Leadership Styles, Diversity in Work Groups, Work Group Effectiveness, and Turnover Intention

Marva L. Dixon
Lynn University

Follow this and additional works at: https://spiral.lynn.edu/etds

Recommended Citation
https://spiral.lynn.edu/etds/29

This Dissertation is brought to you for free and open access by the Theses and Dissertations Collections at SPIRAL. It has been accepted for inclusion in Student Theses, Dissertations, Portfolios and Projects by an authorized administrator of SPIRAL. For more information, please contact liadarola@lynn.edu.
LEADERSHIP STYLES, DIVERSITY IN WORK GROUPS, WORK GROUP EFFECTIVENESS, AND TURNOVER INTENTION

DISSERTATION
Presented in Partial Fulfillment of the Requirements for the Degree of
Doctor of Philosophy
Lynn University

By
Marva L. Dixon

Lynn University
2007
LEADERSHIP STYLES, DIVERSITY IN WORK GROUPS, WORK GROUP
EFFECTIVENESS, AND TURNOVER INTENTION

Marva L. Dixon, Ph.D.

Lynn University, 2007

Copyright 2007, by Marva L. Dixon All Rights Reserved

U.M.I.
300 N. Zeeb Road
Ann Arbor, MI 48106
ACKNOWLEDGMENT

The journey for completing this dissertation was a rigorous long pathway that tested my endurance, patience, determination, commitment, perseverance, and tenacity. The road on the journey was not always straight. Along the way, there were curves, road blocks, detours, caution lights, red lights, speed bumps and even flat tires. However, success was realized because many people provided support and assistance. To everyone who assisted on the journey, I express my heartfelt thanks and gratitude.

A special word of thanks to Dr. Joan Scialli who, with her stringent guidelines, ensured that I developed a research plan that had a solid foundation for successful completion. Thanks also for being so easily accessible (almost 24/7 access) to students like myself who worked long-distance to complete this project. My sincere thanks to Dr. Laura Hart, my Committee Chair who provided counsel and guidance together with other committee members, Dr. Jennette Francis and Dr. Eldon Bernstein who all contributed suggestions and recommendations for improving my research design. Special thanks to the research librarian Ms. Judi Alsdorf for her tireless efforts and support with many research initiatives.

Conducting a research study in a production manufacturing company was not without its challenges especially when the key support person for the company became seriously ill from a heart attack, and was hospitalized indefinitely just after the Internal Review Board approved the research plan for data collection. I am grateful to the other leadership personnel who later got involved in the process, and after many meetings and discussions, assisted with the data collection.
Last but not least, my deepest appreciation and gratitude to my family members and friends who provided ongoing support, encouragement, and prayers along the way. I especially want to thank my husband Lloyd, daughter Marsha, mother Violet Fenton and friend Dr. Jan Case who stood behind me as a tower of strength and support, always expressing belief in my ability to accomplish this mission. Thanks again to everyone who made the completion of this scholarly pursuit, a dream come true.
LEADERSHIP STYLES, DIVERSITY IN WORK GROUPS, WORK GROUP EFFECTIVENESS, AND TURNOVER INTENTIONS

Marva L. Dixon

Abstract

The emergence of our borderless world has resulted in the nationwide intermingling of people of differing demographics and social cultural backgrounds, working together for the common good of organizations. This evolving growth in workforce diversity has resulted in an ever-increasing appearance of diverse work groups in almost every industry because history has shown that “none of us is as smart as all of us” working together (Blanchard & Bowles, 2001, p.111). Many organizations and institutions, including Fortune 500 companies, are utilizing work groups for various types of tasks and projects. Motorola, for example, has approximately 4,000 work groups operating in its facilities around the globe, and research has shown organization-wide cost saving benefits (Cohen & Bailey, 1997).

Collaborative performance and work group effectiveness are benefits of diverse work groups because the total group’s contribution becomes more significant than individual efforts. Challenges in group dynamics, however, often require leadership to ensure the group’s effectiveness and to guard against employees leaving their organizations. The literature is very explicit about the crucial role of leadership in ensuring that work groups are effective (Jung & Sosik, 2002; Waldman, Ramirez, House and Puranam, 2001; House, 1971; & Fielders, 1967). In spite of this, only a few researchers have focused on the concept of leadership style and its relationship to the collaborative efforts of work groups. (Duemer, L. S., et al., 2004).
Research has been conducted to explore the potential relationship between diverse work groups and business profitability performance. However, the literature has done little to study the influence of leadership on building working relationships with diverse work groups for effectiveness and the eliminating employees’ intention to quit their employment, otherwise known as turnover intentions.

This research explored the potential relationship among Path-goal leadership styles, diverse work groups, work group effectiveness and turnover intention for 242 employees working for a manufacturing organization. Work groups have goals and someone has to take the lead to ensure the group is effective in meeting its goal. Invariably, work group will consist of people with differences because no two people are alike. In a work group the person who takes responsibility for leadership will have a special style that may impact the work group’s effectiveness. There is no known research that addresses the combination of these variables: leadership styles, work group diversity, work group effectiveness and turnover intentions. This study combined the examination of these four variables to explore their potential relationships. Multiple regressions were conducted to test the six hypotheses in this study. One hypothesis was fully supported, four hypotheses were partially supported and one hypothesis was not supported. Limitations of the study regarding generalization and recommendations for future research to replicate the study are also included.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Acknowledgment</th>
<th>ii</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>iv</td>
</tr>
<tr>
<td>List of Tables</td>
<td>ix</td>
</tr>
<tr>
<td>List of Figures</td>
<td>xii</td>
</tr>
<tr>
<td>Organization of the Study</td>
<td>1</td>
</tr>
</tbody>
</table>

## CHAPTER I: INTRODUCTION TO THE STUDY

- Introduction and Background to the Problem 3
- Purpose 5
- Definition of Terms 6
- Justification of the Study 10
- Delimitations of the Study 12

## CHAPTER II: REVIEW OF THE LITERATURE, THEORETICAL FRAMEWORK AND HYPOTHESES

- Review of the Literature 13
  - Introduction 13
  - Theoretical Review of Turnover Intention 14
  - Empirical Review of Turnover Intention 16
  - Theoretical Review of Leadership styles 20
  - Empirical Review of Leadership Styles 24
  - Theoretical Review of Diverse Work Groups 30
  - Empirical Review of Diverse Work Groups 35
  - Theoretical Review of Work Group Effectiveness 49
  - Empirical Review of Work Group Effectiveness 53
- Theoretical Framework 58
- Research Question 65
- Hypotheses 65

## CHAPTER III: RESEARCH METHODOLOGY

- Quantitative Methods 70
- Research Design 70
- Population and Sampling Design 71
- Instrumentation 73
# TABLE OF CONTENTS

## Chapter IV: Results
- Final Data Producing Sample
- Research Question 1
- Factor Analyses on Survey Instruments
- Internal Consistency and Reliability of Subscales

## Chapter V: Discussion
- Interpretation
- Output measures
  - Hypothesis 1
  - Hypothesis 2
  - Hypothesis 3
  - Hypothesis 4
  - Hypothesis 5
  - Hypothesis 6
- Hypotheses testing
  - Outcomes
    - Hypothesis 1
    - Hypothesis 2
LIST OF TABLES

<table>
<thead>
<tr>
<th>Number</th>
<th>Table Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-1</td>
<td>Frequencies and Percent of Race, Ethnicity, Education and Occupational levels</td>
<td>87</td>
</tr>
<tr>
<td>4-2</td>
<td>Hollingshead Index of Social Position (ISP)</td>
<td>88</td>
</tr>
<tr>
<td>4-3</td>
<td>Eigenvalues and Extraction Sum of Squared Loadings for Visible Dissimilarity</td>
<td>89</td>
</tr>
<tr>
<td>4-4</td>
<td>Eigenvalues and Extraction Sum of Squared Loading for Value/Informational Dissimilarity</td>
<td>90</td>
</tr>
<tr>
<td>4-5</td>
<td>Eigenvalues and Extraction Sum of Squared Loading for Instrumental Leadership</td>
<td>91</td>
</tr>
<tr>
<td>4-6</td>
<td>Eigenvalues and Extraction Sum of Squared Loading for Supportive Leadership</td>
<td>92</td>
</tr>
<tr>
<td>4-7</td>
<td>Eigenvalues and Extraction Sum of Squared Loading for Participative Leadership</td>
<td>93</td>
</tr>
<tr>
<td>4-8</td>
<td>Eigenvalues and Extraction Sum of Squared Loadings for Turnover Intentions</td>
<td>93</td>
</tr>
<tr>
<td>4-9</td>
<td>Eigenvalues and Rotated Sum of Squared Loadings for Work Group Effectiveness</td>
<td>95</td>
</tr>
<tr>
<td>4-10</td>
<td>Rotated Component Matrix for Work Group Effectiveness Analysis</td>
<td>96</td>
</tr>
<tr>
<td>4-11</td>
<td>Cronbach’s Alpha for each Survey Factor</td>
<td>97</td>
</tr>
<tr>
<td>4-12</td>
<td>Means and Standard Deviations for Hypothesis 1</td>
<td>99</td>
</tr>
<tr>
<td>4-13</td>
<td>Multiple Regression Analysis for Hypothesis 1</td>
<td>100</td>
</tr>
<tr>
<td>Number</td>
<td>Table Description</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>4-14</td>
<td>Linear Regression Correlation Coefficient for Hypothesis 1</td>
<td>100</td>
</tr>
<tr>
<td>4-15</td>
<td>Means and Standard Deviations for Hypothesis 2</td>
<td>101</td>
</tr>
<tr>
<td>4-16</td>
<td>Multiple Regression for Hypothesis 2</td>
<td>102</td>
</tr>
<tr>
<td>4-17</td>
<td>Linear Regression Correlation Coefficient for Hypothesis 2</td>
<td>103</td>
</tr>
<tr>
<td>4-18</td>
<td>Means and Standard Deviations for Hypothesis 3</td>
<td>104</td>
</tr>
<tr>
<td>4-19</td>
<td>Multiple Regression for Hypothesis 3</td>
<td>105</td>
</tr>
<tr>
<td>4-20</td>
<td>Linear Regression Correlation Coefficient for Hypothesis 3</td>
<td>105</td>
</tr>
<tr>
<td>4-21</td>
<td>Means and Standard Deviations for Hypothesis 4</td>
<td>107</td>
</tr>
<tr>
<td>4-22</td>
<td>Multiple Regression for Hypothesis 4</td>
<td>107</td>
</tr>
<tr>
<td>4-23</td>
<td>Linear Regression Correlation Coefficient for Hypothesis 4</td>
<td>108</td>
</tr>
<tr>
<td>4-24</td>
<td>Means and Standard Deviation for Hypothesis 5</td>
<td>109</td>
</tr>
<tr>
<td>4-25</td>
<td>Multiple Regression for Hypothesis 5</td>
<td>110</td>
</tr>
<tr>
<td>4-26</td>
<td>Linear Regression Correlation Coefficient for Hypothesis 5</td>
<td>110</td>
</tr>
<tr>
<td>4-27</td>
<td>Means and Standard Deviations for Hypothesis 6</td>
<td>111</td>
</tr>
<tr>
<td>4-28</td>
<td>Multiple Regression for Hypothesis 6</td>
<td>113</td>
</tr>
<tr>
<td>4-29</td>
<td>Linear Regression Correlation Coefficient for Hypothesis 6</td>
<td>114</td>
</tr>
<tr>
<td>Number</td>
<td>Research Hypotheses and Results</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>5-1</td>
<td></td>
<td>124</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-1</td>
<td>Hypothesized model of variables tested and to be tested</td>
<td>68</td>
</tr>
</tbody>
</table>
Organization of the Study

The first chapter of this study provides an overview that outlines the background to the issue and purpose of the study. Also included in Chapter 1 are definitions of terms, assumptions, justification and delimitations. This chapter also introduces the correlational design of the multiple regressions model for this research.

Chapter II reviews existing theoretical and empirical literature about leadership styles, diverse work group effectiveness and turnover intentions. Also included in this chapter are findings from the critical analysis of the literature about the relationship among leadership styles, diverse work group effectiveness and turnover intentions. The hypothesized conceptual models have been developed from the core foundational findings in the literature.

Chapter III provides an in-depth account of the proposed methodology for this research. The chapter includes the study design, population and sample, survey instruments, procedures and ethical aspects, and plans for analysis and evaluation of the data collected. The instrument design section includes discussion of the conceptual model and the scales utilized to measure leadership styles, diverse work group, work group effectiveness, and turnover intentions. The data analysis section includes justification for the use of multiple regression modeling and the assessment of construct validity for all measures addressed in the study.

Chapter IV presents the test results of this study that explores the hypothesized relationship between and among leadership styles, diversity in work groups, work group effectiveness, and turnover intention.
Chapter V provides a discussion of the results reported in Chapter IV. This study presents the first examination and exploration of the relationships between and among leadership styles, diversity in work groups, work group effectiveness, and turnover intention.
CHAPTER I

INTRODUCTION TO THE STUDY

Introduction and Background to the Problem

In organizations and institutions diverse work groups require leadership that can motivate and inspire work groups to embrace the benefits and challenges of work force diversity (House and Dessler, 1974; Hertzberg, 1968). Leadership is also required to ensure organizational effectiveness by minimizing employee turnover within work groups (Gil, Rico, Alcover, & Barrasa, 2005; Katzenbach, 1997). Studies have shown that members of work groups desire favorable working conditions that include satisfaction with the organization’s operations and the perception of fairness from leadership (Sousa-Posa & Henneberger, 2004; Peterson, 2004; Khatri, Fern, & Budhwar, 2001; Aquino, Griffeth, Allen, & Hom, 1997). When an employee perceives inequity or dissatisfaction with an organization’s work group structure, the employee will often consider seeking new employment opportunities. This is referred to as “turnover intention” in the literature (Hwang & Kuo, 2006; Samad, 2006; Abraham, 1999). It is noted extensively in the literature that when a group member becomes dissatisfied with the work group’s leadership style, the group member often makes plans to leave the employer (Bigliardi, Petroni, & Dormio, 2005; Chen & Silverthorne, 2005; Peterson, 2004; Vandenber & Nelson, 1999; Hom, Griffeth, & Sellaro, 1984;; Mobley, 1977). This phenomenon is true for all organizations, including Fortune 500 companies such as Motorola, that utilize diverse work groups and manage the threat of turnover intentions (McMillan-Capehart, 2006; Peterson, 2004; Cross & Travaglione, 2004; Abraham, 1999; Cohen & Bailey, 1997).
Results from a study of 11,526 employees working for manufacturing companies revealed that if the turnover of frontline employees working in the manufacturing industry was reduced from 17.8% to 6.8%, there would be a net annual savings of more than 18 million dollars in overall operating cost. When the number of managerial staff was included, the results showed an annual saving of approximately $40 million (Anonymous, 2005).

Findings like these explain why employees' turnover intentions are of great interest to organizations and researchers alike. Studies on turnover intentions have been extensively documented by researchers because intention is the precursor to the actual act of turnover, which disrupts work group effectiveness and increases organizations' expenses (Rao & Argote, 2006; Sousa-Poza & Henneberger, 2004; Peterson, 2004; Taplini, Winterton, & Winterton, 2003; Price, 1977). In research built on Hackman and Oldham's (1976) job characteristic model, there is evidence to suggest that employees' perception of their job characteristics often creates dissatisfaction, and results in turnover intentions. The job characteristics theory posits that work group concepts of skill variety, autonomy, identity, significance, and feedback from leadership are tools that facilitate employees' psychological need for responsibility, meaningfulness, and knowledge of outcomes on their jobs. This, in turn, creates a ripple effect of fostering group members' satisfaction, work group effectiveness and minimization of turnover intentions (Good & Fairhurst, 1999; Pearson, 1995; Porter and Steers, 1973)

Work groups are indispensable but create challenges for work group effectiveness due to the threat of turnover intention possibilities (McMillan-Capehart, 2006). As a result, organizations need leaders with effective leadership styles to maintain their
organization’s competitive edge in the work force (Peters and Waterman, 1982; Porter 1980). Almost all organizations use diverse work groups for daily task completion, so leaders who are effective change agents are in demand to provide organizations with the flexibility required to lead these diverse work groups (Cohen & Bailey, 1997).

A limited number of research studies have focused on the concept of leadership styles and their relationship to diverse work group effectiveness (Duemer, et al., 2004). This has created a gap in the literature, namely that of examining the relationship among leadership style, diverse work groups, work group effectiveness and turnover intentions. In this study, this researcher aims to fill this gap partially by exploring the potential relationship of leadership styles, diverse work group, work group effectiveness, and turnover intentions at a manufacturing company.

**Purpose**

The broad purpose of this non-experimental, correlational (explanatory) study is to explain the potential relationship among three Path-goal leadership styles (instrumental, participative and supportive), diverse work groups (demographic and perceived dissimilarity), work group effectiveness, and turnover intentions. Specific purposes of the study are to:

1. Explain the potential relationships among leadership styles (instrumental, participative and supportive), and work group effectiveness of employees.

2. Explain the potential relationships between the degree of diversity (demographic and perceived similarity/dissimilarity) in work groups and work group effectiveness.
3. Explain the potential relationships among leadership styles (instrumental, participative and supportive), diversity (demographic and perceived dissimilarity) in work groups and work group effectiveness.

4. Explain the potential relationships between leadership styles (instrumental, participative and supportive) and turnover intentions.

5. Explain the potential relationships between diversity (demographic and perceived dissimilarity) in work groups and turnover intentions.

6. Explain the potential relationships among diversity in work groups, leadership styles, work group effectiveness and turnover intentions.

**Definition of Terms**

Several explanatory models are tested in this study. Depending upon the model, work group effectiveness is defined as an independent variable or dependent variable. Turnover intention is defined as a dependent variable. Leadership styles, work groups and diversity in work groups are independent and attribute variables (causal).

**Work Group Effectiveness**

*Theoretical Definition.* Work group effectiveness is the level of efficient potential solutions and innovative ideas among organizational subgroup members that results in profitable organizational results. Work groups’ effectiveness provides measures of organizational success and value-added benefits (Knouse & Dansby, 1999).

*Operational Definition.* Work group effectiveness will be measured using Part IV of the six part Defense Equal Opportunity Management Institute’s (DEOMI) Occupational Climate Survey (DEOCS), *Perceived Work Group Effectiveness* scale. This
survey consists of 12 items on a 5-point-Likert-type scale (DEOMI, 2004). See Appendix A, Part 3.

**Turnover Intentions**

*Theoretical Definition.* Turnover intention is defined as the last sequential thinking process of an employee who is considering and/or making plans to leave an employer (Chiu and Francesco, 2003). Studies suggest that turnover intentions from an organization are a strong indicator of the employee’s plan to leave the employer because turnover intentions consistently correlate with turnover (Cammann, et al., 1983; Mobley, et al, 1979).

*Operational Definition.* This study will focus on the voluntary choice employees make to leave their employer. Turnover intentions will be measured with the *Turnover Intention* 3-Item Likert rating scale developed as a part of the Michigan Organization Assessment Questionnaire (Cammann, et al., 1983). See Appendix A, Part 4.

**Leadership Styles**

*Theoretical Definition.* Leadership is a key component for an organization to accomplish its goals, achieve its mission, and establish its vision. Leadership also mobilizes staff members to ensure resources are properly utilized for the organization’s effectiveness (Armitage, 2006). Previous studies (Komives, et al., 2005; Rost, 1993) have shown that leaders are pace setters who re-direct organizations’ foci from the obsolete industrial era to the new technologically oriented global organization. People who display this kind of leadership are seen as change agents who transform organizations and implement cutting-edge approaches in business operations (Garman & Johnson, 2006). The Fiedler (1967) study examines how the change agents often change
their styles of leadership to meet different situations. This changing of leadership styles has its roots in Fiedler’s contingency theory that posits that leadership styles are often adjusted to various situations as they arise. One of the possible situational leadership strategies that can be adopted is the Path-goal leadership style developed from the Path-goal leadership theory (House & Dessler, 1974).

The Path-goal leadership theory is based on the premise that leadership styles influence the performance of subordinates. Path-goal leadership styles are defined as instrumental (IL) when the leader initiates structure in a work group, supportive (SL) when the leader demonstrates support, participative (PL) when the leader involves group members in the decision making process, and achievement oriented (AOL) when the leader sets challenging goals to assist subordinates to perform at their highest levels (House & Dessler, 1974; Kest, 2006).

**Operational Definition.** In this study, leadership styles are measured by subordinates’ perceptions using the 20-item, 5-point frequency rating scale called Participative Leadership Behavioral Scale (PLBS) developed by House & Dessler (1974). See Appendix A, Part 2. This scale has been used in the literature to measure three key areas of leadership styles; namely: instrumental leadership, supportive leadership, and participative (House & Dessler, 1974). Therefore, for this study leadership styles only include these three areas and does not include achievement oriented leadership (AOL) styles.

**Work Groups**

**Theoretical Definition.** Work groups in organizations are defined as members who report to the same supervisor with intact boundaries, interdependence and
differentiated member roles (Seashore, et al., 1983). Work groups have great prominence in an organization because of their contributions to organizational efficiency and effectiveness. As a result, understanding work groups is crucial to understanding the workplace phenomena.

**Operational Definition.** In this study, the work group sample consists of 260 employees of a manufacturing company. Employees in this organization are assigned to 19 different work groups. Two groups of supervisory and non-supervisory workers comprise the white-collar groups. The remaining 17 groups consist of blue-collar skilled and unskilled employees working in the production area of the manufacturing company. Skilled workers include technicians, welders, electricians, machinist, painters, and mechanics. The unskilled workers serve as laborers in cleaning, packing, compiling, storing and distributing products.

**Diversity in Work Groups**

**Theoretical Definition.** Work groups consist of members who work interdependently and collaboratively to accomplish common goals and objectives (Kirkman, Tesluk, Rosen, 2004). Studies on diversity in work groups have focused on two key areas of diversity. One area of diversity includes the visible diversity such as gender, race/ethnicity and age. The other area includes the non-visible such as educational background and tenure (Hobman, Bordia, & Gallois, 2003; Randel, 2002; Pelled, Eisenhardt, Xin, 1999). Diversity in work groups is therefore defined as the different attributes, perspectives and varied backgrounds people bring to their work groups (Mannix & Neale, 2005; Randel, 2002; Miller & Salkind, 2002; Valentine, 2001). Organizations rely on these diverse work groups to resolve the complexities of their daily
operations. Diversity (demographic and perceived dissimilarity) in work groups have objective and subjective characteristics (Hobman, et al., 2003). Objective diversity refers to observance of group members’ visible demographic characteristics (age, gender or ethnicity) and relative characteristics (tenure, education and profession). Subjective diversity relates to the perceived dissimilarity individuals have of themselves as compared with others in the group (Hobman, et al., 2003).

**Operational Definition.** In this study, a 6-item Demographic Profile (objective diversity) developed by the researcher will be used to measure objective characteristics. Age and job tenure will be reported by participants in years. Gender, education, race/ethnicity and occupational levels will be measured by participant responses to checklist items.

Educational and occupational levels have been measured in the literature using Hollingshead’s scale (as cited in Miller & Salkind, 2002). In this study, Hollingshead’s scale will also be used to measure educational and occupational levels. See Appendix A, Part 1.

The researcher will use the Hobman et al. (2003) Perceived Dissimilarity Scale to measure subjective perception of work group members’ level of diversity. The scale is a 6-item instrument that measures perceived dissimilarity. See Appendix A, Part 1.

**Justification**

No known study has combined the examination of leadership styles, diversity in work groups, work group effectiveness and turnover intention relationships; therefore, this study bridges a gap in the literature. Existing studies have examined, separately, each variable (leadership styles, turnover intentions, diversity in work groups and work
group effectiveness). Other studies have examined combinations of two of the four variables such as leadership and work groups, diversity in work groups and effectiveness, and leadership styles and turnover intentions. Even though studies have recommended the combination of variables, this has not yet been done (Hsu et al., 2003; Moshavl, Brown, & Dadd, 2003; Silverthorne, 2001; Udo, Guimaraes, & Igbaria, 1997).

Many published studies include two variables, but they have been confined to laboratory subjects in contrived settings, rather than “real life” field studies (Williams & O’Reilly, 1998). As a result, researchers have advocated more field studies of the general population to balance the number of field studies vs. laboratory studies with students (Webber & Donahue, 2001). This study will therefore help in bridging the gap in the literature by providing findings from a field study of a U.S. manufacturing operation.

Because work groups often make up the fabric of an organization and are inherently diverse, the literature indicates that the “mix” of diversity in work groups create challenges, as well as benefits, for organizations (Valentine, 2001). To manage the challenges and realize the benefits, work groups need leadership to establish and sustain the group’s effectiveness (Kim, K., & Organ, D. 1986). Leadership styles help to maintain work group structure and minimize the likelihood of group members’ turnover intentions (Hsu, Hsu, Huang, and Li, 2003; Silverthorne, 2001). Since the literature seems to indicate existing relationships among different combinations of the variables of leadership styles, diverse work group effectiveness and turnover intentions, this study will contribute to bridging the gap in the literature by combining all the variables of leadership styles, diversity in work groups, work group effectiveness and turnover intention. The study was feasible because it could be easily implemented with the
participants who were available to the researcher and the concepts in the theoretical framework were measurable.

