality of their current training to better meet the needs of faculty members across the university.

The second research question examined, “What multicultural team experiences are JMU international faculty members reporting?”. Supporting culturally diverse faculty members at the institutional level involves a strong cooperation

and collaboration among faculty members and this point is considered one of the vital issues. The findings also verified that, over the last 20 years, the cultural orientation training has dramatically improved at JMU. Cultural Orientation training helps faculty members develop their skills because they work and lead in a global educational setting.

Based on the data, faculty reported the following as benefits of working on a multicultural team: creating a shared understanding (54.8%); developing mutual trust (51.3%); widening cultural knowledge (43.9%); building interpersonal skills (43.5%) and being socially integrated (37.4%). One Interviewee stated that “I think I am a positive addition to the team, since I am part of another culture and more aware about the different cultures”. Another faculty noted that “my diverse background and diverse cultural knowledge brings strength to the team”.

On the other hand, the faculty identified the following as challenges of working on a multicultural team: communication style (37%); accents (34.8%); various attitudes about the work (30%) and management about the work (25.2%). One of the interviewees stated that “Acceptance of international faculty members by native faculty members is an issue”, another faculty member responded that “problems are raised because of multicultural issues and these issues wouldn’t exist if the faculty were involved in multicultural projects or have cultural collaborations”. These statements clearly are examples of challenges of working on a multicultural team.

The third research question asked, “What resources or strategies could improve team performance on a multicultural team within an educational setting?”. Cultural knowledge is another variable that can be assessed in both quantitative and qualitative measures. As the workspace becomes more global, and the number of diverse faculty

increase, it becomes even more imperative to avoid inappropriate and unprofessional verbal and non-verbal communications. These engagements are often interpreted in different ways depending on the culture. Any unwanted verbal and/or non-verbal actions may increase stress, pressure, and prohibit a positive work environment. At the institutional and departmental levels, increasing this knowledge can occur through social activities. Through social activities, faculty members can “talk with each other and learn about one another’s background while providing a better understanding of each other in general” (interview response).

One interviewee respondent stated, “When I came to JMU 20 years ago, we had limited training related to cultural diversity. I think intense cultural training would be a great idea.” By articulating additional human resource responsibilities, clarifying duties for new faculty, and expanding the support offered by the Office of International Program (OIP), everyone’s knowledge and capability for working within a culturally diverse team increases. Based on this data, the researcher highly recommends that more intensive culturally focused training is needed for all faculty members, and that it should be added as part of the orientation program.

A concern worth noting is that some faculty had not attended training in over twenty years, while others had not had training in the last five years. When training was provided, it was a short lecture, but based on faculty responses, they prefer interactive discussions.

Another issue reported by faculty was time constraint. One faculty member reported that “Last year I wanted to attend a cross-cultural training program but could not

because of my work hours. I would like to be able to attend these types of training programs formally”.

The data strongly supported research questions one, two, and three individually; however, with regard to the fourth research question (What results emerge from comparing the explanatory qualitative data about multicultural team experiences with outcomes from the quantitative data within an educational setting?), the mixed-method approach strengthened the combined research findings.

Finally, according to the Chapter IV data analysis, bar charts and line graphs provided support for the hypotheses (Hypothesis 1: Figure 12; Hypothesis 2: Figure 10; Hypothesis 3: Figure 14, 15, 16, 17 and Hypothesis 4: Figure 18).

### **Recommendations for Future Study**

Considering that the study was conducted with only full-time JMU faculty members, future research should be more focused at the state level and within an educational setting containing full-time and part-time faculty members. By increasing the number of people participating, the study would increase generalizability to other institutions with and beyond the state of Virginia. Additional participants might also help to construct stronger culturally diverse teams. Finally, a greater pool may also allow future researchers to generalize to settings outside of education.

These findings and implications suggest (for all faculty) training opportunities through the Office of International Programs (OIP) and the Center for Faculty Innovation (CFI) for experiences that will directly affect new faculty members' experiences.

Simultaneously, training would be beneficial for all faculties, regardless of cultural differences and university expectations, in embracing a culturally diverse environment.

In addition to the analysis conducted in the present study, this research has created a database from which additional analysis can be conducted. A follow up study should be examined to measure changes in faculty perceptions of working on cross-cultural teams and to determine if there are barriers that prevent faculty from being successful working on cross-cultural teams.

Another potential follow-up study, which cannot be examined from the present data, is the exploration of an online module that would provide strategies essential for working on cross-cultural teams. The findings of this study might be a useful guide for developing seminars, training programs, and workshops for future and present faculty members preparing to teach and work in a cross-cultural setting.

Finally, this study might help human resource managers within an academic setting, (who provide support for international faculty members) understand which cross-cultural experiences are beneficial, according to academic experts, giving them a better idea of what level of cross-cultural education is needed.

## **Conclusion**

The present research provided a preliminary examination of the effect of cross-cultural differences on team performance within an educational setting. The results indicate that there is a healthy level of awareness when working on cross-cultural teams. In particular, faculty members at JMU have strong working relationships across multicultural lines. This study should be beneficial to JMU, and other similar

institutions. Eliminating the cultural constraints and decreasing the cultural challenges will be helpful not only for current faculty members but also for future faculty members, regardless of cultural background. It is my intention to continue with this research in years to come and to explore more beneficial and useful strategies for understanding and promoting more productive teams and team performance in multicultural environments.

**Appendix A: Cover Letter**  
**The Effect of Cross Cultural Differences on Team Performance within an Educational Setting: A mixed methods study**

**“Web/Email” Cover Letter (will use in anonymous research)**

**Identification of Investigators & Purpose of Study**

You are being asked to participate in a research study conducted by Sevinj Iskandarova, a graduate student from James Madison University. The purpose of this study is to determine and measure the effect of cross-cultural differences on team performance, highlight advantages and disadvantages of those cross-cultural differences within the team, and to apply the knowledge learned from this study enhance team performance within an educational setting.

This study will contribute to the researcher’s completion of her master’s thesis. Please read this form carefully and ask any questions you may have before agreeing to take part in this study.

**Research Procedures**

This study consists of an online survey using secure Qualtrics software (an online survey tool). You will be asked to provide answers to a series of questions related to your experience within multicultural teams and participation in a cross-cultural training at JMU. Should you decide to participate in this confidential research work, you may access the anonymous survey by following the web link on the same page.

**Time Required**

Participation in this study will require 10-15 minutes of your time.

**Risks**

The investigator does not perceive more than minimal risks from your involvement in this study.

**Benefits**

By participating in this study, faculty members will learn about ratings of multicultural team performance and share successful strategies with colleagues.

**Confidentiality**

The results of this research will be presented at the graduate student’s thesis defense and potentially in academic publications and conferences in the following year. Survey responses will be kept anonymous and in the strictest confidence. The responses will be tracked using Qualtrics, but the survey does not require name or email. All data will be stored in a secure location only the researcher will have access using a secured password.

The researcher retains the right to use and publish non-identifiable data. At the end of the study, all records will be deleted and shredded.

### **Participation & Withdrawal**

Your participation is entirely voluntary. You are free to choose not to participate. Should you choose to participate, you can withdraw at any time without consequences of any kind.

