DISSERTATION

THE IMPACT OF DIVERSITY TRAINING IN ORGANIZATIONS: A SYSTEMATIC REVIEW USING A META-ANALYSIS METHODOLOGY FROM 1991-2006

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WE HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER OUR SUPERVISION BY BRUCE B. DOUGLAS ENTITLED THE IMPACT OF DIVERSITY TRAINING IN ORGANIZATIONS: A SYSTEMATIC REVIEW USING A META-ANALYSIS METHODOLOGY FROM 1991-2006 BE ACCEPTED AS FULFILLING IN PART REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY.

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ABSTRACT OF DISSERTATION

THE IMPACT OF DIVERSITY TRAINING IN ORGANIZATIONS: A SYSTEMATIC REVIEW USING A META-ANALYSIS METHODOLOGY FROM 1991-2006

The work environment in the United States (U.S.) has witnessed a dramatic change in the past decade. Because of this dramatic demographic shift, diversity initiatives have become necessary in organizations, mainly diversity training. While diversity training has become very popular in business and industry, its impact on employees has not kept pace. Therefore, the purpose of this research synthesis is to gather, summarize, and integrate past research since 1991 examining to effectiveness of diversity training in organizations. This review will be conducted with the intention of providing a clear and accessible synthesis of existing research to inform decisions makers of the effectiveness of diversity training in organizations.

Articles were identified through computer database searching and hand searching of selected journals, from 1991 through 2006. Of the 166 studies reviewed at the second-level screening, only eight studies met the criteria for inclusion. Seven studies provided analyses on multiple outcomes. Six studies provided correlations, one study provided odds ratios, and one study provided Cohen's *d* effect sizes. Effect size estimates, tests for homogeneity of variance, and tests for publication bias were calculated using the Comprehensive Meta-Analysis, Version 2.0. The results of this meta-analysis indicate that diversity training has an effect on changing attitudes and behaviors in organizations.

However, attitude and behavioral changes produced by diversity training are susceptible to impermanence if the environment and culture of the organization do not endorse and facilitate its longevity.

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MEMORIAL DEDICATION

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Chapter One: Introduction

Background/Overview

The work environment in the United States (U.S.) has witnessed a dramatic change in the past decade. One factor that has been so compelling is the diverse workforce. Wilson (1997) suggests that workforce diversity has become a major focus area in the work environment with many organizations struggling to increase their understanding of a diverse workforce. Because of this dramatic demographic shift, diversity initiatives have become necessary in organizations. This decade has seen a rapid growth in the popularity of diversity training in the U.S.. Hemphill and Haines (1997) report that most government agencies and about 60 percent of Fortune 500 companies provide some type of diversity training to their employees. These statistics indicate that diversity training is becoming an important component of an organization. According to Cox (1991), diversity training is no longer looked upon as the socially acceptable thing to do; it is viewed as a strategic business objective with the intent to make organizations more competitive. Because of this, managers are concerned with the implementation of different diversity initiatives in order to retain a more diverse workforce (Rosner, 1999).

The primary purpose of a diversity program is to enhance organizational, work group, and individual effectiveness (Lobel, 1999). Many diversity training programs begin with some type of awareness training for employees (Flynn, 1998). These programs focus on sensitizing employees to different values and norms of people from different backgrounds. Some organizations focus on gender and race, while others look at factors such as age and socio-economic status (Tsui & Gutek, 2000). Other organizations have divided the training topic into more specialized areas, such as sexual harassment

awareness or AIDS awareness training (Kaufman, 1994). Organizations are devoting huge amounts of money and time toward diversity training, even during economic hard times (Kluttz, 2002). To illustrate its importance, some organizations are providing diversity training at regular intervals (Carnevale & Stone, 1994). As a result, employees may be required to attend multiple diversity trainings throughout their careers.

Statement of the Research Problem

While diversity training has become very popular in business and industry, its impact on employees has not kept pace. Some organizations neglect to measure how diversity training influences employees' behavior (Carnevale & Stone, 1994). A study conducted by Rynes and Rosen (1995) revealed that diversity trainings are rarely subject to systemic evaluation. Their research found that long term evaluations played an important role in the success of diversity trainings. "We have not found a single reported program that conducts a rigorous evaluation of diversity training effectiveness" (Ivancevich & Gilbert, 2000, p. 84). How does an organization know if diversity training has any real impact on employees' behavior? Does an employee really gain an understanding of cultural differences? Does senior management know if the time and money spent on diversity training results in the desired return on investment? This calls for the need of rigorous research on the topic, studying diversity training over time and using sophisticated statistical analyses to measure its effectiveness.

Purpose of the Study

During the past fifteen years, much has been written on the use of diversity training in organizations (Gottfredson, 1992; Hemphill & Haines, 1997; Matton & Hernandez, 2004; Rynes & Rosen, 1995; Wentling & Palmas-Rivas, 2000). The results of these studies and narrative reviews suggest the importance of this initiative as a major component of an organization. However, to date there has been no quantitative synthesis of the literature on diversity training. In addition to providing an objective method to evaluate intervention outcomes, quantitative syntheses also allow for more detailed investigation of interactions among key variables (Kavale, 2001). With the increasing diverse population in the U.S., a detailed analysis of the literature may be particularly important for such an intervention to be applicable across individuals, settings and behaviors. Therefore, the purpose of this research synthesis is to gather, summarize, and integrate past research since 1991 examining the effectiveness of diversity training in organizations. This review will be conducted with the intention of providing a clear and accessible synthesis of existing research to inform decisions makers of the effectiveness of diversity training in organizations.

Research Questions

This research synthesis will explore the effectiveness of diversity training in organizations. The following specific questions will be the key issues to be addressed:

- Does diversity training have an impact on employees' behavior?
- Does an employee gain a better understanding of cultural differences?
- Does diversity training result in the desired return on investment?

- What methodological and research features of the study related to the outcomes of the study? Four areas of interest are: the publication status of the study; whether the research design was a true or quasi-experiment; the reliability and validity of the measurements instruments; and the internal validity/quality of the study.

The goals for the research synthesis are the following:

- To identify the diversity initiatives that are commonly used in organizations, based on a collection of research and evaluation studies gathered through a structured search process;
- To assess the effectiveness/impact of diversity training and the influences of approach using meta-analytic techniques and narrative reviews;
- To describe study findings in relation to the quality of the research;
- To describe the implications of the findings for researchers and policymakers.

Definition of Terms

Cultural Diversity – the representation, in one social system, of people with distinctly different group affiliations of cultural significance (Cox, 1993).

Diversity – includes all the ways in which people differ, and it encompasses all the different characteristics that make one individual or group different from another. It is all-inclusive and recognizes everyone and every group as part of the diversity that should be valued (Hankin, 2005).

Diversity Initiatives – are specific activities, programs, policies and any other formal processes or efforts designed for promoting organizational culture change related to diversity (Arredondo, 1996).

Managing Diversity – leveraging the people power within an organization in order to maximize productivity and increase the company's overall health and well-being (Thomas, 1991).

Meta-analysis – a quantitative approach to combining the results of prior research in a specified subject. Results provide insight into the body of research, and studies included are selected based upon specific criteria (Glass, 1976).

Research Synthesis – literature reviews that focus on empirical studies and seek to summarize past research by drawing overall conclusions from many separate investigations that address related or incidental hypotheses (Cooper, 1998).

Valuing Diversity – being responsive to a wide range of people unlike oneself, according to any number of distinctions: race, gender, class, native language, national origin, physical ability, age, sexual orientation, religion, professional experience, and work style (Carnevale & Stone, 1994).

Workforce Diversity – refers to the many differences that exist within the world, and the workforce (Thomas, 1991).

Delimitations

The studies that will be included in this synthesis will be from the U.S. only, from 1991 to the present. The focus of this study is diversity training and its impact ion organizations. Therefore, this study will be limited to empirical research studies that explore the effectiveness of diversity initiatives in organizations, specifically diversity training.

Limitations

The researcher recognizes that the ability to draw sound conclusions based on the results of a synthesis depends on the quality of the research that addresses the synthesis topic. If there are insufficient quantitative studies on a topic, then a quantitative synthesis is not possible. Even with sufficient quantitative studies, characteristics of the interventions and their implementations are sometimes too different to warrant combining effect sizes. However, a review of the available research studies can still inform audiences about the research landscape and what it suggests about the topic under consideration, as well as indicate areas that need additional research.

Significance of the Study

A research synthesis is very influential in regard to subsequent research, policy, and practice (Oakley, 2004). It attempts to quantitatively aggregate the findings from independent studies of the same phenomenon. According to Cooper (1998), research syntheses are literature reviews that "focus on empirical studies and seek to summarize past research by drawing overall conclusions from many separate investigations that

address related or incidental hypotheses" (p. 3). Shanahan (2000), who also has written about and conducted syntheses, emphasizes that the important feature of this research approach is the systematic analysis of extant research studies.

The strength of research syntheses lie in their ability to examine information accrued over multiple studies and several operational definitions. "They are used by policymakers in designing strategies for development, and they are used to guide practitioners in the enhancement of professional activity" (Dunkin, 1996, p. 87). Ideally, a research synthesis allows estimates of magnitudes of effects for theorized relations to be aggregated in ways that rarely would or could be tested within one study. The presence of a considerable body of empirical literature on diversity training will provide an opportunity to aggregate this information to address important research questions and to identify gaps in the literature.

Researcher's Perspective

The researcher was born and reared in the southern part of the U.S. and has experienced racial discrimination in the workplace firsthand. It is the researcher's perception that the inclusion of minorities in the workplace in most parts of the south is not an accepted practice. It is something that has to be mandated by a state and/or federal agency. Diversity training has become something that most organizations are using as their affirmative action initiative. In fact, the researcher previously worked in an organization where his primary role was assisting the director of diversity with implementing diversity training to all employees throughout a geographical area within a southern state. It's the experience of the researcher that the training was not well received

in most locations. The researcher believes that the participants were only receiving the training because they were mandated to do so. Diversity training had no impact on their behaviors, and it was as if the participants were not interested in any cultural differences. Therefore, the researcher believes that diversity training is insignificant and a waste of resources.

Chapter Two: Literature Review

Introduction

The purpose of this chapter is to take a detailed look at the literature on diversity training in organizations. It is intended to present an understanding of the current practices that exist and the complexities of implementing diversity training. The chapter focuses on the historical perspective of diversity training, a working definition of diversity, a glance at what diversity looks like in the workplace, and the process of implementing diversity into organizations. This chapter also looks at the types of diversity initiatives that exist in organizations, evaluating diversity training, some benefits of diversity training, and some of the barriers that organizations face when trying to implement diversity initiatives in their respective organizations.

Historical Perspective

The concept of diversity training in the U.S. dates back to Executive Order 8802 (Roosevelt, 1941). During this era, President Roosevelt legally addressed racial discrimination and equality in the employment of workers in defense industries or government agencies. This sent a strong message to the nation that discriminatory practices were prohibited. In 1948, President Truman passed Executive Order 9981 (Truman, 1948), which declared a policy that there be equality of treatment and opportunity for all persons in the armed services. With the upsurge of the civil right movement in the 1960, the countries' awareness of diversity issues was at the forefront. Civil rights activist advocated for racial equality for minorities and women in practically all aspects of society. This led to the passage of the Civil Rights Act of 1964. According

to Paige and Martin (1996), one of the most influential organizations to address cultural training during the 1960s was the U.S. Peace Corps.

Hoopes (1979) reported that during the 1960s the Peace Corps adopted the university training model to educate trainees on cultural differences. With the start of the Vietnam War, minorities were drafted into the armed forces as enormous rates. Many of these soldiers had experienced the Civil Rights movement in the 1960s, and were voicing their concerns about equal opportunity and racial equality (Dansby & Landis, 1996). Hope (1979) reported that during this era many minorities started riots on military bases. As a result, the military embarked upon the most "comprehensive race relations education program ever attempted by any major institution in the U.S." (p. 41).

The 1970s saw a rise in the development of organizations that addressed diversity issues, such as the Society for Intercultural Education, Training, and Research (SIETAR), (Paige & Martin, 1996). During that period, trainers started designing and implementing training that addressed interracial issues (Dansby & Landis, 1996). According to Paige and Martin (1996), the training developed during the 1970s was based on the human relations sensitivity training model. With this model, a strong emphasis was placed on examining the participants' own beliefs, value system, and prejudices. This caused a lot of tension and strife between soldiers, which resulted in high resistance and limited their ability to learn (Hoopes, 1979).