**Delimitations of the Study**

The following are the delimitations for this focused area of research:

1. The geographic setting was limited to the continental United States to minimize the complexities of international organizational differences.
2. Participants in the study had to be able to read, write and speak English.
3. Participants could not be less than 18 years of age.
4. Participants included white and blue collar workers at a U.S. manufacturing organization.
5. All participants were employees of the manufacturing operation.
6. All employees participated in the survey without any coercion.
CHAPTER II
LITERATURE REVIEW, THEORETICAL FRAMEWORK, RESEARCH QUESTIONS, AND HYPOTHESES

Introduction

The literature provides a wealth of information on the causes of worker turnover in different industries, and the manufacturing industry is no exception (Dewett, 2003; Dagher, D’Netto and Sohal, 1998). Existing theoretical studies at the industry level focus on turnover as a result of dissatisfaction in work groups (Porter & Steers, 1973; Vroom, 1964). The literature examines employees’ perception of the causes of dissatisfaction in work groups and the relationship of leadership styles to work group effectiveness (Hsu, et al., 2003, Silverthorne; 2001; Paul & Ebadi, 1989). Existing literature also consists of studies on the dynamics of work groups and turnover intentions when perceived expectations are not met (Porter & Steers, 1973).

This chapter provides a critical analysis of the literature that addresses employees’ turnover intentions, leadership styles, diversity in work groups and work group effectiveness. The four segments of the chapter include the literature review, theoretical framework, research questions, and hypotheses for the proposed study.

Literature Review

This review of the literature is designed to address the following research question: What is known about the relationship between and among leadership styles (instrumental, participative, and supportive), diversity in work groups (perceived dissimilarity), work group effectiveness, and turnover intention of employees? The review covers scholarly literature on leadership, work group diversity, work group
effectiveness, and turnover intentions from books, journals and articles published worldwide from 1965 – 2007. The literature includes research in fields of business, education, and organizational psychology.

This literature review will provide: (1) definition of the variables, (2) exploration of the theoretical and empirical literature relating to the variables and (3) exploration of various methods used to examine the variables. The four variables in the study include: (1) leadership, (2) diversity in work groups, (3) work group effectiveness and (4) turnover intentions.

**Turnover Intention**

Turnover intention is defined as the last stage in a sequence of decision-making thought processes for a person who is planning to leave his/her employer (Chiu and Francesco, 2003). Theoretical and empirical literature indicates that turnover is detrimental to organizational effectiveness and is the net result of employees’ intention to leave the employer (Loi, Hang-Yue, & Foley, 2006; Khatri, Fern, & Budhwar, 2001; Cammann, Fichman, Jenkins, & Klesh, 1983). Turnover results in the loss of talented employees from organizations, as well as the added expense of recruitment and training (Loi, Hang-Yue, & Foley, 2006). In organizations, employees do not work totally independently, nor do they function in a vacuum without interaction with others. On the contrary, employees are members of work groups, and work groups invariably have leadership. Work groups are never homogenous because they consist of people who are different. These differences create diversity in the group.
Review of the literature on Turnover Intention Theory

The literature indicates that turnover intention from an organization is a strong indicator of an employee’s plan to leave the employer because turnover intentions consistently correlate with turnover (Khatri, et al., 2001; Cammann, et al., 1983; Mobley, et al. 1978). A theoretical study by Peterson (2004) addresses the theory of organizational equilibrium, positing that employees’ satisfaction in their work groups reduces the likelihood of turnover from the employer. The Peterson (2004) study was conducted as a follow-up to his 2002 study, which was built on Porter and Steers’ (1973) theory proposing the Met-Expectation Model. The Met-Expectation Model suggests that employees’ expectations are tied to their satisfaction within their work groups. If employees’ expectations are not met and the employee becomes dissatisfied, the likelihood of turnover intention often increases.

Mobley, et. al. (1979) research is tied to Adams’ (1965) study that posits the equity theory that emerged from employees’ unmet expectations. The Adams (1965) equity study proposes that group members have expectations that they want to realize when they are members of work groups. This theory proposed that when work group members perceive inequity in their groups and their expectations are not met, this often results in dissatisfaction and possible turnover intentions. Mobley’s (1979) theory that proposes that emotional dissonance is the reason for employees’ perception about their work groups and the relatedness to the subconscious appraisal of the group’s working conditions and unmet expectations appear to be all rooted in Adams’ (1965) theory.
Based on the appraisal, a work group member may determine that unsatisfactory conditions are a source of emotional dissonance and, therefore, will consider leaving his/her employer.

Valentine (2001) addressed the human capital concept of valuing each work group member’s role and contribution to the group. Valentine concluded that when leaders valued the organization’s greatest asset, the human resources of work group members, cohesiveness improves in the groups. This cohesiveness within the group helps to eliminate turnover intentions.

Peterson (2004) pointed out the shortcomings of focusing on theories that were individualist to work group members because those theories eliminate the role of organizations’ leadership in work group effectiveness. This gap in the literature prompted Peterson (2004) to recommend the inclusion of leaderships’ impact on work groups and their role in curtailing turnover intentions.

**Review of Empirical Literature on Turnover Intentions**

The empirical literature on turnover intentions included Abraham’s (1999) study that tested the equity theory for a relationship among emotional dissonance, job satisfaction, organizational commitment, and turnover intentions. This study, which is tied to many previous studies on worker satisfaction and turnover intentions, proposed that social support moderates the emotional dissonance-job satisfaction relationship of work group members (Mobley, 1979; Porter & Steers, 1973; Vroom, 1964; March & Simon, 1958). Seventy-nine customer service representatives from four industries in the United States participated in the study.
The researcher used Adelmann's (1989) Emotional Labor Scale to measure work group members' need for emotional expression on the job, and Hackman and Oldham's (1978) 5-item, 7-point scale to measure work group members' job satisfaction. Porter, Steers, Mowdy, and Boulian's (1974) 9-item Organizational Commitment Questionnaire and the Michigan Organizational Assessment 3-item Turnover Intention Questionnaire were also used in this study. Results from the study concluded that work group members' perception of equity in their groups, influenced their level of satisfaction and their decisions to remain with their employers. All instruments used in the study were found valid and reliable (Seashore, et al., 1982; Cammann, et al., 1979).

Research by Breukelen, Van Der Vlist & Steensma (2004) studied whether job satisfaction, commitment, tenure and age were predictors of turnover intentions. The researchers proposed that tenure and age were the greatest predictors of turnover intention because tenure was indicative of an employee's relationship with the employer, and age was related to the maturity level of the employee. Their empirical study consisted of Dutch Navy men between the ages of 20 to 35.

The research group had skilled and unskilled sailors who served in technical and general support positions. The research was a 2-year longitudinal study of the 296 participants who were asked to complete questionnaires to determine their attitudes about their commitment and satisfaction with their perceived working conditions. The questionnaire included demographic variables such as age and tenure. The job satisfaction variable was measured using the Brayfield and Rothe (1951) scale.
Organizational commitment was measured with the Organizational Commitment Questionnaire developed by Mowday et al. (1979). Turnover intention was measured by four 7-point scales developed by Bluedron (1982) with bipolar adjectives such as “pleasant-unpleasant,” “unfavorable-favorable,” “annoying-nice,” and “good-bad.” The first and fourth items were reverse-scored with a Cronbach alpha of 0.92.

Results from this study indicated that organizational commitment had no significant relationship to turnover intentions. However, the results did imply that an employee’s behavioral intention was the single best predictor of that person leaving the organization. The researchers highlighted the significance of turnover expectations vs. turnover intentions because intention addresses conscious plans to perform a specific behavior. Expectation, however, relates to the likelihood of something happening in the future because a person’s job satisfaction will provide a motivational push to keep his/her jobs. If there is an external attractive pull of alternative job opportunities, however, an employee may make plans for a future move.

Even though this study provided insights into the predictors of turnover intentions, it had limitations. The study was limited to only men of a specific age group in the Dutch Navy and the working conditions were peculiar to active duty service members. The study was also unclear about the level of anonymity that the participants had during the data collection.

Khatri, Fern, Budhwar, 2001 study addressed the attitude theory of employees’ satisfaction, commitment, perception of justice/equity, and job-hopping/turnover intention activities. Five of the 48 companies in Singapore invited to participate in the study made the decision to do so. Three of the companies were in the manufacturing
industry and two in the service industry. The data for the research was collected using a questionnaire to measure the variables of job satisfaction with pay, the nature of work, and supervision. The questionnaire also addressed organizational commitment, organizational justice/equity, job-hopping, perceived alternative employment opportunities and turnover intention.

The Human Resource (HR) managers of the participating companies received and distributed the surveys to the employees. To protect anonymity, researchers provided self-addressed stamped envelopes for participants to return their surveys to them, or they could drop them off in secure boxes provided in each company’s HR department.

Results from the study revealed that males out-numbered females in the manufacturing companies and females out-numbered males in the service companies. The study also supported the hypothesis that organizational commitment had a strong positive association with turnover intention, as well as tenure in the service industry and satisfaction with supervision. Satisfaction with the nature of work, however, was not significant for both industries. The study was limited to Singapore companies because job-hopping is a cultural phenomenon in the country, and this is even more prominent in the service industries. Over 16 percent of the retail industry participants confirmed that they sometimes had urges to change their jobs. Seven percent admitted to having a willingness to change jobs if their friends changed jobs. Seventeen percent and 14% of participants from marine and retail industries, respectively, said that if given less than $50 increase in their basic pay, they would consider changing their jobs. The researchers noted that cross-sectional methodology and correlational regression analyses were used so causal direction is assumed.
Leadership

The literature has numerous studies that noted leadership as a critical ingredient for organizational effectiveness because leaders develop strategies and structures to support subordinates and to reward their commitment in order to minimize turnover (Waldman, Ramirez, House Puranam, 2001; Katzenbach, 1997; Sheard & Kakabadse, 2002 & 2004; Fielder, 1967). Leadership is also forcing organizations to incorporate diverse work groups into their organization’s “mix” to improve effectiveness and sustainability. The era of homogeneity and individualism is becoming non-existent, as the number of heterogeneous work groups continue to grow (Williams & O’Reilly, 1998). Organizations are therefore forced to embrace more work groups as a normal mode of daily operation, as well as the handling the four-fold increase of a diverse workforce (Bergen, Soper & Parnell, 2005). Workforce 2020 expects the existing trend of diverse new entrants into the workforce to continue (McMillan-Capehart, 2006). Jackson et al. (1995) reported that 58% of new entrants to the labor force were from white native-born Americans and the remaining 42% from diverse ethnic origins (Ford, 2004; Swanson, 2004; William & O’Reilly, 1998; Jackson, et al. 1995). With this trend companies are seeking to turn their diverse workforces into competitive advantage to enhance their organization’s reputations (Fujimoto & Hartel, 2006; McMillan-Capehart, 2006; Bergen, et al. 2005; Dolphin, 2004). This growth in workforce diversity is creating a greater need for effective leadership in all organizations.

The borderless global world with its advances in technology is facilitating even more growth of diverse work groups. These differences sometimes create conflicts that hinder group performance; therefore, leadership becomes a key variable in facilitating
positive performance outcomes and work group effectiveness (Williams & O’Reilly, 1998).

A review of the literature reveals theories that include a focus on the functional division of authority as it relates to the group leader and the formally recognized leader (Day, Gronn & Salas, 2004; Doyle, 2004; Cox, Pearce & Perry, 2003; Andre, 1995). Still, other theories focus on the characteristics of leaders and leadership’s effectiveness with cross-functional groups where leadership is interchanged or shared within the group (McCauley, 2004). This concept of shared leadership embraces the situational approach of utilizing other members of the group’s expertise rather than having one formal leader (Day, et al., 2004; Sivasubramaniam et al., 2002; Blanchard & Bowles, 2001; Blanchard & Miller, 2001; Yukl, 1989).

Despite the different foci of situational leadership theories, the consensus is that leadership provides a vision that empowers, motivates and encourages performance (Ahn, et al., 2004; Ogbonna & Harris, 2000; Joplin & Daus, 1997). Rost’s (1991) theory focuses on the relationship concept of the leader and follower that is involved in the mutual purpose of handling change. When there is change, there is a need for a change agent, and this need gives birth to the leader. This kind of leader within a work group offers group members a roadmap of confidence and direction during situational change and ensures positive work group outcomes (Waldessee & Eagleson, 2002; Ogbonna & Harris, 2000; Joplin & Daus, 1997).

Fiedler’s (1967) Contingency/Situational Model of leadership postulated that the operational ability of the group is dependent on leadership’s flexible styles and their impact on work group effectiveness. Fiedler (1967) posited that three important
situational dimensions influence a leader’s effectiveness with groups; the leader-follower association, the operational set-up, and the leadership’s established position-power within the group. The model proposes two key types of leadership styles: task oriented and relationship oriented. For the leader to be effective there must be an overlapping of the two styles. For example, the relationship-oriented leader may need to improve a work group’s effectiveness by imposing a more task-oriented focus on the group, and the task-oriented leader may need to improve on personal relationships with the group members.

To build on Fiedler’s model, Hersey and Blanchard (1996) developed the situational theory model that proposes that leaders adjust their styles to meet the needs of their followers in every work group situation. In other words, leaders must demonstrate flexibility that addresses the needs of diverse work groups and to moderate styles as the need of the work group changes. According to this theory, followers set the pace in situational leadership and leaders must demonstrate their ability to measure followers’ adaptability to their imposed changes. If adaptability is unfavorable to the follower, then the leader has to adjust expectations until the follower can comply with the leader’s requirements.

The Hersey-Blanchard Situational Leadership Theory therefore relates to the amount of task direction and support relationship a leader must provide to a follower in a specific situation. This theory focuses on two types of leadership, transactional and transformational. A transactional leader is action-oriented and demonstrates adaptability to provide guidance to followers on required task depending on their needs (Hersey & Blanchard, 1996; Blank, Weitzel & Green, 1990). On the other hand, the transformational leader often transforms followers through motivation, inspiration and
empowerment (Burns, 1978). In Burns' theory the transformational leader is a visionary with passion and enthusiasm who inspires followers to excel and to be at their best to ensure work group effectiveness.

The Path-goal theory of leadership evolved from Fiedler's contingency model (1967) and was developed by House (1971). The theory postulates that successful leaders are flexible and able to achieve high performance and work group effectiveness by increasing a subordinate's motivation through clarification, direction, structure and rewards. This theory suggests that environmental factors, coupled with personality idiosyncrasies, can all influence the group's effective outcome (Hsu, et al., 2003; House & Mitchell, 1974; House, 1971). The theory suggests that power is given to leaders because of their influential posture and ability to perform effectively and achieve satisfaction. The leader who adopts path-goal leadership styles will clarify and provide directions for followers, help remove pathway obstacles, and provide encouragement and rewards along the journey of goal achievement. It also contends that a leader's style in stimulating interest and pleasing the subordinate, often helps to facilitate clarification, helps in behavior improvement, and increases path-goal attainment, as well as reduces turnover intention (House & Mitchell, 1974).

The literature suggests that the Path-goal leadership model works well for diverse work groups because the Path-goal leadership styles provide leaders with directional paths, ability to assess needs and provide goal clarification in any work group situation (Hsu, et al., 2003; Hunt & Larson, 1973). In addition, the Path-goal leadership theory has four core elements: instrumental, participative, supportive, and achievement approach that a leader may adopt for leading a work group. The instrument in literature that is able
to test these four styles is the *Perceived Leadership Behavior Scale*. The instrument outlines the measurement for instrumental, supportive and participative approaches. The supportive outline is twofold because it measures how the supportive leader helps the subordinate with achievement goals. It is implied that the flexibility of these styles provides the tool for leadership and ensure that diverse work group members are satisfied with their working conditions, which in turn, reduces the likelihood of turnover intentions (Hunt & Larson, 1973; Hsu, et al., 2003).

**Review of empirical literature on Leadership**

Gillespie & Mann (2004) tested the situational leadership theory developed by Hersey and Blanchard (1996) about the skills and attributes in leadership practices that impact work group effectiveness. The study investigates leadership styles (transformational/transactional) and members’ trust in their leader. Usable questionnaires were completed by 83 team members drawn from 33 project teams working for the same company. The factors of decision making, communication, collective vision and sharing common values were all identified as contributors for developing trust with leadership and work groups.

Results from the Gillespie & Mann (2004) study showed that trust in the leadership’s styles was strongly associated with the leader’s effectiveness with his/her work group. The implications of these findings for leadership were also considered in this study and they “speak” to the behavior the group leaders should demonstrate to impact group effectiveness.

A major limitation in this study was the lack of discussion regarding the need for trust among group members because the study addresses shared leadership in groups. In
addition, the study recommends the embracing of shared leadership among group members to foster trust, and camaraderie if the leadership’s role passes from one person to the next in the absence of a formal leader. The study supported the theory of trust in the leadership’s styles influencing work groups and revealed that when everyone has a turn at leading through shared leadership, the leader quickly discovers how important it is to be able to trust members of the group.

The aim of the Ogbonna and Harris (2000) study was to examine the relationship between Path-goal leadership styles theory and work group effectiveness within organizations. A descriptive quantitative research design was used and the sample was randomly drawn from a database of 1,000 companies in the United Kingdom with 342 responses. The majority of respondents were male with an average age of 41.3 years and length of service of six years. Factor analysis was used to ascertain whether the adopted measures of organizational leadership styles captured differing dimensions. The researchers used the House & Dessler (1974) Perceived Leadership Behavioral Scale (PLBS) and measured the three Path-goal leadership styles: participative, supportive and instrumental. Test results for reliability had a Cronbach alpha of 0.90.

The initial exploration of data included descriptive statistic measures of culture, leadership style and organizational effectiveness. The analysis of participative, supportive and instrumental leadership styles indicated a significant indirect relationship with the effectiveness of work groups. The researchers concluded that the study’s results indicate that the generation of an organizational culture, which is externally oriented, played a role in the mix of influence for work group effectiveness. However, demonstration of supportive leadership was a significant influence (Ogbonna and Harris, 2000). This study
provided possible new findings and implications companies in the United States (U.S.)
because the study was only conducted in the United Kingdom. The researchers alluded
to the need for this research to be replicated, with considerations made to address the
need of having leaders as change agents who are able to adjust to situational changes in
their work groups.

O'Connell et al. (2002) conducted a study to examine the impact situational
leadership style had on group effectiveness in the context of semiautonomous work
groups. The study gathered group performance ratings from upper-level managers and
leader behavior ratings from work group members of the same company. For each of the
102 groups studied, two group members were chosen at random to provide subordinate
ratings of their group leader's effectiveness. To provide ratings of the leadership,
members had to have been in their current groups for at least six consecutive months. All
group leaders and members who provided ratings had worked together on a daily basis
for at least six months.

The form used by group members to rate group leaders was designed based on job
analysis information and was used to measure certain key dimensions using behavioral
eamples representative of each dimension. Items were rated using a 7-point Likert-type
cale. An average or overall rating of leadership effectiveness was calculated. The
researchers concluded from the regression analyses results that the diverse make-up of
the group, coupled with its leadership's style, influenced the collaborative efforts of the
group and ultimately the group's performance. In addition, participants in the groups
rated the leadership based on the level of feedback (communication) they received.
The group members' assessment of the group and their leadership’s performance were positively significantly correlated. In the regression analysis test that measured productivity and quality in performance, the correlation between leadership and group performance was $r = .42$ for small groups and $r =-.03$ for large groups. Groups ranged in size from small groups of four to large groups of 13. A limitation of this study is that leadership style was not clearly defined nor were work groups’ structures and processes.

Kuo (2004) used a conceptual model of situational leadership and measured it against group effectiveness. This research explores the relationship of group leadership and group diversity to group effectiveness. Using a standardized measurement process this research study also explored the relationship between group leadership and group effectiveness. The conclusions from this research include that (1) transactional leadership and transformational leadership have positive impacts on group effectiveness, (2) transformational leadership has a more positive and significant impact on group effectiveness than transactional leadership and (3) management by expectation has a negative impact on group effectiveness. The study’s limitations include the fact that the authors failed to explain where the group was from and did not discuss differences in group composition.

In the Duemer et al. (2004) research, graduate students were interviewed and directed to concentrate on the topic of leadership and group effectiveness during their participation in the study. This qualitative study was designed to examine graduate students working in a collaborative setting to determine their effective leadership qualities in different situations. The study was also designed to examine how situational leadership styles emerge in a collaborative classroom setting. The graduate class studied
consisted of 17 students who worked during a semester course in four groups of four or five students per group. Of the 17 students, 14 agreed to participate in the study, one declined to participate, and two could not be located after the course ended, when the interviews were conducted.

Research data consisted of responses to interview questions and the students' participation in a writing exercise that was analyzed for interpersonal skills, group management, time management and expertise. The data obtained was analyzed using individual characteristics of work group members but was not analyzed with any work group comparisons. On the contrary, the data was analyzed as a whole (Duemer, et al., 2004).

Four themes related to effective group leadership surfaced during the analysis of data: interpersonal skills, group management, time management and expertise. During a collaborative writing process, effective group leaders exhibited specific interpersonal skills such as confidence, assertiveness and facilitation. These same leaders emerged to take turns in shared leadership during the actual research process (Duemer, et al., 2004).

Even though the impact of group leadership and group dynamics played a role in the group’s effectiveness, the study shows that additional factors affect groups’ progress. These additional factors include the leader’s abilities to demonstrate experience and to provide direction and support (Duemer, et al., 2004). These findings support the theory of Path-goal leadership even though this was not specifically identified in the study. The results also show that as tasks and/or situations change, leadership skills have to be adjusted to meet the needs within the group (Duemer et al., 2004; Kuo, 2004).
The limitation of this study was the fact that data was collected from individuals within a laboratory work group. In addition, the data was not analyzed with any work group comparisons. It was only analyzed as a combined whole without any comparisons or examination of internal work group relationships.

Hsu et al. (2003) conducted a study in Mainland China to examine the relationship between Path-goal leadership styles and turnover intention in China’s Internet industry. The researchers chose the three House et al. (1974) Path-goal leadership styles (instrumental, supportive and participative styles) to explore how they relate to turnover intentions in three major Internet companies in China. The researchers examined the difference between technical employees and non-technical employees, managerial and non-managerial employees in leadership and turnover intention. The questionnaire used in this research included a combination of the House and Dessler’s (1974) Perceived Leadership Behavior Scales (PLBS) and Hom, Griffith, and Sellaro’s (1984) Turnover Intention Questionnaire. Three hundred and six employees were targeted to participate. One hundred and forty-eight people responded, and 127 surveys were usable.

Results from the testing indicated that supportive leadership had the strongest positive correlation with turnover intention. At a significance level of 99%, negative (Pearson) correlations were found for IL-T1 (.403), SL-T1 (-.458) and PL-T1 (-.448). The correlation among the dimension of all three leadership styles (instrumental, supportive and participative) and turnover intention was negative and not equal but close to each other.
The limitations of this study are the exclusion of other possible variables such as work group diversity in age, gender and educational background. Also, the fact that the study was confined to Chinese Internet companies limits the ability to generalize results to other populations, geographies, and industries.

**Diverse Work Groups**

Although 84% of Fortune 500 organizations have implemented diversity training, many continue to plan, develop, organize, and implement procedures to respond to growth in their diverse workforce and customer markets (Saji, 2004). The literature reveals that only 10% of the world’s 191 nations have workforces that are homogeneous with neither cultural nor ethnic diversity (Harris, 1996). Pitts (2005) study of the U.S. notes that in 1980, whites made up 80% of the population in 1989 and 69% in 2000. Pitts also noted that the labor force projection is that white men will account for 37% of the U.S. workforce by 2008 and workers will be older and more balanced in gender (Pitts, 2005). Scholars from the Urban Institute forecast that, in 2030, whites will constitute 60% of the U.S. population in contrast to the 75% they comprised in 1994 (McCuiston, Wooldridge, & Pierce, 2004; Harris, 1996).

The literature defines diverse work groups as heterogeneous because they relate to member’s individual attributes (Hobman, Bordia, Gallois, 2004 & 2003; Pelled, et al., 1999; Pelled, 1996). Huer and Saenz (2003) noted that work group diversity is very important to organizational effectiveness because organizations are dependent on work groups. Therefore, the concept of diversity ought to be expanded to even include researchers being trained for data collection on diverse work groups. The literature also
implies that researchers should acquire specialized skills to conduct studies on diverse work groups (Huer & Saenz, 2003).

Diverse work groups also provide members with social-emotional benefits because of people’s natural need to belong (Blanchard & Bowers, 2001; Beck, et al. 1999; & Caudron, 1994). This emotional feeling of wanting to belong and having an association with others is referred to as the Social-Emotional Theory. This theory asserts that common work activities and goals shared by group members might provide meaning and satisfy the belongingness needs of social connection regardless of a group’s diversity in age, race/ethnicity or gender.

Researchers of organizational demography often focus on two dimensions of group diversity; namely explicit characteristics such as age, race and gender, as well as relative characteristics such as job functional background and seniority (Hobman, Bordia, Gallois, 2004 & 2003; Chattopadhyay, 2003; Chatman & Flynn, 2001; Williams & O’Reilly, 1998; Caudron, 1994; Pfeffer, 1983).

The vast majority of the literature uses the word “race” to define physical appearances of a group of people who share specific combinations of physical, genetically inherited characteristics that distinguish them from other groups (Cherobot-Mason, 2004; Thatcher, et al., 2003; Wise & Tschirhart, 2000; Jehn, Northcraft & Neale, 1999; Pelled, et al., 1999; Frable, 1997).

In the Richard, Kochan, and McMillan-Capehart (2002) study, race diversity was categorized as the visible diversity of identifying people who were African American, White, Asian American, Native American and Hispanic. Cox and Nkomo (1990) argued that race and ethnicity seem to create an issue because the term race is frequently used in
reference to blacks and whites, and the term ethnicity frequently is related to Hispanics
and Asians. According to Cox and Nkomo (1990), use of these terms erroneously
implies that only blacks and whites have distinct physical traits, while Hispanics and
Asians have distinct cultural traits. This research will, therefore, combine the words
race/ethnicity when referring to people in work groups who are different because of
physical and/or cultural backgrounds.