### **Questions about the Study**

If you have questions or concerns during the time of your participation in this study, or after its completion or you would like to receive a copy of the final aggregate results of this study, please contact:

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### **Questions about Your Rights as a Research Subject**

Dr. David Cockley  
Chair, Institutional Review Board  
James Madison University  
(540) 568-2834 [cocklede@jmu.edu](mailto:cocklede@jmu.edu)

### **Giving of Consent**

I have been given the opportunity to ask questions about this study. I have read this consent and I understand what is being requested of me as a participant in this study. I certify that I am at least 18 years of age. By clicking on the link below I am consenting to participate in this research.

[http://jmu.co1.qualtrics.com/SE/?SID=SV\\_etefPpr3mjoDIfr](http://jmu.co1.qualtrics.com/SE/?SID=SV_etefPpr3mjoDIfr)

Sevinj Iskandarova  
Name of Researcher (Printed)

6/30/2015  
Date

**The Effect of Cross Cultural Differences on Team Performance within an Educational Setting: A mixed methods study**

**Interview Consent Form (will use in Confidential Research)**

**Identification of Investigators & Purpose of Study**

You are being asked to participate in a research study conducted by Sevinj Iskandarova, a graduate student from James Madison University. The purpose of this study is to determine and measure the effect of cross-cultural differences on team performance, highlight advantages and disadvantages of those cross-cultural differences within the team, and to apply the knowledge learned from this study enhance performance within an educational setting.

This study will contribute to the researcher's completion of her master's thesis. Please read this form carefully and ask any questions you may have before agreeing to take part in this study.

**Research Procedures**

This study consists of an interview that will be administered to individual participation through face –to-face conversation. You will be asked to provide answers to a series of questions related to your experience within multicultural team as an international faculty member at JMU.

**Time Required**

Participation in this study will require 20-25 minutes of your time.

**Risks**

The investigator does not perceive more than minimal risks from your involvement in this study.

**Benefits**

By participating in this study, there is no direct benefit from your involvement, as the participant. Findings will guide the faculty members about rating of multicultural team performance and share successful strategies with colleagues.

**Confidentiality**

The results of this research will be presented at eh graduate student's thesis defense with James Madison University professors present. Individual responses will be obtained and recorded by the researcher using a voice recorder and paper for taking brief notes. Data will be represented as averages or generalizations about the responses as a whole. The data collected during the interview will be kept on a password-protected computer and then destroyed after (June 30<sup>th</sup>, 2016). All identifiable data will be masked to ensure confidentiality. No identifiable demographic information will be collected from the participant and no identifiable responses will be presented in the final form of this study. All data will be stored in a secured location (using JMU's Windows Encrypting File System (EFS) – for Windows 7) and will only be accessible to the researcher. The

researcher retains the right to use and publish non-identifiable data. At the end of the study, all voice recorded will be destroyed at the conclusion of the thesis period (June 30<sup>th</sup>, 2016) and paper notes will be shredded. Final aggregate results will be made available to participants upon request.

### **Participation & Withdrawal**

Your participation is entirely voluntary. You are free to choose not to participate. Should you choose to participate, you can withdraw at any time without consequences of any kind.

### **Questions about the Study**

If you have questions or concerns during the time of your participation in this study, or after its completion or you would like to receive a copy of the final aggregate results of this study, please contact:

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### **Questions about Your Rights as a Research Subject**

Dr. David Cockley

Chair, Institutional Review Board

James Madison University

(540) 568-2834

[cocklede@jmu.edu](mailto:cocklede@jmu.edu)

### **Giving of Consent**

I have read this consent and I understand what is being requested of me as a participant in this study. I freely consent to participate. I have been given satisfactory answers to my questions. I certify that I am at least 18 years of age.

I give consent to be audio taped during my interview. \_\_\_\_\_ (initials)

\_\_\_\_\_  
Name of Participant (Signed)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name of Researcher (Signed)

\_\_\_\_\_  
Date

**Appendix B: Survey Questions**

The Effect of Cross-Cultural Differences on Team Performance within an Educational Setting

Q1 By clicking through to the next page, you will consent to participate:

- Continue to the survey (1)
- Exit the survey (2)

If Continue to the survey Is Selected, Then Skip To Please indicate your current status.If Exit the survey Is Selected, Then Skip To End of Survey

Q2 Please indicate your current status.

- Full-time Instructional Faculty (1)
- Part-time Instructional Faculty (2)
- Full-time Administrative Faculty (3)
- Part-time Administrative Faculty (4)
- Other: Please specify (5) \_\_\_\_\_

If Part-time Instructional Fac... Is Selected, Then Skip To End of BlockIf Part-time Administrative Fa... Is Selected, Then Skip To End of Block

Q3 Please indicate your gender.

- Male (1)
- Female (2)
- Choose not to respond (3)

Q4 What is your age?

Q5 How many years of experience do you have with US. culture?

Q6 How long have you been working at James Madison University?

Q7 Are you considered International faculty?

- Yes (1)
- No (2)

Q8 How many languages can you speak?

Q9 Which of the following best describes the college you work for?

- College of Arts and Letters (1)
- College of Business (2)
- College of Education (3)
- College of Health and Behavioral Studies (4)
- College of Integrated Science and Engineering (5)
- College of Science and Math (6)
- College of Visual and Performing Arts (7)
- Other: Please specify (8) \_\_\_\_\_

Q10 Read the statement and select the response that best describes your cultural knowledge and skills in your job at JMU.







requires it. (4)						
I alter my facial expressions when cross-cultural interaction requires it. (5)	○	○	○	○	○	○

Q13 Have you ever worked on a team with department members/co-workers of a different culture from your own?

- Yes (1)
- No (2)

If Yes Is Selected, Then Skip To Read the statement and select the res...If No Is Selected, Then Skip To Have you ever participated in a cross...

Q14 Read the statement and select the response that best describes your capabilities in your job at JMU.

	Most of the time (1)	Often (2)	Sometimes (3)	Rarely (4)	Never (5)
<p>When I participate on multicultural teams, I am aware that my experiences may be very different from the experiences of my teammates. (1)</p>	<input type="radio"/>				
<p>I understand that gender roles may vary significantly among people from various cultural backgrounds. (2)</p>	<input type="radio"/>				
<p>When I communicate with people from culturally diverse backgrounds, I ask questions to make sure I have heard and understood all of the relevant details. (4)</p>	<input type="radio"/>				

Q15 Think about your multicultural team experiences, the team was able to.... (Choose all that apply)

- create a shared understanding (1)
- socially integrate (2)
- develop mutual trust (3)
- widen cultural knowledge (4)
- build interpersonal skills (5)

Q16 While working on a multicultural team to what extent did any of the following hinder productivity? (Choose all that apply)

- Communication style (1)
- Accent (2)
- Various attitude about the work (3)
- Management about the work (4)



Q18 Please rate your level of agreement on each of the following statements.