During the 1980s, organizations were expanding globally and diversity training grew as a result (Black & Mendenhall, 1990). According to Adler (1986), organizations were required to send employees and their families abroad, which required training on various cultural backgrounds. Throughout the 1980s, a major focus of diversity training was on

international business and foreign nationals (Paige & Martin, 1996). The 1980s and 1990s were periods when the U.S workforce began to become more diverse, which meant that there was a demand for more diversity training domestically. Increase in competition and demographic changes had convinced leaders in business and industry that diversity should be a major component of their organizational strategy (Cox, 1993). The 1990s was a period when many of the largest organizations in the U.S. had developed some type of program that addressed workforce diversity, or was in the planning stages.

Defining Diversity

There are many ways in which individuals define diversity. In today's society, the definition of diversity reflects a broader perspective of workplace diversity as opposed to the traditional view of diversity as just focusing on gender and race (Judy & D'Amico, 1997). Norton and Fox (1997) point out that broad definitions tend to include age, national origin, religion, disability, sexual orientation, values, ethnic culture, education language, lifestyle, beliefs, physical appearance, and economic status. Cox and Beale (1997) defined diversity as "a mix of people of different socially relevant group identities working or living together in a defined social system" (p.13). Diversity is an infusion into the cultural environment of an appreciation for gender, minorities, and ethnic/religious lifestyles (Hayles & Mendez-Russell, 1997).

Narrower definitions seem to define diversity in terms of race, gender, and ethnicity (Kossek & Lobel, 1996). Diversity encompasses every individual difference that affects a task or relationship. Diversity also includes secondary characteristics such as geographic location, military experience, work experience, income, religion, first language,

organizational role and level, communication style, family status, work style, and education (Becker, Huselid, & Ulrich, 2001). Therefore, for the purpose of this study, a diversity program is to link all members of the organization together and to provide a clear indicator of a commitment to workforce diversity goals by establishing formal policies with measurable criteria aimed at tapping and developing the full potential of everyone.

Demographic Changes in the U.S.

Because of the dramatic demographic shifts in the U.S., diversity initiatives have become necessary in organizations. By 2010, people of color, immigrants, and white women will make up 85 percent of the net growth in the nation's labor force (Judy & D'Amico, 1997). Gay men, lesbians, and bisexual individuals will also be defined as new minorities in the workplace (Carnevale & Stone, 1995). Because of this major demographics shift, people from many different racial/ethnic groups will be working together to keep organizations running competitively (Thomas, 1991)

It is widely accepted that the United States is becoming more diverse, causing organizations to become more diverse as well (Gilbert & Ivancevich, 2000; Norton & Fox, 1997). Dutton (1998) suggests that people will be working together from different diverse groups to keep businesses running competitively throughout the United States and other countries. Because of this demographic workforce shift, organizations will be impacted significantly on their competitiveness and economic outcome (Gasorek, 1998). Therefore, the ability of organizations to effectively compete globally will depend on their ability to manage a diverse workforce. Crawford (1991) argues that organizations

remain competitive only if they recognize and obtain the best talent, value the diverse perspectives that come with talent born of different cultures, races, genders, always nurture and train that talent, and create an atmosphere that values its workforce. Only organizations that have diverse human resources will be able to remain competitive (Morosini, 1998).

Diversity initiatives have become necessary in organizations because of dramatic demographic shifts in the United States. Globalization, technology, a shrinking workforce, gender issues, anti-discrimination legislation, and the changing face of America are but a few of the reasons that diversity initiatives are a legitimate bottom line concern. These trends create a changing world in which to do business. These changes are taking place so rapidly that organizations wishing to grow must understand the effects that these changes have on their future. Organizations doing business in a diverse country must make themselves appealing and fit into this changing landscape.

Diversity in the Workplace

The U.S. workforce is becoming more racially and ethnically diverse. During the past decade, several books have been published on workforce diversity (Cox, 1993; Tsui & Gutek, 2000; Thomas, 1991; Wilson, 1997). Organizations in the U.S. are beginning to make diversity a priority. "In the context of a changing population, there are indications that diversity efforts can increase an organization's productivity, innovativeness, market share, and overall competitiveness" (Morrison, 1992, p. 266). Companies now realize they must attract, retain, and promote the full spectrum of people just to keep the business running and competitive. Workforce diversity initiatives have increased the pressure on

managers to recruit and retain a diverse body of employees, and are holding them accountable for their diversity performance (Wentling & Palma-Rivas, 2000). Thomas (1991) suggests that in order to succeed in this highly competitive environment, managers must find ways to get the performance from their workers. "And they will not be able to do that unless they are aware of the many ways that their understanding of diversity relates to how well, or how poorly, people contribute" (p. 4)

With the growth of the globalization process and the hard realities of competition in the marketplace, many top executives see that there is a need for diversity in their business strategy. "Managers are increasingly coming to recognize that their ability to represent their organizations' customers and clients is a major issue in marketplace competitiveness" (Morrison, 1992, p. 19). Morrison also suggests that managers who share the same experiences and speak the same language as a customer may have the greater credibility because of those similarities. This may lead customers to believe that someone of their own ethnicity is better able to serve their needs, which may influence them to stay with or switch to one organization over another (Morrison, 1992).

In an article titled *Making Diversity a Reality within our Profession*, Barnard and Lentz (1992) point out that in order for professional associations to function effectively in this changing environment, they must include membership and leadership from all cultures without favoritism. "We will need to provide activities, leadership opportunities, and programs that will attract these individuals to our professional association" (p. 30). Many executives in organizations believe that a diverse workforce increases productivity. "The cost of changing an organization's climate for nontraditional employees may be high, but the promise of a significant payoff in increased productivity is what keeps the

effort alive" (Morrison, 1992, p. 23). Morrison also suggests that a good diversity initiative brings about a better quality of management in an organization. "Responding to the management challenge posed by greater workforce diversity also gives managers an opportunity to learn and grow, to become more competent in areas vital to their organization's success" (p. 26).

Gilliland's research (1991) focuses on higher education's commitment to promoting women and people of color to roles of leadership. "The inclusion of people with different gender and ethnic backgrounds in educational leadership and management roles provides added diversity to our institutions" (p. 94). Gilliland also talks about how encouraging employees to be alike rather than valuing their differences is counterproductive to an organization's goals and/or mission. "Such an approach dismisses the fact that different people bring a variety of values to an organization....Institutions must recognize that the greatest value individual employees can bring is their own special values, talents, and culture" (p. 99). Schauber (2001) suggests that two good reasons why organizations should become culturally diverse are because it may be more economical in the long run and it will result in better service to a changing clientele. Sanchez's research (1993) concentrates on leadership diversity in community colleges. The researcher believes that the inclusion of culturally different people within the leadership of community colleges will result in the encouragement of new program development and institutional innovation. "The more points of view and the more references of experience there are, the more options appear in response to both problems and opportunities" (pp. 31-32).

The Process of Implementing Diversity into Organizations

Leaders who set out to implement diversity into an organization must start with themselves. There must be a clear vision, a clarification of what they are hoping to achieve through this diversity initiative. "For the aspiring change agent, the most useful vision is one that assumes a diverse work force and then says, 'Let's create an environment that allows every single employee to do his or her best work'" (Thomas, 1991, p. 36). Thomas suggests that leaders must also solicit the assistance of multiple change agents from all levels of the organization who share the same vision. The culture of an organization is also a critical piece to consider when implementing diversity into an organization. The process begins with identifying the company's philosophy about diversity and those influential elements that can support or hinder a diversity initiative. Once this is done, all priorities should be shifted toward the desired change that promotes a diverse workforce (Thomas, 1991).

Wiethoff (2004) proposes a model based on the theory of planned behavior (TPB) that addresses the roles of attitude, subjective norms, and perceived behavior control in motivation to learn from diversity trainings. Wiethoff suggested one or more hypotheses for each segment of the model, which can be used to expand our knowledge of the motivation to learn construct and help design successful diversity trainings. Framing of diversity training is also an essential component to its success (Tversky & Kahneman, 1986). For example, when affirmative action is framed as enhancing diversity, acceptance of the plan is more favorable than when it is framed as a past injustice (Fine, 1992). With the context of organizational communications, framing can affect workers' reactions to

organizational changes (Bolman & Deal, 1991). Morrison (1992) points out in her book *The New Leaders: Guidelines on Leadership Diversity in America* that there are five basic steps that managers need to take in order to create and carry out an effective diversity plan. These steps are:

- Discover (and rediscover) diversity problems in the organization. Collecting current information helps counter assumptions about diversity problems and progress;
- Strengthen top-management commitment. Top manager's involvement in a diversity effort can be the key to success, but there are also some pitfalls to avoid;
- Choose practices that fit a balanced strategy. Although no particular set of practices seems to work better than others across organizations, the selection process involves some strategic issues in responding to current problems;
- Demand results. Setting specific diversity goals and evaluating the results of diversity efforts are complicated and often involve debate over quantitative and qualitative measures; and
- Use building blocks to continue progress. Managers alert to their organization's traditions, business situation, and past successes in foresting diversity can incorporate these into an ongoing diversity effort.

Haro (1993) states that to achieving a desirable form of diversity in an organization involves the following processes: (1) leadership in planning and providing resources to accomplish diversity; (2) strategies to adapt the preparation of goods and services to meet the needs of a mixed clientele; (3)goals to change the orientation and composition of the

work force to be more inclusive; and (4) implementation of systematic assessment procedures to gauge how well the institution is moving toward its goal(s) of diversity. According to Barnard and Lentz (1992), the following steps need to be taken in order to move toward a multicultural perspective for any organization: (a) gain commitment from the top; (b) understand where your organization is and where it has to go; (c) open leadership roles to members from diverse backgrounds; (d) aggressively recruit minority members for leadership; and (e) develop programs that address the cross-sectional diversity of the membership.

Pollar (1998) suggests using the following five steps to set up a good diversity initiative: (1) create a diversity task force. This will provide the leadership and create a vision that reflects the organization's goals; (2) design a cultural audit. This will identify the organizations strengths and weaknesses, and also provide important data that can suggest future actions to improve the organization; (3) develop the overall strategy. This will be a clear outline to follow and provide valuable guidance in both designing and delivering training; (4) deliver training. This cannot be a one-time event. It must be continuous and should include everyone in the organization in order for it to be effective; and (5) measure its effectiveness. Getting feedback from the participants and observing the overall behavior of the organization will assist in implementing a diversity initiative.

Types of Diversity Initiatives

Many organizations in the U.S. have established formal programs to address diversity issues. Diversity training is one of those programs that are fundamental to a diversity initiative. Research conducted by Ramsey (1996) takes a look at a four-stage

conceptual model for diversity identity development (DID) training. This model shows the relationship between identity development and diversity training. The stages of this model are: (a) Fascination – dominant culture preference-minimal awareness; (b) Differentiation – multicultural contact-increased awareness; (c) Confrontation – ethnocentric preferences and hostilities; and (d) Application – reevaluation and appreciation of multiple cultures. The DID training model uses theory to inform and/or guide the practice and structure of diversity trainings (Ramsey, 1996).

Matton and Hernandez (2004) looked at ten companies, searching for the types of diversity initiatives commonly used in their respective organizations. The researchers conducted open-ended interviews with twelve diversity professionals, asking them to identify and discuss the range of initiatives employed in their organizations. Forty percent of the respondents reported that setting targets, goals, or milestones for gender and race representation were the top initiatives in their organizations. Other initiatives included EEO/AA data-gathering and/or data-sharing processes, technology training, diversity councils and task forces. Thomas (1991), in his book titled *Beyond Race and Gender*, stated that affirmative action has been the number one strategy for assimilating minorities and women into the corporate world. Thomas reported that affirmative action programs grew out of a series of assumptions: (1) the mainstream in U.S. business is made up of white males; (2) women and minorities are excluded from this mainstream because of widespread racial, ethnic, and sexual prejudices; (3) such exclusion is unnecessary, given the strength of the U.S. economic edifice; (4) furthermore, it is contrary to both good public policy and common decency; and (5) therefore, legal and social coercion are necessary to bring about change.