Cox (2001) theorizes that diversity is related to a smorgasbord of human
peculiarities and similarities, so it is more than a socially-based issue. Early in the life of
a group, there is a focus on the visible ascriptive types of diversity such as gender,
race/ethnicity and age (Hobman, Bordia, & Gallois, 2004 & 2003; Cox & Nkomo, 1990).
As members of a group interact, attention is re-directed from the visible to the non-visible
features of group members such as education, personality and values (Hobman, Bordia,
& Gallois, 2004 & 2003; Cunningham, 2004 & Caudron, 1994). In addition, the focus of
members turns to other differences such as communication, problem solving styles and
expertise (Caudron, 1994).

Nkomo (1998) acknowledges the theoretical complexity of diverse work groups
and emphasizes that many researchers have found that the study of workforce diversity
and its relationship to work group effectiveness has lagged behind other research on work
group effectiveness. As a result, the book, *Diversity in Organizations: New Perspective
for a Changing Workplace*, by Martin M. Chemers, Stuart Oskamp and Mark A.
Costanzo (1995) was a welcome addition to the field. Nkomo (1998) states that this book
provides a rich theoretical study because of its insights into how different specialization
and diverse work groups influence group effectiveness. In addition, it examines whether
differences in gender or ethnicity are associated with conflicts within the groups and the value of leadership. The theoretical conclusions from Chemers et al. (1995) are focused on the framework of demographic characteristics in work groups and their potential to affect work group effectiveness outcomes. The authors argue that demographic variables such as gender, age and ethnicity may affect turnover, job properties, organizational commitment and performance.

Theory on diverse work groups has its roots in the social capital concept. Nahapiet and Ghoshal (1998) define social capital as a kind of relationship with resources embedded in all human groups or social networks. Experts argue that social capital (including knowledge creation) belongs to all members of the group, and no member has sole ownership. Members become dependent on others to accomplish work group goals. This social capital-work interdependency relates to emotional social theory because as people work together, they develop working and social relationships regardless of their diversity differences.

Ely and Thomas’ (2001) study is developed from the concept of social capital theory because it proposes a concept of “diversity perspectives,” where they argue that diverse groups hold the perspective of cultural identity as a resource of individual uniqueness that each person brings to a work group learning environment. The group diversity theory is therefore an underlying concept that defines diverse groups’ tasks and goals and how group members interact and collaborate within the groups despite their differences. The literature posits that group members use differences as a source of growth, learning and insight when those differences are acknowledged and explored (Chattopadhyay, 2003 & Cohen & Bailey, 1997).
When individuals in work groups interact with people who are different, they tend to classify themselves and others in social categories (Nkomo & Cox, 1998). The visible diversity attributes of race, gender or age may determine a social category, based on the social emotional theory, of a person rather than the person’s education and/or personality because it is the visible attributes that will first “grab” attention and trigger a curious attraction (Salomon & Schork, 2003; Richard, Kochan & McMillan-Capehart, 2002; Williams & O’Reilly, 1998).

Schneider’s (1987) attraction-selection-attrition (A-S-A) theory helps to clarify the research focus on diversity in work groups by positing that diversity of age, race/ethnicity and gender in groups often leads to unfavorable interpersonal relations, low group cohesiveness and high turnover rates. The A-S-A theory also proposes that diversity in work groups may, at the same time, improve adaptability and lead to greater innovative activities because people will gravitate with a comfort level to others that they are attracted to in their work groups.

Pfeffer’s (1983) theory builds on the tendencies of people to gravitate to others whom they perceive as similar to themselves. The theory focuses on several variables that include: work groups’ make up, empirical relationships between individuals and groups, work group outcomes and diversity in age, functional background and seniority. Pfeffer argues that heterogeneity of organizations’ work group compositions will sometimes lead to low interpersonal attraction; impede communication among members; decrease group cohesiveness and affect performance effective outcomes; so management of diversity is crucial.
Review of empirical literature on diverse work groups

Diverse Work Groups. This review of the empirical literature about diverse work groups reflects a focus on gender, race/ethnicity and age as these relate to diverse work groups (Jehn & Bezrukova, 2004; Ely, 2004; Hobman, et al., 2004 & 2003; Thatcher, Jehn, & Zanutto, 2003; Frink, et al., 2003; Combs, 2002; Pelled, Eisenhardt, & Xin, 1999). It includes a review of research that supports the theories discussed in the previous section. Literature about gender diversity will be presented followed by literature about ethnicity and gender diversity, race/ethnicity diversity, and age diversity.

Gender Diversity. Frink, et al., (2003) conducted the only known study directly related to the relationship of gender composition and work group effectiveness. The longitudinal study was designed to analyze the degree of direct impact that gender diversity has on organizations' work group effectiveness. The study also involved a nonlinear examination of the relationship that gender diversity has on group effectiveness.

The study noted that performance at the work group level impacts the organization level and proposed the following hypothesis: “Gender composition of the workforce will reflect a nonlinear relationship with overall organization performance such that increases in female representation will be associated with increased performance of firms up to the point at which jobs are held in equal proportion, beyond which further increases in female representation will be associated with decreases in organization performance” (Frink, et al., 2003, p. 5).
The study used two different national data surveys for each segment of the study. For the first segment, the National Organization Survey (NOS) was used to investigate the relationship of gender composition to the organization and its performance. In the second segment of the study the federal EEO reports allowed the constructive replication of the results of gender composition effects.

In the first segment of the study, there were 291 organizations that were working samples. In the second segment of the study, 500 firms were randomly selected using the Dun & Bradstreet list of publicly traded firms. Missing data from samples reduced the participants to 410 working samples.

Results from the first segment of the study offered support for a relationship between gender diversity and organizational performance (Frink et al., 2003). The female performance correlation was positive and significant \((p<.05)\). The second segment of the study revealed that total revenue per employee was not related to the proportion of females in the organization. A STATA generalized least square (GLS) cross-sectional time-series analysis regression model was used to examine the data. The peak of the inverted U for the industry occurred at approximately the 56% female participation point. However, the study found that net income was related to the total proportion of females (Frink et al., 2003). The "mean total assets was $533.7 million \((SD = $4.3\) billion) and a mean total of 27,547 employees \((SD = 47,760)\) with a mean female participation of 36.20% \((SD = 17.96%)\)" (Frink, et al., 2003, p. 21).

Researchers noted these results suggest that gender diversity does have an impact on an organization work group’s ability to utilize assets to generate income versus the impact of each employee’s potential. It was also noted that it is difficult to be totally
conclusive on the benefits of gender diversity because some industries (such as light and heavy manufacturing industries that require the strength, endurance and dexterity skill sets of a gender specific work group) prefer a gender specific work group than a gender diverse group. Although the study did not include other diversity variables, it provides great insights and support for a balance in work group gender composition rather than a dominance of either gender.

Randel (2002) conducted a study to test models regarding the significance of gender in group composition, group conflict and group effectiveness. A survey tool was created and administered in seven organizations to 262 individuals in 41 work groups that were identified as heterogeneous in gender. There were a total of 191 surveys from 37 work groups completed. Participants (54% men and 46% women) came from seven, tech-oriented organizations (telecommunications, computer manufacturing, engineering services, aerospace companies, and consulting) in the western United States. In addition to completing surveys, semi-structured interviews were conducted with one randomly selected member from each of the 37 work groups. Twenty-six interviews were conducted, and participants completed demographic instruments and pre-testing surveys. The interviews were designed to determine if unusual circumstances could affect gender identity significance and group functioning (Randel, 2002).

To determine the importance of identity of gender (identify salience) in work groups, respondents completed five-point Likert scale surveys ranging from “strongly disagree” (1) to “strongly agree” (5). The three gender identity items were: (1) If people ask me about who is in the group, I initially think of describing a member in terms of gender composition, (2) when I think of my group members, the thought of gender rather than
names often come to mind and (3) I think of men vs. women as the most prominent characteristic of my work group members (Randel, 2002).

Hierarchical regression analyses were used to test predictions of the independent variables’ effects on the dependent variables. The hypotheses predicted that there would be a resulting effect of numerical distinctiveness of gender (a group-level variable) on identity salience (an individual-level variable). The first hypothesis proposed that there would be a positive relationship between numerical distinctiveness and gender identity (Randel, 2002). The second hypothesis proposed that gender identity would be positively related to diverse work group relationship conflicts (Randel, 2002). Numerical distinctiveness was a configurable group property because it described group-level patterns of individual characteristics within a group (Klein & Kozlowski, 2000).

Results from the study show the impact of gender composition rather than the mere presence of gender diversity within a group that contributes to conflict. The variance inflation factors were less than 2.1, so multicollinearity was not considered a problem. The incremental explained variance was “statistically significant (p<0.05) and the quadratic term was positive with indications of a U-shared curvilinear relationship between groups’ gender composition and gender identity salience for men respondents” (Randel, 2002, p. 28). Gender identity salience was found to function as a modifier between the association of group structure and work group conflict. In addition, the study provides insights into why majority members may experience negative effects related to heterogeneity and why gender identities of group members become important to them. This implies that decreasing the importance of identities held by group members could eliminate the negative effects within diversity work groups (Randel, 2002).
Limitations noted in this research were the contradictory findings and the fact that, because data was “cross-sectional, it cannot be said with certainty that gender salience causes relationship conflict” in diverse work groups (Randel, 2002, p.11). In addition, the researcher mentioned that the importance of identity might lessen over time as heterogeneous group members interact with each other (Randel, 2002).

*Ethnicity, Gender and Age Diversity.* Thatcher, Jehn & Zanutto (2003) conducted a quasi-field study on 742 MBA students at a northeastern U.S. university. The study tested a model of the effects of diversity (age, gender, ethnicity) fault lines on conflict experiences and group outcome. Fault line is defined as a hypothetical line that splits a group into subgroups based on one or more attributes. An example of a group with a strong fault line would be a group that consists of eight people: four people in the group are African-American women about age 30 and four are Caucasian men about age 35. This group’s fault line would be strong because within the group there are two homogenous subgroups in age, gender and race.

The average age of the students in this study was 27 and 72% were male. Participants were from 55 countries and were randomly selected to participate in different work groups. The groups worked for approximately 5 hours each day on different tasks during the study and had to complete questionnaires at the end of each work period. Group members received a formal feedback on performance at the end of each period and had the option to remain with their work groups for other work sessions.

The work group fault lines were measured by combining demographic characteristics (years of work experience, type of functional background, degree major, gender, age, race/ethnicity and country of origin). The fault line strengths were measured
as a percentage of the overall group characteristics that was accounted for by the
strongest group split (Thatcher, et al., 2003). Only fault lines that split groups into two
subgroups were considered in the study. Work group effectiveness was measured using
an average of the final scores given in group projects during the observation period
(Thatcher, et al., 2003). Results from this study imply that leaders need to be able to
monitor diversity within their work groups to avoid detrimental subgroups that could
disrupt the groups’ effectiveness. The study clearly noted that strong heterogeneity and
weak alignment can negatively impact a work group’s effectiveness if there are
competitive conflicts (Thatcher, et al., 2003).

The study provided some interesting implications about balancing the number of
diverse people in a work group. However, because it was conducted in a classroom
setting, the study provides a more contrived result rather than a “real-life” perspective.
Conducting a field study in a business/industrial environment would offer another
perspective.

The Larkey (1996) study included a random sample of 40 employees from a high-
tech manufacturing firm and 60 from a consumer products manufacturer/distributor. The
study was designed to measure how diversity impacts working groups.

One-on-one interviews were conducted and audio-taped during the study by an
Asian-American female doctoral student. Participants were asked to identify their work
group, describe interactions within the group and share their experiences. Questions were
designed to generate discussion of both favorable and unfavorable experiences to obtain
new insight into each dimension (Larkey, 1996). Focus group discussions covered
expectations of leaders, peers and subordinates handling communication, conflict and
cooperation. Results from the study support the hypothesis of a relationship between work group diversity and the group’s effectiveness, but it was inconclusive because researcher noted that interpretation of behavior appeared favorable in some contexts and unfavorable in others.

Kochan, et al. (2003) conducted a study to determine the impact gender and ethnicity have on effectiveness for group members in organizations, and ultimately turnover intentions. This research involved a Fortune 500 information processing company with more than 26,000 employees. Two tools were used in this study. They included a performance assessment survey and a performance reward/recognition survey. The tools were designed to collect qualitative data on business unit culture, human resources and leadership practices to evaluate and to measure the group’s effectiveness process and to identify levels of accountability for leadership. Quantitative data was collected to assess the company’s contextual structure and quality management procedures.

Data obtained from participants included general group effectiveness ratings and bonus awards performance ratings. Results revealed no significant direct effect of racial or gender diversity on the organization’s effectiveness. However, it was observed that groups who participated in diversity training performed more effectively within their groups. In addition, those who had direct customer contact had no negative reactions from customers for their gender or ethnic diversity, but sometimes their ethnicity and gender diversity positively impacted their performance and relationship with customers. The quantitative segment of the study highlighted favorable results from those diverse employees who had direct contact with customers. The three conclusions of the study
were: (a) organizational workforce diversity has little impact on community diversity and
group performance, (b) a diverse workforce may have high levels of complexities that are
not easily detectable, (c) gender and ethnic diversity had some impact on work group and
organizational overall effectiveness. This study provided limited statistical data on
results from the research findings.

The authors recommended a change in the way people articulate the argument for
diversity. They noted that the change should incorporate the concept of workforce
diversity as a key fabric in the labor marketplace and its importance for organizations’
successful growth, development and sustainability. To achieve this success, Kochan et
al., (2003) suggest that organizations evaluate themselves by the number of
training/education opportunities that they make available to all members of their diverse
work groups. When work group members are educated about diversity, they will be able
to appreciate and value the creativity of others. The study also noted that efforts to foster
and to maintain diverse relationships will require a sustained, systemic approach and
long-term commitment with a common denominator of leadership support and
cooperation. It was also concluded that when organizations invest in workforce diversity
opportunities, they will outperform those that fail to make such investments.

Fujimoto & Hartel (2004) conducted a study to measure the different types of
diversity that often impacts newly formed work groups. Participants in the study were
job candidates taking part in the Job Sport aspect of the selection procedure for a
multinational hotel in Southeastern Australia. Approximately 65 candidates were
randomly selected and assigned to groups of four to five candidates. There were 32
women and 33 men; one individual failed to provide a gender status. The average age of
the participants was 28. Forty-three participants identified themselves as Caucasian, eight as Asian, seven as Black, one as Indian, and four as other.

Fujimoto & Hartel (2004) developed a questionnaire with four sub-scales where responses were provided on a 7-point structured Likert scale. Each group member was asked to respond to questionnaire items about diversity. The first hypothesis tested was that the greater the level of openness to perceived dissimilarity among members in a group, the greater the decision effectiveness of the group will be. This was similar to Hobman et al. (2004) study. The analysis for this was done at a group level and there were 15 groups. A multiple regression analysis was conducted and the results supported the hypothesis by showing groups that had racially diverse group members and had higher decision effectiveness when the receptiveness and openness to "diversity was high (F(1,3)=17.602, R2=25%; F(1,3)=6.744, R2=9%)" (Fujimoto, 2004, p.10)

The second hypothesis tested by Fujimoto was that individuals’ openness to perceived dissimilarity on the social category level of diversity would be positively related to people’s perception of their visible dissimilarities to others. For this test, the response variable measured the tendency of an individual to speak with others of the same ethnicity. Results from the study supported the hypothesis of individuals’ openness to perceived dissimilarity on the social category diversity level.

Race/Ethnicity and Age Diversity. Harrison, Price & Bell (1998) examined the differences or heterogeneity of leadership and members of diverse work groups over a period of time. The hypothesis for the study was that communication was vital to build cohesive relationships in diverse work groups to enhance the group’s effectiveness. Data was collected from two samples. Sample one involved 39 units (groups) of employees in
a medium-sized hospital in a U. S. Southwestern city. Four hundred and forty-three participants were involved with four to 25 people in each group. Participants included Whites, Hispanics, African Americans, Asians, and Native Americans. Participants’ included professional administrators, nurses (registered nurse or licensed practical nurse), pharmacists, lab technicians, radiologists, and non-professional maintenance workers.

The second group consisted of employees in the U.S. deli-bakery section of 32 stores of a regional grocery chain. Approximately 13 people worked in each deli-bakery with group size ranging from two to 22 employees. Participants’ mean age was 34 years, and the mean organizational tenure was four years. The racial/ethnic backgrounds of employees included White (68%), African-American (17%), Hispanic (12%) and other (3%). Seventeen percent of this sample group had not completed high school, 42% were high school graduates, 34% had completed some college or the equivalent and seven percent were college graduates. Each deli-bakery had at least one manager.

Questionnaires were completed by participants in the first group over a three-week period, and for the second group, questionnaires were completed over a six-week period. Personal information on each respondent’s age, race/ethnicity and gender was collected and used to calculate a group’s heterogeneity for each variable in both samples. Blau’s (1977) instrument was used to examine within-group heterogeneity in ethnicity. The group’s cohesiveness in performance was measured with aggregated individual ratings. Reliability estimates at the individual level were .66 and .70 for each sample. Group members were questioned about surface-level diversity, and responses were provided on a five-point Likert scale. Results showed that the correlation of perceived ethnic differences with cohesiveness in diverse work group effectiveness was non-
significant \( (r's = -.14 \text{ and } .14, \text{ respectively}) \) however, over time group performance improved. As a result, there is significance to this finding because it shows that with time, working relationships in diverse work groups do improve.

In another study, work-group diversity was measured by DeMeuse and Hostager (2001) who developed a training tool, Reaction-To-Diversity (R-T-D), to examine the insights, concepts and attitudes about diversity that individuals bring to the workplace. The five dimensions of interest in the Hostager and DeMeuse (2002) study included those of the 2001 study in regard to emotional reactions, judgments, behavioral reactions, personal consequences and organizational outcomes. The R-T-D study was conducted in one academic and two business settings. Approximately 100 university students (some working full-time and others part-time jobs), 66 white-collar workers (including leaders), and 90 blue-collar workers (including leadership and employees) were included in the study.

Participants’ provided data using R-T-D Inventory and Workplace Diversity Survey (WDS). The hypotheses for the study were that companies can tap into workplace diversity as a source of competitive advantage, and groups’ diversity training impacts performance. Data was analyzed using the Multivariate Analysis of Variance (MANOVA) package in SPSS (1993). The researchers noted that the two between-subject factors were specified as organization and role, and the means were different and statistically significant. Participants’ scoring was counted, with 1.0 indicating that all subjects circled at least one word in the cell of the survey, in contrast to a score of 0.0, indicating that no subjects circled at least one word. This suggested that some people were more aware than others of diverse work groups’ challenges in managing their
differences. The leadership was found to have more positive views about work group diversity and group effectiveness because they had more education and training in these subject areas. Individual summary scores were calculated by subtracting negative words circled from the positive words circled. The individual results ranged from a high of +35 to a low of -35. Positive scores included +1 to +35. Neutral scores were indicated by 0 with a range from -1 to -35 (Hostager & DeMeuse, 2002).

The results of this research supported both hypotheses by showing that if individuals in a group take introspective views into their values, styles and beliefs about work group diversity, work group effectiveness will be greatly enhanced. The mean scores for the positive depth of perception indicated that members of Company Y (M=13.58) displayed greater depth of positive perception than members of Company X (M=11.24) together with the university students (M=10.13). Participants of Company Y who had received diversity training, had a much more positive perspective about diversity. Judgmental depth suggest that members of Company Y (M=3.86) were more judgmental in their perceptions of diversity than university students (M=3.19) and members of Company X (M=2.65). The mean scores relating to roles indicated that managers (M=3.48) showed more depth of perception in the area of positive judgments than employees (M=2.80) and students (M=2.66). The survey seems to provide a useful tool for conducting similar research. However, the study is limited because of its one-time examination. A replication of this study with a focus on a business/industrial environment would therefore add credibility to the study’s conclusions.

**Age Diversity.** Leonard et al. (2004) conducted a study in a national chain of stores located in the United States. The study examined approximately 700 workplaces with
more than 70,000 employees. Researchers were interested in learning whether age diversity was associated with higher or lower sales performance. The literature (Fujimoto, 2004; Ely, 2004; Thatcher, et al., 2003; Harrison, et al., 1998) provides age diversity as a combined variable with other variables of diversity. Leonard et al. (2004) is the only researcher who examined age diversity as a “stand-alone” variable.

The majority of the stores’ non-leadership employees were always visible to the public. Each workplace employed 15-40 employees who worked flexible shift hours in different groups for each pay-period. The median age of the participants was 22.

Pay was straight wages without commissions or incentives for group work. Only the leaders received training in managing diversity. Employee diversity data used in the study were gender, race/ethnicity and age. Study results showed that the standard deviation of age had implications of proportional gaps in age that could have contributed to social distance in the group.

Research findings supported the hypothesis that age diversity was significantly related to lower sales. Even though there was a narrow age distribution and noticeable youthfulness of this organization’s employees, sales were a bit higher in stores with an older average workforce. Within a store, sales were lower with increasing age differences. The latter effect was substantial. The author concluded this study by noting that the age range of this study was restricted to those work groups with ongoing interaction with external customers. Future studies should include a balanced cross-section of work group members such as those who serve external and internal customers.

_Age, tenure, race/ethnicity and gender._ A 2004 study by Ely provides results from an analysis of data obtained from a study of more than 480 retail branches of a bank in
the United States. The study was conducted to investigate the relationships among work group effectiveness and four commonly studied dimensions of diversity - tenure, age, sex, and race in each branch. In addition, the study assessed whether the degree of employee participation in the bank’s diversity education programs influenced these relationships and the leadership role.

This study had two hypotheses related to each dimension of diversity. The first hypothesis was that age diversity would be negatively related to group effectiveness. In addition, due to the consumer and market-focused nature of the retail industry considered in this study, as well as the firm’s diversity-oriented human resource system, the author hypothesized that diversity education programs would enhance group effectiveness and that attending such training would positively impact the group’s performance. Thus, the second hypothesis was that participation in diversity training programs would enhance the positive effects of gender and racial diversity on team performance and mitigate the negative effects of age diversity.

There were 7,529 employees in the bank’s 480 branches in and around the Northeastern United States. The bank’s branches ranged in size from four to 70 staff members with a standard deviation of ten. The mean age of employees in the branch offices was 37, with a standard deviation of four. Employees’ mean tenure with the bank was eight years, with a standard deviation of three. The data set obtained included historical data for race, gender, age, and tenure of each staff member and staff members’ attitude-satisfaction information from surveys conducted annually.

Four sets of measures were used to test the hypotheses in this study, each constructed with the branch as the unit of analysis. Results from the hierarchical
regression showed that there was minimal support (-0.77) for the hypothesis that age diversity was negatively related with performance. Consistent with the hypothesis, results revealed that age diversity was negatively associated with customer referrals and resulted in a similar rippling effect on the bank branch’s customer referral goal. Overall work group effectiveness was positively associated with age and tenure diversity with a marginal level of significance (p<0.10). The levels of significance for the other diversity variables, race/ethnicity, gender, and tenure were 1.34, 0.77 and 3.04 respectively. Goals set for customer satisfaction through work group age and tenure diversity were met with positive group effectiveness. One standard unit increase in the quality of work group effectiveness was associated with 4.5, 1.3, and 1.9 percentage point increase in meeting the organizational goal of a 5.5-point overall increase in revenue. When cooperation and teamwork were low, the impacts of age and tenure diversity on effectiveness were less consistent.

In the study, age diversity had a strong positive relationship with revenue from new sales and a weak positive relationship with total performance. Higher age diversity was associated only with lower attainment of customer referral goals.

One of the limitations of this study is that participation in diversity education programs was voluntary. The author concluded that the strength of the study was the fact that it assessed the diversity-performance link using bottom-line measures of organization’s effectiveness in a relatively large sample of work groups engaged in comparable work.
Work Group Effectiveness

Work groups consist of individuals who are interdependent and interact with one another for project completion (Miura & Hida, 2004). The literature shows that work groups are sometimes formed to accomplish time-limited tasks where leadership determines effectiveness and minimizes group members’ turnover (Chatman & Flynn, 2001; Pelled, 1999; & Andre, 1995).

Review of the literature on work group effectiveness

Work group effectiveness is defined as a collaborative interaction of people working together, sharing information and knowledge in decision-making and task accomplishments for work group effectiveness (Kochan, et al., 2003). There are several important themes about work group effectiveness that explain, in general, what the theories do. These theories include Knowledge Creation Theory, Social Similarity and Homo-social Reproduction Theories, Self-Determination Theory, Legitimization Theory and Group Think theory.

Knowledge Creation Theory suggests that organizations cannot create knowledge without the actions and interactions of individuals in groups because knowledge is created by, and resides within, individuals (Nonaka & Takeuchi, 1995). New knowledge is created when individuals solve problems by coming together and exchanging information and know-how with others (Nonaka, 1994; Cohen & Levinthal, 1990). In addition, individuals must exchange information and know-how, then recombine newly acquired information and know-how with existing information to create new knowledge.
This invariably creates not only a work group relationship, but a social group as well (Nonaka & Takeuchi, 1995).