	Strongly Disagree (1)	Disagree (2)	Not sure/ Not applicable (3)	Agree (4)	Strongly Agree (5)
I feel encouraged having culturally diverse co-workers/department members at JMU. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To work with culturally diverse co-workers gives me a feeling of personal accomplishment. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
James Madison University values cultural diversity (to recognize and respect the value of differences in gender, age, etc.) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q19 Please rate the level of importance on each of the following statements.

	Very important (1)	Important (2)	Moderately important (3)	Slightly important (4)	Not important (5)	Not sure/ Not applicable (6)
How important is it in your job at JMU to work effectively in a multicultural team? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How important is it in your position that you recognize a conflict between multicultural team members? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is cross-cultural training important? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q20 Have you ever participated in a cross-cultural training program? (Cross-cultural training is “to prepare people for more effective interpersonal relations and for job success when they interact extensively with individuals from cultures other than their own”)

- Yes (1)
- No (2)

If Yes Is Selected, Then Skip To When was the last time you attended a...If No Is Selected, Then Skip To End of Survey

Q21 When was the last time you attended a cross-cultural training program?

- with the last year (1)
- 2-3 years ago (2)
- 3-4 years ago (3)
- 5 years ago (4)
- more than 5 years ago (5)

Q22 How many times have you attended a cross-cultural training?

- 1-3 times (2)
- 4-5 times (3)
- More than 5 times (4)

Q23 What was the duration of cross-cultural training?

- One lecture or short presentation (1)
- Full day (2)
- 2-3 days (3)
- 2 weeks (4)
- 1 month (5)
- 1 year (6)
- Other: Please specify (7) \_\_\_\_\_



Q25 How was the cross-cultural training delivered? (Choose all that apply)

- Classroom teaching (1)
- Project work (field work) (2)
- Distance learning (on-line) (3)
- Mentoring (4)
- Coaching (5)
- Informal workplace learning (6)
- Other: Please specify (7) \_\_\_\_\_

Q26 Please indicate the most valuable aspect of the cross-cultural training for your current position. (Choose all that apply)

- Interactive discussion (1)
- Lecture (2)
- Guest speaker and panelists (3)
- Project work (field work) (4)
- Coaching (5)
- Mentoring (6)



### Appendix C: The Cultural Intelligence Scale (CQS)

#### The Cultural Intelligence Scale (CQS)

Read each statement and select the response that best describes your capabilities. Select the answer that BEST describes you AS YOU REALLY ARE (1 = strongly disagree; 7 = strongly agree)

<i>CQ factor</i>	<i>Questionnaire items</i>
<b>Metacognitive CQ</b>	
MC1	I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.
MC2	I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.
MC3	I am conscious of the cultural knowledge I apply to cross-cultural interactions.
MC4	I check the accuracy of my cultural knowledge as I interact with people from different cultures.
<b>Cognitive CQ</b>	
COG1	I know the legal and economic systems of other cultures.
COG2	I know the rules (e.g., vocabulary, grammar) of other languages.
COG3	I know the cultural values and religious beliefs of other cultures.
COG4	I know the marriage systems of other cultures.
COG5	I know the arts and crafts of other cultures.
COG6	I know the rules for expressing nonverbal behaviors in other cultures.
<b>Motivational CQ</b>	
MOT1	I enjoy interacting with people from different cultures.
MOT2	I am confident that I can socialize with locals in a culture that is unfamiliar to me.
MOT3	I am sure I can deal with the stresses of adjusting to a culture that is new to me.
MOT4	I enjoy living in cultures that are unfamiliar to me.
MOT5	I am confident that I can get accustomed to the shopping conditions in a different culture.
<b>Behavioral CQ</b>	
BEH1	I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.
BEH2	I use pause and silence differently to suit different cross-cultural situations.
BEH3	I vary the rate of my speaking when a cross-cultural situation requires it.
BEH4	I change my nonverbal behavior when a cross-cultural situation requires it.
BEH5	I alter my facial expressions when a cross-cultural interaction requires it.

© Cultural Intelligence Center 2005. Used by permission of the Cultural Intelligence Center.

*Note:* Use of this scale granted to academic researchers for research purposes only. For information on using the scale for purposes other than academic research (e.g., consultants and non-academic organizations), please send an email to [cquery@culturalq.com](mailto:cquery@culturalq.com). The Chinese version of the scales is available on the *MOR* website.

## **Appendix D: Interview Questions**

### **Interview questions**

#### Introduction

1. Tell me your experience about interacting with people with different cultural backgrounds.

#### Experience

2. Can you describe an average work day of yours (from the point of view of working in a multicultural environment)?
3. How do you feel about your ability to cope up with cross-cultural differences in your team?
4. How do you think your experience differs from that of other faculty members who are locals?
5. Have you ever considered quitting the project because of stress or pressures caused by cross-cultural differences, and if so, can you describe the context of that situation?
  - a) What kept you going? In other words, how did you overcome these obstacles to continue working in your project in a cross-cultural team?
6. According to your experience how does cross-cultural differences affect the team performance? (Please mention positive or negative effects)

#### Resources

7. Are you aware of any training that has helped you to perform better in a current work environment?

#### Constraints

8. What would you identify as the major barriers to being an international faculty member who is working in a cross-cultural environment?

#### Strategies for Success

9. What strategies or advice might you give to others to help them cope in a similar situation to yours?
10. What resources or supports do you think could be offered-formally or informally-to make your experience as an international faculty member?

#### Conclusion

11. Is there anything additional you would like to share about your experiences as an international faculty member?

**Appendix E: Number of International Faculty Members at James Madison University Over the Last 10 Years: 2005-2015**

Below the visualized charts shows the number of full-time and part-time international faculty member during the last 10 years (from 2005-2015).

**In 2005: Full-time and part- time international faculty members by college**

**FULL-TIME INTERNATIONAL FACULTY MEMBERS**



**PART-TIME INTERNATIONAL FACULTY MEMBERS**



**In 2006: Full-time and part- time international faculty members by college**

**FULL-TIME INTERNATIONAL FACULTY MEMBERS**



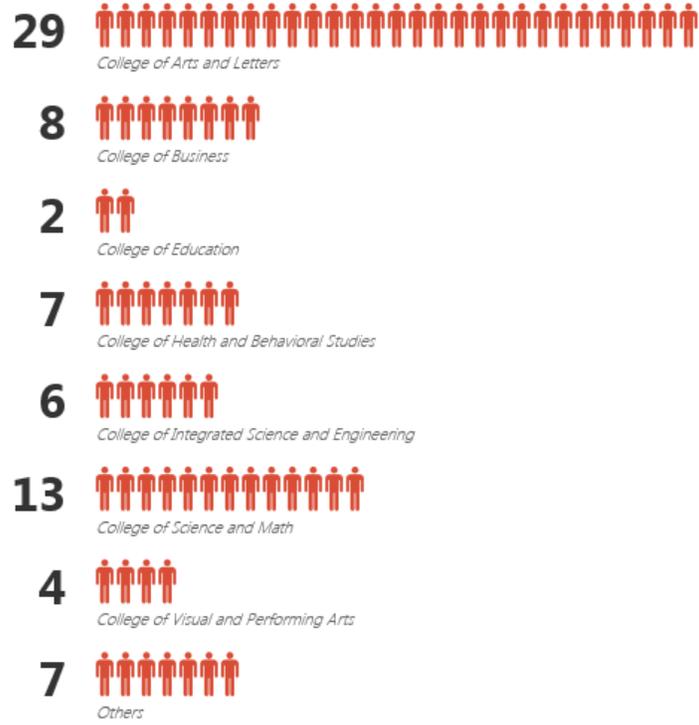
**PART-TIME INTERNATIONAL FACULTY MEMBERS**