Some companies in the U.S. have incorporated valuing differences programs as a diversity initiative (Thomas, 1991). The main focus of these programs is to improve interpersonal relationships among individuals within the organization and to also minimize the expressions of racism and sexism. Thomas points out that those valuing differences concentrate one or more of the following objectives: (a) fostering awareness and acceptance of individual differences; (b) fostering greater understanding of the nature and dynamics of individual differences; (c) helping participants understand their own feelings and attitudes about people who are "different"; (d) exploring how differences might be tapped as assets in the workplace; and (e) enhancing work relations between people who are different. Thomas (1991) suggests that the assumption of valuing differences is that behaviors that are considered undesirable come from a lack of knowledge and understanding.

Gardenswartz and Rowe (1994) propose that there are basically three common models that guide and promote workforce diversity efforts: Affirmative Action, Valuing the Differences and Managing Diversity. Organizations that are driven by affirmative action emphasize achieving diversity through demographics. Valuing the differences in employees emphasize achieving diversity through creating structures that favor expressing different viewpoints. Managing diversity is an approach that stresses issues that deal with the bottom line of sales and/or programming. All organizations with diversity policies and practices will reflect at least one of these models in some form or fashion (Gardenswartz & Rowe, 1994)

Based on a study conducted by Morrison (1992), there are eighteen kinds of formal and informal practices that are used in organizations as leadership diversity initiatives.

The top eight developmental tools are: (1) diversity training programs; (2) networks or support groups within the organization; (3) "fast track" development programs for employees designated as high potential; (4) informal internal networking activities; (5) job rotation; (6) formal mentoring programs; (7) informal mentoring programs; and (8) entry development programs for newly hired employees designated as high potential. Sims and Sims (1993) discuss the concept of diversity and difference training in organizations. "Diversity and difference training helps employees understand how to work through and appreciate the changing dynamics of their organization" (p. 74). It also involves learning about participants' own beliefs and values. "Diversity and difference training should encourage employees to develop a better understanding of their own and others' behaviors" (p. 75). Another diversity initiative is the managing diversity approach (Thomas, 1991). This approach talks about changing the root culture of an organization. The primary focus of managing diversity is to create an environment that utilizes the full potential of a diverse workforce, and seeks to identify the fundamental elements of the organizations.

Evaluating Diversity Training

Evaluating diversity training is an important component of a diversity initiative. However, very little attention has been given to measuring the impact and effectiveness of diversity training (Ferdman & Brody, 1996). Ferdman and Brody also suggest that there are very few reliable instruments to measure the effectiveness of diversity training. Research conducted by Wentling and Palmas-Rivas (1997) found that many of the organizations who participated in their study lacked a clearly focused evaluation plan

when conducting diversity training programs. Tan, Morris and Romero (1996) focused on measuring changes in perceptions, attitudes and knowledge before and after diversity training. Their research revealed that although there were increases in diversity-related knowledge, it failed to measure participants' own perceptions of and attitudes toward diversity.

Kossek and Zonia (1993) examined university employees' attitudes toward the employer's efforts to promote diversity and found that minorities responded more favorably to the institution's efforts to promote diversity than Whites. Ellis and Sonnefield (1994) assessed the reactions of employees who attended a diversity workshop and revealed that employees who attended perceived it to be an experience that enhanced their ability to interact and work with people from a different culture that theirs. Stewart, LaDuke, Bracht, Sweet and Gamarel (2003) took on the task to evaluate the well-known diversity training exercise called "blue-eyes/brown-eyes", an exercise made popular by Jane Elliott that is used to reduce stereotyping, prejudice and discrimination. Their results indicated that those students who participated interacted more comfortably with participants from a different race than theirs than did students who did not participate. However, researchers did not find that participation in the exercise led to racism and prejudice (Stewart et al., 2003).

Some organizations do not conduct evaluations of diversity training because it is too problematic. Cox (1993) believes that the reason for this is that there are no measurements in place, no clear objectives, or leaders in organizations feel that there is no need for evaluation because they are doing well financially. Morrison (1992) suggests

that if diversity training is not measured, it can cost organizations lots of time and money, and not create significant changes.

Wentling and Palmas-Rivas (1997) suggest that diversity trainings should have both formative and summative evaluations. A study conducted by Rynes and Rosen (1995) addressed the need for careful assessment of diversity trainings. The researchers polled human resource managers on the impact of their diversity training programs and discovered that one-third of the managers viewed their programs as successful and approximately eighteen percent viewed their programs as unsuccessful. Their research found that long-term follow-up evaluations played a critical role in successful diversity training programs. Of the twelve participants Matton and Hernandez (2004) interviewed during their study, researchers reported that all respondents evaluating the effectiveness of diversity initiatives is a critical factor of accountability, but the extent to which each company surveyed were able to do so varied widely. Several companies have conducted formal, internal evaluations while others were planning to use external consultants to employ some type of evaluation mechanism. Most of the participants expressed a need to improve the way they measure the effectiveness of diversity initiatives in their respective organizations. Evaluating diversity training is a tedious event. Organizations must use tools to measure diversity training and link performance to individual accountability (Carnevale & Stone, 1994).

Benefits of Diversity Training

The results of affirmative action, valuing differences, and managing diversity have been good overall (Thomas, 1991). Large numbers of women and minorities are working

in entry-level positions in companies whose recruitment efforts are very strong. These diversity initiatives have created a more diverse workforce that fosters upward mobility for women and minorities. With the implementation of these three initiatives, there is a mutual respect among the groups involved (Thomas, 1991). "We believe that the real success of diversity and difference training efforts will depend on the extent to which organizations commit the resources to evaluate their efforts in this area" (Sims & Sims, 1993, p. 90.) Sims and Sims also point out that by requiring that all employees participate in diversity and difference training, organizations will reap the benefits of their efforts in increased creativity, a more motivated workforce, as well as increased profits.

Wentling and Palmas-Rivas (2000) concluded in their study that the majority of the participating corporations considered diversity initiatives to have a very positive effect on the employees and their organizations. "Through coaching, leadership, and modeling, a multicultural educational leadership program can help develop diversity as a strategic educational and organizational asset" (Smith, 1996, p. 38). Leaders in organizations find many reasons that are beneficial to incorporate diversity within their organization, such as increased productivity, improving quality management and gaining market shares (Morrison, 1992). A healthy, diverse workplace can provide an organization with the necessary tools to improve problem-solving, improve productivity, and be more flexible and creative (Cox, 1993).

In the spirit of diversity, Butler and DeSole (1993) suggest that libraries should be staffed by a number of minorities as well as Anglo, which would represent the full diversity of the student population. "Not only will these students by their very presence create a more welcoming climate for multicultural students, but they can also serve as

sources of information about what might make the library more welcoming from their perspectives" (p. 168). "Diversity produces stability, which is the ability of the system to withstand stress and to identify and respond to opportunities" (Gilliland, 1991, p. 95). Gilliland also points out that the real strength of an organization is its appreciation of cultural diversity. "The full potential of educational and business institutions will be realized more fully as they move beyond previous self-imposed limitations and benefit from real leadership diversity and richness" (p. 96).

With the increased minority population in the U.S., organizations are adapting their products and services to cater to this diverse interest. Members of minority groups are more likely to give patronage to business that are of their own cultural group (Cox, 1993). The recruitment and retainment of minorities in organizations has created a climate of diversity and opened doors to hiring practices that address the global market. Cox (1993) suggests that this approach promotes a multiplicity of viewpoints, creating the potential to generate more creative ideas. Thus, a diverse workforce has had a significant impact on increased sales and profits of goods and services.

Challenges of a Diverse Workforce in Organizations

While there are numerous benefits and advantages of diversity initiative, a diverse workforce came bring about many challenges. Cox (1993) points out that there are two main contributors to conflict in a diverse workplace: (1) group differences are formed with group boundaries and (2) the conflict is directly related to this group identity. Cox also suggests that as a result of this group conflict, interpersonal dynamics in the workplace can become hostile. Northcraft, Polzer, Neale and Kramer (1995) reported that

the issue of conflict leads to a problem with self-identity. People have to arrive at a decision about what group to associate with at work. This leads to a work environment that is likely to be categorizations of "in-groups" and out-groups" (Northcraft, et al., 1995).

There is also the concept of cohesion that is present in a diverse workforce. Individuals are attracted to other individuals like themselves (Allison, 1999). Because of this, such cohesion fosters homogeneous work groups. Cox (1993) cautions that sometimes diversity threatens the cohesiveness of groups. When this happens, low morale can occur, which will result in high absenteeism and high turnover. There is also the issue of resistance to change. According to Allison (1999), this resistance can be rooted in issues of prejudice, discrimination and/or a resistance to addressing sensitive issues that typically would be considered taboo.

Another challenges organizations face when trying to create a diverse workforce is a resistance to change. According to Block (1999), the number one reason why people resist change if fear. Robbins (2000) points out that when something new is introduced to people that threatens their routine, they naturally resist. Because of the complexity of our cultures, people tend to stick with the things that work best for them. "Many employees avoid embracing change by not directly confronting or openly expressing their real issues, opinions, or concerns" (Gilley, Quatro, Hoekstra, Whittle & Maycunich, 2001, p. 53). Job security is also a concern for people. The introduction of diversity initiatives may cause someone to perceive that they will lose their job to a minority group member, causing them economic hardship (Robbins, 2000). The only way to deal with resistance

to change is to understand the reasons behind it and address those reasons head on (Gilley et al., 2001).

Oftentimes, diversity training is used as an indicator to determine whether or not an organization is committed to diversity. One of the challenges faces is whether or not to make training voluntary or mandatory. James (1996) points out that mandatory participation is not authentic and is ineffectual. Allison (1999) suggests that mandatory participation is not ideal but there is a need for such training in that it may sensitize a workforce that is out of touch with alternate viewpoints. Whether diversity training is mandatory or voluntary, steps must be taken to increase cultural awareness and sensitivity.

Barriers to Implementing Diversity in Organizations

Although affirmative action has some good points, limitations of its effect are prevalent in organizations. "Minorities and women are disproportionately clustered at the bottom of the corporate pyramid. This phenomenon (called the glass ceiling when referring to women and premature plateauing when referring to minorities) exists even in organizations with excellent affirmative action reputations" (Thomas, 1991, p. 21). The other problem that is frustrating and unavoidable with affirmative action programs is the affirmative action cycle. According to Thomas, "the traditional approach to diversity inevitably creates a cycle of crisis, problem recognition, action, great expectations, disappointment, dormancy, and renewed crisis" (p. 21). When this occurs, affirmative action is no longer a front issue, relaxation sets in, and the cycle just repeats itself.

Thomas (1991) talks about how most managers see diversity as a legal or moral issue rather than a business issue. "As a result, diversity remains a 'fair weather' agenda item-a luxury to be pursued when business results allow it and relegated to the back burner when sales or profits dip" (p.41). Another inhibiting factor that Thomas talks about is the prevailing definition of diversity. "By limiting the term to minorities and women, and ignoring diversity's other dimensions, this definition blocks understanding" (p. 43). In addition to those barriers, Thomas goes on to discuss assimilation as an inhibiting factor. "Some managers are so steeped in assimilation that they cannot imagine conditions under which employee diversity would be acceptable. They worry about what would happen if all employees 'did their own thing'" (p. 42).

Gottfredson (1992) focuses on the dilemmas that diversity programs face in some organizations. "On the negative side, for example, they have sometimes led to resentment and dissatisfaction among some or all groups of employees and, consequently, to polarization across groups" (p. 288). The researcher also talks about equal treatment as a barrier. "Treating all people the same, it is said, leaves many of the old barriers in place. It also suppresses the talents of women and minorities and thus hobbles them" (p. 289). "The counterargument is that treating people differently on the basis of group membership is unjust and sows the seeds of resentment, thereby creating additional barriers between groups and corroding the morale that is necessary for high levels of performance" (Gottfredson, 1992, p. 289). Gottfredson continues with a discussion on ethnic and gender issues. The researcher talks about how discussing stereotypes can do more harm than good. "Acknowledging and celebrating average ethnic and gender

differences may only replace one set of stereotypes and barriers with others. Rather than unite, the attention to differences may divide and polarize" (p. 291).

Sessa and Jackson (1995) discuss diversity in decision-making teams and the adverse affect it has on organizational cohesiveness. "Thus individuals who differ from their teammates or work unit members on sex and race are more likely to report a lower commitment to their organization, less intent of staying, and more absences" (p. 141). Matton and Hernandez (2004) interviewed twelve diversity professionals and discovered several factors that posed barriers to the implementation of diversity initiatives. Those barriers are: organizational culture, technology, middle management and employee buy-in, and differences between gender and race. In his work titled *Leadership and Diversity: Organizational Strategies for Success*, Haro (1993) talks about some of the risks associated with diversity programs. Implementing change within an organization at an accelerated pace may cause major problems.