The Social Similarity and Homo-social Reproduction Theorists postulate that people are reassured in working groups where others who are similar to them in terms of how they think, talk and act are involved in sharing and collaborating efforts for task accomplishments (Foldy, 2004; Kanter, 1993). As a result of this assurance and affirmation people feel, work group effectiveness can be solidified because of the perceived similarity group members have of each other. This theory gives credence to the study on workforce diversity to an understanding of group relationships, to the impact on effectiveness, and to turnover intentions (Foldy, 2004).

Deci & Ryan (1985) theorized that people with confidence are able to “shine” and to thrive in groups to positively impact the overall performance effectiveness of the group ultimately. Later Bandura (1997) modified this theory and strengthened it with one that described positive personal consequences that are associated with feelings of confidence in one’s own abilities. Similarly, Deci & Ryan (2000) added to the body of literature with the Self-Determination Theory, proposing that human functioning and determination is optimized to the extent that fundamental needs of relatedness, relationships, competence and autonomy are satisfied when people work in groups and no group is ever without a leader.

If leadership roles change in a group, non-leader group members tend to take submissive postures during the transition. To test for the existence of this behavior, Berger and his colleagues developed a theory they described as legitimization of the status of other group members (Berger et al., 1998). This theory highlighted “collective
validation" as an important cause of legitimacy, where validation occurs when group members refuse to challenge the leadership during the change process.

Theorists who argue contrary to this legitimization process found a common thread in discussion in groups noting that groups tend to focus on common or shared information during their interaction, rather than unique or unshared information that a leader often introduces to a group (Wittenbaum & Park, 2001; Stasser, 1999; Lin, Ensel, & Vaughn, 1981). As a result, when a new leader does introduce unique or unshared information, the leader may get unexpected responses from the group where everyone either agrees or disagrees with this new information provided. Failure to re-direct the group with the new information and to make everyone feel comfortable in expressing personal opinions about the information may result in the leader appearing to be extreme and polarized from the group (Day, Gronn, & Salas, 2004; Blanchard & Bowles, 2001). As a result, leadership has to be sensitive to this group and to make efforts to finesse this kind of change.

Another challenge in work groups is the Group Think Theory where people within a group feel pressured towards group consensus and may agree with group members' bad decisions to "fit in" with the group and to avoid being disagreeable. The Group Think theory has a real influence on work group members' decision-making, performance, and effectiveness (Moorhead, Ference & Neck, 1991; Won-Woo, 1990). This ultimately negatively affects the groups' effectiveness (Moorhead, Ference & Neck, 1991; Won-woo, 1990; Longley & Pruitt, 1980).
Empirical Studies on Work Group Effectiveness

Conflict is one of the greatest barriers to work group effectiveness because it could result in turnover intentions in work groups (Boyar, et al., 2003; Jehn, Northcraft & Neale, 1999). As a result, a significant body of literature addresses the topic of work group heterogeneity and conflict (Kerr & Tindale, 2004; Swanson, 2004; Thatcher, Jehn & Zanutto, 2003; Jehn & Mannix, 2001; & Pelled, et al., 1996). Empirical studies have also shown that diversity in age, gender, tenure, ethnicity, and other aspects of diversity can negatively impact a group’s effectiveness.

Jehn, Northcraft and Neale (1999) conducted a multi-method field study of 92 work groups to examine the influence of different dimensions of work group diversity. The sample consisted of 545 employees in one of the top three firms in the household goods moving industry. The groups for the study were taken from the firm’s functional divisions that included marketing/sales, accounting, information systems and domestic and international operations. The firm had formally designated work units as groups in which all personnel within a group reported directly to the same supervisor.

This organization provided a fitting arena in which to test two hypotheses. The first was to determine if functional background and tenure diversity would have stronger positive associations with intra-group task conflict than would diversity in age, gender and race. The second hypothesis was that diversity in race, gender, age, and tenure
would have stronger positive associations with intra-group emotional conflict than would diversity in functional background.

A survey was distributed to all employees in the firm. Survey completion was voluntary, although the company’s CEO encouraged employees to participate and provided company time to complete the surveys. The response rate was 89%, resulting in 485 completed surveys.

The survey instrument consisted of 85 self-reported, Likert-style questions. Personnel records were used to verify demographic information. Employees’ perceived value of diversity among group members was measured using six, 5-point Likert scales anchored by 1 (“Strongly disagree”) and 5 (“Strongly agree”). Items of the intra-group conflict scale developed by Jehn (1995) were used to measure the amount and type of perceived relationship and task conflict in each work unit. Examples of the 5-point Likert items measuring task conflict included the questions, “How frequently are there conflicts about ideas in your work unit?”, “How well do you think your work unit performs?”, and “How effective is your work unit?”

Actual group effectiveness was assessed by departmental records. Work group efficiency was assessed by supervisors’ ratings of two items measured on 7-point Likert scales, “How effective is this group at getting things done quickly?” and “How efficient is this work unit?” (1 = “not at all effective” to 7 = “very effective”). Regression analyses were used to test conflict in workgroups and the effects of workgroup diversity on worker morale and group performance.

Jehn, Northcraft, and Neale (1999) study was also designed to assess the validity of the argument that diversity increases conflict in groups and, in turn, affects work
group's effectiveness. Results from the study suggested that different dimensions of
diversity have distinctive effects on work group effectiveness. In addition, findings from
the study indicated that the diversity variables that drive task conflict are different from
those that drive emotional conflict. Additionally, researchers found that task conflict
tends to have more favorable performance consequences on work groups than emotional
conflict, and that multiple interrelated factors must be considered when determining how
work group composition shapes conflict and, ultimately, the work group's effectiveness.

Jehn & Mannix (2001) conducted a longitudinal study to examine work group
effectiveness that is associated with the low, but sometimes increasing levels of group
relationship conflict that occurs during work deadlines and group interactions. There
were four hypotheses for the study. The first was that elevated levels of interaction in
groups would result in sequencing levels of events that would trigger conflicts. Second is
that high level performing groups would demonstrate lower levels of interacting
relationship conflicts during all stages of the group. Third, when members of a group
have similar work values, the tendency to work in harmony and agree to norms facilitates
work group effectiveness. The fourth hypothesis was that group consensus on value and
trust would result in a positive work atmosphere and improved work group effectiveness.

Jehn & Mannix (2001) study utilized 51 groups of three-people with similar
organizational tasks. The groups were comprised of 153 students at three U.S. business
schools with comparable entrance requirements, all taking the same general management
course with the same instructor. Students' average age was 29.4 years. Forty-five
percent of the students were employed in financial institutions, 27% in manufacturing,
14% in consulting firms, and 14% in other organizations. Sixty-four percent were male,
and 18% were not originally from the U.S. so the work group was very diverse. Students were assigned to work on projects for different organizations and reported weekly on their group meetings by completing individual questionnaires and group worksheets.

Students’ work values were evaluated prior to their participation in the study. The Organizational Culture Profile (OCP) (O’Reilly et al., 1991) was used for the assessment and also as an introductory group exercise. A cross-level analysis was used to average all the responses. To assess group effectiveness, a repeated-measures multivariate analysis of variance (MANOVA) on conflict type and time block was conducted. A matrix was constructed to compile all results from the testing.

Results in the early and late time periods of work group performance revealed that elevated levels in competitiveness resulted in different patterns of conflict. In addition, communication between leadership and group members were seen as solutions to work group effectiveness because they “are key in setting open communication norms and a cohesive and friendly environment that enhances both members’ attitudes and a group’s overall performance” (Jehn & Mannix, 2001, p. 12). The limitation of the study was a concentration on one kind of group-related value consensus paradox.

The implications are that homogeneity may not be beneficial to work groups because it diminishes relationships and incidents of conflicts that might be beneficial to work groups. In addition, it may encourage “group think” where everyone wants to be agreeable and not challenge the group with new perspectives of conflicts. This finding was contrary to the authors’ prediction, and presents a dilemma for future research on how groups can have moderately high levels of task conflict and low levels of
relationship conflict, but remain highly productive work groups. It, therefore, appears that other factors may influence work group effectiveness.

Erdem & Ozen (2003) conducted a study of 50 work-based groups (with 279 group members) to examine the importance of a climate of trust in work groups and work group effectiveness. The research sample consisted of 20 companies chosen for applying quality and lean standards. There were two research hypotheses. The first hypothesis was that a positive relationship exists between group effectiveness and cognitive dimensions of trust among group members, and there is a negative relation with regard to mistakes that impact work group effectiveness. The second hypothesis was that a positive relationship exists between group effectiveness and trust among group members, and there is a negative relationship with regard to mistakes that occur in work groups.

The scale consisted of 48 expressions used to measure the dimension of trust to which participants respond. The questionnaire instrument was designed to analyze: (1) the quality of trust in the group, (2) work group effectiveness, (3) individual’s perception of their integrity and (4) how team members perceived others demonstration of concern for one another. The instrument and scale were found to be highly reliable (Cronbach’s alpha = 0.80). Pearson coefficient correlation was used to calculate the cognitive dimension of trust and the performance indicators. Results showed that as the dimensions of trust between group members rose, so did effectiveness relating to planning, problem solving and process improvement. Correlation was significant at 0.01 level. The relationship between group effectiveness and the cognitive dimension of trust group members’ actions was a 0.515 correlation. The affective dimension of trust and group members’ respect for others’ emotions was a 0.487 correlation (Erdem & Ozen, 2003).
D'Netto and Sohal (1999) conducted a study on workforce diversity in some of Australia’s manufacturing industries. It was noted that the management of diversity was crucial in Australia to ensure a cohesive environment for effectiveness, productivity and a competitive advantage. The study was designed to examine Australia’s ability to manage workforce diversity of people with different backgrounds, cultures and experiences and to ensure work group effectiveness and ultimately organizational effectiveness.

The D’Netto and Sohal (1999) study included 500 organizations in the manufacturing sector in Australia. The study was designed to examine the effectiveness of human resource management practices with diverse work groups. This was due to findings relating to Australia’s leadership and management practices that did not allow diverse employees to reach their full potential in performing effectively in work groups. This was negatively impacting organizations’ effective outcomes. The human resource managers of each company that participated in the study were the point of contact for the questionnaires that were distributed to employees.

Questionnaires consisted of three sections and collected data about demographics, challenges and benefits, and diversity management practices. A seven-point Likert scale was used and Cronbach’s alpha coefficient was computed to test the internal consistency of the scales. The Cronbach alpha was 0.92.

Results from the study revealed that the management of diverse work groups in Australian organizations was ineffective. This was because leadership and management practices did not allow diverse employees to reach their full potential in performing effectively in work groups, and this in turn impacted organizational effectiveness. This study highlighted the fact that diverse work groups are a global phenomenon because of
their challenges and benefits. There are limitations, however, to this study because of its Australian multicultural focus and the limited statistical results provided. A more balanced perspective could have also included other variables such as leadership, age, and gender.

Key limitations of this study are therefore the research confinement to Australia’s manufacturing industries only and its human resources management focus on only multiculturalism of diversity. The researchers recommended that other areas of diversity be explored such as leadership, age, and gender.

**Theoretical Framework for the Study**

*Turnover Intention*. Turnover intention theory has its origin in the social bonding theory related to diversity in groups and perceived similarity fit that individuals have of the organizations they work for (Sims & Keon, 1997; Seashore, et al. 1983). The literature indicates that individuals do consider turnover intentions when their working conditions including leadership styles and demographic diversity, are dissatisfying (Abraham, 1999; Sims & Keon, 1997; Thomas & Ely, 1996; Sims & Galen, 1994). In addition, the definition of work group often focuses on the social dimension of interdependencies or collective responsibilities of group members. This social integration may result in a group member feeling a sense of cohesion with the group or a lack of cohesion which may foster turnover intentions (Bayazit and Mannix, 2003: Dion, 2000). The literature also builds on the social exchange theory that posits that group members want to feel valued and to be given the opportunity to participate in decisions that impact the group. When group members are given this opportunity through the
group's leadership, it will reduce group members' turnover intentions (Loi, Hang-Yue, and Foley, 2006).

**Leadership styles.** Leadership provides a style of vision and motivation that inspires work group members to be effective (Ahn, et al, 2004 & Joplin & Daus, 1997). As a result of leadership's style, followers are motivated to emulate the leader when asked to share leadership responsibilities in changing work group situations (Waldersee & Eagleson, 2002 & Joplin & Daus, 1997).

The leadership theoretical focus for this study will be the Path-goal leadership theory that had its origin in Fiedler's contingency theory (1967) that posits that the leader's role is contingent upon the situation within a work group (Horner, 1997; House, 1974; House, 1971). Leadership helps to establish and maintain conditions that are favorable for high-performing groups (Andre, 1995). The Path-goal contingency theory assigns the responsibility of the work group's effectiveness to the leaders based on the premise that leader's behavior impacts the work group (Kest, 2006). The House and Dessler (1974) study on the four Path-goal leadership styles (instrumental, supportive, participative and achievement) is the theoretical focus for this study. The Path-goal contingency theory offers insight into how leaders affect groups' effectiveness when they clarify the pathway of goals, diminish obstacles that would hinder group members from reaching their goals, and assist in maximizing the members' potential while improving their satisfaction (Youngjin, 2006; Hsu, et al. 2003).

The Path-goal Contingency Theory of Leadership also postulates that successful leaders are flexible and able to achieve high performance in work groups by increasing
followers’ motivation through clarification of direction, providing rewards and control (House, 1974). This theory suggests that environmental factors, coupled with personality idiosyncrasies, can all influence the work group’s performance, relationships and effective outcomes (Hsu, et al., 2003; House & Mitchell, 1974; House, 1971).

Path-goal Contingency Theory provides a directive approach to help leadership and followers achieve their work performance goals. The theory suggests that power is given to leaders because of their influential posture and ability to perform effectively and achieve satisfaction. It also contends that a leader’s style in stimulating interest and pleasing followers often helps to facilitate clarification and results in improvement in behavior and increases in path-goal attainment (House & Mitchell, 1974). House and Dessler (1974) four areas of Path-goal leadership styles included: 1) instrumental leadership, 2) supportive leadership, 3) participative leadership and 4) achievement-oriented leadership are examined in the literature using the Participative Leadership Behavioral Scale (PLBS). The PLBS instrument measures all four leadership styles where instrumental leadership (IL) provides an environment of structure and specific directions for work group members, supportive leadership (SL) offers an environment of camaraderie, friendliness and concern for achievement and well-being of group members, and participative leadership (PL) provides an environment of shared leadership where group members participates in the decision making process.

**Diverse Work Groups.** Theories on diverse work groups have their roots in the social capital concept. Nahapiet and Ghoshal (1998) define social capital as a kind of relationship with resources embedded in all human groups or social networks. Researchers propose that social capital (including knowledge creation) belongs to all
members of the group and no member has sole ownership. Ely and Thomas (2001) propose a concept of “diversity perspectives” where diverse groups hold the perspective of cultural identity as a resource for learning. However, they do not elaborate on the components of this perspective. The group diversity perspective is therefore an underlying approach to define diverse groups’ tasks and goals and how group members interact despite their differences. Groups use differences as a source of growth, learning and insight when differences are acknowledged and explored (Hobman, Bordia & Gallois, 2003; Chattopadhyay, 2003; Cohen & Bailey, 1997).

Diverse groups also provide members with social-emotional benefits because of the natural need of people to belong (Blanchard & Bowles, 2001; Beck, et al. 1999; & Caudron, 1994). The social-emotional theory developed by Dion (2000) asserts that common work activities and goals shared by group members might provide meaning and satisfy the belongingness needs of social connection regardless of a group’s diversity.

Schneider’s (1987) attraction-selection-attrition (A-S-A) theory helps to clarify the research focus on diversity and work groups. Schneider’s (1987) theory posits that diversity of age, race and/or gender within groups can lead to unfavorable interpersonal relations, low group cohesiveness and high turnover rates. It may, at the same time, improve adaptability and lead to greater innovativeness.

The theoretical discussions from Chemers et al. (1995) study focus on the framework of demographic characteristics and their potential to affect an organizational outcome. The authors propose that demographic variables such as gender, age and ethnicity may affect turnover, job properties, organizational commitment and performance. Other researchers of organizational demography in diverse work groups
focus on the amount of heterogeneity in relation to visible characteristics, information and value dimensions of group diversity (Chatman & Flynn, 2001; Pfeffer & O’Reilly, 1984). These may include explicit characteristics such as age, race/ethnicity, gender; informational tenure or background and values of motivational differences (Hobman, et al., 2003; Chattopadhyay, 2003; Chatman & Flynn, 2001; Wagner, Williams, & O’Reilly, 1998; Caudron, 1994; Wagner, Pfeffer & O’Reilly, 1984). The vast majority of the literature uses the word “race” to define physical appearances of a group of people who share specific combinations of physical, genetically inherited characteristics that distinguish them from other groups (Cherobot-Mason, 2004; Thatcher, et al, 2003; Wise & Tschirhart, 2000; Jehn Northcraft & Neale, 1999; Pelled, et al, 1999; Frable, 1997; Frances & Martins, 1996).

In the study by Richard, Kochan, and McMillan-Capehart (2002), race diversity was categorized as the visible diversity of identifying people who were African American, White, Asian American, Native American and Hispanic.

Nkomo and Cox (1990) posit that race and ethnicity seem to create an issue because the term race is frequently used in reference to blacks and whites, and the term ethnicity frequently is related to Hispanics and Asians. According to Nkomo and Cox (1990), use of these terms erroneously implied that only blacks and whites have distinct physical traits, while Hispanics and Asians have distinct cultural traits. This research will, therefore, combine the words race/ethnicity when referring to people in work groups who are different because of physical and/or cultural backgrounds.

When individuals interact with people whom they see as different, they tend to classify themselves and those people in social categories (Nkomo & Cox, 1998).
However, the visible attributes of a person’s race, gender or age are more likely to be focused on than a person’s education and personality (Salomon & Schork, 2003; Richard, Kochan & McMillan-Capehart, 2002; Wagner, Williams & O’Reilly, 1998). Pfeffer’s (1983) theory of organizational make-up identifies organizational relationships between diverse individuals and groups’ outcomes and diversity with respect to the demographic variables of age, functional background and seniority. Pfeffer (1983) proposed that heterogeneity of organizational composition will lead to low interpersonal attraction, impede communication among members, decrease group cohesiveness, foster turnover intention and therefore impact work group effectiveness.

**Work Group Effectiveness.** A work group is made up of individuals who have the task requirement to function as part of a group to acquire knowledge and accomplish task requirements for the groups’ effectiveness (Driskell & Salas, 1992). Work groups in organizations are defined as members who report to the same supervisor, obtaining and sharing knowledge with intact boundaries, interdependence and differentiated member roles (Seashore, et al., 1983). Gil, Rico, Alcover & Barrasa (2005) defined work group effectiveness as “the joint actions of individuals working together in a cooperative manner to attain shared goals through the differentiation of roles and functions, and the use of elaborate communication and coordination systems” (p.2).

Knowledge Creation Theory suggests that organizations cannot create knowledge without the actions and interactions of individuals in work groups, because knowledge is created by, and resides within, individuals (Nonaka & Takeuchi, 1995). New knowledge is created when individuals solve problems by coming together and exchanging information and know-how with others (Nonaka, 1994; Cohen & Levinthal, 1990).
Individuals must first exchange information and know-how, then recombine newly acquired information and know-how with existing information to create new knowledge.

Conceptually, the literature refers to group orientation theory as a character trait that can be used to determine the success or failures of work groups and the period of time it will take the group to be effective in its operation (Eby & Dobbins, 1997; Hackman & Wagerman, 1995;). Some organizations use individuals’ receptiveness to the concept of working in groups as selection criteria for hiring group members to ensure the group’s ultimate effectiveness and the reduction in chances of early intention to turnover from the group. (Eby & Dobbsin, 1997).

Findings from this review of the literature clearly indicate that diverse work groups become dissatisfied with their working conditions when leadership styles and work group effectiveness fail to meet their expectations. When this occurs, it has an effect on work groups’ effectiveness and work group members’ turnover intentions. The literature has demonstrated that there are gaps in determining what the level of impacts are suggesting, and a need for further empirical research.

The theoretical and empirical literature addresses combinations of one to three variables, but none addresses the combination of four variables, creating an important gap in the literature. This study will bridge the gap because it includes a combination of the path-goal leadership theory (instrumental, participative and supportive) styles, work group diversity (demographic and perspective dissimilarity) work group effectiveness and turnover intentions. There is no indication in the literature that these combined variables have ever been explored. This study is focused on the following research question and hypotheses.
Research Question

The research question driving this study is, are there relationships between and among Path-goal leadership styles (instrumental, participative and supportive), diversity in work groups (demographic and perceived dissimilarity), work group effectiveness, and turnover intentions?

Research Hypotheses

H1. There is a significant relationship between leadership styles (instrumental, participative and supportive) and work group effectiveness.

Independent variables: leadership styles
Dependent variables: work group effectiveness

H2. There is a significant relationship between diversity (demographic and perceived dissimilarity) and work group effectiveness.

Independent variables: diversity in work groups
Dependent variable: work group effectiveness

H3. There is a significant relationship among leadership styles (instrumental, participative, and supportive leadership), diversity (demographic and perceived dissimilarity) in work groups and work group effectiveness.

Independent variables: leadership styles and diversity in work groups
Dependent variable: work group effectiveness

H4. There is a significant relationship between leadership styles (instrumental, participative and supportive) and turnover intention.

Independent variables: leadership styles
Dependent variables: turnover intention

H5. There is a significant relationship between diversity in work groups and turnover intention of employees.

Independent variables: diversity in work groups
Dependent variables: turnover intention

H6. There is a significant relationship among diversity in work groups, leadership styles, work group effectiveness and turnover intentions of employees.

Independent variables: diversity in work groups, leadership styles, and work group effectiveness
Dependent variables: turnover intention

**Figure 2-1** provides an overview of the constructs in this study and the hypothesized relationships between leadership styles, diversity in work groups, work group effectiveness and turnover intentions.
Figure 2-1. Hypothesized model of variables tested (H1-H5) and to be tested (H6) in the study (Scialli, 2006).
The preceding literature review was guided by the research question regarding the relationship of leadership styles, diversity in work groups, work group effectiveness, and turnover intentions. The review provided findings from the critical analysis of the literature on theoretical studies and empirical studies that addresses different dimensions of leadership styles, diversity in work groups, work group effectiveness, and turnover intentions. By examining the constructs provided by other studies, this research will focus on path-goal leadership styles (instrumental, participative, and supportive), diversity in work groups (demographic and perceived dissimilarity), work group effectiveness and turnover intention. All existing research has addressed each of these variables as double or triple combination studies, or in separate isolated studies. Based on prior research conclusions that path-goal leadership styles, diversity in work groups and work group effectiveness play vital roles in determining employees’ work group effectiveness and turnover intentions, this researcher proposes a study of all four variables to determine their relationship.

The next chapter provides an in-depth description of the research design, the sampling plan, instrumentation, ethical considerations, data collection procedures, methods of data analysis, and evaluation of research methods.
CHAPTER III
RESEARCH METHODOLOGY

This chapter presents the methodology used in this study about the relationship of leadership styles (instrumental, participative and supportive), diversity (demographic and perceived dissimilarity), work group effectiveness and turnover intention. The chapter also includes a description of the research design, the target population, accessible population, sampling plan, eligibility, instrumentation, human subject procedures, data collection procedures, methods of data analysis and evaluation of research methods.

Research Design

The research questions and hypotheses previously presented in Chapter II were developed from a gap in the literature and have led to this research design. The design is a quantitative, non-experimental, correlational (explanatory) and causal-comparative study to examine relationships between and among leadership styles, diversity in work groups, work group effectiveness and turnover intention. For hypothesis 1, the independent variables were leadership styles, and the dependent variable was work group effectiveness. For hypothesis 2, the independent variable was diversity in work groups, and the dependent variable was work group effectiveness. For hypothesis 3, the independent variables are leadership styles and diversity in work groups, and the dependent variable was work group effectiveness. For hypothesis 4, the independent variables were leadership styles, and dependent variable was turnover intention. For hypothesis 5, the independent variable was diversity in work groups, and the dependent variable was turnover intention. For hypothesis 6, the independent variables were
diversity in work groups, leadership styles, and work group effectiveness. The dependent variable was turnover intention.

The survey was an adopted four-part self-report instrument used to answer the research questions and test this study's hypotheses within a manufacturing organization. The 260 employees of the organization were invited to participate in the study, and with the organization's strong leadership support; 257 (98%) responded and completed surveys. Fifteen of the 257 surveys were not usable because respondents failed to answer one or more question(s). The net total was therefore 242 (93%) usable surveys.

Managers from the organization provided assigned time during the work day for employees to complete their surveys, and each respondent took approximately 8-10 minutes to complete a survey. The entire data collection process took the researcher approximately one week to complete. During the surveying exercise, respondents were asked not to put their names or identifying marks on their surveys. All study participants complied with their requirements and returned their completed surveys to the researcher in their sealed envelopes to maintain their anonymity.

**Population and Sampling Plan**

**Target Population**

In research studies, population refers to all individuals that belong to a specifically defined group (American Marketing Association, 1946). The population identified for this study was approximately 2,700 blue and white collar employees working for nine branches of U.S. manufacturing companies located in nine different states. Each branch location was structured similarly and worked independently of the others in developing operational efficiency and effectiveness.
Accessible Population

The leadership of the Alabama-branch manufacturing company with a total of 260 employees agreed to participate in this study. As a result, the accessible population for the study was the 260 employees.