**In 2007: Full-time and part- time international faculty members by college**

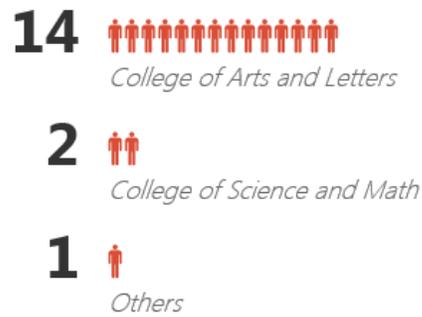
**FULL-TIME INTERNATIONAL FACULTY MEMBERS**

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**PART-TIME INTERNATIONAL FACULTY MEMBERS**

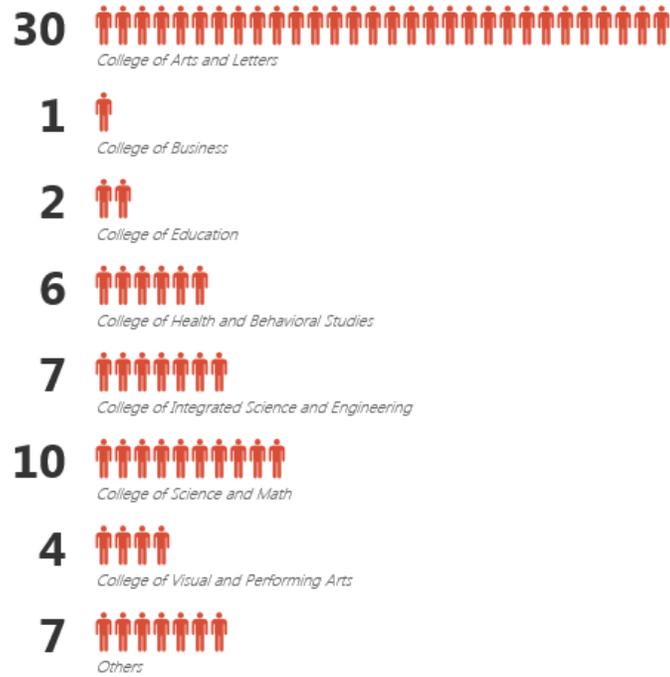
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**In 2008: Full-time and part- time international faculty members by college**

**FULL-TIME INTERNATIONAL FACULTY MEMBERS**

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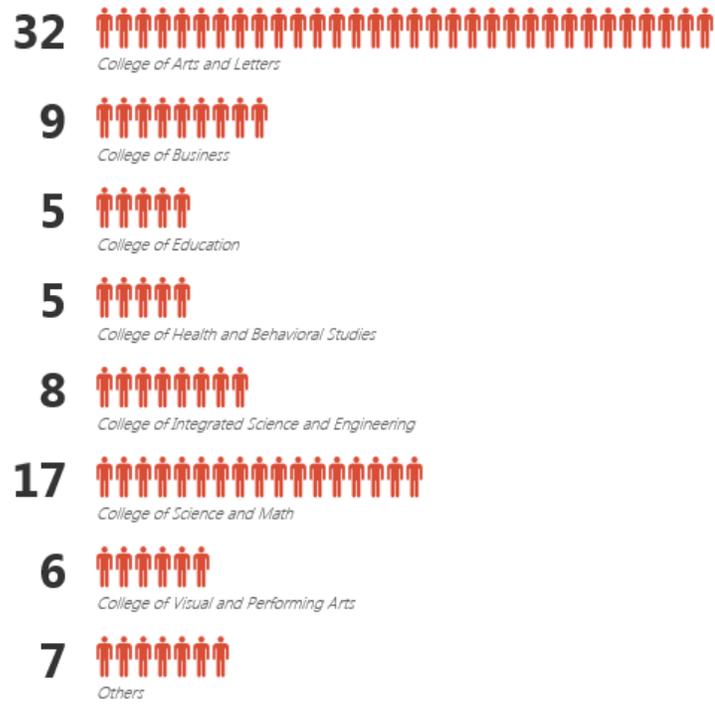
**PART-TIME INTERNATIONAL FACULTY MEMBERS**

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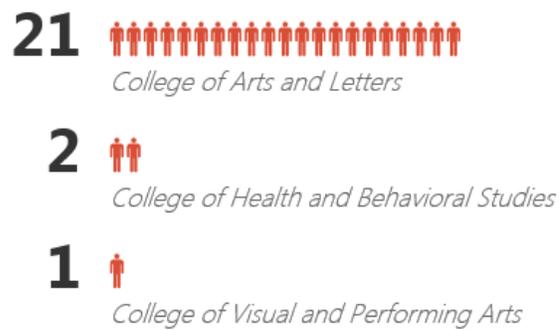