> A firm that pushes too hard in the recruitment and hiring of women and minorities may find itself the target of a reverse-discrimination suit....Management must play a leadership role in sensitizing different groups within an organization about diversity values (p. 60).

Bowens, Merenivitch, Johnson, James, and McFadden-Bryant (1993) discuss three key barriers to cultural diversity that exists in organizations. The first barrier is the Deficit Model and the Racism Model. The Deficit Model is the belief of most whites that black people are innately deficient. The Racism Model, which is held by many black people, is the belief that most white people are racist, which causes blacks to be doubtful and skeptical of the motives of white people. The next barrier discussed is that of leadership commitment. Bowens et al. suggest that if leadership at the very top of an organization is not involved in the diversity initiative, it sends a clear message that the

issue is not important. The last barrier discussed is that of valuing. Organizations that do not appreciate and utilize the multitude of differences of its workforce are promoting an atmosphere that is counterproductive to organizational success (Bowens, Merenivitch, Johnson, James, & McFadden-Bryant, 1993).

Summary

The literature review exposed key points from a variety of avenues on diversity training in organizations. It took a look at some of the common diversity initiatives in organizations, some benefits of implementation, a glance at how diversity training is evaluated, and some of the common barriers that exist. This selective review of the literature clearly illustrates the importance of having a diversity initiative in the workplace. A basic understanding of what the literature says about diversity initiatives, specifically diversity training, is required to understand its impact in organizations.

Chapter Three: Method

Introduction

A research synthesis is very influential in regard to subsequent research, policy, and practice (Oakley, 2004). It attempts to quantitatively aggregate the findings from independent studies of the same phenomenon. According to Cooper (1998), research syntheses are literature reviews that "focus on empirical studies and seek to summarize past research by drawing overall conclusions from many separate investigations that address related or incidental hypotheses" (p. 3). Shanahan (2000), who also has written about and conducted syntheses, emphasizes that the important feature of this research approach is the systematic analysis of extant research studies. The strength of research syntheses lie in their ability to examine information accrued over multiple studies and several operational definitions. "They are used by policymakers in designing strategies for development, and they are used to guide practitioners in the enhancement of professional activity" (Dunkin, 1996, p. 87). Ideally, a research synthesis allows estimates of magnitudes of effects for theorized relations to be aggregated in ways that rarely would or could be tested within one study. The presence of a considerable body of empirical literature on diversity training will provide an opportunity to aggregate this information to address important research questions and to identify gaps in the literature.

Details of the Literature Search

The goal of the literature search was to conduct an exhaustive search for research and evaluation studies on the impact of diversity training in organizations. This involved a preliminary search of the Education Resources Information Center (ERIC) database

from 1991 through 2006, using general keyword search terms/phrases such as "diversity training" and "organizations." Citations produced through these preliminary searches helped the researcher to identify the primary search terms to be used in formal literature searches. The relevant literature databases searched included ERIC, Business and Management Practices, Business Source Premier, and Business/Industry. The researcher also examined recent tables of content from pertinent journals, such as Human Resource Development Quarterly, Human Resource Development Review, Advances in Developing Human Resources, and Human Resource Development International. Also, websites were searched for technical reports and evaluations. The screening process occurred at two levels. First, abstracts were reviewed for inclusion using the criteria described in the next section. Articles were ordered and read for studies initially included. The second level of screening involved reading and coding ordered articles again using rules for inclusion and exclusion and the coding instrument described in a later section.

Criteria for Including/Excluding Studies

The criteria for including studies in the synthesis reflected the research problem and the purpose of the synthesis. The following reflect the criteria for inclusion:

- Studies have to include empirical data, specifically quantitative inquiry,
- Studies have to involve businesses/organizations,
- A research or evaluation study has to be published or reported in or after 1991 (The researcher chose this date because of The Civil Rights Act of 1991.),
- Studies have to be implemented in the United States,

- Quantitative studies have to include some type of assessment of employee/participant outcomes as a result of training, and
- Studies must have adequate data to calculate effect sizes.

The researcher included both published and unpublished studies, such as evaluation reports, conference presentations, and dissertations. Through this approach, researcher avoided the null hypothesis problem (Cooper, 1998), whereby studies that do not find effects from an intervention are excluded from the synthesis because they are not published. This problem tends to bias a synthesis in favor of finding positive results.

Details of Study Coding and Data Extraction

The researcher designed an instrument to code studies for content and quality. The instrument is based on the What Works Clearinghouse (2006) Study Review Standards for inclusion and exclusion. The instrument included an initial overview of the study and sections concerning program/intervention and subject/participant information, research design/methodology, quantitative analysis (effect sizes and study outcomes), and quality rating (see appendix). The researcher coded descriptive information for the study, including the nature of the approach, the participants, and the locale. To code the research design of the study, the researcher identified the predominant methodology as the one on which study conclusions were based. Quantitative research was coded as experimental, quasi-experimental, non-experimental (descriptive, correlational, pre and post test, etc.), and/or mixed methods. When appropriate, secondary research methods were also described. Statistical results for quantitative studies were coded for each outcome measure in the study and included the information needed to conduct a meta-analysis:

group means, standard deviations, effect sizes, and inferential test statistics. The researcher described the relevant findings and conclusions that relate to the research problem addressed by the synthesis.

Coding the quality of quantitative studies is based on the framework of Shadish, Cook, and Campbell (2002), which addresses threats to validity, and the Study Design and Implementation Assessment Device (Valentine & Cooper, 2003). Both examine research studies for four types of validity: construct, internal, external, and statistical. A rating was assigned to a study based on the degree to which research methods address each type of validity as indicated by the information provided in the article. These criteria resulted in the following quality scale for quantitative studies: sufficient and insufficient. Table 1 describes the characteristics of quantitative studies rated as "sufficient."

Table 1.

Characteristics of Quantitative Studies with a Sufficient Rating

Type of Validity	Study Characteristics
Construct Validity	• The description of the intervention is adequate and largely reflects commonly held ideas about its definition. • Treatment fidelity is discussed and its assessment is reported. • There is evidence for the alignment of the outcome measure with the intervention and for construct validity of the outcome measure.
Internal Validity	• There were adequate steps taken to make groups comparable. • Alternate explanations for results are ruled out.
External Validity	• The most important characteristics of the participants, settings, and outcomes are represented in the sample. • The intervention was tested for effectiveness with most but not all important subgroups of participants.
Statistical Validity	• Effect sizes can be calculated for most but not all outcome measures.

Statistical Procedures and Conventions

Researchers have published on different types of syntheses and provided guidelines for their conduct (Cooper, 1998; Shanahan, 2000). However, there has been disagreement about which synthesis methods are most appropriate (Wayne & Youngs, 2003). In order to reflect the goals of the synthesis, the research problem, and the nature of the studies that meet the inclusion criteria, the researcher has chosen to use a meta-analytic approach to conduct this study.

Introduction to Meta-Analysis

According to Morgan, Gliner, and Harmon (2006), a meta-analysis is a research synthesis that uses effect sizes of quantitative studies to indicate the strength of the relationship between variables. Meta-analysis is a method of analyses of social science data developed by Glass (1976) for the purpose of integrating a body of experimental literature in a replicable way. A meta-analysis is a methodology that enhances the external validity because subjects, treatments, and conditions from various studies are combined (Cooper & Hedges, 1994).

Meta-analysis contributes to theory because it examines information gathered over multiple studies and several conditions. The ability to evaluate multiple effect magnitudes of various theoretical relationships in one single analysis helps contribute to the theory being examined (Cooper & Hedges, 1994). Meta-analysis provides a more objective means of analyzing and comparing results than tests of significance because sample size does not drive meta-analysis results. Meta-analysis allows the researcher a way of seeing what research has been done and whether or not it has been effective.

The researcher has selected a meta-analysis as the method of synthesizing quantitative studies because it provides a more objective means of analyzing and comparing results than tests of statistical significance because sample size does not drive meta-analysis results. Through the careful classification and assignment of numerical values to study aspects, estimated effect sizes provide a standardized means to compare quantitative studies as opposed to the possibility of a more subjective method using narrative adjectives. In all cases, analytic methods were systematically applied. Results were analyzed and interpreted separately for studies that use randomized controlled trials, those that use quasi-experimental methods, and those studies that do not report sufficient quantitative information for meta-analysis.

Calculating Effect Sizes

In meta-analysis, cumulating the effects across studies requires that outcomes from all studies be converted to a common metric (Hunter & Schmidt, 1990). The researcher has chosen to calculate effect size estimates by using Cohen's *d* (Cohen, 1988). The effect size, or *d* statistic, provides a measure of the strength of a treatment or independent variable. The *d* statistic is calculated as the difference between the means of the experimental (M_E) and control groups (M_C) divided by the pooled standard deviation of the two groups (Cohen, 1988; Glass, 1976; Glass, McGaw, & Smith, 1981; Hunter & Schmidt, 1990).

$$d = \frac{M_E - M_C}{S_W}$$

For studies that reported actual means and standard deviations of the experimental and control groups, d effect sizes were calculated using this statistic. If studies compared a

treatment group with a control group and reported the results of a *t* test, but did not report means and standard deviations, a d value was computed by using the following formula:

$$d = \frac{2t}{\sqrt{df}}.$$

If studies that are included express effect sizes as *r*, then *r* was converted to *d* by using the following formula:

$$d = \frac{2r}{\sqrt{1-r^2}}.$$

If studies that are included express effect sizes as *F*, then *F* was converted to *d* by using the following formula:

$$d = \frac{2\sqrt{F}}{\sqrt{df}}.$$

Weighting Samples

In some cases, a study may provide more than one effect size estimate (Morgan, Gliner, & Harmon, 2006). If this is the case, the researcher selected one representative measure from the study. If the researcher was convinced that some of the measures in the study are independent of each other, more than one effect size was computed from that study. Large sample sizes produce more accurate estimates of its population. Conversely, small sample sizes may provide estimates that are of little value because the sample does not represent its population to any significant degree. To improve estimates of effect sizes, the researcher has chosen to use the Hedges and Olkin's (1985) weighted integration method by using the following formula:

$$d_+ = \frac{\sum_{i=1}^{k} \frac{d_i}{\hat{\sigma}^2(d_i)}}{\sum_{i=1}^{k} \frac{1}{\hat{\sigma}^2(d_i)}}.$$

Test for Homogeneity of Effect Sizes

To verify whether or not the individual effect sizes used to calculate the mean effect size are estimates of the same population effect size, a homogeneity analysis was performed that is based on the Q statistic. According to Lipsey and Wilson (2001), if a distribution of effect sizes is homogeneous, the dispersion of the effect sizes around their mean will be no greater than that expected from sampling error alone. The formula for Q is:

$$Q = \sum w_i (ES_i - ES_m)^2$$

Software for Analysis

Calculating average weighted effect sizes and homogeneity statistics by hand is time-consuming and open to many errors. To reduce the chances of error, the researcher used the *Comprehensive Meta-Analysis, Version 2* software program. This software allows for the synthesis of data from multiple studies and provides a means for determining the source of variation when effect sizes differ significantly. Additionally, this software program can calculate overall effect sizes, search for outliers and moderators, and present the findings graphically.

Quality Control

The researcher applied quality control procedures throughout the development of the synthesis. Coding procedures were designed to help the researcher reach a common understanding of the codes used to describe each study and to check for the reliability of coding results. Coding procedures incorporated Stock's (1994) recommendations for reducing coding errors. Coding procedures and decisions were double-checked at several points: in data entry, in preparation of study tables and reporting of findings, during initial review of the draft report, and during revisions. The researcher also assessed reliability of study exclusions during level 1 screening and of study codes during level 2 screening. Low reliabilities resulted in secondary screening and coding of studies. A final quality control procedure was the use of external review of the synthesis report by the dissertation committee.

Chapter Four: Results

Introduction

This chapter covers the results and data presentation for this meta-analysis of studies on the impact of diversity training in organizations. The specific components of this chapter include: (1) the purpose and goal of the study, along with the specific research questions, (2) details of the literature search; (3) descriptive statistics results of the excluded studies, (4) the descriptive statistics results of the included studies, (5) the meta-analysis results, and (6) a response to the specific research questions.