All 260 skilled and unskilled, blue and white collar workers were invited to participate in the study and all received the consent forms together with their surveys. The employees were full-time workers who were assigned to 20 work groups in the following five divisions: production/manufacturing, distribution/logistics, technology, cleaning/painting, and recycling. The work groups ranged from small to large with the small groups consisting of five employees and the large groups having up to 25 employees. The company’s Human Resource Manager, together with other leadership personnel, worked collaboratively with the researcher in the data collection exercise.

Sampling Plan

A sampling plan was not used for this study because the entire accessible sample population of 260 employees at the U.S. Alabama branch manufacturing company was invited to participate in the study. The literature indicates that a sample size of 200-300 people is considered fair to good for providing factor solutions of an identified population. As a result, this sample population was considered adequate for this study (Mundfrom, Shaw, & Lu Ke, 2005; Kline, 1994; Comrey & Lee, 1992).

The company’s employees were encouraged to participate but were reminded that their participation was voluntary and that the researcher would supervise the data collection process to protect their anonymity. The company’s Human Resource Manager provided his written authorization for the researcher to conduct the survey and he
assisted, as well as the company’s leadership, in organizing an authorized time for employees to participate in the surveying exercise.

**Eligibility Criteria and Exclusion Criteria**

The study focused on all the accessible 260 employees working for the Alabama branch manufacturing company. The eligibility criteria for the sample population were as follows:

1. All participants were at least 18 years old.
2. All participants were able to read, write, and speak English.
3. All participants were employees of the manufacturing organization.
4. All participants voluntarily consented to participate and complete a survey for the study.

**Instrumentation**

The self-report survey for this study consisted of four parts. Part 1 measured diversity in the work groups with a *Demographic Profile* (objective diversity) and *Perceived Dissimilarity* (subjective diversity). Part 2 measured *Leadership Styles* (Instrumental, Participative and Supportive). Part 3 measured *Work Group Effectiveness*, and Part 4 measured *Turnover Intentions*. The entire survey (Part 1-4) had a total of 48 questions and took approximately 8-10 minutes to complete. See Appendix A for a copy of the survey.

**Part 1: Diversity in Work Groups**

Diversity (demographic and perceived dissimilarity) in work groups has objective and subjective measures. Objective indicators of demographic diversity were measured
by a Demographic Profile, and subjective indicators were measured using a Perceived Dissimilarity Scale.

**Description of Demographic Diversity (Objective Indicators of Diversity in Work Groups).** Objective indicators of demographic diversity were measured using a Demographic Profile developed by the researcher that included seven variables: age, gender, race, ethnicity, educational level, occupational level, and job tenure. Age and job tenure were “fill in the blank” questions. Gender, education, race, ethnicity and occupational levels were measured with a checklist. Race/ethnicity categories were from the U.S. Census Bureau (2000), where the Office of Management and Budget provided five categories as a minimum requirement for reporting for race: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander and White. Minimum categories for ethnicity were Hispanic or Latino and Not Hispanic or not Latino.

Education and occupational levels were measured using Hollingshead’s scale (as cited in Miller & Salkind, 2002). These scales assign an educational and occupational score ranging from 1 (highest level) to 7 (lowest level). Hollingshead’s two-factor scale provides an index of social status (ISP), creating another variable of diversity. The ISP score was determined as follows:

$$\text{ISP score} = (\text{Occupation score} \times 7) + (\text{Education score} \times 4)$$

Based on the ISP score, each individual was assigned a social status: upper (11-17), upper middle (18-31), middle (32-47), lower middle (48-63) and lower (64-77). The results will show that the higher the social status, the lower the score will be.
Description of Subjective Indicators of Diversity in Work Groups: Perceived Dissimilarity Scale. Perceived dissimilarity (subjective indicators of diversity) was measured using the Perceived Dissimilarity Scale (a five-point semantic scale) developed by Hobman, Bordia and Gallois (2004). This semantic differential scale was used to measure perceived diversity (visible, value and informational), anchored by 1 (strongly disagree) to 5 (strongly agree). In Hobman, et al. (2004) study, perceived visible and value dissimilarity had negative association with work group members’ effectiveness when people had negative concepts of these levels of diversity. The value and informational dimension had two items per subscale; that is six items, (total score range of six to 30) and two items with a score range of two to ten respectively (Hobman, et al., 2004). None of the items on the scale needed reverse coding. Higher scores were associated with greater perceptions of dissimilarity with work group members and lower scores were associated with lesser perceptions of similarity (Hobman, et al., 2004).

Reliability. In the study conducted by Hobman et al. (2004), Cronbach’s alphas for perceived visible, value and informational dissimilarity were .67, .79, and .72, respectively, for a sample of 452 participants. In another study conducted by Hobman et al. (2003) Cronbach alphas for perceived visible, value and informational dissimilarity were .79, .87, and .80, respectively, for a sample of 129 participants. In this study, coefficient alphas were determined for the subscales, and the total Perceived Dissimilarity Scale as estimates of internal consistency and reliability.

Validity. In the Hobman et al. 2003 study, a factor analysis (principal components extraction with varimax rotation) was conducted and supported the three factor (multidimensional) structure of the Perceived Dissimilarity Scale with factor loadings
that were over .35. Factor loading of .35 and more are significant (Hair, et al., 1998). Factor analysis was conducted in this study to establish further construct validity.

**Part 2: Leadership Styles (Instrumental, Participative, and Supportive)**

*Description.* Leadership styles were measured by the three factor *Perceived Leadership Behavior Scale* (PLBS) developed by House & Dessler (1974). Hsu et al. (2003) used the PLBS scale to examine the relationship of the Path-goal leadership styles to turnover intention in a Mainland China study. Perceived leadership behavior, as measured in this study, had its conceptual base in the path-goal theory of leadership development by (House & Dessler, 1974). This theory proposes that leaders facilitate a clear path of achievement for subordinates to accomplish their goals (Huang, 2004). Therefore, leadership behavior is an explanatory variable that directly affects subordinates performance (House & Dessler, 1974).

The Path-goal leadership concept evolved from the contingency theory that posits that those in leadership positions assist others to achieve goals by providing a clear path of direction. This is accomplished when leaders adopt styles that are instrumental (having structure), supportive (being responsive) and participative (facilitating involvement and participation of subordinates) (House & Dessler, 1974).

The *Perceived Leadership Behavior Scale* (PLBS) has 22 items organized according to three types of leadership (subscales). In this study, subordinates provided their perceptions of their leaders with respect to the three leadership styles: instrumental leadership (IL), supportive leadership (SL) and participative leadership (PL) (House & Dessler, 1974). The PLBS items are scored on a 5-point frequency rating scale ranging
from “always”=5, “often”=4, “occasionally”=3, “seldom”=2, and “never”=1. All items are positively worded, so no items were reverse scored.

Item scores were summed within each factor of the three styles of leadership. Instrumental leadership (IL) had seven items and a score range of seven to 35. Supportive leadership (SL) had 10 items and a score range of 10-50. Participative leadership (PL) had five items and a score range of five to 25. The total score range for the PLBS was 22 to 110. Higher scores were associated with respondent perceptions of greater instrumental, supportive and participative leadership.

**Reliability.** Teas (1981) reported coefficient alpha estimates of .84, .51 and .82 for supportive leadership, instrumental, and participative leadership, respectively, in a study sample of 171 industrial salespeople. Silverthorne (2001) estimated reliability by using the PLBS: test-retest for stability, with result of .77 as an estimate of internal consistency. While subscales results of IL, SL and PL were not reported, Silverthorne concluded that the PLBS was reliable. Internal consistency as a reliability estimate using coefficient alphas was conducted in this study on the three PLBS leadership style subscales.

**Validity.** Huang (2004) reported factor analysis results of more than 0.5 for the construct validity of the PLBS in his study. Huang (2004) used the principal component analysis for factor retrieval. Silverthorne (2001) established concurrent validity of the PLBS by having a group of managers evaluate peers on a ten-point scale for each of the subscales, and he later compared results to the scores on the regular PLBS scales using the five-point rating scale. The correlations were significant (p<.05), ranging from .49 (supportive leadership) to .65 (participative leadership). He concluded that the PLBS had “a reasonable level of validity” (Silverthorne, 2001, Instrumentation section, para. 3). In
this study, factor analysis for the total scale and subscales of the PLBS was conducted to further establish construct validity.

**Part 3: Work Group Effectiveness**

**Description**

Part IV of the six-part Defense Equal Opportunity Management Institute’s Occupational Climate Survey (DEOCS), the *Perceived Work Group Effectiveness Scale*, was used as a subjective measure of work group effectiveness. The scale measured the structure of effectiveness for the group members (Salas, et al., 2004). The *Perceived Work Group Effectiveness* segment of the DEOCS instrument was measured by 12 items on a five-point-Likert-type scale where 1=totally disagree with the statement, 2=moderately disagree with the statement, 3=neither agree nor disagree with the statement, 4=moderately agree with the statement to 5=totally agree with the statement. All items were positively worded. The score range was 12-60, and higher scores were associated with more positive climate conditions; in this case, better work group effectiveness (Defense Equal Opportunity Management Institute [DEOMI], 2004).

**Reliability.** Landis et al. (1988) reported internal consistency for all items in the DEOCS and the Part IV Scale, *Perceived Work Group Effectiveness*, with a Cronbach’s alpha of .87 for a study sample of 104 participants. Other researchers had similar reliability results for the scale. Knouse and Dansby (1999) reported a Cronbach’s alpha of .89 for the scale in a study of 1,968 participants. A reliability estimate of internal consistency was conducted in this study.

**Validity.** Knouse and Dansby (1999) reported construct validity for the scale. In addition, Landis et al. (1998) used factor analysis (varimax rotation) to establish validity
for the scale. Further exploratory factor analysis was also conducted in this study to establish construct validity.

**Part 4: Turnover Intention**

**Description.** Turnover intention was measured by the *Turnover Intention Scale*, one of eleven scales of the Michigan Organizational Assessment Questionnaire (MOAQ). The MOAQ was designed to help facilitate the ability of organizations to obtain information through assessments of perceptions of organizational members (Cammann, Fichman, Jenkins, & Klesh, 1979). In the three-item scale (Camman, et al., 1979), participants responded to a seven-point Likert rating scale where 1=strongly disagree, and 7=strongly agree. The total score range was three to 21. High scores were associated with being in positive agreement with the statement regarding intentions to leave the organization (high intentions to leave) and low scores were associated with not being in agreement with the statements (low intention to leave).

**Reliability.** The Khatri, Budhwar and Fern (1999) study reported a Cronbach’s alpha of .87 using the MOAQ *Turnover Intention* scale with 212 participants. In another study conducted by Van der Vliet and Hellgren (2002), a Cronbach’s alpha of .84 was reported using the MOAQ Turnover Intention scale. In the Cross and Travaglione (2004) study of 234 participants, the reported internal reliability for the scale was 0.80. Reliability estimations were conducted for this study.

**Validity.** Abraham’s (1999) study of 79 participants reported the scale as uni-dimensional by a coefficient alpha of .83 and with inverse correlations measures. Exploratory factor analysis was also conducted in this study to further establish construct validity.
Procedures: Ethical Considerations and Data Collection Methods

1. The researcher obtained permission from the developers to utilize their instruments for data collection in this study. The following are the instruments used: (1) Perceived Dissimilarity Scale, (2) Hollingshead Two Factor Index of Social Position (3) Perceived Leadership Behavior Scale (PLBS), (4) Defense Equal Opportunity Climate Survey (DEOCS), (5) Michigan Organizational Assessment Questionnaire Turnover Intention Scale. (See Appendix A for the instruments).

2. The researcher obtained permission from the Alabama-branch manufacturing organization to conduct this study (see Appendix C).

3. An application was submitted and approved by the Lynn University Institutional Review Board (IRB) in order for the researcher to conduct this study.

4. Collection of the data started after the researcher obtained approval from the IRB.

5. The researcher conducted data collection with the manufacturing organization that consented to be a part of the study. The researcher organized, coordinated, and conducted the data collection and complied with the following:

   a. Provided informational briefings for study’s participants with an explanation of the rationale for conducting the study.

   b. Informed subjects that their participation was voluntary.

   c. Requested that participants answer survey questions correctly.

   d. Provided notification that the survey would take approximately 8-10 minutes to complete.
e. Requested that completed surveys be returned to the researcher in sealed, unmarked envelopes.

f. Reassured participants that their information would be kept anonymous and confidential.

6. The leadership of the manufacturing organization helped to facilitate the surveying exercise. Data was collected over a one-week time frame.

7. The researcher submitted a Lynn University IRB Report of Termination (Form 8) within a week after the data collection was completed.

8. Data were analyzed as described in the data analysis using SPSS for Windows version 15.0.

9. Data surveys collected for this study are being kept in a secured locked file cabinet at the researcher’s home.

10. Data surveys will be destroyed after five years.

**Methods of Data Analysis**

All data collected from this study were analyzed using the Statistical Package for Social Sciences (SPSS) software, version 15.0. The methods of data analysis were designed to answer the research questions and test the hypotheses, and they included descriptive statistics (frequency distributions, measures of central tendency and variability) and multiple regression. The benchmark level of significance was $p < .05$.

In this study, the researcher provides estimates of internal consistency with coefficient alpha and factor analysis for psychometric analyses of all scales. The values of coefficient alphas were expected to exceed the standard .7 level of good estimates for the items in the scales (Nunnally & Bernstein, 1994). Factor analyses were used to
further establish construct validity for the scales. Factor loadings greater than .35 were considered significant (Hair, et al., 1998).

**Evaluation of Research Methods**

This study was examined for internal validity and external validity by examining the strengths and weaknesses of the research methods. Internal validity refers to the approximate degree of truth in the confidence level that determines cause-and-effect relationships between and among independent and dependent variables. External validity, on the other hand, relates to the ability of generalizing findings from this study as approximate truth that is transferable to other persons in other places and at other times (Cavana, Delahaye, & Sekaran, 2001). This segment therefore provides the internal and external validity of the research methods for this study.

**Internal Validity**

**Strengths**

1. A strength of the methodology for this study is the fact that it is a non-experimental quantitative, correlational (explanatory) survey research design.

2. The instruments used to measure the variables have established reliability and validity that have been reported in previous studies.

3. Multiple regression analysis is a test for explanatory or predictive relationships between the causal and outcomes variables. The independent and dependent variables are identifiable.
**Weakness**

1. When compared to an experimental design, the non-experimental design used in this study is weaker in drawing causal inference (Cavanna, Delahayne & Sekaran, 2001).

2. The accessible population size of 260 employees in the manufacturing organization could have been a challenge if a large number of employees had chosen not to participate. In the literature, sample size (adequacy) in a study does affect the data analyses procedures that are performed (Mundfrom, Shaw, & Lu Ke, 2005).

**External Validity**

**Strength**

1. The accessible population of the manufacturing organization was invited to participate in this study. This decreased the likelihood of a bias associated with sampling.

**Weakness**

1. Only the Alabama-branch of the manufacturing organization was accessible to the researcher. The final data producing sample consisted of those people who agreed to participate, introducing a selection bias.

2. Caution will be necessary in generalizing results based on the representativeness of the sample of the accessible population.

3. Generalizing results to the target population are limited because only the regional Alabama organization participated.

Chapter III provided the research methodology to examine the research question
and hypotheses about leadership styles, diversity in work groups, work group effectiveness, and turnover intention for employees working for a manufacturing company. This chapter also included a description of the research design, the sampling plan, instrumentation, ethical consideration, data collection procedures, methods of data analysis, and evaluations of research methods.

Chapter IV presents the results of the data analysis conducted for this study. The results include findings that answer the research question, test the hypotheses, and provide descriptive statistics of the sample, the instruments and the overall analyses.
CHAPTER IV
RESULTS

Chapter IV presents the test results of this study that explores the relationship between and among leadership styles, diversity in work groups, work group effectiveness, and turnover intention. The data collected from the field study of a manufacturing organization were analyzed using the Statistical Package for Social Sciences (SPSS) for Windows, version 15.0. Descriptive and inferential statistics were used as methods of data analyses to answer the research questions and test hypotheses. Analysis also included multiple regressions, causal comparative analyses (analysis of variance), and exploratory factor analysis. Reliability and construct validity tests of the measurement scales were also conducted.

Final Data Producing Sample

The accessible population of 260 employees from a U.S. manufacturing organization was invited to participate in the surveying exercise, and the researcher distributed more than 300 surveys to ensure everyone received a copy. A total of 257 (98%) employees returned surveys to the researcher, but 15 were unusable because the respondents did not answer all the questions on the survey. As a result, a net total of 242 usable surveys (93% return) were available for statistical analysis at the end of the data collection.

Research Question 1

Q1. What were the socio-demographic diversity characteristics of respondents in the sample of U.S. employees from a manufacturing corporation?
Results from the surveys showed that 151 respondents (64.3%) were male and 84 (35.7%) were female. The average participant’s age was 42.06 (SD = 11.1) years. The average participant had 9.76 (SD = 11.03) years tenure with the corporation. A majority (166 or 68.6%) of the participants were white. There was a wide dispersion of educational levels among the participants. Two (0.8%) participants indicated they had a junior high school education and six (2.5%) stated that they had a graduate or professional degrees. Most participants indicated that they had high school diplomas or some college experience (203 or 83.8%). Review of the occupational level indicated by the largest number of participants was skilled manual employees (106 or 44.0%). The frequencies, with percents for participants’ race/ethnicity, education, and occupational levels are listed in Table 4-1.
Table 4-1

Frequencies and Percents of Race, Ethnicity, Education & Occupational Level (N=242)

<table>
<thead>
<tr>
<th>Variable</th>
<th>%</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asia</td>
<td>0.4%</td>
<td>1</td>
</tr>
<tr>
<td>Black/African American</td>
<td>30.6%</td>
<td>74</td>
</tr>
<tr>
<td>Indian/Alaskan Native</td>
<td>0.4%</td>
<td>1</td>
</tr>
<tr>
<td>White</td>
<td>68.6%</td>
<td>166</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>2.1%</td>
<td>5</td>
</tr>
<tr>
<td>Non Hispanic/Latino</td>
<td>97.9%</td>
<td>237</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Junior High School</td>
<td>0.8%</td>
<td>2</td>
</tr>
<tr>
<td>Partial High School</td>
<td>2.1%</td>
<td>5</td>
</tr>
<tr>
<td>High School Graduate</td>
<td>42.1%</td>
<td>102</td>
</tr>
<tr>
<td>Partial College</td>
<td>41.7%</td>
<td>101</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>10.7%</td>
<td>26</td>
</tr>
<tr>
<td>Graduate or Professional</td>
<td>2.5%</td>
<td>6</td>
</tr>
<tr>
<td><strong>Occupational Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Director/Professional</td>
<td>5.8%</td>
<td>14</td>
</tr>
<tr>
<td>Manager/Supervisor/Tech</td>
<td>23.2%</td>
<td>56</td>
</tr>
<tr>
<td>Administrative</td>
<td>5.4%</td>
<td>13</td>
</tr>
<tr>
<td>Clerical/Sales</td>
<td>5.4%</td>
<td>3</td>
</tr>
<tr>
<td>Skilled Manual Employee</td>
<td>44.0%</td>
<td>106</td>
</tr>
<tr>
<td>Machine Operator/Semi-skilled</td>
<td>12.0%</td>
<td>29</td>
</tr>
<tr>
<td>Unskilled</td>
<td>4.1%</td>
<td>10</td>
</tr>
</tbody>
</table>

Scores from the educational and occupational scales were weighted and calculated to determine Hollingshead’s Index of Social Position. This result provided the social status level for respondents in the areas of upper, upper-middle, middle, lower, and lower middle occupational positions. This result provided insights into the number of white collar (upper and upper-middle) employees and blue collar (lower and lower-middle) employees in the sample. Table 4-2 shows the results for the social position status.
Table 4-2

Hollingshead Index of Social Position (N=242)
(Occupational Scale score x 7) + (Educational Scale Score x 4)

<table>
<thead>
<tr>
<th>Social Position</th>
<th>%</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper</td>
<td>2.5%</td>
<td>6</td>
</tr>
<tr>
<td>Upper-middle</td>
<td>27.3%</td>
<td>66</td>
</tr>
<tr>
<td>Middle</td>
<td>28.9%</td>
<td>70</td>
</tr>
<tr>
<td>Lower-middle</td>
<td>37.6%</td>
<td>91</td>
</tr>
<tr>
<td>Lower</td>
<td>3.3%</td>
<td>9</td>
</tr>
</tbody>
</table>

Factor Analyses on Survey Instruments

Several exploratory factor analyses were conducted on the subscales of the instruments used for this study. An exploratory factor analysis was conducted on the Perceived Dissimilarity Profile (Visible Dissimilarity and Value/Informational Dissimilarity), Perceived Leadership Behavior Scales (Instrumental leadership, Supportive Leadership and Participative Leadership), DEOCS Work Group Effectiveness scale, and MOAQ Turnover Intention scales. The factor analyses were conducted with a principal components extraction with varimax rotation. Bartlett's test of sphericity was significant for each analysis. Several strategies could be used to determine how many factors to retain in a study (Stevens, 2002). This study's factor analysis utilized the Kaiser (1960) criterion to determine which factors to retain. Kaiser suggested that all components with an eigenvalue greater than one should be retained. This strategy yielded one factor solutions for each of the following variables: visible dissimilarity,
value/informational dissimilarity, instrumental leadership, supportive leadership, participative leadership and turnover intention scales. However, the factor analyses revealed a two-factor solution for the work group effectiveness scale.

There was a one-factor solution for the 2-item dimension of the visible dissimilarity segment of the Perceived Dissimilarity Scale. The one-factor accounted for 82.70% of the variability in the data, which falls in line with Stevens’ (2002) recommended eigenvalue levels. The eigenvalues and extraction sums of squared loadings for the visible dissimilarity scale’s analysis are depicted in Table 4-3.

Table 4-3

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total % Variance</td>
<td>Cum %</td>
</tr>
<tr>
<td>1</td>
<td>1.65</td>
<td>82.70</td>
</tr>
<tr>
<td>2</td>
<td>.35</td>
<td>17.30</td>
</tr>
</tbody>
</table>

There was a one-factor solution for the value/informational dissimilarity 4-item dimension of the scale. The one-factor accounted for 73.18% of the variability in the data, which is in line with Stevens’ (2002) recommended levels. The eigenvalues and extraction sums of squared loadings for the value/informational dissimilarity dimension of the scale’s analysis are depicted in Table 4-4.
Table 4-4

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% Variance</td>
</tr>
<tr>
<td>1</td>
<td>2.93</td>
<td>73.19</td>
</tr>
<tr>
<td>2</td>
<td>.51</td>
<td>12.81</td>
</tr>
<tr>
<td>3</td>
<td>.33</td>
<td>8.19</td>
</tr>
<tr>
<td>4</td>
<td>.23</td>
<td>5.81</td>
</tr>
</tbody>
</table>

There was a one-factor solution for the Perceived Leadership Behavioral Scale Instrumental Leadership style 6-item dimension of the scale. The one-factor accounted for 55.95% of the variability which falls below Stevens' (2002) recommended levels. However, this instrument and its factor had been proven reliable in other studies (Hsu, et. al., 2003; Silverthorne, 2001). The eigenvalues and extraction sums of squared loadings for the instrumental leadership style dimension of the scale's analysis are depicted in Table 4-5.
Table 4-5

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% Variance</td>
</tr>
<tr>
<td>1</td>
<td>3.36</td>
<td>55.95</td>
</tr>
<tr>
<td>2</td>
<td>.93</td>
<td>15.43</td>
</tr>
<tr>
<td>3</td>
<td>.59</td>
<td>9.87</td>
</tr>
<tr>
<td>4</td>
<td>.42</td>
<td>6.92</td>
</tr>
<tr>
<td>5</td>
<td>.37</td>
<td>6.10</td>
</tr>
<tr>
<td>6</td>
<td>.34</td>
<td>5.73</td>
</tr>
</tbody>
</table>

There was a one-factor solution for the *Perceived Leadership Behavioral Scale* Supportive leadership style 9-item dimension of the scale. The one-factor accounted for 74.26% of the variability, which falls in line with Stevens’ (2002) recommended levels. The eigenvalues and extraction sums of squared loadings for the supportive leadership style dimension of the scale’s analysis are depicted in Table 4-6.
Table 4-6

*Eigenvalues and Extraction Sum of Squared Loadings for Supportive Leadership*

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% Variance</td>
</tr>
<tr>
<td>1</td>
<td>6.68</td>
<td>74.26</td>
</tr>
<tr>
<td>2</td>
<td>.58</td>
<td>6.41</td>
</tr>
<tr>
<td>3</td>
<td>.40</td>
<td>4.45</td>
</tr>
<tr>
<td>4</td>
<td>.30</td>
<td>3.31</td>
</tr>
<tr>
<td>5</td>
<td>.28</td>
<td>3.13</td>
</tr>
<tr>
<td>6</td>
<td>.24</td>
<td>2.70</td>
</tr>
<tr>
<td>7</td>
<td>.20</td>
<td>2.18</td>
</tr>
<tr>
<td>8</td>
<td>.18</td>
<td>2.01</td>
</tr>
<tr>
<td>9</td>
<td>.14</td>
<td>1.57</td>
</tr>
</tbody>
</table>

There was a one-factor solution for the *Perceived Leadership Behavioral Scale* Participative leadership style 5-item dimension of the scale. The one-factor accounted for 85.84% of the variability, which exceeds Stevens’ (2002) recommended levels. The eigenvalues and extraction sums of squared loadings for the participative leadership style dimension of the scale’s analysis are depicted in Table 4-7.
Table 4-7

Eigenvalues and Extraction Sum of Squared Loadings for Participative Leadership

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total % Variance</td>
<td>Cum %</td>
</tr>
<tr>
<td>1</td>
<td>4.29</td>
<td>85.84</td>
</tr>
<tr>
<td>2</td>
<td>.27</td>
<td>5.31</td>
</tr>
<tr>
<td>3</td>
<td>.23</td>
<td>4.50</td>
</tr>
<tr>
<td>4</td>
<td>.12</td>
<td>2.40</td>
</tr>
<tr>
<td>5</td>
<td>.10</td>
<td>1.95</td>
</tr>
</tbody>
</table>

There was a one-factor solution for the turnover intention 3-item scale. The one-factor accounted for 74.83% of the variability which falls in line with Stevens’ (2002) recommended levels of 70%. The eigenvalues and extraction sums of squared loadings for the turnover intention scale are depicted in Table 4-8.