**In 2009: Full-time and part- time international faculty members by college**

**FULL-TIME INTERNATIONAL FACULTY MEMBERS**

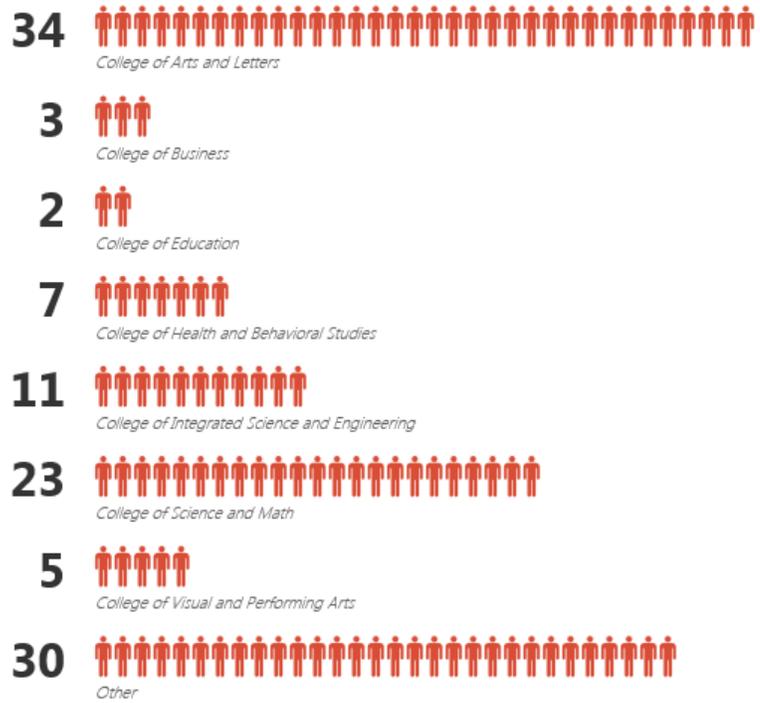


**PART-TIME INTERNATIONAL FACULTY MEMBERS**



**In 2010: Full-time and part- time international faculty members by college**

**FULL-TIME INTERNATIONAL FACULTY MEMBERS**



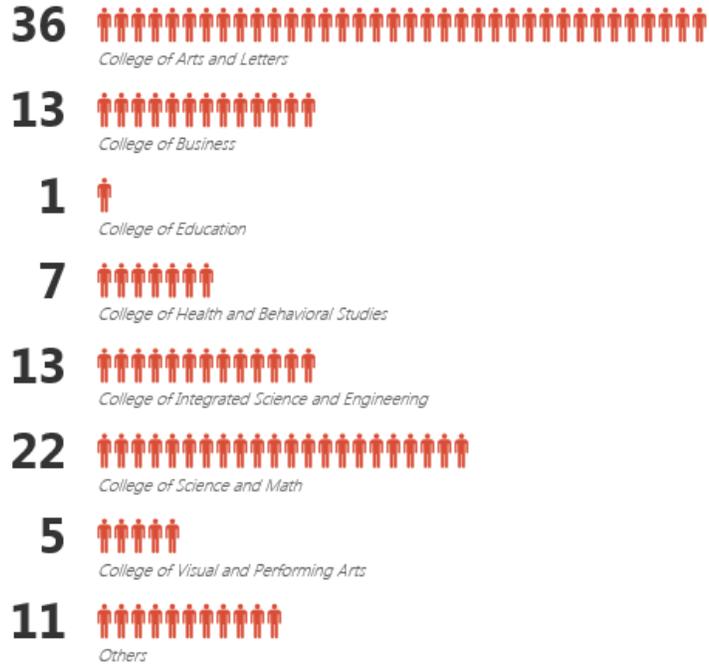
**PART-TIME INTERNATIONAL FACULTY MEMBERS**



**In 2011: Full-time and part- time international faculty members by college**

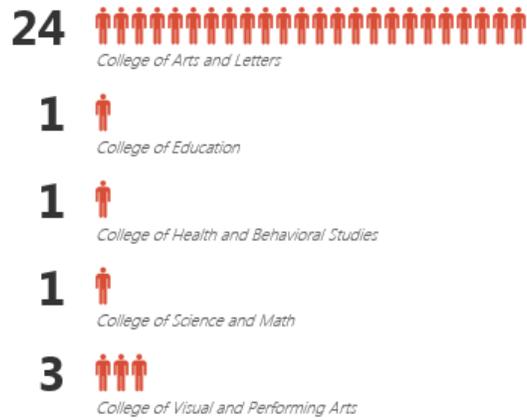
**FULL-TIME INTERNATIONAL FACULTY MEMBERS**

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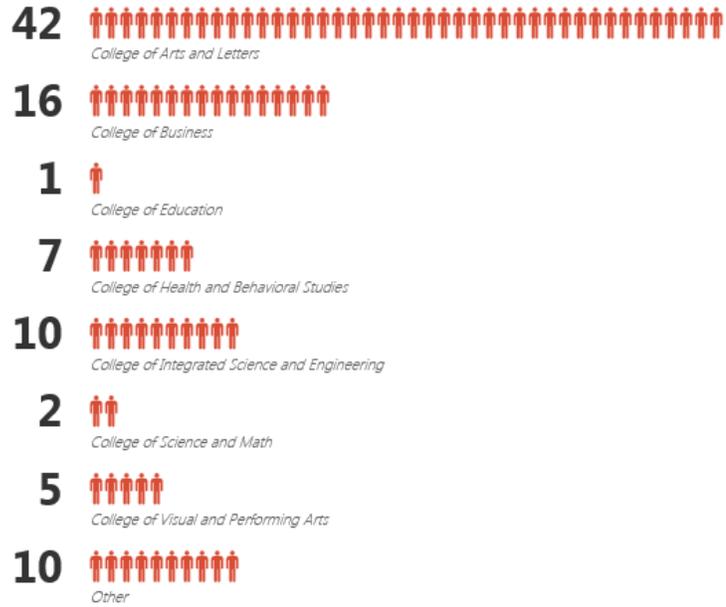
**PART-TIME INTERNATIONAL FACULTY MEMBERS**

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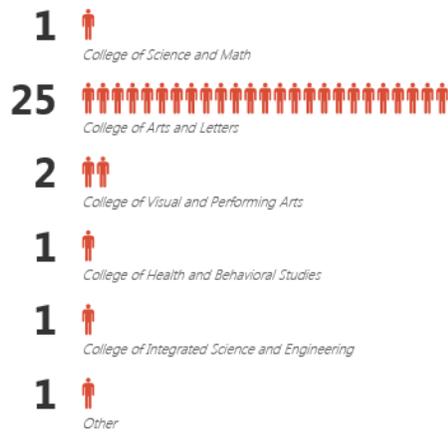