Purpose of the Study

The purpose of this study was to gather, summarize, and integrate past research from 1991 thru 2006 examining the effectiveness of diversity training in organizations utilizing a meta-analytic approach. The overall goal of the synthesis was to: (1) identify the diversity initiatives that are commonly used in organizations, based on a collection of research and evaluation studies gathered through a structured search process; (2) assess the effectiveness/impact of diversity training and the influences of approach using meta-analytic techniques and narrative reviews; (3) describe study findings in relation to the quality of the research; and (4) describe the implications of the findings for researchers and policymakers. This purpose and goal was achieved through answering the following questions:

- Does diversity training have an impact on employees' behavior?
- Does an employee gain a better understanding of cultural differences?
- Does diversity training result in the desired return on investment?

- What methodological and/or research features of the study are related to the outcomes of the study?

Results of the Literature Search

Articles were identified through computer database searching and hand searching of selected journals, from 1991 through 2006. The relevant literature databases searched included Education Resources Information Center (ERIC), Business and Management Practices, Business Source Premier, and Business/Industry. The search terms are located in Table 2 below. See Appendix for complete results of search terms from each database searched.

Table 2.

Search Terms

Primary Search Terms	Secondary Search Terms
Diversity Initiative	Organization
Diversity Training	Workplace
Diversity Program	Business and Industry
	Corporation
	Work Environment
	Multinational Corporation
	Corporate America

Researcher also examined the tables of content from pertinent journals, such as Human resource development Quarterly, Human Resource Development Review, Advances in Developing Human Resources, and Human Resource Development International. The first coding level of screening included reviewing abstracts for inclusion/exclusion criteria, which yielded 3,249 abstracts. The second-level of screening involved reading and coding articles that met the inclusion criteria at the first level of

screening, which yielded 166 articles for review. See Appendix B for abstract and article coding instruments.

Characteristics of Excluded Studies

The meta-analysis identified 166 studies for possible inclusion in this study. As described in the methodology section, the second level screening that was used assessed the quality of the studies for four types of validity: construct, internal, external, and statistical. A rating was assigned to a study based on the degree to which research methods addressed each type of validity and resulted in either a "sufficient" or "insufficient" rating.

To ensure accurate and unbiased judgment regarding the quality of each study, the researcher reviewed each study three times. The time frame for review was six weeks, with two weeks between each review. As a result, this assessment yielded 130 studies as "insufficient." However, after careful analysis of each article, only eight articles met the total inclusion criteria. Detailed reasons for excluding these studies are summarized in Table 3. See Appendix for the list of excluded study references.

Table 3.

Reasons for Excluded Studies

Exclusion Reasons	Frequency	Percentage
Lacks empirical data	96	58%
No assessment/documentation of employee/participant outcome of diversity training	41	28%
Does not have adequate data to calculate effect sizes	35	21%
Duplicate	4	2%

Note: some excluded studies met multiple exclusion criteria.

Characteristics of Included Studies

Of the 166 studies reviewed at the second-level screening, only eight studies met the criteria for inclusion. The earliest study occurred in 1995 and the latest in 2006. All included studies received a "sufficient" rating regarding the issue of quality. Two of the studies used quasi-experimental designs and the remaining six studies were non-experimental (correlation, regression, pre-post test, etc.). Seven studies provided analyses on multiple outcomes. Six studies provided correlations, one study provided odds ratios, and one study provided Cohen's *d* effect sizes. Table 4 provides the detailed description of effect size data per study.

Table 4.

Effect Sizes per Outcome

Study	Outcome	Type of Effect Size Data	Effect Size
Hanover, J.M.B. & Cellar, D.F. (1998)	Behavior	Cohen's *d*	.22
Hanover, J.M.B. & Cellar, D.F. (1998)	Attitude	Cohen's *d*	.38
Hanover, J.M.B. & Cellar, D.F. (1998)	Behavior	Correlation	.49
Hanover, J.M.B. & Cellar, D.F. (1998)	Attitude	Correlation	.38
Holladay, C.L & Quinones, M.A. (2005)	Attitude	Correlation	-.11
Holladay, C.L & Quinones, M.A. (2005)	Attitude	Correlation	.09
Holladay, C.L & Quinones, M.A. (2005)	Attitude	Correlation	.11
Holladay, C.L & Quinones, M.A. (2005)	Attitude	Correlation	.12
Holladay, C.L & Quinones, M.A. (2005)	Attitude	Correlation	.13
Sanchez, J.I. & Medkik, N. (2004)	Behavior	Correlation	.68
Roberson, L., Kulik, C.T. & Pepper, M.B. (2001)	Attitude	Correlation	.17
Roberson, L., Kulik, C.T. & Pepper, M.B. (2001)	Behavior	Correlation	.14
Roberson, L., Kulik, C.T. & Pepper, M.B. (2001)	Behavior	Correlation	.26
Roberson, L., Kulik, C.T. & Pepper, M.B. (2001)	Behavior	Correlation	.24
Ely, R.J. (2004)	Behavior	Correlation	.04
Kalev, A., Dobbin, F. & Kelly, E. (2006)	Behavior	Odds ratio	.031
Kalev, A., Dobbin, F. & Kelly, E. (2006)	Behavior	Odds Ratio	-.066
Kalev, A., Dobbin, F. & Kelly, E. (2006)	Behavior	Odds Ratio	-.038

Kalev, A., Dobbin, F. & Kelly, E. (2006)	Behavior	Odds Ratio	-.001
Holladay, C.L., Knight, J.L., Paige, D.L. & Quinones, M.A. (2003)	Attitude	Correlation	.33
Holladay, C.L., Knight, J.L., Paige, D.L. & Quinones, M.A. (2003)	Attitude	Correlation	.24
Holladay, C.L., Knight, J.L., Paige, D.L. & Quinones, M.A. (2003)	Attitude	Correlation	.20
Rynes, S. & Rosen, B. (1995)	Behavior	Correlation	.29
Rynes, S. & Rosen, B. (1995)	Behavior	Correlation	.26
Rynes, S. & Rosen, B. (1995)	Behavior	Correlation	.25
Rynes, S. & Rosen, B. (1995)	Behavior	Correlation	.39
Rynes, S. & Rosen, B. (1995)	Behavior	Correlation	.01
Rynes, S. & Rosen, B. (1995)	Behavior	Correlation	.44

Meta-Analysis Results

A meta-analysis using the fixed effects model and the random effects model were performed using the Comprehensive Meta-Analysis, Version 2.0 software program. This software allowed for the synthesis of data from multiple studies, with multiple outcomes, and provided a means for determining the source of variation when effect sizes differ significantly. Effect size estimates, tests for homogeneity of variance, and Fail=Safe N were calculated. In each of the studies that qualified for this meta-analysis, effect sizes were computed for each outcome using the required information provided in the research, such as descriptive statistics and supplemental tests.

Calculating Effect Sizes

All calculations were performed using the Comprehensive Meta-Analysis, Version 2.0. Output for both the fixed effects model and the random effects model provided the mean effect size, standard error, variance, confidence interval, Q-value, and the P-value

for Q. Interpreting the estimated effect sizes followed Cohen's (1988) guidelines, which suggest this interpretation:

Effect Size	Degree of Effect
.20	Small
.50	Medium
.80	Large

The overall effect size based on the fixed effects model is 0.013 and the overall effect size based on the random effects model is 0.324. These results reveal a smaller than typical effect sizes according to Cohen's *d* index. Table 5 presents the results of the individual effect sizes, along with the overall results from the fixed effects model and the random effects model.

Table 5.

Overall Effect Size Estimates

Study	Effect Size	Standard Error	Variance	95% CI	
				Lower Limit	Upper Limit
Hanover et al., 1998	0.220	0.202	0.041	-0.175	0.615
Hanover et al., 1998	0.350	0.203	0.041	-0.047	0.747
Hanover et al., 1998	1.124	0.342	0.117	0.454	1.795
Hanover et al., 1998	0.822	0.322	0.104	0.190	1.453
Holladay et al., 2005	-0.221	0.091	0.008	-0.400	-0.043
Holladay et al., 2005	0.181	0.091	0.008	0.003	0.359
Holladay et al., 2005	0.221	0.091	0.008	0.043	0.400
Holladay et al., 2005	0.242	0.091	0.008	0.063	0.420
Holladay et al., 2005	0.262	0.091	0.008	0.084	0.441
Sanchez et al., 2004	1.855	0.247	0.061	1.371	2.339
Roberson et al., 2001	0.345	0.208	0.043	-0.063	0.753
Roberson et al., 2001	0.283	0.207	0.043	-0.123	0.689
Roberson et al., 2001	0.539	0.213	0.045	0.122	0.955
Roberson et al., 2001	0.494	0.211	0.045	0.080	0.909
Ely, 2004	0.080	0.091	0.008	-0.098	0.259
Kalev et al., 2006	0.017	0.010	0.000	-0.003	0.038
Kalev et al., 2006	-0.036	0.010	0.000	-0.056	-0.017

Kalev et al., 2006	-0.021	0.012	0.000	-0.044	0.002
Kalev et al., 2006	-0.001	0.012	0.000	-0.024	0.023
Holladay et al., 2003	0.699	0.169	0.029	0.368	1.031
Holladay et al., 2003	0.494	0.164	0.027	0.172	0.817
Holladay et al., 2003	0.408	0.163	0.027	0.089	0.728
Rynes et al., 1995	0.606	0.075	0.006	0.460	0.753
Rynes et al., 1995	0.539	0.074	0.005	0.393	0.684
Rynes et al., 1995	0.516	0.074	0.005	0.372	0.661
Rynes et al., 1995	0.847	0.078	0.006	0.695	0.999
Rynes et al., 1995	0.020	0.072	0.005	-0.120	0.160
Rynes et al., 1995	0.980	0.080	0.006	0.824	1.136
Overall Fixed Effect	**0.013**	**0.005**	**0.000**	**0.003**	**0.024**
Overall Random Effect	**0.324**	**0.035**	**0.001**	**0.255**	**0.393**

Weighting Samples

The samples included in this meta-analysis cover a wide range sizes (48 to 785), measures and designs. As a result, some studies may produce more representative estimates of effect sizes than others. Based on the work of Cooper and Hedges (1994), larger sample sizes reduce sampling error and produce more accurate estimates of its population. Conversely, small sample sizes may produce estimates that are of little value because the sample does not represent its population to any significant degree. Also, the variability of the sample estimates from small study samples around the parameters of the population is much greater than that of large sample sizes (Cooper & Hedges, 1994). To improve estimates of effect sizes, samples included in this meta-analysis were weighted by sample size with larger study sample sizes receiving more weight than smaller sample sizes. See Table 6 below for relative (random) weights of effect sizes in percentages.

Table 6.

Weights of Effect Sizes

Study	Sample Size	Effect Size	Relative Weight (Random)
Hanover et al., 1998	99	0.220	2.03
Hanover et al., 1998	99	0.350	2.01
Hanover et al., 1998	99	1.124	0.91
Hanover et al., 1998	99	0.822	1.00
Holladay et al., 2005	493	-0.221	4.26
Holladay et al., 2005	493	0.181	4.26
Holladay et al., 2005	493	0.221	4.26
Holladay et al., 2005	493	0.242	4.25
Holladay et al., 2005	493	0.262	4.25
Sanchez et al., 2004	125	1.855	1.53
Roberson et al., 2001	98	0.345	1.94
Roberson et al., 2001	98	0.283	1.96
Roberson et al., 2001	98	0.539	1.89
Roberson et al., 2001	98	0.494	1.90
Ely, 2004	486	0.080	4.25
Kalev et al., 2006	708	0.017	5.89
Kalev et al., 2006	708	-0.036	5.89
Kalev et al., 2006	708	-0.021	5.88
Kalev et al., 2006	708	-0.001	5.88
Holladay et al., 2003	160	0.699	2.52
Holladay et al., 2003	160	0.494	2.60
Holladay et al., 2003	160	0.408	2.63
Rynes et al., 1995	785	0.606	4.68
Rynes et al., 1995	785	0.539	4.70
Rynes et al., 1995	785	0.516	4.71
Rynes et al., 1995	785	0.847	4.61
Rynes et al., 1995	785	0.020	4.77
Rynes et al., 1995	785	0.980	4.55

Test for Homogeneity of Effect Sizes

To determine whether the effect sizes from the selected studies varied more than expected by sampling error, a test for homogeneity of the effect size distribution was conducted. According to Lipsey & Wilson (2000), the assumption is made that if the distribution is homogeneous, then the variability around the effect size is no greater than

would be expected from sampling error. However, if the variability around the mean effect size is heterogeneous, then it appears that each effect size is not estimating a common population. The homogeneity analysis resulted in a Q value of 609.677, which was statistically significant ($p < .00001$).This indicates that the null hypothesis of homogeneity is rejected and the researcher assumes a heterogeneous distribution. Since the distribution is heterogeneous, the data fits a random effects model, which will be used to make generalizations. Hedges & Olkin (1985) suggest that the random effects model assumes that the effect size estimates are samples of a distribution of effect size parameters and that the variability in effect size estimates is the product of both the variability in population parameters and sampling error.