Table 4-8

Eigenvalues and Extraction Sum of Squared Loadings for Turnover Intentions

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total % Variance</td>
<td>Cum %</td>
</tr>
<tr>
<td>1</td>
<td>2.25</td>
<td>74.83</td>
</tr>
<tr>
<td>2</td>
<td>.48</td>
<td>16.08</td>
</tr>
<tr>
<td>3</td>
<td>.27</td>
<td>9.10</td>
</tr>
</tbody>
</table>
There was a two-factor solution for work group effectiveness 12-item scale. Because Stevens (2002) suggests that all components with an eigenvalue greater than one should be retained, the two components that exceeded the “one” factor (component 1 = 6.86 and component 2 = 1.83) were retained, and each accounted for 37.58% and 72.37% of the variability, respectively. Even though component one’s proportion of variability (37.58) was below the recommended levels of variability, component two’s proportion of variability (72.37) was in line with recommended levels (Stevens, 2002). The eigenvalues and extraction sums of squared loadings for the work group effectiveness scale’s analysis are depicted in Table 4-9.
The work group effectiveness scale was analyzed to determine which items significantly load on each retained factor. Stevens (2002) suggests the loading should be twice the critical value for a correlation coefficient at $\alpha = .01$. For 242 participants the critical loading was .334. Table 4-10 displays the rotated component matrix where the relevant loadings on each factor are bolded. The table indicates that items five through 12 loaded on factor one, and items one through eight loaded significantly on factor two.
### Table 4-10

*Rotated Component Matrix for Work Group Effectiveness Analysis*

<table>
<thead>
<tr>
<th>Item</th>
<th>Component 1</th>
<th>Component 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top leaders in my organization really care about each other.</td>
<td>.929</td>
<td>.176</td>
</tr>
<tr>
<td>Top leaders in my organization work well together as a team.</td>
<td>.896</td>
<td>.232</td>
</tr>
<tr>
<td>Top leaders in my organization trust each other.</td>
<td>.889</td>
<td>.190</td>
</tr>
<tr>
<td>Top leaders in my organization pull together to get the job done.</td>
<td>.878</td>
<td>.209</td>
</tr>
<tr>
<td>Members of my work group trust each other.</td>
<td>.639</td>
<td>.476</td>
</tr>
<tr>
<td>Members of my work group really care about each other.</td>
<td>.589</td>
<td>.583</td>
</tr>
<tr>
<td>The quality of output of my work group is very high.</td>
<td>.110</td>
<td>.829</td>
</tr>
<tr>
<td>My work group's performance in comparison to similar work group is very high.</td>
<td>.175</td>
<td>.825</td>
</tr>
<tr>
<td>When high priority work arises the people in my work group do an outstanding job in handling these situations.</td>
<td>.232</td>
<td>.791</td>
</tr>
<tr>
<td>The amount of output of my work group is very high.</td>
<td>.137</td>
<td>.718</td>
</tr>
<tr>
<td>Members of my work group pull together to get the job done.</td>
<td>.442</td>
<td>.701</td>
</tr>
<tr>
<td>My work group works well together as a team.</td>
<td>.466</td>
<td>.666</td>
</tr>
</tbody>
</table>

**Internal Consistency and Reliability of Subscales**

Several Cronbach's alphas were calculated to determine the levels of internal consistency and reliability for the scales used in this study: *Perceived Dissimilarity Profile* (visible dissimilarity and value/informational dissimilarity), *Perceived Leadership Behavior Scale* (instrumental leadership, supportive leadership, and participative leadership), *DEOC* work group effectiveness, and *MOAQ* turnover intention scales. The
alphas on the *Perceived Leadership Behavior Scale* ranged from .64 (instrumental leadership) to .96 (supportive leadership and participative leadership). Even though Cronbach’s alpha for instrumental leadership in this sample was lower than the conventional cut-off of .70 (Nunnally, 1978), the results were retained. The literature shows that .64 measures have been found to be acceptable for substantial number of other cross-national research studies that report Cronbach alpha reliabilities of less than .70 (Oyserman, et al. 2002). The Cronbach’s alphas for each scale in this study are listed in Table 4-11.

Table 4-11

*Cronbach’s Alpha for each Survey Factor*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Cronbach’s Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visible Dissimilarity</td>
<td>.791</td>
<td>2</td>
</tr>
<tr>
<td>Value/Informational Dissimilarity</td>
<td>.877</td>
<td>4</td>
</tr>
<tr>
<td>Instrumental Leadership</td>
<td>.637</td>
<td>6</td>
</tr>
<tr>
<td>Supportive Leadership</td>
<td>.956</td>
<td>9</td>
</tr>
<tr>
<td>Participative Leadership</td>
<td>.959</td>
<td>5</td>
</tr>
<tr>
<td>Work Group Effectiveness</td>
<td>.930</td>
<td>12</td>
</tr>
<tr>
<td>Turnover Intentions</td>
<td>.825</td>
<td>3</td>
</tr>
</tbody>
</table>

Research Question 2

Q2. Are there relationships between and among Path-goal leadership styles (instrumental, participative and supportive), diversity in work groups
Multiple regressions were conducted on the six hypotheses supporting this research question in order to examine relationships between and among the variables of leadership styles, diversity in work groups, work group effectiveness and turnover intention. Data used to conduct the analysis for this study were obtained from the 242 manufacturing company employees who provided responses to the four-part, self report survey instrument provided to them by the researcher.

Hypothesis 1

H1. There is a significant relationship between leadership styles (instrumental, participative, and supportive) and work group effectiveness.

A multiple regression analysis was conducted to determine if there was a statistically significant relationship between the independent variables (leadership styles: instrumental, participative, and supportive) and the dependent variable (work group effectiveness). Variance inflation factors were reviewed, and there was no evidence of multicollinearity (unusually high correlation among independent variables). Review of the histogram suggested that there was equal error variance across levels of the dependent variable. The omnibus (overall) model of the independent variables’ relationship to the dependent variable showed a significant predictor relationship for the dependent variable (work group effectiveness), \([F (3, 229) = 41.27, R^2 = .35, p < .01]\). The benchmark for significance was \(p = .05\).

The means (M) and standard deviations (SD) for the dependent variable (work
group effectiveness) and the independent variables (instrumental, participative and supportive leadership styles) in this model are listed in Table 4-12.

Table 4-12

Means and Standard Deviations for Hypothesis 1 [Relationships between leadership styles (instrumental, participative, supportive) and work group effectiveness]

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Group Effectiveness</td>
<td>3.88</td>
<td>0.85</td>
<td>233</td>
</tr>
<tr>
<td>Instrumental Leadership</td>
<td>3.89</td>
<td>1.06</td>
<td>233</td>
</tr>
<tr>
<td>Participative Leadership</td>
<td>3.42</td>
<td>1.13</td>
<td>233</td>
</tr>
<tr>
<td>Supportive Leadership</td>
<td>3.55</td>
<td>1.09</td>
<td>233</td>
</tr>
</tbody>
</table>

Results of the multiple regression analysis for the three dimensions of the Perceived Leadership Behavior Scale (instrumental, participative, and supportive leadership styles) showed that each style had a significant positive predictor relationship with work group effectiveness. This suggests that work group effectiveness increased with increasing levels of instrumental, participative and supportive leadership styles, thus supporting hypothesis 1. The coefficients of correlation for the model are contained in Table 4-13, showing that instrumental leadership styles had the strongest significance in the analysis at, p = .005.
Table 4-13

*Multiple Regression Analysis for Hypothesis 1 [Explaining Relationships of leadership styles (instrumental, participative, supportive) to work group effectiveness]*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrumental Leadership</td>
<td>.15</td>
<td>.05</td>
<td>.18</td>
<td>2.81</td>
<td>.005*</td>
</tr>
<tr>
<td>Participative Leadership</td>
<td>.19</td>
<td>.08</td>
<td>.25</td>
<td>2.49</td>
<td>.013*</td>
</tr>
<tr>
<td>Supportive Leadership</td>
<td>.18</td>
<td>.08</td>
<td>.23</td>
<td>2.25</td>
<td>.026*</td>
</tr>
</tbody>
</table>

Note. * p<.05

The regression coefficient summary analysis depicts the R and R² values that are the proportion of variability in the dependent variable that can be accounted for by the independent variable (Howell, 1999). The regression coefficient results for hypothesis 1 include the R² of the independent variables (participative leadership, supportive leadership, and instrumental leadership) that accounted for 35% of the variability in the dependent variable (work group effectiveness). The regression coefficient summary result is depicted in Table 4-14.

Table 4-14

*Linear Regression Correlation Coefficient Summary Analysis for Hypothesis 1 [Relationships between leadership styles (instrumental, participative and supportive) and work group effectiveness]*

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>.59*</td>
<td>.35</td>
<td>.34</td>
<td>.69</td>
</tr>
</tbody>
</table>

Note. a. Predictors: (Constant), participative leadership, supportive leadership, and instrumental leadership
Hypothesis 2

H2. There is a significant relationship between diversity (demographic and perceived dissimilarity) and work group effectiveness.

A multiple regression analysis was conducted to determine if visible dissimilarity and value/informational dissimilarity (independent variables) had a relationship with work group effectiveness (dependent variable). The variance inflation factors were reviewed and there was no evidence of multicollinearity (unusually high correlation among independent variables). Review of the histogram suggested that there was equal error variance across levels of the dependent variable. The omnibus (overall) model of the independent variables' relationship to the dependent variable showed a significant predictor relationship for the dependent variable (work group effectiveness), \( F(2, 236) = 7.38, R^2 = .06, p < .01 \). The level of significance for the model was \( p = .05 \).

Results of the analysis for the mean and standard deviation suggested that participants were neutral in their responses to visible dissimilarity. The mean (M) and standard deviation (SD) for the variables work group effectiveness, visible dissimilarity and value/informational dissimilarity in this model are listed in Table 4-15.

Table 4-15

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Group Effectiveness</td>
<td>3.88</td>
<td>0.85</td>
<td>239</td>
</tr>
<tr>
<td>Visible Dissimilarity</td>
<td>2.57</td>
<td>1.19</td>
<td>239</td>
</tr>
<tr>
<td>Value/Informational Dissimilarity</td>
<td>2.84</td>
<td>1.10</td>
<td>239</td>
</tr>
</tbody>
</table>
The multiple regression analysis results suggested that visible dissimilarity (.193) and value/informational dissimilarity (.053), together, were not significant predictors of work group effectiveness. However, the results also showed that value/informational dissimilarity (.053) had a trend effect for relationship to the dependent variable (work group effectiveness). The level of significance for the model was \( p = .05 \). As a result, hypothesis 2 was not supported. The coefficients of correlation for this analysis are listed in Table 4-16.

Table 4-16

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE</th>
<th>( \beta )</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visible Dissimilarity</td>
<td>-.08</td>
<td>.06</td>
<td>.11</td>
<td>-1.31</td>
<td>.193</td>
</tr>
<tr>
<td>Value/Informational Dissimilarity</td>
<td>-.12</td>
<td>.06</td>
<td>-.16</td>
<td>-1.94</td>
<td>.053</td>
</tr>
</tbody>
</table>

*Note. *\( p < .05 \)

The regression coefficient summary results for hypothesis 2 include the \( R^2 \) value of the independent variables (visible dissimilarity and value/informational dissimilarity) that accounted for only 6% of the variability in the dependent variable (work group effectiveness). The result for this regression correlation coefficient summary is depicted in Table 4-17.
Table 4-17

Linear Regression Correlation Coefficient Summary Analysis for Hypothesis 2
(Relationships among visible dissimilarity, value dissimilarity and work group effectiveness)

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>.24</td>
<td>.06</td>
<td>.05</td>
<td>.82</td>
</tr>
</tbody>
</table>

Note. a. Predictors: (Constant), visible dissimilarity and value/informational dissimilarity

Hypothesis 3

H3. There is a significant relationship among leadership styles (instrumental, participative, and supportive leadership), diversity (demographic and perceived dissimilarity) in work groups, and work group effectiveness.

A multiple regression analysis was conducted to determine if there was a statistically significant relationship among the independent variables (leadership styles: participative, instrumental, and supportive, diversity/dissimilarity) and the dependent variable (work group effectiveness). The variance inflation factors were reviewed and there was no evidence of multicollinearity (unusually high correlation among independent variables). The omnibus (overall) model of the independent variables' relationship to the dependent variable showed a significant predictor relationship for the dependent variable, work group effectiveness, $F(5, 226) = 27.70, R^2 = .38, p < .01$. The level of significance for the model was $p = .05$.

The highest average score ($M = 3.89, SD = 1.07$) was for the independent variable (instrumental leadership) and the lowest average ($M = 2.55, SD = 1.19$) was for
participative leadership in this model. The means and standard deviations of all the variables are listed in Table 4-18.

Table 4-18

Means and Standard Deviations for Hypothesis 3 [Relationships among leadership styles (instrumental, participative, supportive), dissimilarity (visible and value/informational), and work group effectiveness]

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Group Effectiveness</td>
<td>3.88</td>
<td>0.85</td>
<td>232</td>
</tr>
<tr>
<td>Instrumental Leadership</td>
<td>3.89</td>
<td>1.07</td>
<td>232</td>
</tr>
<tr>
<td>Participative Leadership</td>
<td>3.41</td>
<td>1.14</td>
<td>232</td>
</tr>
<tr>
<td>Supportive Leadership</td>
<td>3.56</td>
<td>1.08</td>
<td>232</td>
</tr>
<tr>
<td>Visible Dissimilarity</td>
<td>2.55</td>
<td>1.19</td>
<td>232</td>
</tr>
<tr>
<td>Value Dissimilarity</td>
<td>2.83</td>
<td>1.10</td>
<td>232</td>
</tr>
</tbody>
</table>

Results of a multiple regression analysis indicated a statistically significant relationship between instrumental leadership ($p = .004$) and participative leadership ($p = .010$) styles and work group effectiveness at the $p = .05$ significance level. This suggests that work group effectiveness increased with increasing levels of these predictor variables. The results also indicated that visible dissimilarity ($p = .241$) and value/informational dissimilarity ($p = .133$) were not significant predictors in the model. However, supportive leadership ($p = .053$) showed a trend effect relationship to work group effectiveness in the model. As a result, hypothesis 3 was only partially supported in this analysis. The coefficients of correlation are listed in Table 4-19.
Table 4-19

Multiple Regression for Hypothesis 3 [Explaining relationships of leadership styles (instrumental, participative, supportive), dissimilarity (visible and value/informational) to work group effectiveness]

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrumental Leadership</td>
<td>.15</td>
<td>.05</td>
<td>.19</td>
<td>2.90</td>
<td>.004*</td>
</tr>
<tr>
<td>Participative Leadership</td>
<td>.20</td>
<td>.08</td>
<td>.26</td>
<td>2.60</td>
<td>.010*</td>
</tr>
<tr>
<td>Supportive Leadership</td>
<td>.16</td>
<td>.08</td>
<td>.20</td>
<td>1.95</td>
<td>.053</td>
</tr>
<tr>
<td>Visible Dissimilarity</td>
<td>-.06</td>
<td>.05</td>
<td>-.08</td>
<td>-1.18</td>
<td>.241</td>
</tr>
<tr>
<td>Value/Info. Dissimilarity</td>
<td>-.08</td>
<td>.05</td>
<td>-.11</td>
<td>1.51</td>
<td>.133</td>
</tr>
</tbody>
</table>

Note. * p<.05

The regression coefficient summary results for hypothesis 3 include the $R^2$ value of the independent variables (instrumental leadership, participative leadership, supportive leadership, visible dissimilarity and value/informational dissimilarity) that accounted for 38% of the variability in the dependent variable (work group effectiveness). The regression coefficient summary result for hypothesis 3 is depicted in Table 4-20.

Table 4-20

Linear Regression Correlation Coefficient Summary Analysis for Hypothesis 3 (Relationships among leadership styles (instrumental, participative, supportive), dissimilarity (visible and value/informational) and work group performance.)

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>.62 a</td>
<td>.38</td>
<td>.37</td>
<td>.67</td>
</tr>
</tbody>
</table>

Note. a. Predictors: (Constant), instrumental leadership, participative leadership, supportive leadership, visible dissimilarity and value/informational dissimilarity
Hypothesis 4

H4 There is a significant relationship between leadership styles (instrumental, participative and supportive) and turnover intention.

A multiple regression analysis was conducted to determine if there was a statistically significant relationship between the independent variables (instrumental leadership, participative leadership, supportive leadership) and the dependent variable (turnover intention). The variance inflation factors were reviewed and there was no evidence of multicollinearity (unusually high correlation among independent variables). Review of the histogram suggested that there was equal error variance across levels of the dependent variable. The omnibus (overall) model of the independent variables’ relationship to the dependent variable (turnover intention) was significant, $F(3, 231) = 22.72, R^2 = .23, p < .01$. The level of significance for the model was $p = .05$.

The highest independent variable average score in this model was for instrumental leadership ($M = 3.89, SD = 1.06$) and the lowest average score ($M = 3.41, SD = 1.13$) was for participative leadership. The means and standard deviations of all the variables in this analysis are listed in Table 4-21.
Table 4-21

Means and Standard Deviations for Hypothesis 4 [Relationships of leadership styles (instrumental, participative, supportive) and turnover intention.]

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover Intentions</td>
<td>2.93</td>
<td>1.80</td>
<td>235</td>
</tr>
<tr>
<td>Instrumental Leadership</td>
<td>3.89</td>
<td>1.06</td>
<td>235</td>
</tr>
<tr>
<td>Participative Leadership</td>
<td>3.41</td>
<td>1.13</td>
<td>235</td>
</tr>
<tr>
<td>Supportive Leadership</td>
<td>3.56</td>
<td>1.08</td>
<td>235</td>
</tr>
</tbody>
</table>

The results of the regression analysis revealed that instrumental leadership ($p = .365$) and participative leadership ($p = .127$) were not statistically significantly related to the dependent variable (turnover intention). Supportive leadership, however, was significantly related at $p = .002$. As a result, hypothesis 4 is only partially supported.

The analysis results are listed in Table 4-22.

Table 4-22

Multiple Regression for Hypothesis 4 [Relationships of leadership styles (instrumental, participative, supportive) to turnover intention]

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE</th>
<th>$\beta$</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrumental Leadership</td>
<td>.11</td>
<td>.12</td>
<td>.06</td>
<td>0.91</td>
<td>.365</td>
</tr>
<tr>
<td>Participative Leadership</td>
<td>-.27</td>
<td>.18</td>
<td>-.17</td>
<td>-1.53</td>
<td>.127</td>
</tr>
<tr>
<td>Supportive Leadership</td>
<td>-.60</td>
<td>.19</td>
<td>-.36</td>
<td>-3.19</td>
<td>.002*</td>
</tr>
</tbody>
</table>

Note. * $p<.05$
The regression coefficient summary results for hypothesis 4 include the R\textsuperscript{2} value of the independent variables (instrumental leadership, participative leadership, and supportive leadership) that accounted for 23% of the variability in the dependent variable (turnover intention). This result is significant and partially supports hypothesis 4. The regression coefficient summary result for hypothesis 4 is listed in Table 4-23.

Table 4-23

| Linear Regression Correlation Coefficient Summary Analysis for Hypothesis 4 |
|-----------------------------|------------------|-------------------|-----------------------------|
| R                         | R Square | Adjusted R Square | Std. Error of the Estimate |
| .48\textsuperscript{a}    | .23      | .22               | 1.60                        |

Note. a. Predictors: (Constant), instrumental leadership, participative leadership, and supportive leadership

Hypothesis 5

H5. There is a significant relationship between diversity/dissimilarity in work groups and turnover intention of employees.

A multiple regression analysis was conducted to determine if independent variables (visible dissimilarity and value/informational dissimilarity) had any statistically significant relationship to the dependent variable (turnover intention). The variance inflation factors were reviewed and there was no evidence of multicollinearity (unusually high correlation among independent variables). A review of the histogram suggested that there was equal error variance across levels of the dependent variable. The omnibus (overall) model of the independent variables' relationship to the dependent variable showed a significant predictor relationship for the dependent variable (turnover

108
intention), $F(2, 238) = 3.76, R^2 = .03, p < .05$. The benchmark level of significance in the model was $p = .05$.

The independent variable (value/informational dissimilarity) had the highest average score ($M = 2.84, SD = 1.10$) and visible dissimilarity had the lowest ($M = 2.58, SD = 1.19$). The means and standard deviations for the entire model are listed in Table 4-24.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover Intentions</td>
<td>2.91</td>
<td>1.80</td>
<td>241</td>
</tr>
<tr>
<td>Visible Dissimilarity</td>
<td>2.58</td>
<td>1.19</td>
<td>241</td>
</tr>
<tr>
<td>Value/Informational Dissimilarity</td>
<td>2.84</td>
<td>1.10</td>
<td>241</td>
</tr>
</tbody>
</table>

Results of the regression analysis indicated that value/informational dissimilarity was a statistically significant ($p = .019$) positive predictor variable of employees’ turnover intentions. This suggests that turnover intentions increased with increasing levels of value/informational dissimilarity. Visible dissimilarity ($p = .656$) was not found to be a significant predictor variable for turnover intentions. As a result, hypothesis 5 was only partially supported. Results of the regression coefficient of correlation analysis are listed in Table 4-25.
Table 4-25

*Multiple Regression for Hypothesis 5 [Relationships of dissimilarity (visible and value dissimilarity) to turnover intention]*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visible Dissimilarity</td>
<td>-.06</td>
<td>.13</td>
<td>-.04</td>
<td>-0.45</td>
<td>.656</td>
</tr>
<tr>
<td>Value/Informational Dissimilarity</td>
<td>.32</td>
<td>.14</td>
<td>.20</td>
<td>2.36</td>
<td>.019*</td>
</tr>
</tbody>
</table>

Note. * p<.05

The regression coefficient summary results for hypothesis 5 include the $R^2$ value of the independent variables (visible dissimilarity and value/informational dissimilarity) that accounted for 3% of the variability in the dependent variable (turnover intention). The coefficient summary results and are depicted in Table 4-26.

Table 4-26

*Linear Regression Correlation Coefficient Summary Analysis for Hypothesis 5 (Relationship of dissimilarity (visible and value/informational) to turnover intention)*

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>.18 a</td>
<td>.03</td>
<td>.02</td>
<td>1.78</td>
</tr>
</tbody>
</table>

Note. a. Predictors: (Constant), visible dissimilarity and value/informational dissimilarity

**Hypothesis 6**

H6. There is a significant relationship among diversity/dissimilarity in work groups, leadership styles, work group effectiveness, and turnover intention of employees.
A multiple regression analysis was conducted to determine if the independent variables (leadership styles: instrumental, participative, supportive, visible dissimilarity, value/informational dissimilarity, and work group effectiveness) had a statistically significant relationship with the dependent variable (turnover intention). The variance inflation factors were reviewed, and there was no evidence of multicollinearity (unusually high correlation among independent variables). Review of the histogram suggested that there was equal error variance across levels of the dependent variable. The omnibus (overall) model of the independent variables' relationship to the dependent variable (turnover intention) was significant, $F(6, 225) = 12.68, R^2 = .25, p < .01$. The benchmark level of significance was $p = .05$.