**In 2012: Full-time and part- time international faculty members by college**

**FULL-TIME INTERNATIONAL FACULTY MEMBERS**



**PART-TIME INTERNATIONAL FACULTY MEMBERS**



**In 2013: Full-time and part- time international faculty members by college**

**FULL-TIME INTERNATIONAL FACULTY MEMBERS**

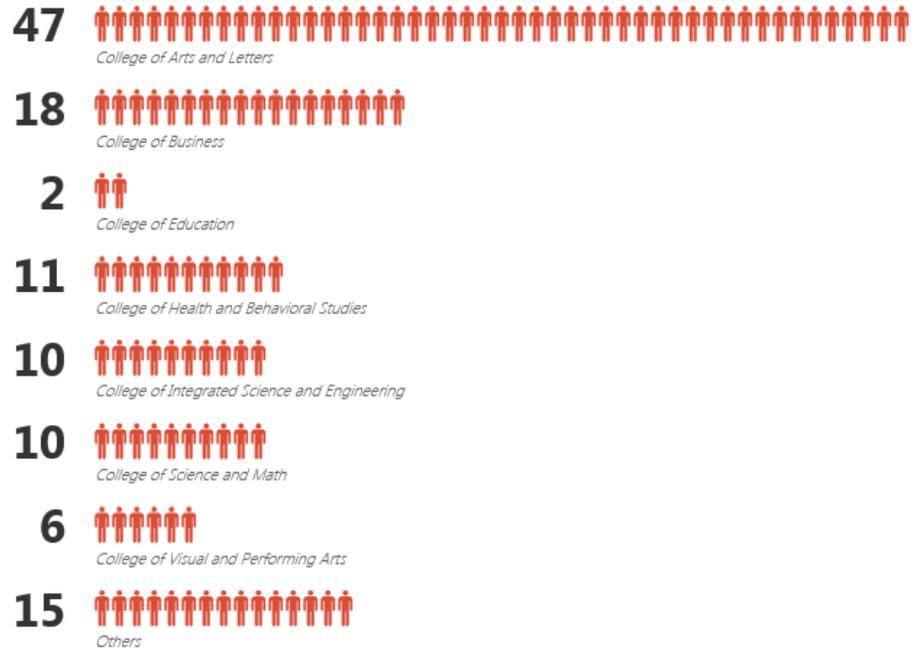


**PART-TIME INTERNATIONAL FACULTY MEMBERS**

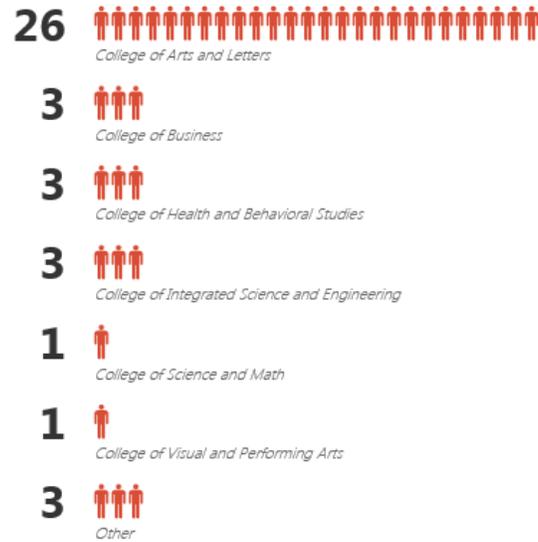


**In 2014: Full-time and part- time international faculty members by college**

**FULL-TIME INTERNATIONAL FACULTY MEMBERS**



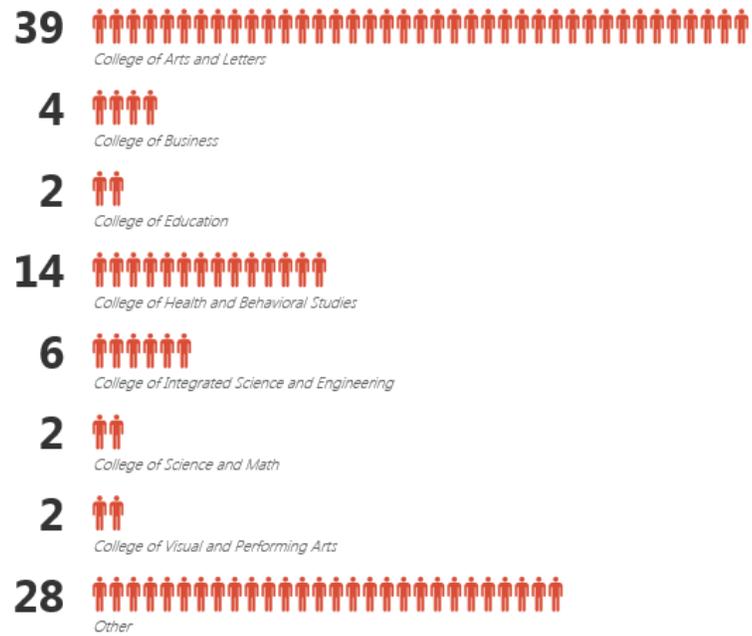
**PART-TIME INTERNATIONAL FACULTY MEMBERS**



**In 2015: Full-time and part- time international faculty members by college**

**FULL-TIME INTERNATIONAL FACULTY MEMBERS**

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**PART-TIME INTERNATIONAL FACULTY MEMBERS**

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**Appendix F: Institutional Review Board (IRB) Form with Approval Number**

James Madison University

Human Research Review Request

FOR IRB USE ONLY:			
Exempt:	Protocol Number:	1 <sup>st</sup> Review:	Reviewer:
Expedited: <b>X</b>	IRB: <u>16-0038</u>	2 <sup>nd</sup> Review:	Reviewer:
Full Board:	Received: _____	3 <sup>rd</sup> Review:	

<b>Project Title:</b>	<u><b>The Effect of Cross Cultural Differences on Team Performance within an Educational Setting: A mixed methods study</b></u>		
<b>Project Dates:</b> (Not to exceed 1 year minus 1 day)	From: <u>08/25/2015</u>	To: <u>08/24/2016</u>	
	MM/DD/YY	MM/DD/YY	
<b>Minimum # of Participants:</b>	<u>10</u>		
<b>Maximum # of Participants:</b>	<u>230</u>		
<b>External Funding:</b>	Yes: <input type="checkbox"/>	No: <input checked="" type="checkbox"/>	No: <input checked="" type="checkbox"/>
	<b>Internal Funding:</b>		Yes: <input type="checkbox"/>
	If yes, Sponsor: _____		No: <input checked="" type="checkbox"/>
	Will monetary incentives be offered with funding? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>		
	If yes: How much per recipient? <u>N/A</u> In what form? <u>N/A</u>		
<b>Must follow JMU Financial Policy:</b>	<a href="http://www.jmu.edu/finprocedures/4000/4205.shtml#_Toc460225002">http://www.jmu.edu/finprocedures/4000/4205.shtml#_Toc460225002</a>		
<b>Responsible Researcher(s):</b>	<u>Sevinj Iskandarova</u>		
<b>E-mail Address:</b>	<u>iskandsx@jmu.edu</u>		

<b>Telephone:</b>	<u>540-568-2589</u>
<b>Department:</b>	<u>Adult Education/Human Resource Development</u>
<b>Address (MSC):</b>	<u>6913</u>
<b>Please Select:</b>	<input checked="" type="checkbox"/> Faculty <input type="checkbox"/> Undergraduate Student <input type="checkbox"/> Administrator/Staff Member <input checked="" type="checkbox"/> Graduate Student
<b>(if Applicable):</b>	
<b>Research Advisor:</b>	<u>Dr. Oris Griffin McCoy</u>
<b>E-mail Address:</b>	<u><a href="mailto:griffiot@jmu.edu">griffiot@jmu.edu</a></u>
<b>Telephone:</b>	<u>(540) 568-6453</u>
<b>Department:</b>	<u>AHRD/LTLE</u>
<b>Address (MSC):</b>	<u>6913</u>

**Investigator:** Please respond to the questions below. The IRB will utilize your responses to evaluate your protocol submission.

1.  YES  NO Does the James Madison University Institutional Review Board define the project as *research*?

The James Madison University IRB defines "research" as a "systematic investigation designed to develop or contribute to *generalizable knowledge*." All research involving human participants conducted by James Madison University faculty and staff and students is subject to IRB review.

2.  YES  NO Are the human participants in your study *living* individuals?

"Individuals whose physiologic or behavioral characteristics and responses are the object of study in a research project. Under the federal regulations, human subjects are defined as: living individual(s) about whom an investigator conducting research obtains:

(1) data through intervention or interaction with the individual; or (2) identifiable private information."

3.  YES  NO Will you obtain data through *intervention* or *interaction* with these individuals?

"Intervention" includes both physical procedures by which data are gathered (e.g., measurement of heart rate or venipuncture) and manipulations of the participant or the participant's environment that are performed for research purposes. "Interaction" includes communication or interpersonal contact between the investigator and participant (e.g., surveying or interviewing).

4.  YES  NO Will you obtain *identifiable private information* about these individuals?

"Private information" includes information about behavior that occurs in a context in which an individual can reasonably expect that no observation or recording is taking place, or information provided for specific purposes which the individual can reasonably expect will not be made public (e.g., a medical record or student record). "Identifiable" means that the identity of the participant may be ascertained by the

investigator or associated with the information (e.g., by name, code number, pattern of answers, etc.).