Test for Publication Bias

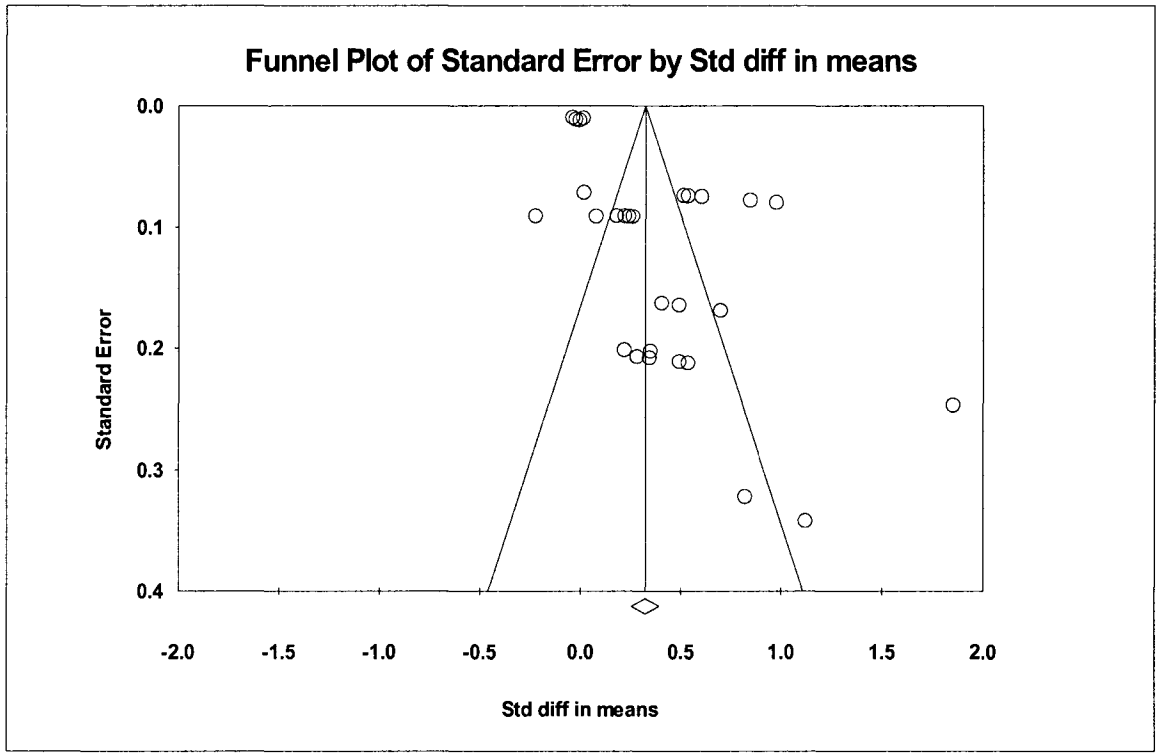
Funnel Plot

Publication bias is the likelihood that significant results are over-represented in published research. To test for publication bias, a funnel plot was used. According to Borenstein (2002), a funnel plot is a plot of a measure of study size as a function of effect sizes. If the studies appear at the top of the graph and appear to be symmetrically distributed around the mean effect size, this would be an indication of the absence of publication bias. By contrast, if the studies appear at the bottom of the graph and show a higher concentration of studies on one side of the mean than the other, this would indicate the presence of publication bias. In reviewing the funnel plot for the impact of diversity training in organizations, it was discovered that the majority of the studies accumulated at

the top of the graph but were concentrated on the right side of the mean effect size. This indicates asymmetry and suggests the possibility of publication bias. (See Figure 1)

Figure 1.

Funnel Plot



Trim and Fill

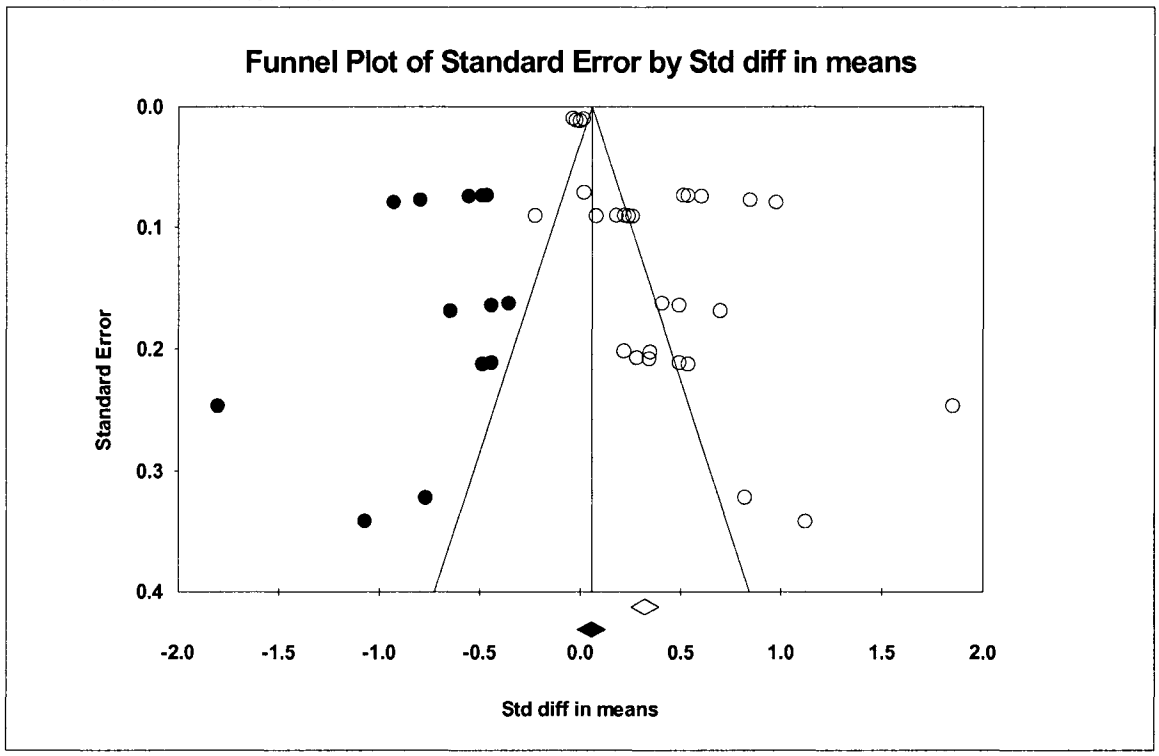
If all relevant studies were included in this meta-analysis, the above funnel plot would be symmetric. Since there are more studies to the right of the mean effect, the researcher is concerned with studies missing on the left side of the mean effect. To address this concern, the Trim and Fill method was used. The trim and fill method is a nonparametric approach that is based on the funnel plot (Duval & Tweedie, 2000). This procedure adds the missing studies to the analysis and then re-computes the effect size,

making the funnel plot symmetric. This approach provides an estimate of the effect size after the bias has been taken into account.

Using the Comprehensive Meta-Analysis software to look for missing studies based on a random effects model, the analysis suggests that thirteen studies are missing. Under the random effects model, the point estimate (effect size) is 0.05811, 95% confidence interval (-0.01379, 0.13000). (See Figure 2)

Figure 2.

Trim and Fill Funnel Plot



The Fail Safe N

Another method to test for publication bias is the Fail Safe N. This method is used to address what is called the "file drawer problem," a term coined by Rosenthal (1984). The term speaks of the tendency of authors to publish statistically significant results and keep

non-significant results in the file drawer. Such a practice is an important issue in any type of meta-analysis, since published studies will not be representative of all research undertaken on a topic. The Fail Safe N is the least number of unpublished studies that would be needed to change the conclusion achieved by the meta-analysis if those studies were included. It is a method for assessing the magnitude of the file drawer problem. Rosenthal (1984) generated a formula to calculate the magnitude of the file drawer problem, 5K + 10, where K is the number of studies included in the meta-analysis.

To investigate the file drawer problem regarding the impact of diversity training in organizations, the researcher calculated the Fail Safe N using Rosenthal's formula:

Fail Safe N = 5K + 10 = 5(28) + 10 = 150.

The researcher also calculated the Fail Safe N using the Comprehensive Meta-Analysis software, which resulted in 1,813 unpublished studies, much greater than the number generated from Rosenthal's formula. This suggests that over twelve times as many studies are needed to nullify the conclusion obtained by this meta-analysis about the observed effect.

Response to Research Questions

Research Question #1

Does diversity training have an impact on employee's behavior?

To examine the impact of diversity training on employee's behavior, calculations were performed using samples that specifically addressed behavior, an arbitrary decision by the researcher. The overall effect size based on the random effects model is .31. This result reveals a smaller than typical effect size according to Cohen's *d* index. Table 7

presents the results of the individual effect sizes, along with the overall results based on the random effects model.

Table 7.

Effect Size of Impact on Employee's Behavior

Study	Effect Size	Standard Error	Variance	95% CI	
				Lower Limit	Upper Limit
Hanover et al., 1998	0.220	0.202	0.041	-0.175	0.615
Hanover et al., 1998	1.124	0.342	0.117	0.454	1.795
Roberson et al., 2001	0.283	0.207	0.043	-0.123	0.689
Roberson et al., 2001	0.539	0.213	0.045	0.122	0.955
Roberson et al., 2001	0.494	0.211	0.045	0.080	0.909
Ely, 2004	0.080	0.091	0.008	-0.098	0.259
Kalev et al., 2006	0.017	0.010	0.000	-0.003	0.038
Kalev et al., 2006	-0.036	0.010	0.000	-0.056	-0.017
Kalev et al., 2006	-0.021	0.012	0.000	-0.044	0.002
Kalev et al., 2006	-0.001	0.012	0.000	-0.024	0.023
Rynes et al., 1995	0.606	0.075	0.006	0.460	0.753
Rynes et al., 1995	0.539	0.074	0.005	0.393	0.684
Rynes et al., 1995	0.516	0.074	0.005	0.372	0.661
Rynes et al., 1995	0.847	0.078	0.006	0.695	0.999
Rynes et al., 1995	0.020	0.072	0.005	-0.120	0.160
Rynes et al., 1995	0.980	0.080	0.006	0.824	1.136
Sanchez et al., 2004	1.855	0.247	0.061	1.371	2.339
Overall Random Effect	**0.347**	**0.042**	**0.002**	**0.264**	**0.430**

Research Question #2

Does an employee gain a better understanding of cultural differences?

To examine if an employee gains a better understanding of cultural differences due to diversity training, calculations were performed using samples that specifically addressed a change in attitude based on the understanding of cultural differences, an arbitrary decision by the researcher. The overall effect size based on the random effects

model is .29. This result reveals a smaller than typical effect size according to Cohen's *d* index. Table 8 presents the results of the individual effect sizes, along with the overall results based on the random effects model.

Table 8.

Effect Size of Attitude Change Based on Understanding of Cultural Differences

Study	Effect Size	Standard Error	Variance	95% CI	
				Lower Limit	Upper Limit
Hanover et al., 1998	0.350	0.203	0.041	-0.047	0.747
Hanover et al., 1998	0.822	0.322	0.104	0.190	1.453
Holladay et al., 2005	-0.221	0.091	0.008	-0.400	-0.043
Holladay et al., 2005	0.181	0.091	0.008	0.003	0.359
Holladay et al., 2005	0.221	0.091	0.008	0.043	0.400
Holladay et al., 2005	0.242	0.091	0.008	0.063	0.420
Holladay et al., 2005	0.262	0.091	0.008	0.084	0.441
Roberson et al., 2001	0.345	0.208	0.043	-0.063	0.753
Holladay et al., 2003	0.699	0.169	0.029	0.368	1.031
Holladay et al., 2003	0.494	0.164	0.027	0.172	0.817
Holladay et al., 2003	0.408	0.163	0.027	0.089	0.728
Overall Random Effect	**0.294**	**0.078**	**0.006**	**0.141**	**0.447**

Research Question #3

Does diversity training result in the desired return on investment?