The independent variable with the highest average score ($M = 3.89, SD = 1.07$) was instrumental leadership and the lowest ($M = 2.55, SD = 1.19$) was visible dissimilarity. The means and standard deviations for this overall analysis are listed in Table 4-27.
Table 4-27

Means and Standard Deviations for Hypothesis 6 [Relationships of dissimilarity (visible and value/informational), leadership styles (instrumental, participative, supportive), work group effectiveness to turnover intention]

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover Intentions</td>
<td>2.93</td>
<td>1.80</td>
<td>232</td>
</tr>
<tr>
<td>Visible Dissimilarity</td>
<td>2.55</td>
<td>1.19</td>
<td>232</td>
</tr>
<tr>
<td>Value/Informational Dissimilarity</td>
<td>2.83</td>
<td>1.10</td>
<td>232</td>
</tr>
<tr>
<td>Instrumental Leadership</td>
<td>3.89</td>
<td>1.07</td>
<td>232</td>
</tr>
<tr>
<td>Supportive Leadership</td>
<td>3.56</td>
<td>1.09</td>
<td>232</td>
</tr>
<tr>
<td>Participative Leadership</td>
<td>3.41</td>
<td>1.14</td>
<td>232</td>
</tr>
<tr>
<td>Work Group Effectiveness</td>
<td>3.88</td>
<td>0.85</td>
<td>232</td>
</tr>
</tbody>
</table>

Results of the regression analysis in this model revealed that value/informational dissimilarity ($p = .045$) had a significant positive predictor relationship to turnover intentions. This suggests that employees’ turnover intentions increased with increasing levels of value/informational dissimilarity. Results of analysis also indicated that instrumental leadership ($p = .328$), participative leadership ($p = .067$), visible dissimilarity ($p = .466$), and work group effectiveness ($p = .858$) had no significant predictor relationships to turnover intentions in this model. Participative leadership style ($p = .067$), however, showed a trend effect in relationship to the dependent variable (turnover intention) in the model. As a result, hypothesis 6 was only partially supported. The regression coefficients are listed in Table 4-28.
Table 4-28

*Multiple Regression for Hypothesis 6 [Relationships of dissimilarity (visible and value/informational), leadership styles (instrumental, supportive, participative), and workgroup effectiveness to turnover intention]*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visible Dissimilarity</td>
<td>-.09</td>
<td>.12</td>
<td>-.06</td>
<td>-0.73</td>
<td>.466</td>
</tr>
<tr>
<td>Value/Informational Dissimilarity</td>
<td>.25</td>
<td>.13</td>
<td>.16</td>
<td>2.02</td>
<td>.045*</td>
</tr>
<tr>
<td>Instrumental Leadership</td>
<td>.12</td>
<td>.12</td>
<td>.07</td>
<td>0.98</td>
<td>.328</td>
</tr>
<tr>
<td>Supportive Leadership</td>
<td>-.53</td>
<td>.19</td>
<td>-.32</td>
<td>-2.77</td>
<td>.006*</td>
</tr>
<tr>
<td>Participative Leadership</td>
<td>-.33</td>
<td>.18</td>
<td>-.21</td>
<td>-1.84</td>
<td>.067</td>
</tr>
<tr>
<td>Work Group Effectiveness</td>
<td>-.03</td>
<td>.16</td>
<td>-.01</td>
<td>-0.18</td>
<td>.858</td>
</tr>
</tbody>
</table>

Note. *p<.05

The regression coefficient summary results for hypothesis 6 include the R² value of the independent variables (visible dissimilarity, value/informational dissimilarity, instrumental leadership, supportive leadership, participative leadership, work group effectiveness) that accounted for 25% of the variability in the dependent variable (turnover intention). The regression coefficient summary result for hypothesis 6 is depicted in Table 4-29.
Table 4-29

Linear Regression Correlation Coefficient Summary Analysis for Hypothesis 6
[Relationships of dissimilarity (visible and value/informational), leadership styles
(instrumental, participative and supportive), work group effectiveness, and turnover
intention]

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>.50&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.25</td>
<td>.23</td>
<td>1.58</td>
</tr>
</tbody>
</table>

Note. a. Predictors: (Constant), participative leadership, supportive leadership, and instrumental leadership

Chapter IV presented descriptive statistics of the sample, provided psychometric characteristics of all the instruments in the study, and reported the results of regression analysis of data collected to answer the research questions and test the study’s six hypotheses. Chapter V discusses these findings, presents limitations of the study, assesses research implications and provides conclusions about this important topic.
CHAPTER V
DISCUSSION

Chapter V presents a discussion of the results reported in Chapter IV. This study provides the first examination and exploration of the relationship between and among path-goal leadership styles, diversity in work groups, work group effectiveness, and turnover intention of employees. Work groups make up the fabric of all organizations, and work groups invariably will have someone in leadership creating a process for achieving the goals for the work group. Every leader in a work group has different leadership styles that either propel the work group to be effective or hinder the group’s effectiveness (Ahn, et al., 2004; Ogbonna & Harris, 2000; and Joplin & Daus, 1997). Work groups, by their very nature, are heterogeneous because no two people in any work group are exactly alike.

There will come a time in the life of a work group when one or more members in the group start making assessments about the work group’s effectiveness to determine if they want to stay or leave the group. If the member decides that the work group has low work group effectiveness, then that person might leave the work group. When someone in any work group considers leaving the group, this action is referred to as turnover intention (Chiu & Francesco, 2003). The specific purpose, therefore, for this non-experimental, quantitative, correlational (explanatory) and causal-comparative research was to explore the relationship between and among the variables of leadership styles, diversity in work groups, work group effectiveness, and turnover intention. There were two research questions in this study, and six hypotheses were developed and tested.
Interpretations

Socio-demographic Characteristics of the Sample

The findings from this study of 242 employees indicate that 155 respondents (64%) were male and 87 (34%) were female. In industries such as manufacturing and engineering, men far outnumber women. In other service industries such as nursing, the women outnumber male employees (Hobman, et al., 2004, Randal, 2002; Khatri, Fern, Budhwar, 2001).

The average age of the participants was 42.06 (SD=11.1) years, and the average tenure in years of working for the organization was 9.76 (SD = 11.03). A majority, 166 (69%) of the participants were white, and 74 (31%) were black.

These socio-demographic findings in this study were not unique for a manufacturing organization in the S.E. United States, so the results were not a surprise to the researcher. A total of 84% of the respondents indicated that they had high school and some college education, and six (2.5%) had completed graduate or professional education. Once again these findings for the sample of respondents were reflective of the region’s general population and mirrored findings in the literature for manufacturing organizations (Randal, 2002).

Also, as expected in this study of employees in a manufacturing organization, the occupational level indicated by the largest number of participants was skilled manual employees. The study’s sample of heterogeneous respondents with respect to diversity of age, gender, race/ethnicity, occupation and educational levels, were similar to the
findings in the literature (Hobman, Bordia, & Gallois, 2004 & 2003; Pelled, et al., 1999; and Pelled, 1996).

**Literature Review of Leadership Styles, Diversity in Work Groups, Work Group Effectiveness and Turnover Intention**

**Output Measurements**

**Hypothesis 1 (Relationship of leadership styles and work group effectiveness)**

Leadership has been identified as a key component variable for work groups’ effectiveness. In the role of a change agent, leadership provides the vision that empowers and encourages work group effectiveness. Work group members recognize the functional division of authority and formally recognized role of their leadership who has a unique style to promote work group effectiveness (Fairholm, 2004). Fairholm (2004) noted that there was a need for understanding leadership and its impact on work group’s effectiveness.

A study was conducted to examine the extent to which leadership styles were related to work group effectiveness in a manufacturing and service industry (Jabnoun & Al-Ghasyah, 2005). The researchers analyze the relationship of leadership styles to work group effectiveness with an ISO certification work process. The results of an ANOVA test indicated that there was a significant positive relationship between leadership styles and work group’s effectiveness. Results from this study showed that leadership needed to keep individuals in work groups focused to ensure the work group’s effectiveness. The authors recommended that more studies be conducted on the relationship of leadership styles and their impact on work groups’ effectiveness to confirm their results and expand the research to different settings. Their finding was the impetus for this study that includes leadership and work group effectiveness.
Hypothesis 2 (Relationship of diversity/dissimilarity to work group effectiveness)

Cox (2001) theorized that diversity in work groups is related to the differences and peculiarities of people within a group and the socially based issues that everyone in the group must adjust to in order to ensure work group effectiveness. Differences and peculiarities may include visible dissimilarities and/or value/informational dissimilarities.

Nahapiet and Ghoshal’s (1998) theory on diverse work groups is rooted in the social capital concept. These researchers defined social capital as relationships of resources that are embedded in all human groups or social networks. Nahapiet and Ghoshal (1998) theorized that work group members’ perception of diversity/dissimilarity can hinder their level of contribution to the group’s effectiveness.

Hobman, et al., (2003) conducted a study to determine the level of openness that work group members had about their diversity/dissimilarity to other group members and the impact of their perceptions on work group effectiveness. A factor analysis (principal components) extraction with varimax rotation was conducted and supported a three factor structure. Cronbach alpha were .79, .80 and .87, respectively, for each factor. Results of study analysis showed that levels of openness to diversity that may impact work group effectiveness was at the midpoint level of the scale and most of the correlations were in the anticipated predicted directions. Multiple regressions were conducted on the hypothesized relationships between variables. The regression analyses that tested the predicted relationships between dissimilarity and work group effectiveness showed variance in task conflict, \( R^2 = .18, F(6,122) = 4.55, p < .001 \). These results indicated that value dissimilarity was positively related to relationship conflicts that affected work
group effectiveness, $B = .23$, $p < .05$, task conflict, $B = .38$, $p < .001$. The study concluded that the higher the levels of dissimilarity in values, the lower a work group’s effectiveness would be.

**Hypothesis 3 (Relationship of leadership styles, diversity/dissimilarity and work group effectiveness)**

A study by Ayoko and Hartel (2006 & 2002) confirmed the theoretical findings in the literature regarding the crucial role leadership plays in ensuring that diverse work groups demonstrate high work group effectiveness. It is noted in the study that due to the natural tendency of individuals to identify with people they perceive as similar, when there is diversity/perceived dissimilarity, conflicts arise in work groups. These conflicts result in disruptions that negatively impact work group effectiveness. For this reason, diverse work groups require leadership with appropriate leadership styles to facilitate group tasks, norms, and processes for effective outcomes. Williams and O’Reilly (1998) recommended that future research be conducted to improve the understanding of links among leadership styles, diversity in work groups, and work group effectiveness.

Kirkman, Tesluk, and Rosen (2004) studied the relationship of leadership styles, work diversity/dissimilarity and work group effectiveness. It was noted in the study that perceptions of in-group versus out-group status of dissimilarity was hypothesized to be related to disruptions in work groups and ultimately impacted work group effectiveness. Four organizations participated in this study (textile manufacturers, high-technology manufacturers and an insurance company). The study was an exploratory approach with qualitative and quantitative methods. All instruments used in the study were tested for reliability and validity. Race dissimilarity was found to be less of a significant predictor
for diversity/dissimilarity in work group effectiveness. Results of the study data analysis showed that leaders rated team members who were racially similar to them, more positively than others. As a result of the findings, a recommendation was made for future study to provide further understanding of leadership styles, work group diversity and work group effectiveness. This current study is, therefore, a response to the call.

**Hypothesis 4 (Relationship of leadership styles and turnover intention)**

The relationship of leadership and work group members has been studied by many researchers who have looked at the impact of different leadership styles, on work group members. Some leadership styles have negative relationships with work groups that resulted in turnover intention for work group members. This has been explained by the social exchange theory that relates to the various work roles of leaderships and work group members (O’Reilly, et al., 1980). According to the theory, when there are high levels of perceived support, trust and guidance from leadership, members of work groups indicate lower levels of turnover intentions.

Yeh’s (1995) study of 334 employees from six major research and development organizations studied three leadership styles (instrumental, participative and supportive) and their relationships to work groups. Researchers found that supportive leadership had the greatest positive impact on work groups and member’s intentions to remain in the groups. This study noted that future research about leadership styles should adopt the Perceived Leadership Behavior Scale and include the analysis of turnover intention to better understand the relationship with leadership styles. This study responds to this research recommendation.
Hypothesis 5 (Relationship between diversity/dissimilarity and turnover intention)

Diversity/dissimilarity in work groups creates new interest and introduces new ideas and ways of thinking for the groups. Diversity/dissimilarity also serves as a two-edged sword because of its challenges and benefits to work groups. Diverse work groups provide the opportunity and challenge to optimize each person’s unique contribution to the group, while avoiding conflicting differences among the members. Maintaining this balance helps to and alleviate thoughts of turnover intention (Williams & O’Reilly, 1998). Diversity/dissimilarity in work groups therefore generates both positive outcomes and negative outcomes.

Cunningham and Sagas' (2004) analyzed approximately 235 assistant coaches of men’s national collegiate athletic association to examine the relationship of group surface level diversity to turnover intention. The instruments used in the study included one for diversity and one for turnover intention. Results from the findings indicated that high levels of perceived visible race diversity/dissimilarity resulted in high levels of turnover intentions in the work groups.

The instruments were found to be reliable with estimates of .90 for the diversity/dissimilarity dimension. The reliability estimate for the turnover intention scale was alpha .84. Results from the hierarchical regression in the study showed that when “turnover intention served as the dependent variable, the controls accounted for 18% (p<.001) of the variance” (Cunningham & Sagas, 2004, p. 7). Value similarity was the only significant predictor of turnover intention (B = -.39, p <.001). Based on these findings, the researchers (Cunningham & Sagas, 2004) called on others to conduct future studies in other organizations, unrelated to sports, to examine additional levels of
diversity and work group outcomes. This call from Cunningham & Sagas (2004) has resulted in this current research study.

*Hypothesis 6 (Relationship among leadership styles, diversity/dissimilarity, work group effectiveness and turnover intention)*

Published research indicate that there is a crucial role for leadership to ensure diverse work groups meet their goals for work effectiveness. Leadership is theorized as a moderating variable for guarding against employee turnover intention (Waldman, et al. 2001). Some group members will favor certain leadership styles, and the leadership’ style can either create disruptions or foster cohesion within a work group. When there is cohesiveness within the group, the work group is effective. However, when there is disruption, leadership risk the possibility of group members’ turnover intention.

Hwang and Kuo (2006) conducted a study to determine if the availability of other employment opportunities was a contributor to employees’ turnover intention. The purpose was to make a contribution to predicting turnover behaviors more precisely and assist leadership in taking measures in advance to prevent employee turnover. A total of 259 people participated in the study using instruments to measure job satisfaction, perceived employment opportunities and turnover intention. The results from the study showed that job satisfaction accounted for 15% of turnover variance which meant that perceived alternative employment opportunity was also a variable in turnover intentions. Hwang and Kuo (2006) suggested that future research be conducted to examine other variables that might be related to turnover intention. This current study aims to respond to their call.
Hypotheses Testing

The researcher conducted multiple regressions testing for this study because multiple regression analysis is a multivariate statistical technique used to examine the relationship between an outcome variable and predictor variables (George & Mallery, 2003). In addition, multiple regression analysis examines the relationship among variables and the extent to which independent variables are linked and explain dependent variables (Gay, 1996). The $F$ statistic and its significance level have been established tests for the significance of overall regression models and $R^2$ has provided results of the proportion of variance in dependent variables that can be explained by the independent variables (Howell, 1999).

There were six hypotheses in this study. Four of the six hypotheses were partially supported, one was not supported and one was fully supported. Table 5-1 provides a summary of all six research hypotheses and the findings of those that were partially supported and supported.
### Table 5-1

**Research Hypotheses and Results**

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Results</th>
<th>Literature</th>
<th>Consistent With the Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1. There is a significant relationship between leadership styles (instrumental, participative and supportive) and work group effectiveness.</td>
<td>Supported</td>
<td>Fairholm (2004)</td>
<td>Yes</td>
</tr>
<tr>
<td>H4. There is a significant relationship between leadership styles (instrumental, participative and supportive) and turnover intention.</td>
<td>Partially supported</td>
<td>O'Reilly, et al. (1980) Yeh (1995)</td>
<td>Yes</td>
</tr>
<tr>
<td>H5. There is a significant relationship between diversity in work groups and turnover intention of employees.</td>
<td>Partially supported</td>
<td>Williams &amp; O'Reilly (1998) Cunningham &amp; Sagas (2004)</td>
<td>Yes</td>
</tr>
<tr>
<td>H6. There is a significant relationship among diversity in work groups, leadership styles, work group effectiveness, and turnover intentions.</td>
<td>Partially supported</td>
<td>Waldman, et al. (2001) Hwang &amp; Kuo (2006)</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Outcomes

Relationship between leadership styles (instrumental, participative, and supportive) and work group effectiveness (H1)

To obtain an extensive examination of the variables in H1 of this study, multiple regressions were conducted on the three leadership dimensions (instrumental, participative, and supportive) of the Perceived Leadership Behavior Scale and their relationship to work group effectiveness. Based on the regression models tested, the findings indicate that all three dimensions of leadership styles had significant positive predictor relationships to work group effectiveness. In this model, instrumental leadership (providing structure) had the most significant \( p = .005 \) relationship to work group effectiveness. The overall model, however, suggests that work group effectiveness increased with increasing levels of the leadership predictors (instrumental, participative, and supportive). The \( R^2 \) correlation coefficient regression summary analysis of the independent variables (leadership styles: instrumental, participative and supportive) accounted for a significant (35%) proportion of variability of the dependent variable (work group effectiveness). These findings were consistent with the findings of other researchers in the literature who noted that the three leadership styles studied contributed to work groups' effectiveness (Duemer, et al. 2004, Fairholm, 2004; Jabnoun & Al-Ghasyal, 2005; and Ogbonna & Harris, 2000).
The multiple regression analysis for hypothesis 2 examined the relationship between work group effectiveness and dissimilarity (visible and value/informational). However, the study showed no significant predictors to support this hypothesis. Value/informational dissimilarity, however, showed evidence of a trend effect ($p = .053$) with a significance level of ($p = .05$). The coefficient of determination was only 6% showing that diversity/dissimilarity accounted for only a minor portion of the variability of the dependent variable, work group effectiveness. These findings coincide with similar findings of other researchers. Jehn, Northcraft and Neale's (1999) findings indicated that diversity/dissimilarity created challenges/conflicts in groups and they ultimately impacted work group effectiveness. Visible dissimilarity was not a significant variable in this current study, nor was it significant in other research studies. One explanation might be due to findings noted in the literature that visible diversity often has an initial impact on work group members, however, the impact often diminishes when the focus moves from the visible to the less visible dissimilarities such as value/informational levels of diversity. When there are high levels of value/informational dissimilarity, there are low levels of work group effectiveness (Jehn, Northcraft, & Neale, 1999).
Relationship among leadership styles (instrumental, participative, and supportive leadership), diversity (demographic and perceived dissimilarity) in work groups, and work group effectiveness (H3).

The socio-demographic profile of respondents in the study indicated that the work group was diverse in many areas to include race, age, gender, tenure, and occupational levels. Analysis of data to test hypothesis 3 revealed that visible dissimilarity and value/dissimilarity were not significantly related to work group effectiveness. Instrumental, participative and supportive leadership styles all showed significant relationships with work group effectiveness. Supportive leadership also had a trend effect relationship to work group effectiveness with a significance level of $p = .053$. The $R^2$ of 38% showed that leadership styles accounted for a significant proportion of the variability of work group effectiveness. These findings are similar to findings in the literature where it is noted that value dissimilarity has a stronger positive relationship with work group effectiveness than visible dissimilarity (Williams & O’Reilly, 1998). Other researchers have also concluded that, due to the complexity of diversity in work groups, it takes leadership with specialized styles to lead diverse work groups. The instrumental (structured) leader is often favored to ensure task completion and work group effectiveness (Kirkham, et al., 2004; Waldman, Ramirez, House, & Puranam, 2001).
**Relationship between leadership styles (instrumental, participative, and supportive) and turnover intention (H4).**

In the model that tested hypothesis 4 to determine the relationship between the leadership style variables (instrumental, participative and supportive) and turnover intention, supportive leadership was found to be the most significant leadership style, \( p = .002 \). This indicated that when supportive leadership was high in a work group, there was a reduced likelihood of group members considering turnover intentions. Participative leadership style and instrumental leadership styles did not have a significant relationship with turnover intention. The \( R^2 \) revealed that leadership styles explained 23% of group members' turnover intention. These findings were similar to the findings in the literature where it was noted that when levels of supportive leadership styles were high in work groups, turnover intention levels were low (Peterson, 2004, Hsu, et al., 2003; Katzenbach, 1997; and Yeh 1995)

**Relationship between diversity/dissimilarity (demographic and perceived dissimilarity) in work groups and turnover intention (H5).**

Analysis of the current study's data suggested that when there is a high level of value/informational dissimilarity among work group members, there is a possibility that members within the group are considering turnover intention. The level of significance for visible dissimilarity (\( p = .656 \)) indicated that visible dissimilarity had no relationship to turnover intention. The \( R^2 \) correlation coefficient regression summary analysis (independent variables: leadership styles: instrumental, participative and supportive) accounted for a minor significance (3%) proportion of variability of the dependent variable (turnover intention). These findings are similar to the findings in the literature
where it was noted that visible dissimilarity creates the first triggers of differences in a work group but are quickly replaced by other levels of value/informational dissimilarity. The value/informational dissimilarity levels have the most significant impact on work groups. When the levels of value/informational dissimilarity are high, turnover intentions are also high (Jehn, Northcraft, & Neale, 1999).

**Relationship among diversity in work groups, leadership styles, work group effectiveness, and turnover intention (H6).**

The model for hypothesis 6, which combined all the independent variables (leadership styles, diversity/dissimilarity, and work group effectiveness) to determine a relationship with the dependent variable (turnover intention), showed the highest result of significant relationship for supportive leadership and turnover intention. Value/Informational dissimilarity also indicated a significant ($p = .045$) relationship to turnover intention in work groups. Participative leadership style ($p = .067$) showed a trend effect relationship to turnover intention at a significance level of $p = .05$. This suggests that participative leadership style in diverse work groups may help to guard against work group members considering turnover intentions. The other independent variables (visible dissimilarity, $p = .466$; instrumental leadership, $p = .328$; and work group effectiveness, $p = .858$) in this model had no significant relationship with turnover intention. The $R^2$ correlation coefficient regression summary analysis showed that the independent variables: diversity/dissimilarity (visible and value/informational), leadership styles (instrumental, supportive and participative), and work group
effectiveness] accounted for 25% proportion of variability of the dependent variable (turnover intention). This finding is unique to this current study.

**Limitations**

This study was the first examination and exploration of the relationship between and among Path-goal leadership styles (instrumental, participative and supportive), diversity/dissimilarity (visible and value/informational), work group effectiveness and turnover intentions. Even though this is a very valuable research to add to the body of literature, there are some limitations to this study.

1. The selection bias associated with non-experimental design was a threat to external validity.
2. This study was limited to respondents who were accessible to the researcher.
3. Since this study was limited to one US manufacturing company, the findings may only be generalized to similar US industries.
4. Knowledge about the relationships between and among the variables examined in this study was limited to the findings obtained using multiple regression analyses. There is a possibility that structural equation modeling could have provided additional information about the relationships between the variables.

**Practical Implications**

In all organizations (large or small; for profit or non-profit) there are diverse work groups making efforts to achieve work group effectiveness. In the “mix” of all the efforts to achieve effectiveness, there is someone in the role of leadership. The designated
person with the role of leadership has a crucial responsibility to ensure the work group demonstrates effectiveness when working together. In addition, leadership has to also ensure minimal turnover intention.

Since an organization's greatest asset is its human resources, many want to recruit and retain employees within their work groups effectively because of the high expenditure an organization can incur as a result of turnover. Research indicates that turnover intention (thinking about leaving one's employer) is the best and most immediate predictor of turnover (Dougherty, Bludorn, & Keon, 1985; Hui, 1988; Martin, 1979; Mobley, Horner, & Hollingsworth, 1978; and Steers & Mowday, 1981). There is no known previous study that has looked at the possibility of all these variables combined (leadership styles, diversity/dissimilarity in work group, and work group effectiveness) having a predictor relationship with turnover intention. Findings from this current study imply the following:

1. A careful selection of work group leadership is crucial for the effectiveness of the diverse work groups.

2. Even though a work group may appear to be heterogeneous with visible dissimilarity, the key variables that could create disruptions within the work group are value/informational dissimilarities. Visible dissimilarity in a work group may have an immediate impact but may not be sustained as long as the value/informational impact.

3. As dissimilarity in work group increases, work group effectiveness decreases.
4. When selecting leadership for diverse work groups, the Path-goal leadership styles (instrumental, participative and supportive) should be considered as some of the favorable traits for a leader to achieve work group effectiveness.

5. The most significant predictor of a relationship that will positively impact work group effectiveness is instrumental leadership style (a style that provides an environment of structure and specific directions for work group members’ task completion). The next best is the participative leadership style that provides an environment of shared leadership where group members participates in the decision making process. The leader with a supportive leadership style, however, will offer an environment of camaraderie, friendliness and concern for achievement and well-being of group members.

6. Supportive leadership style has shown a trend effect relationship for predicting work group effectiveness.

7. The Path-goal leadership (supportive) style indicates the most significant positive relationship to guard against turnover intention in work groups. Participative leadership styles showed a trend effect positive relationship to also guard against group members considering turnover intention.

8. The most significant diversity/dissimilarity variable that would result in a group member having consideration of turnover intention would be value/informational dissimilarity. If someone in the group considers himself/herself to have significant value/informational dissimilarity from the work group, then that person is likely to consider turnover intention.
Conclusions

This study was conducted at a U.S. manufacturing organization where 242 employees participated by completing a self-report, 4-part study. The variables in the study included leadership styles (instrumental, participative and supportive), work group effectiveness, diversity/dissimilarity (visible and value/informational, and turnover intention. In the key analysis for this study, the combined variables: leadership styles (instrumental, participative and supportive), diversity/dissimilarity (visible and value/informational) and work group effectiveness were all independent variables. The dependent variable was turnover intention. Statistical significance was tested and measured for all the variables to determine what relationship the independent variables had with the dependent variable. The following are this study’s conclusions:

1. Analysis of the data in this study supported all of the findings in the literature regarding the relationship between leadership styles and work group effectiveness.

2. The socio-demographic information allowed the researcher to assess the comparability of the present sample to the target population. The sample’s characteristics were consistent with the target population, making generalization to the US manufacturing industry possible.

3. In measuring respondent’s perceptions about diversity/dissimilarity, this study found the respondents were less concerned with visible dissimilarity than value/informational dissimilarity in their work groups. This indicates that participations were neutral in expressing their
opinions about the relationship of diversity/dissimilarity to their work
group effectiveness. This finding was consistent with findings of
similar studies in the literature.

4. The supportive leadership style had the strongest relationship with low
levels of work group turnover intention of the three types of leadership
styles assessed.

5. Participative leadership style has a trend effect relationship for
leadership of a diverse work group who wants to avoid group members’
turnover intention. This was also similar to findings in the literature.

6. Survey instruments used in this study provided similar reliability and
validity results to those found in the literature.