5.  YES       NO Does the study present *more than minimal risk* to the participants?

"Minimal risk" means that the risks of harm or discomfort anticipated in the proposed research are not greater, considering probability and magnitude, than those ordinarily encountered in daily life or during performance of routine physical or psychological examinations or tests. Note that the concept of risk goes beyond physical risk and includes psychological, emotional, or behavioral risk as well as risks to employability, economic well-being, social standing, and risks of civil and criminal liability.

### **CERTIFICATIONS:**

For James Madison University to obtain a Federal Wide Assurance (FWA) with the Office of Human Research Protection (OHRP), U.S. Department of Health & Human Services, **all** research staff working with human participants must sign this form and receive training in ethical guidelines and regulations. "Research staff" is defined as persons who have direct and substantive involvement in proposing, performing, reviewing, or reporting research and includes students fulfilling these roles as well as their faculty advisors. The Office of Research Integrity maintains a roster of all researchers who have completed training within the past three years.

Test module at ORI website

<http://www.jmu.edu/researchintegrity/irb/irbtraining.shtml>

Name of Researcher(s)	Training Completion Date
Sevinj Iskandarova	02/08/2015
Dr. Oris Griffin Mc-Coy	07/08/2015

For additional training interests, or to access a Spanish version, visit the National Institutes of Health Protecting Human Research Participants (PHRP) Course at:

<http://phrp.nihtraining.com/users/login.php>.

**By signing below, the Responsible Researcher(s), and the Faculty Advisor (if applicable), certifies that he/she is familiar with the ethical guidelines and regulations regarding the protection of human research participants from research risks. In addition, he/she agrees to abide by all sponsor and university policies and procedures in conducting the research. He/she further certifies that he/she has completed training regarding human participant research ethics within the last three years.**

Sevinj Iskandarova

6/30/2015

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Principal Investigator Signature

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Date

Oris Griffin McCoy

6/30/2015

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Faculty Advisor Signature

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Date

### **Purpose and Objectives**

The purpose of this study is to determine and measure the effect of cross-cultural differences on team performance, highlight advantages and disadvantages of those cross-cultural differences within the team, and to apply the knowledge learned from this study to enhance team performance within an educational setting.

This study is a mixed methods research. The first stage of this research will gather information from JMU faculty members, through responding to questions regarding their experiences, challenges, and benefits of working on a multicultural team. The second stage of this research will be interviewing international faculty at James Madison University.

The findings may improve JMU organizational culture and provide a vision for increasing multicultural team performance. By highlighting the “benefits” and “challenges” cross cultural differences, the organization will possess greater knowledge in understanding and promoting more productive teams.

### **Research questions:**

Specifically this study will investigate the following research questions:

Quantitative:

**RQ1:** What effect do cross-cultural differences have on James Madison University (JMU, Harrisonburg, Virginia, USA) faculty members’ approaches to multicultural team environments within an educational setting?

Qualitative:

**RQ2:** What multicultural team experiences are JMU international faculty members reporting?

**RQ3:** What resources or strategies could improve team performance on a multicultural team within an educational setting?

Mixed methods:

**RQ4:** What results emerge from comparing the explanatory qualitative data about multicultural team experiences with outcomes from the quantitative data within an educational setting?

The lack of knowledge regarding cross cultural differences on team performance impacts an educational setting and creates a huge gap in understanding levels of personality on team performance. As a result, the educational workforce may suffer, as the lack of knowledge will result in an ineffective work environment in cross cultural situations. Educational settings often fail in this step because they cannot control employee's motivation by working on a multicultural team. The researcher hopes that the information gained from this study will be used to improve understanding of conceptual conditions under diversity and its effect on team performance, both theoretically and empirically in an academic organization.

### **Procedures/Research Design/Methodology/Timeframe**

Describe your participants. From where and how will potential participants be identified (e.g. class list, JMU bulk email request, etc.)?

Participants of the first part (quantity part) in this study will be faculty members (full time and part-time instructional and administrative faculty members) at James Madison University (JMU), Harrisonburg, Virginia, USA. This research will be conducted through the implementation of an anonymous web-based Qualtrics survey. The survey will be sent via a formal request through bulk email services to all faculty members- the population of which was reported to be nearly 960 full-time and 430 part-time faculty members, in 2014. The email will include a consent form with a cover letter requesting voluntary participation as well as a direct link to the Qualtrics survey. This research will filter participants according to full or part- time status, age, gender, and experience working on a multicultural team. This survey will contain quantitative responses (consisting of Likert Scaled Questions). Participation in this study will require 15-20 minutes.

Participants of the second part (qualitative part) in this study will be international faculty members at James Madison University (JMU), Harrisonburg, Virginia, USA. In this part, the research will consist of an interview that will be administered to individual participants through a face –to-face conversation. The participants will be asked to provide answers to a series of questions related to their experience on a multicultural team at JMU. Participation in this interview will require 20-25 minutes.

How will subjects be recruited once they are identified (e.g., mail, phone, classroom presentation)? Include copies of recruitment letters, flyers, or advertisements.

The population of faculty members will voluntarily choose whether to complete the survey sent through JMU bulk email services. As mentioned above, only faculty members will be asked to participate in the survey and international faculty members will be asked to participate in the interview process.

At the end of the interview, respondents will be asked to provide contact information if they wish to know the result of this research.

Describe the design and methodology, including all statistics, IN DETAIL. What exactly will be done to the subjects? (Emphasize possible risks and protection of subjects.)

This study qualifies as a two-stage an explanatory sequential mixed-methods of design. The first part, the participants will voluntarily and anonymously respond to the survey sent via bulk email to all faculty members. During the second part, the participants will voluntarily respond to the interview questions face-to face. No recruitment flyers or marketing efforts will be used.

#### Step One: Quantitative data collection

The survey should take about 15-20 minutes to complete and will be open for response from August through September. During this time, the quantitative data will be collected. Follow-up reminder emails will be sent periodically. The university reported that there are about 960 full-time and 430 part-time faculty members, in 2014, so the researcher assumes that at least 30% of faculty members will response. The survey will gather information through the Qualtrics online software program. The product will be as database with variables/scales.

#### Step Two: Quantity data analysis

In this step, all collected quantitative data will be analyzed procedure. Analyzing procedure includes: cleaning database, input to software, descriptive results and inferential results. The products will be shown as statistical results in tables, significance results, effect sizes and confidence intervals. This procedure will start from October to November.

#### Step Three: Qualitative data collection

The third part of this research will begin from December to January. The number of participants will be dependent on the number of interested participants among the international faculty members. The interview will take about 20-25 minutes. The interview will yield qualitative data and more in-depth answers, and opinions to discover the process, challenges and benefits of team performance within multicultural teams.

#### Step Four: Qualitative data analysis

Following up the qualitative data collection, the next step will be qualitative data analysis. This step will cover from February to the middle of March. The collected data will follow transcribing and coding procedures. The products will be list of codes and themes, and possible diagram linking themes.