Oftentimes, when return on investment is of concern, a monetary value is placed on training. For the purpose of this study, the researcher examined if diversity training resulted in the desired return on investment by looking at the overall impact of diversity training in organizations. Therefore, the desired return on investment for this study is a result of a change in behavior and/or attitude.

Based on the results of the meta-analysis calculations, the overall effect size based on the random effects model is 0.32. In reference to the impact of diversity training on

behavior, the overall effect size based on the random effects model is .31. In reference to the impact of diversity training on attitude, the overall effect size based on the random effects model is .29.These results reveal a smaller than typical effect size according to Cohen's *d* index. This means that diversity training does have an impact on behaviors and attitudes in organizations but the impact is small. The 95 percent confidence intervals around these effect sizes do not include zero, which supports the conclusion that diversity training examined through this meta-analysis significantly has an impact in organizations ($p < .05$). Table 9 presents the overall results mentioned in this section.

Table 9.

Effect Sizes of Desired Return on Investment

Random Effect	Effect Size	Standard Error	Variance	95% CI	
				Lower Limit	Upper Limit
Behavior	0.347	0.042	0.002	0.264	0.430
Attitude	0.294	0.078	0.006	0.141	0.447
Overall	0.324	0.035	0.001	0.255	0.393

Research Question #4

What methodological and research features of the study are related to the outcomes of the study?

To investigate whether the outcomes of the studies differ on whether the studies were conducted using an experimental design or a non-experimental design, a chi-square statistic was used. Table 10 shows the chi-square results and indicates that the outcomes, a change in attitude or behavior, are not significantly different on whether they are of an experimental design or a non-experimental design ($\chi^2 = .020$, $df = 1$, $N = 28$, $p = .887$). However, two cells had expected a count of less than five, which violates an assumption

for using the chi-square statistics. Therefore, the researcher reports the results of the Fisher's Exact Test, $p = 1.000$, which also reports a non-significant difference between the outcomes and the study design. Phi, which indicates the strength of the association between outcome and study design, is .027 and, thus, the effect size is considered to be very small according to Cohen's *d* index.

Table 10

Chi-square Analysis of Study Design among Outcome

Variable	N	Outcome		χ^2	*p*
		Attitude	Behavior		
Study Design				.020	.887
Experimental	5	2	3		
Non-experimental	23	10	13		
Totals	28	12	16		

Conclusion

The results of the meta-analysis on the impact of diversity training in organizations were presented in this section. Of the 166 articles reviewed at the second-level screening, only eight studies met the criteria for inclusion. This resulted in 28 outcomes that included the necessary statistics for computing an estimated effect size. In addition to an overall effect size estimate, a test for homogeneity of effect sizes was explored, along with a test for publication bias. Calculations were performed to answer the specific research questions of this study and the results were presented in this section.

Chapter Five: Discussion

Introduction

The results of the meta-analysis of the impact of diversity training in organizations, presented in Chapter Four, are summarized in this section. A discussion of the implications, along with the limitations is also presented. Conclusions are explored and recommendations for future research on the topic are set forth.

Summary

The purpose of this study was to gather, summarize, and integrate past research examining the effectiveness of diversity training in organizations. This study identified 166 studies with only eight meeting the inclusion criteria. Of the eight studies included, seven reported multiple outcomes, which resulted in 28 effect size calculations. Based on the overall effect size of .32 for the random effects model and given that this is significantly different from zero, diversity training does have an impact on a change in attitude and behavior in organizations, but the impact is small. The homogeneity analysis demonstrated a variation among effect sizes reported by the 28 samples in the meta-analysis. A funnel plot was used to test for publication bias and revealed its presence. This was supported by the Fail Safe N analysis. The Trim and Fill analysis suggest that thirteen additional studies are needed to make the funnel plot symmetric and the Fail Safe N calculation suggested over 12 times as many studies are missing from this meta-analysis.

Implications of Results

In relation to the specific research questions addressed in this study, the results of this meta-analysis indicate that diversity training has an effect on changing attitudes and behaviors in organizations. The results support Banks' (1995) work, which suggest that prejudice reduction through the development of favorable attitudes and behaviors represents an important step toward inclusion and improves the racial climate. This study suggests that participation in diversity training leads to more favorable attitudes toward diversity among participants but it does not provide clarity on how or why this effect takes place. However, attitude and behavioral changes produced by diversity training are susceptible to impermanence if the environment and culture of the organization do not endorse and facilitate its longevity.

In reference to a return on investment, it is profitable for employers to provide employees with a wealth of knowledge about the cultural, psychological, social and cognitive dynamics that underlie differences among human beings. This type of information will enhance their abilities to adopt positive attitudes and behaviors toward diversity within organizations. This supports the work of Sims and Sims (1993), which suggest that diversity training helps employees understand how to work with different cultures and dynamics of culture that affects performance. It also suggests that attitudes and behaviors toward diversity are enduring, and any attempt to influence them demands a persuasive approach that embraces the individual and also the organization's culture.

While the results of this meta-analysis indicate an impact of diversity training on attitude and/or behavior, the effect sizes should be viewed with caution. The chance that multiple constructs are being synthesized is high and little can be concluded about the

results. To compound this, none of these studies reported the reliability of scores. If the scores from these studies are inconsistent or unreliable, they may not accurately represent the true scores. As a result, effect size estimates may be inaccurate.

Limitations

Although efforts were made to make this meta-analysis as comprehensive as possible, there are a number of limitations. First, due to the small sample size of studies; the generalizability of the results is a concern. The limited amount of studies in this meta-analysis supports the notion put forth by Carnevale and Stone (1994), which suggest that organizations are neglecting to measure how diversity training influences behavior. Second, the heterogeneity of the effect size distribution cannot be adequately explained. There are other variables that should be examined, such as the age of participants, previous experience with diversity training, length of training, level of evaluation of training, and/or year of publication. The detailed information regarding those variables is not always reported in these studies.

Also, studying the impact of sampling methods, statistical techniques used to analyze the data, and the quality of studies on treatment effects were beyond the scope of this study. Finally, many researchers did not provide clarification and explanation regarding the objectives, the teaching strategies, the content and detailed description of the intervention, and/or the evaluation methods used. This makes it very hard to judge the overall quality of the intervention.

Recommendations for Future Research

As organizations move beyond attempts to change attitudes and values to providing alternative behavioral patterns for employees, higher levels of training evaluation is suggested. There is a need for more rigorous evaluations of diversity training effectiveness (Ivancevich & Gilbert, 2000; Ryan & Rosen, 1995). The impact of diversity training should be evaluated rigorously by using Kirkpatrick's (1994) model for evaluation. The Kirkpatrick four-level approach suggested consist of evaluating diversity training at the following levels: trainee reaction (Level One), newly learned attitudes (Level Two), changed behavior (Level Three), or improved organizational climate and/or performance (Level Four).

Further exploration of moderator variables may prove beneficial for future research. This would result in determining factors associated with variations in effect size estimates. The meta-analysis should be reproduced using averaged effect size estimates for studies with multiple measures to determine whether the treatment of the results as independent samples was justified.

Finally, a narrative synthesis which includes the multitude of qualitative studies is recommended. The danger of heterogeneity still exists, and may go undetected without a statistical means of assessing it. However, a narrative synthesis could summarize the underlying constructs in the studies which may help define and direct diversity training, making the results of future meta-analyses more representative.

Conclusion

The results of this meta-analysis on diversity training in organizations indicate that there is a small effect on attitude and/or behavior. The presence of unexplained heterogeneity indicates that some unknown systematic population or study characteristic may be affecting the variance. Qualitative research on diversity training is well represented in the literature. The lack of quantitative studies on diversity training continues to be prevalent. It is not suggested that researchers abandon qualitative research but that they increase the amount of quantitative research studies in order to strike a more equal balance.

More clearly defined and directed quantitative studies may uncover the cause of heterogeneity of studies and, as a result, could yield new theories and classifications of the components of what constitutes good, quality diversity training. Researchers also need to seek a common ground when it comes to conducting research on diversity training, collaborating to develop a system of measurements which will provide reliable scores and generalizable results.

This study indicates that leaders in organizations understand that diversity training is a key component to support a diversity initiative. All employees must become culturally aware and learn how to interact in a diverse workplace. Through diversity training an organization can establish a common ground where employees understand each other and strive to eliminate barriers that impede productivity. Though this research has made an attempt at understanding the impact of diversity training, a systematic evaluation of diversity training is still lacking. This evaluation needs to consider not only the reactions of participants but also the learning outcomes of the training sessions should be assessed.

This study suggests that there is a value to implementing diversity training in organizations. People who attend such trainings are exposed to the differences that exist within cultures and see the value inherent in all individuals. As a result, they may be less inclined to seek out and rely on stereotypes pertaining to race. Diversity training also could decrease an individual's tendency to use discrimination in human resources practices, such as recruitment techniques, selection and the hiring process.

There are many topics that spark controversy in an organization and diversity training is one of them because it takes people out of their comfort zone. Diversity programs are essentially about changing behavior in order to improve the culture of an organization. Diversity training, specifically, deals with improving relationships in the workplace and changing the culture of an organization into one that embraces diversity. Organizations must address issues like racism, discrimination and prejudice if it is to move forward in today's society. Diversity training is an initiative that can address those issues and create an environment of equal opportunity.

In conclusion, it is possible to influence individuals' attitudes and behaviors toward human differences using diversity training. Diversity training heightens members' sensitivity to the manifestation of cultural differences so that they can be empowered to function in a manner that would benefit the organization. The findings in this study provide evidence to stakeholders for the continued use of diversity training as a valuable management tool. Diversity training will help organizations value the uniqueness of its employees and aid in releasing the full potential of each and every member. As the global workforce continues to become increasingly diverse and competitive, the ability to

effectively manage a diverse workforce will become more crucial to an organization's strategic initiative.

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Note: References marked with an asterisk indicate studies included in the meta-analysis.

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Appendix

Instructions for Coding Abstracts

For each abstract in your EndNote library, enter a code in the first line of the Notes field to indicate Inclusion or Exclusion. For included studies, write a second code to indicate the type of dependent variable (outcome) addressed in the study. For example: **Notes:** I3, D4

Table 1. Codes for Research Designs of Included Studies

Code	Description
I1	Quantitative Experiment: two or more comparison groups with random assignment to groups
I2	Quantitative Quasi-Experiment: two or more comparison groups without random assignment to groups
I3	Quantitative Non-Experimental: correlational, regression, pre-post test, descriptive, etc.
I4	Qualitative Only: primarily qualitative data such as in case studies, interviews
I5	Mixed Methods
I6	Other/Don't Know

Note- for mixed quantitative/qualitative designs, code only the quantitative design part.

Table 2. Codes for Dependent Variables (Outcomes) in Included Studies

Code	Description
D1	Employee/Participant Data: Attitudes
D2	Employee/Participant Data: Perceptions
D3	Employee/Participant Data: Behaviors
D4	Employee/Participant Data: Practices
D5	Other/Don't Know

Table 3. Codes for Excluding Studies

Code	Description
E1	Not an Empirical Study: e.g., guidelines, manual, advocacy, essay, no data... (do not exclude case studies or articles with qualitative data)
E2	Does not involve businesses/organizations
E3	Foreign: Not conducted in U.S.
E4	Study was not published or reported in or after 1991
E5	Study is not quantitative inquiry
E6	Quantitative study does not include some type of assessment of employee/participant outcomes as a result of training
E7	Study does not have adequate data to calculate effect sizes (means, standard deviations)
E8	Don't know; not sure whether to include or exclude

Article Coding Sheet

For direct quotes, use quotation marks and cite page umbers.
For ERIC documents, cite the ERIC page number, not the original page number.