7. The findings that leadership styles and diversity/dissimilarity are
correlated with employees’ turnover intention add new important
insights to the literature which has primarily focused on job satisfaction
as a factor of employees’ turnover intention.

**Recommendations for Future Study**

This study was limited to measuring respondents’ perceptions of leadership styles,
diversity/dissimilarity in work groups, and work group effectiveness as well as reporting
their turnover intentions. All available leaders and subordinates in a U.S. manufacturing
organization in the S.E. Region of the U.S. participated in the study. Recommendations
for future research that could reinforce and extend the conclusions of this study include:

1. Replication of this study expanded to another industry.
2. Addition of a qualitative segment to this study to learn what additional information interviews can elicit on the combined topic of leadership styles, diversity/dissimilarity in work group, work group effectiveness and turnover intention.

3. Use of a different sampling method to collect data, possibly an online data collection to see if a new approach would yield similar or completely different results.

4. Further analysis of the work group effectiveness instrument as a two-factor variable to explore if a two-factor examination would result in a different outcome.

5. The addition of other leadership styles to this study's design with an effort to provide additional understanding.

6. A longitudinal analysis of the interaction between leadership styles, diversity/dissimilarity in work groups, work group effectiveness and turnover intention over time.

7. Investigation of the relationship of the variables (leadership styles, diversity/dissimilarity, and work group effectiveness) to actual employee turnover statistics in one or more organizations.
Summary of Chapter V

Based on the findings of Chapter IV, this chapter, Chapter V, presented a discussion of the characteristics of the sample, results of the tests, limitations of this study, and recommendations for future study. This Chapter also discussed the results of the analyses related to the testing of the hypotheses that flowed from the research purpose of the study. Findings were interpreted in light of the review of the literature and review of instrumentation. This study therefore adds to the knowledge and understanding about the relationship among leadership styles, diversity/dissimilarity in work groups, work group effectiveness and turnover intention.
REFERENCES


Research to Practice Conference in Adult, Continuing, and Community Education, Columbus, OH.


Retrieved February 5, 2006, from ProQuest database.

Retrieved April 15, 2005 from ProQuest database.


ProQuest database.


U.S. Census Bureau, Census 2000, Retrieved August 22, 2006 from

http://www.census.gov/


APPENDICES
APPENDIX A

SURVEY INSTRUMENTS PARTS 1 – 4
Appendix A
Survey Instruments

Part 1: Socio-demographic Profile

Directions: For the following items, please fill in the blank.

1. Please write your age in years ____

2. Please report the length of time that you have been employed at this company in years ____

Directions: For the following items, please check one response for each item.

3. Gender (Check one): 1 = Male  2 = Female

4. Race (Check one)
   1 = □ Indian or Alaska Native
   2 = □ Asian
   3 = □ Black or African American
   4 = □ Native Hawaiian or Other Pacific Islander
   5 = □ White

5. Ethnicity (Check one)
   1 = □ Hispanic or Latino
   2 = □ Not Hispanic or Latino

6. The highest level of education: (Check one):
   __ 1. Graduate Professional Training (MA, MS, ME, MD, DDS, PHD, LLD)
   __ 2. Four-year college graduate (Bachelor’s Degree)
   __ 3. Partial College: One to three years of college or business school
   __ 4. High school graduate
   __ 5. Partial High School (completed the tenth or eleventh grade)
   __ 6. Junior High School (completed the seven to nine years of school)

7. Your Occupational level: (Check one)
   __ 1. Directors or Professionals such as Engineers and Accountants
   __ 2. Business Managers, Supervisors, Technicians
   __ 3. Administrative Personnel such as secretaries or office assistants,
   __ 4. Clerical and Sales Workers and Technicians
   __ 5. Skilled Manual Employee
   __ 6. Machine Operator and Semi-Skilled Employee
   __ 7. Unskilled employee
Appendix A - Part 1 (Cont’d.): Perceived Dissimilarity Profile

**Directions:** Please respond to the following statements about how dissimilar you feel compared with your work group members. Check one box for each item using the scale below.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Visible Dissimilarity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I feel I’m visibly dissimilar to other group members.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. In terms of visible characteristics (e.g. age, gender, ethnicity) I think I’m different from other group members.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Value Dissimilarity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I feel my work values and/or motivations are dissimilar to other group members.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. In terms of functional background (e.g. professional background and/or work experience) I think I’m different from other group members.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I feel I’m professionally and/or educationally dissimilar to other group members.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. In terms of principles that guide my work (e.g. detail-oriented, reward-driven) I think I’m different from other group members.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Appendix A - Part 2. Perceived Leadership Behavior Scales (PLBS)

**Directions:** Please respond to the following items regarding the frequency of the behavior by your supervisor using the scale below. Check one box for each statement:

<table>
<thead>
<tr>
<th>Never</th>
<th>Seldom</th>
<th>Occasionally</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

#### Instrumental leadership (Initiating Structure)

1. He/she lets group members know what is expected of them.

2. He/she decides what shall be done and how it shall be done.

3. He/she makes sure that his part in the group is understood.

4. He/she schedules the work to be done.

5. He/she maintains definite standards of performance.

6. He/she asks that the group members follow standard rules and regulations.

#### Supportive leadership (Leadership Consideration)

1. He/she is friendly and polite.

2. He/she does little things to make it pleasant to be a member of the group.

3. He/she puts suggestions made by the group into operation.

4. He/she treats all group members as his equals.

5. He/she gives advance notice of changes.

6. He/she looks out for the personal welfare of group members.

7. He/she is willing to make changes.

8. He/she helps me overcome problems which stop me from carrying out my task.

9. He/she helps me make working on my tasks more pleasant.
Participative Leadership (Leadership Participation)

1. When faced with a problem, he/she consults with his subordinates.

2. Before making decisions, he/she gives serious consideration to what subordinates have to say.

3. He/she asks subordinates for their suggestions concerning how to carry out assignments.

4. Before taking action he/she consults with his subordinates.

5. He/she asks subordinates for suggestions on what assignments should be made.

Appendix A - Part 3. Work Group Effectiveness

**Directions:** Please respond to the following items regarding the *effectiveness of your work group* (all persons who report to the same supervisor that you do) using the scale below.

1-----------------2------------------3-----------------4------------------5---
Strongly Disagree Moderately Disagree Neither Disagree Nor agree Moderately Agree Totally Agree

<table>
<thead>
<tr>
<th></th>
<th>Totally Disagree</th>
<th>Moderately Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Moderately Agree</th>
<th>Totally Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appendix A - Part 4. Turnover Intention Scale

**Directions:** Check one box for each statement below.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Slightly Disagree</th>
<th>Neither Disagree</th>
<th>Slightly Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

1. I often think about quitting.

2. It is very likely that I will actively look for a new job in the next year.

3. I will leave this organization in the next year.

---

APPENDIX B

AUTHORIZATIONS TO USE INSTRUMENTS
Appendix B – Part 1

Permission to Use Instrument

Hollingshead’s scale

From: Wiley, Karen [mailto:]
Sent: Mon 2/5/2007 1:42 PM
To: Marva Dixon
Subject: RE: PERMISSION TO USE SCALES IN HANDBOOK OF RESEARCH DESIGN & SOCIAL MEASUREMENT

Dear Ms. Dixon,

Thank you for your request. Please consider this written permission to reprint the material you have detailed below for use in your dissertation. Please include proper attribution to the original source. This permission does not extend to any 3rd party material found within our work. Please contact us for any future usages.

Best,
Karen

Karen Wiley
Permissions Supervisor
Sage Publications, Inc.
2455 Teller Road
Thousand Oaks, CA 91320-2218
Phone: [redacted]
www.sagepub.com

-----Original Message-----
From: Marva Dixon [mailto:]
Sent: Monday, February 05, 2007 10:25 AM
To: Wiley, Karen
Cc: [redacted]
Subject: FW: PERMISSION TO USE SCALES IN HANDBOOK OF RESEARCH DESIGN & SOCIAL MEASUREMENT

Ms. Wiley,

Here is the other request that I have been asking for your response to. You responded to one e-mail but did not respond to this one. Thank you for your time. You may reach me at [redacted] with any questions or late evening at [redacted] I have also left you another voicemail message.

Marva
Subject: FW: PERMISSION TO USE SCALES IN HANDBOOK OF RESEARCH DESIGN & SOCIAL MEASUREMENT
Karen,

Here is the other request that I need permission to use.

I’m a doctoral candidate at Lynn University working on my dissertation and would like to use Hollingshead, Two Factor Index of Social Position (copyright 1957), privately printed 1965. It was published by Sage Publication in the following:

Handbook of Research Design and Social Measurement, page 351:
Author Delbert C. Miller
Copyright 1991 by Sage Publications, Inc.
Can you please let me know who I should forward this request to and/or fax a Request for Permission form to in order to use this in my dissertation. My dissertation topic is Leadership's Impact on Diverse Work Group Performance. Looking forward to hearing from you.

From: Mama Dixon
Sent: Thu 1/18/2007 1:47 PM
To: Wiley, Karen
Cc: 
Subject: PERMISSION TO USE SCALES IN HANDBOOK OF RESEARCH DESIGN & SOCIAL MEASUREMENT

Karen,

The IRB office at Lynn University requested that I re-submit my request to you for permission to use the scales in the above book via Lynn University's e-mail. In my previous request I did not use the school's e-mail. I already have your approval. Your response to this e-mail would be greatly appreciated. A copy of my original request is attached below for your information.

Marva Dixon
1/18/07

Dear Ms. Dixon,

I believe that the agreement I sent you was for that title. We do not charge for theses/dissertations. I've attached the agreement again just in case. I think that I saw a signed agreement from you today; however, I thought I should reply just in case. Let me know if you have any other questions. Best,

Alison Scott
Handbook of Research Design and Social Measurement
ISBN/ISSN: 0761920463
Publication date: Jan 2002
Authors: D.C. Miller and N. J. Salkind

Also, can you please clarify if there is a charge. If this is all I need, then I will sign it and return it to you.
Thanks.

Marva
Appendix B – Part 2

Permission

Perceived leadership behavior scale (PLBS)

From: Wiley, Karen on behalf of permissions
Sent: Fri 1/26/2007 1:34 PM
To: Marva Dixon
Subject: RE: Permission to use a scale in your publication - Handbook of Marketing Scales

Dear Ms. Dixon,

Sorry for the slight delay. We've been in extended meetings this week!

Please consider this written permission to use material from the Handbook of Marketing Scales in your dissertation. Please include proper attribution to the original source. This permission does not extend to any 3rd party materials found within our material. Please contact us for any future usage of the material.

Good luck!

Karen Wiley
Permissions Supervisor
Sage Publications, Inc.
2455 Teller Road
Thousand Oaks, CA 91320-2218
Phone: [redacted]
www.sagepub.com

-----Original Message-----
From: Marva Dixon [mailto: [redacted]]
Sent: Friday, January 26, 2007 10:22 AM
To: permissions
Cc: [redacted]
Subject: FW: Permission to use a scale in your publication - Handbook of Marketing Scales

Ms. Wiley,

I have left you phone messages and this note as a follow-up from the permission you granted last year. I just need you to reconfirm on this e-mail from Lynn University's system e-mail. Thank you.

If you need to speak with me, please call me at work [redacted] or [redacted].

Marva Dixon

From: Marva Dixon
Sent: Fri 1/19/2007 10:58 PM
To: Wiley, Karen  
Subject: FW: Permission to use a scale in your publication - Handbook of Marketing Scales

Ms. Willey,

Last July 2006 I obtained your permission to use the Perceived Leadership Behavior scale that is in one of your publication. I failed, however, to submit my request on Lynn University's e-mail system. As a result, I'm requesting your permission again and would greatly appreciate your written response via this e-mail system.

I'm attaching a copy of my last correspondence with you and your written permission. Thanks for your time and consideration.

Marva Dixon

Subject: RE: Permission Request  
Date: Fri, 7 Jul 2006 08:41:52 -0700  
From: "permissions"  
To: 

Dear Ms. Dixon,

Thank you for your request. Please consider this written permission to use material from the Handbook of Marketing Scales in your dissertation. Please include proper attribution to the original source. This permission does not extend to any 3rd party materials found within our material. Please contact us for any future usage of the material. Best,

Karen Wiley  
Permissions Supervisor  
Sage Publications, Inc.  
2455 Teller Road Thousand Oaks, CA 91320-2218  
Phone: 
www.sagepub.com

-----Original Message-----
From: Marva Dixon

Sent: Monday, July 03, 2006 11:21 AM
To: permissions
Subject: Permission Request

Permissions Request

Requestor's Information

Name: Marva Dixon
Affiliation: 
Publication Information for the material that Requestor Intends to Use:

- Publication Title: Handbook of Marketing Scales
- Publication Type: Book
- ISBN/ISSN: 0-8039-5155-8
- Publication Date: 1993
- Title of Material: Perceived Leadership Behavior Scale
- Authors of Material: House and Dessler 1974
- Title of Material: Perceived Leadership Behavior Scale
- Publication Type: Book
- Page Range Material: All PLBS together with reliability and validity report for each scale

Requestor’s Use of the Material

- Type of Use: republish in a thesis/dissertation
- Purpose of Use: Academic
- Distribution Quantity: 1

Requestor’s Publication

- Title: Handbook of Marketing Scales
- Type: Multi-item Measures for Marketing and Consumer Behavior Research
- Author/Editor: 
- Publisher: 
- Publication Date: 
- Entire Publication: Other: 
Appendix B – Part 3

Permission
Defense Equal Opportunity Climate Survey (DEOCS)

From: Scarpate, Jerry C Civ DEOMIIDRP [mailto]
Sent: Wed 1/24/2007 4:55 PM
To: Marva Dixon
Subject: RE: YOU PROVIDED PERMISSION TO USE YOUR SCALE LAST JUNE 2006

Marva,
You have our permission to use the DEOCS. Be aware that the algorithms used to score it will not be available to you. However, you may use our questions and establish your own scoring system.

Just a reminder, please reference us where appropriate. Let us know how your research project went. Good luck.

-----Original Message-----
From: Marva Dixon [mailto]
Sent: Thursday, January 18, 2007 3:20 PM
To: Scarpate, Jerry C Civ DEOMIIDRP
XXXXXXXXXX
Subject: YOU PROVIDED PERMISSION TO USE YOUR SCALE LAST JUNE 2006

Mr. Scarpate,

Last year I contacted you about using your scale for my PhD dissertation at Lynn University. I obtained your permission noted below but I should have submitted my request via the university’s e-mail system. As a result, I am re-submitting my request for your confirming approval. Your e-mail response to this note will be provided to the Internal Review Board (IRB) at Lynn University.

My previous e-mail with your approval is attached below. Thank you for your assistance in this matter.

******************************************************************************

Marva,
You may proceed. Please go to our website for a copy of our survey - https://www.patrick.af.mil/deomi/deomi.htm Let me know what your fax number is and I will send some info concerning validity/reliability.
Good luck and keep us informed.

From: Dixon, Marva L Ms
Sent: Thursday, June 08, 2006 5:32 PM
To: Scarpate Jerry C GS-12 DEOMIIDRP
Subject: RE: NEED PERMISSION TO USE PARTS OF YOUR INSTRUMENT ORGANIZATIONAL CLIMATE SURVEY

Jerry,
Do you know when I might receive a response from you all. Please advise.

Marva

From: Scarpate Jerry C GS-12 DEOMI/DRP
Sent: Tuesday, June 06, 2006 2:35 PM
To: Dixon, Marva L Ms
Subject: RE: NEED PERMISSION TO USE PARTS OF YOUR INSTRUMENT
ORGANIZATIONAL CLIMATE SURVEY

Marva,
Thanks for the info. I will pass the request for researcher assistance, but I should inform you we are very slim here so I wouldn't plan on any assistance.

If not already provided, please send info on when and where the survey will be employed and who (to include number) the participants will be.
Also:
(1) acknowledge DEOMI's support on prepared materials
(2) insure the information provided is not used beyond the scope of the project
(3) forward to us a copy of the finished product.

We look forward in working with you.

From: Dixon, Marva L Ms AMSTA-AN (PKI)
Sent: Tuesday, June 06, 2006 11:15 AM
To: Scarpate Jerry C GS-12 DEOMI/DRP
Subject: FW: NEED PERMISSION TO USE PARTS OF YOUR INSTRUMENT
ORGANIZATIONAL CLIMATE SURVEY

Jerry,
Do you know of any researcher who might be interested in assisting me with this project?

Marva

From: Dixon, Marva L Ms AMSTA-AN (PKI)
Sent: Tuesday, June 06, 2006 9:07 AM
To: [redacted]
Subject: NEED PERMISSION TO USE PARTS OF YOUR INSTRUMENT
ORGANIZATIONAL CLIMATE SURVEY

Jerry,
Thanks for your time in discussing my research needs. As I discussed with you, I'm working on my PhD dissertation at Lynn University and need to use your instrument for my proposed field study. The more I review your instrument, it appears that I will be able to use segments of your survey to develop my own survey to test my hypotheses for my study and therefore I need your permission to do so. I will also need your most current version of your survey and also the reliability and validity support.
I have attached what I'm developing for my instrument measuring proposal together with my research question and hypotheses. On part 1 of your survey, I would like to modify it by eliminating numbers 6, 8 and 9 and
include a question on tenure. Please review and provide your feedback.
My contact information is noted below. Looking forward to your
assistance with this project.
Marva
<<DissertationWk5Instrument6June06.doc>>
Marva L. Dixon
Appendix B – Part 4

Permission
Turnover Intention Scale

From: Cortlandt Cammann
Sent: Fri 1/19/2007 6:08 PM
To: Marva Dixon
Subject: Re: MICHIGAN QUESTIONAIRE - Turnover Intention Scale

I am happy to give you permission.
Corty Cammann

On 1/19/07, Marva Dixon > wrote:

Dr. Cammann,

Last July 2006 I wrote to you requesting permission to use the above scale for my dissertation and you provided that permission even though you mentioned that it was not necessary. All doctoral candidates at Lynn University are required to obtain permission to use all instruments. In addition, we are required to request permission using our Lynn University e-mail.

Since I did not request permission on the university's e-mail, I'm therefore requesting your written permission again and would really appreciate your response. I do apologize for the inconvenience of my encroaching on your time again and look forward to your response. I'm also attaching below, a copy of my last correspondence with you. Looking forward to hearing from you. Thanks again.

Marva Dixon

Date: Sun, 16 Jul 2006 08:05:55 -0400
From: "Cortlandt Cammann" <cortlandt@lynn.edu>
To: "Marva L. Dixon" <marva@lynn.edu>
Subject: Re: FW: MICHIGAN QUESTIONAIRE

You don't really need permission to use it, but I am happy to give it to you. Good luck with your research.
Corty Cammann

On 7/15/06, Marva L. Dixon > wrote:

> Dr. Cammann,
>
> Do I have your permission to use the Intention to Turnover scale in my field study for my dissertation?>> Marva Dixon> Note: forwarded message attached.
Appendix C

Consent to conduct study at a manufacturing company

From: XXXXXXXXXXXXXXXXXXXXXXXXXXXX

Sent: Wed 1/24/2007 6:34 AM
To: Marva Dixon
Subject: Re: REQUEST YOUR PERMISSION/AUTHORIZATION FOR ME TO CONDUCT A STUDY AT YOUR ORGANIZATION

Ms. Dixon,

Per our previous discussions and agreement and barring any unforeseen plant production issues XXXXXXXXXX is permissible to allowing you to conduct your field study at our facility with the understanding the confidentiality will be maintained. Best of Luck.

XXXXXXXXXXXX
Human Resources
XXXXXXXXXXXXXXXXXXXXX

Subject
REQUEST YOUR PERMISSION/AUTHORIZATION FOR ME TO CONDUCT A STUDY AT YOUR ORGANIZATION

Mr. XXXXXXXXXX

Lynn University requires that I request permission for my study via the Lynn University's e-mail system so I'm formally submitting this request to you for your written authorization for me to conduct my field study at your manufacturing corporation.

Your participation in my study will assist me in completing my program requirements for the Doctoral Program in Global Leadership at Lynn University. Looking forward to your favorable consideration in this venture.

Thank you.
Marva Dixon

XXXXXXXXXXXXXXXXXXXXX
APPENDIX D

IRB APPROVAL FOR RESEARCH
Principal Investigator: Marva L. Dixon
Project Title: Leadership Styles, Diversity in Work Group, Work Group Effectiveness, and Turnover Intention:

IRB Project Number 2007-020 REQUEST FOR EXPEDITED REVIEW of Application and Research Protocol for a New Project

IRB ACTION by the IRB Chair or Another Member or Members Designed by the Chair

Expedited Review of Application and Research Protocol and Request for Expedited Review (FORM 3):

Approved X Approved; w/provision(s) __

COMMENTS:

Consent Required: No ___ Yes X ___ Not Applicable ___ Written X ___ Signed ___

Consent forms must bear the research protocol expiration date of 05/07/08.

Application to Continue/Renew is due:

1) For an Expedited IRB Review, one month prior to the due date for renewal ___ X ___

2) Other:

Name of IRB Chair Farideh Farazmand _____________________________

Signature of IRB Chair ___________________________ Date: 05/07/07

Cc. Dr. Hart

Institutional Review Board for the Protection of Human Subjects
Lynn University
3601 N. Military Trail Boca Raton, Florida 33431
APPENDIX E

Authorization for Informed Consent
VOLUNTARY CONSENT LETTER

Lynn University

THIS DOCUMENT SHALL ONLY BE USED TO PROVIDE AUTHORIZATION FOR VOLUNTARY CONSENT

PROJECT TITLE: Leadership styles, diversity in work groups, work group effectiveness and turnover intention.

Project IRB Number: 2017-02-02 Lynn University 3601 N. Military Trail Boca Raton, Florida 33431

I, Marva Dixon, am a doctoral student at Lynn University. I am studying Global Leadership, with a specialization in Corporate and Organizational Management. One of my degree requirements is to conduct a research study.

DIRECTIONS FOR THE PARTICIPANT:

You are being asked to participate in my research study. Please read this carefully. This form provides you with information about the study. The Principal Investigator (Marva Dixon) will answer all of your questions. Ask questions about anything you don't understand before deciding whether or not to participate. You are free to ask questions at any time before, during, or after your participation in this study. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled. You acknowledge that you are at least 18 years of age, and that you do not have medical problems or language or educational barriers that precludes understanding of explanations contained in this authorization for voluntary consent.

PURPOSE OF THIS RESEARCH STUDY: The study is about the relationship between and among leadership styles, diversity in work groups, work group effectiveness, and turnover intention. Participants are all employees of the Alabama branch of your manufacturing company located in the United States of America.

PROCEDURES:

After reading the Consent Form you will complete the survey that consists of four parts. You are being asked to complete the questions in part 1 and then go to all four parts of the survey and complete all the questions. You should only provide one answer for each question. The surveys will take approximately 15-20 minutes. Do not put your name or any identifying marks on the surveys. When they are completed put them in the envelopes provided and drop them in the collection box. The researcher will collect all the surveys directly from you and from the collection box.

POSSIBLE RISKS OR DISCOMFORT: This study involves minimal risk. You may find that some of the questions are sensitive in nature. In addition, participation in this study requires a minimal amount of your time and effort.

Institutional Review Board for the Protection of Human Subjects
Lynn University
3601 N. Military Trail Boca Raton, Florida 33431

195
POSSIBLE BENEFITS: There may be no direct benefit to you in participating in this research. However, knowledge may be gained that may help organizational leadership, management and researchers.

FINANCIAL CONSIDERATIONS: There is no financial compensation for your participation in this research. There are no costs to you as a result of your participation in this study.

ANONYMITY: Surveys will be anonymous. You will not be identified and data will be reported as "group" responses. Participation in this survey is voluntary and return of the completed survey will constitute your informed consent to participate.

The results of this study may be published in a dissertation, scientific journals or presented at professional meetings. In addition, your individual privacy will be maintained in all publications or presentations resulting from this study.

All the data gathered during this study, which were previously described, will be kept strictly confidential by the researcher. Data will be stored in locked files and destroyed five years following completion of the research. All information will be held in strict confidence and will not be disclosed unless required by law or regulation.

RIGHT TO WITHDRAW: You are free to choose whether or not to participate in this study. There will be no penalty or loss of benefits to which you are otherwise entitled if you choose not to participate.

CONTACTS FOR QUESTIONS/ACCESS TO CONSENT FORM: Any further questions you have about this study or your participation in it, either now or any time in the future, will be answered by Marva Dixon (Principal Investigator) who may be reached at [contact information] and Dr. Laura Hart, faculty advisor, who may be reached at [contact information]. For any questions regarding your rights as a research subject, you may call Dr. Farazmand, Chair of the Lynn University Institutional Review Board for the Protection of Human Subjects, at [contact information]. If any problems arise as a result of your participation in this study, please call the Principal Investigator (Marva Dixon) or the faculty advisor (Dr. Laura Hart) immediately. Keep a copy of this consent form.

INVESTIGATOR'S AFFIDAVIT: I hereby certify that a written explanation of the nature of the above project has been provided to the person participating in this project. A copy of the written documentation provided to each participant is attached hereto. By the person's consent to voluntarily participate in this study, the person has represented that he/she is at least 18 years of age, and that he/she does not have a medical problem or language or educational barrier that precludes his/her understanding of my explanation. Therefore, I hereby certify that to the best of my knowledge the person participating in this project understands clearly the nature, demands, benefits, and risks involved in his/her participation.

INstitutional Review Board for the Protection of Human Subjects
Lynn University
3601 N. Military Trail Boca Raton, Florida 33431

Signature of Investigator

Date of IRB Approval 5/7/07