Step Five: Interpretation of how qualitative data explains quantitative data

This is the last step of the research study. It will start from the mid of March to the mid of April.

Both these processes are intended to guide the faculty member's ratings of multicultural team performance and to share successful strategies with colleagues.

Will data be collected from any of the following populations?

- Minors (under 18 years of age);  
Specify Age: \_\_\_\_\_
- Prisoners
- Pregnant Women
- Fetuses
- Cognitively impaired persons
- Other protected or potentially vulnerable population
- Not Applicable

Data will only be collected from full-time faculty members at JMU who volunteer to participate in the study. The survey will be sent to faculty members, but only full-time instructional and administrative faculty will complete the full survey. Survey responses will be kept anonymous, and focus group answers will be labeled to preserve confidentiality.

All data will be stored separately and securely. Survey data will be protected in Qualtrics within the password protected accounts of the researcher and research advisor. Once the survey has been closed and results are downloaded for analysis, the data will be stored on the password protected laptops of the researcher and her advisor. Interview recordings will be recorded with a standard recorder borrowed from a JMU library. Digital files from the recorder's memory card will be transferred to the researchers' laptops, encrypted using the JMU Windows Encrypting File System (EFS) for windows 7 and stored with a secured password. Data will be deleted from the memory promptly after each interview. Interviews will take place in each faculty member's own office. The interviewees' responses will be kept in the strictest of

confidence. A numeric coding system will be employed (vice name or title) to mask the identity of each participant (i.e., Ann Horan = A1). Both researchers will share in the coding of these records, and recording files will be deleted once coding is complete. The audio files will be analyzed with QSR N6 (NVivo) qualitative system.

Signed informed consent forms will be stored in a locked drawer within the office of the primary researcher, which also requires a key for entry. Coded data from interview recordings will be stored on the password protected laptops of the researcher and advisor.

Where will research be conducted? (Be specific; if research is being conducted off of JMU's campus a site letter of permission will be needed.)

The research will take place at James Madison University (Harrisonburg, Virginia, 22807).

The survey will be sent to all James Madison University faculty members

The interviews will be conducted at the International Students and Scholars` Center (James Madison University Admin Complex #6 Suite 22, MSC 5731; Harrisonburg, Virginia 22807).

Will deception be used? If yes, provide the rationale for the deception:

No deception will be used in this research.

What is the time frame of the study? (List the dates you plan on collecting data. This cannot be more than a year, and you cannot start conducting research until you get IRB approval.)

The timeframe of this study will be August through the mid of April. The exact date of beginning date will depend on the time required for IRB approval of this plan as well as processing the initial bulk email request that will deliver the survey invitation to JMU faculty members. The first date will be when survey invitation sends to all faculty members. The quantitative data collection will cover August and September. The qualitative data collection will cover December and January. It will end with the last person`s interview meeting. Quantitative and qualitative data analysis will take an additional month each. The researcher`s final thesis will be submitted to The Graduate School by April 22<sup>nd</sup>, 2016. The full 364 days will cover data collection, analysis, and further work. The research may be submitted for potential publication in an academic journal and this work at academic conferences.

### **Data Analysis**

What methodology will be taken to ensure the confidentiality of the data (i.e., how and where data will be stored/secured, how data will be analyzed, who will have access to data, and what will happen to data after the study is completed?)

The researchers perceive no more than minimal risk of harm to the participants in either stage of this study. Survey data will be stored first in Qualtrics, which will strip identifying information from the responses and analyze the results into both numerical and pictorial summaries. The descriptive analyses performed by Qualtrics will later be stored on the password protected laptops of the researchers until the destruction of all records. A back-up record of this data will also be stored on a password protected external hard drive until the conclusion of the study. Anonymity will be promised to all who respond to the survey. Quantitative data analysis will involve mainly descriptive statistics, as the survey close ended questions. Qualtrics will aggregate descriptive statistics and visual representations of the average number of participated faculty members, the average faculty's age and working status.

The interview will rely on open-ended questions that require a qualitative data analysis process involving analysis and identification of themes, and coding of these themes into data that can be summarized visually or numerically. The session will be face-to-face and researcher will make note of participants' responses. In this way, the notes will be considered representative of a detailed, subjective of human perception.

### **Reporting Procedures**

**Who is the audience to be reached in the report of the study?**

This study will first be reported to the approval Thesis Committee for this project:

- Dr. Oris Griffin McCoy- Committee Chair
- Dr. Diane Wilcox- Committee Member & AHRD Program Director
- Dr. Amy Thek – Committee Member & Director of Assessment and Evaluation

The audience may extend to others in the JMU community –administrators, deans, department heads, instructors and students.

**How will you present the results of the research? (If submitting as exempt, research cannot be published or publicly presented outside of the classroom.)**

The formal presentation of this study will involve a defense of research decision to the Thesis committee members listed above. The research will also be presented in a research symposium at JMU, during spring in 2016. Finally, the researcher plans to write an article of this research for publication in an academic journal.

**How will feedback be provided to subjects?**

In the consent letter explaining the purpose and risks involved in this research. The consent letter also provides the researcher contact information. The participants can contact with researcher regarding questions or concerns.

### **Experience of the Researcher (and advisor, if student):**

**What is the prior relevant experience of the researcher, advisor, and/or consultants?**

Sevinj Iskandarova is a full-time, second year student in the Adult Education/ Human Resources Development Master`s program at James Madison University. She is employed as a Graduate Assistant in the Department of Learning, Technology, and Leadership Education where she assists faculty in research and teaching projects. She received her bachelor degree in School of Humanity and Social Science at Khazar University, Baku, Azerbaijan. She builds her research skills in the research methods and inquiry in education with Dr. Oris Griffin Mc-Coy. Sevinj`s research interest includes innovative applications of instructional technologies, performance assessment in the virtual classroom, adult learning, practice based learning, education management, and international education.

Dr. Oris Griffin McCoy is a professor in the Learning, Technology and Leadership Education Department of the JMU College of Education. She has been on the James Madison University faculty for over 26 years. Her commitment to student learning is exemplified by her long-term involvement with community service-learning, having served as faculty liason and a Professor in Residence (PIR) for several inner city schools in Richmond, VA for over six years; she also served as the Director of the PIR Program for three years. Dr. Oris Griffin McCoy teaches both undergraduate and graduate level courses. She received her Ed.D. in Higher Education: Administration from Western Michigan University. Her research interest includes student diversity, leadership, student access and retention. She has also served on many research committees and is aware of the protocols and procedures of conducting research. Dr. Griffin McCoy is sensitive to the expectations of following IRB guidelines, particularly where human subjects are concerned.

Past and current research methods and other relevant courses that Dr. Oris Griffin McCoy has taught at JMU include:

- AHRD 540: Leadership and Facilitating
- AHRD 680: Reading and Research
- AHRD 690: Supervision of Graduate Teaching Assistance
- AHRD 698: Comprehensive Continuance
- AHRD 699: Thesis Continuance
- AHRD:700: Thesis
- LTLE 245: Leadership In Organizational Settings
- AHRD 570: Diversity and Ethics

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