INITIAL CODER name and date:

FINAL CODER name and date:

1. STUDY SUMMARY *(cite page numbers where appropriate)*

1.01 Author(s):

1.02 Year:

1.03 Title (*or first several words*):

1.04 Source: ☐ Dissertation ☐ Conference presentation ☐ Technical report

☐ Book or book chapter ☐ Journal Journal Name:

1.05 Are there multiple reports related to this study that have been screened for the synthesis? ☐ Yes ☐ No

If yes, name the author(s) and year(s) of the reports:

1.06 Additional studies *(reference chasing; cite page no.)*:

1.07 Purpose of study:

1.08 ☐ **EXCLUDE STUDY - SCREENING LEVEL**	
a) ☐ Lacks empirical data	e) ☐ No assessment/documentation of employee/participant outcomes
b) ☐ Reported before 1991	f) ☐ Does not address research questions
c) ☐ Doesn't involve businesses/organizations	g) ☐ Does not have adequate data to calculate effect size
d) ☐ Not conducted in U.S. or its territories	h) ☐ Study is not quantitative inquiry

1.09 ☐ **EXCLUDE STUDY - CODING LEVEL**	
a) ☐ Quantitative study lacking criteria for rigor	d) ☐ Summary of other included reports
b) ☐ Mixed methodology study lacking criteria for rigor	
c) ☐ Alternate version of the same report	

For 1.09a, b, and c, complete the following:

1.09a, b, and c **Quantitative study lacking the following criteria for rigor** (*check those that the study does **not** include*)

- ☐ The study describes instrument development, such as where the items were obtained or, if items were developed, there was a pilot test of the items and their validity or an expert check.
- ☐ For results based on a survey, the response rate was reported or could be obtained.
- ☐ The study sufficiently describes the processes used for data collection and analysis, including sample size.
- ☐ The study includes sufficient evidence of the results such as tables of means or frequencies and descriptive statistics, as opposed to summarizing findings without details.

NOTE: If two or more items are checked, no need to continue coding excluded studies.

2. METHODOLOGY *(cite page numbers where appropriate)*

2.01 Type of research and method *(check only one and describe the method or design if applicable, e.g., pretest-posttest survey design, qualitative case study design with interviews and document review)*:

- ☐ Research review (meta-analysis or narrative):
- ☐ Quantitative experimental (random assignment):
- ☐ Quantitative quasi-experimental (non-random assignment but with 2 or more conditions or levels of treatment:
- ☐ Quantitative non-experimental (descriptive survey, correlational, regression, etc.):
- ☐ Qualitative:
- ☐ Mixed methods:

2.02 Study Type: ☐ Research study ☐ Evaluation study ☐ Not indicated

2.02a If an evaluation, was the evaluator external to the program? ☐ Yes ☐ No ☐ Not indicated

2.03 Longitudinal study? ☐ Yes ☐ No

2.03a If yes, duration of study:

2.03b If yes, number and frequency of measurements:

2.04 Other characteristics of methodology, including factors that influence research quality:

3. **MEASUREMENT VALIDITY** *(cite page numbers where appropriate)*

3.01 Was research validity measured? ☐ Yes ☐ No If yes, provide the type.

4. **MEASUREMENT RELIABILITY** *(cite page numbers where appropriate)*

4.01 Was measurement reliability measured? ☐ Yes ☐ No If yes, provide the type.

5. **STUDY POPULATION/SAMPLE** *(cite page numbers where appropriate)*

5.01 Business/Organization Locale: ☐ Urban ☐ Suburban ☐ Rural ☐ Missing

5.02 Age (mean or min–max):

5.03 Sample size(s) and description:

5.04 Sample selection and/or assignment process:

5.05 Survey response rate(s): ☐ Not applicable

5.06 Other attrition indicators:

6. **INTERVENTION**

6.01 Describe intervention with key words:

6.02 Was intervention fidelity data collected? ☐ Yes ☐ No If yes, how were these data used?

6.03 Duration of intervention

6.04 Was there manipulation of intervention participation? ☐ Yes ☐ No (The intervention was naturally occurring.)

6.05 Calendar start and end dates of intervention participation:

6.06 Duration of subjects' participation (*fill in one*):

Total hours:

Total weeks:

Total days:

☐ Missing

6.07 Describe comparison conditions/groups (what is being compared to treatment?):

7. **OUTCOME(S) AND ANALYSIS**

Outcome(s) studied and how measured:

7.01 Participant Attitude: ☐ Yes ☐ No If yes, identify outcome(s) and how measured:

7.02 Participant Perception: ☐ Yes ☐ No If yes, identify outcome(s) and how measured:

7.03 Participant Behavior: ☐ Yes ☐ No If yes, identify outcome(s) and how measured:

7.04 Organizational Practices: ☐ Yes ☐ No If yes, identify outcome(s) and how measured:

7.05 What analytic methods are used to measure the link between the intervention and the outcome(s)?

☐ in-depth description (qualitative) ☐ counts/frequencies (qualitative)

☐ counts/frequencies (quantitative) ☐ descriptive statistics (quantitative)

☐ simple correlations ☐ inferential statistical comparisons

☐ multiple regression

☐ Other *(describe)*

8. **RESULTS** *(cite page numbers where appropriate)*

8.01 Was an effect size reported? ☐ Yes, on page(s): ☐ No

8.02 Was there adequate data to calculate effect size? ☐ Yes, on page(s): ☐ No

8.03 Could this study be used for a meta-analysis? ☐ Yes, see data on page(s): ☐ No

8.04 Summary description of relevant findings *(Describe the results — both positive and negative — that pertain to the influence of the intervention on attitudes, behaviors, or achievement of high school students, their parents, teachers, or administrators:*

Other important results:

8.05 Implications for education policies and practices (*Distinguish between those that the author describes and those that can be validly inferred from the results*):

8.06 Implications for research (*Identify issues that need further research. Distinguish between those that the author describes and those that can be validly inferred from the results*):

Search Terms Results

ERIC – Search Terms 1991-2006

Primary Search Terms	Secondary Search Terms	Number of Citations
Diversity Initiative	Organization	12
Diversity Initiative	Workplace	8
Diversity Initiative	Business and Industry	1
Diversity Initiative	Corporation	3
Diversity Initiative	Work Environment	14
Diversity Initiative	Multinational Corporation	0
Diversity Initiative	Corporate America	0

Primary Search Terms	Secondary Search Terms	Number of Citations
Diversity Training	Organization	85
Diversity Training	Workplace	112
Diversity Training	Business and Industry	26
Diversity Training	Corporation	10
Diversity Training	Work Environment	105
Diversity Training	Multinational Corporation	1
Diversity Training	Corporate America	1

Primary Search Terms	Secondary Search Terms	Number of Citations
Diversity Program	Organization	132
Diversity Program	Workplace	95
Diversity Program	Business and Industry	19
Diversity Program	Corporation	19
Diversity Program	Work Environment	75
Diversity Program	Multinational Corporation	1
Diversity Program	Corporate America	1

Business and Management Practices – Search Terms 1991-2006

Primary Search Terms	Secondary Search Terms	Number of Citations
Diversity Initiative	Organization	20
Diversity Initiative	Workplace	11
Diversity Initiative	Business and Industry	7
Diversity Initiative	Corporation	1
Diversity Initiative	Work Environment	1
Diversity Initiative	Multinational Corporation	0
Diversity Initiative	Corporate America	4

Primary Search Terms	Secondary Search Terms	Number of Citations
Diversity Training	Organization	63
Diversity Training	Workplace	86
Diversity Training	Business and Industry	23
Diversity Training	Corporation	6
Diversity Training	Work Environment	21
Diversity Training	Multinational Corporation	0
Diversity Training	Corporate America	41

Primary Search Terms	Secondary Search Terms	Number of Citations
Diversity Program	Organization	34
Diversity Program	Workplace	43
Diversity Program	Business and Industry	18
Diversity Program	Corporation	5
Diversity Program	Work Environment	6
Diversity Program	Multinational Corporation	0
Diversity Program	Corporate America	29

Business Source Premier – Search Terms 1991-2006

Primary Search Terms	Secondary Search Terms	Number of Citations
Diversity Initiative	Organization	224
Diversity Initiative	Workplace	290
Diversity Initiative	Business and Industry	54
Diversity Initiative	Corporation	48
Diversity Initiative	Work Environment	37
Diversity Initiative	Multinational Corporation	6
Diversity Initiative	Corporate America	7

Primary Search Terms	Secondary Search Terms	Number of Citations
Diversity Training	Organization	292
Diversity Training	Workplace	434
Diversity Training	Business and Industry	51
Diversity Training	Corporation	52
Diversity Training	Work Environment	87
Diversity Training	Multinational Corporation	6
Diversity Training	Corporate America	9

Primary Search Terms	Secondary Search Terms	Number of Citations
Diversity Program	Organization	820
Diversity Program	Workplace	1246 (could only get 1200)
Diversity Program	Business and Industry	176
Diversity Program	Corporation	181
Diversity Program	Work Environment	213
Diversity Program	Multinational Corporation	13
Diversity Program	Corporate America	28

Business/Industry – Search Terms 1991-2006

Primary Search Terms	Secondary Search Terms	Number of Citations
Diversity Initiative	Organization	1
Diversity Initiative	Workplace	1
Diversity Initiative	Business and Industry	2
Diversity Initiative	Corporation	0
Diversity Initiative	Work Environment	0
Diversity Initiative	Multinational Corporation	0
Diversity Initiative	Corporate America	6

Primary Search Terms	Secondary Search Terms	Number of Citations
Diversity Training	Organization	0
Diversity Training	Workplace	4
Diversity Training	Business and Industry	3
Diversity Training	Corporation	0
Diversity Training	Work Environment	0
Diversity Training	Multinational Corporation	0
Diversity Training	Corporate America	12

Primary Search Terms	Secondary Search Terms	Number of Citations
Diversity Program	Organization	3
Diversity Program	Workplace	4
Diversity Program	Business and Industry	7
Diversity Program	Corporation	2
Diversity Program	Work Environment	1
Diversity Program	Multinational Corporation	0
Diversity Program	Corporate America	32

Reference List of Studies Excluded from Meta-Analysis

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Using needs assessment to resolve controversies in diversity training design.

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Is diversity training necessary? (1993). *Training & Development, 47*(11), 21.

Dancing around diversity. (1994). *Training & Development, 48*(11), 7.

Idea box. (1994). *Supervisory Management, 39*(8), 16.

In practice. (1994). *Training & Development, 48*(6), 9.

Is diversity training necessary? (1994). *Training & Development, 48*(2), 26.

Is diversity training worth maintaining? (1994). *Business & Society Review (00453609)*(89), 47.

Trends. [and] looking past the numbers. (1994). *Training, 31*(10), 59-60,62,64,67-72,74.

U.S. companies offer diversity training. (1994). *HRMagazine, 39*(1), 10.

Affirmative action does make a difference. (1995). *Executive Female (0199-2880), 18*(6), 18.

Corporations make some change. (1995). *Personnel Journal, 74*(7), 22.

Skill levels inadequate, survey reveals. (1995). *Managing Office Technology, 40*(10), 44.

Training across cultures. (1995). *Industrial & Commercial Training, 27*(10), 3-4.

Are training games a waste of time? (1996). *Training & Development, 50*(1), 26.

Diversity programs take priority, but may still muddle through. (1996). *Managing Office Technology, 41*(6), 26.

FaxForum: November's question: What would you change at work? (1996). *Training & Development, 50*(2), 18.

July's question: Heard any good jokes lately? (1996). *Training & Development, 50*(10), 16.

Key steps in implementing companywide diversity training. (1996). *Training & Development, 50*(3), 59.

Nordstrom diversity program delivers. (1996). *Minority Markets Alert, 8*(11), 8.

'Work/Life' programs on the rise, survey finds. (1996). *National Underwriter Property & Casualty no., 34*, 9+.

Ameritech corp. Chicago. (1997). *Black Enterprise, 27*(7), 132.

Diversity: Less than meets the eye. (1997). *Getting Results...For the Hands-on Manager: Plant Edition, 42*(6), 8.

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The diversity initiative at US WEST Dex. (Cover story). (1998). *Successful Meetings, 47*(3), 55.

Diversity: A principle of human resource management. (1998). *Public Personnel Management, 27*(2), 175-185.

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What you thought. (1998). *Workforce, 77*(6), 23.

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Survey says. (2000). *Training & Development, 54*(12), 17.

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New data show diversity programs aid recruitment, retention, and more. (2001). *Compensation & Benefits for Law Offices, 1*(8), 7.

Strategic planning: 10-step plan to build a stronger diversity training program. (2001). *Managing Training & Development, 1*(11), 5.

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Leadership development partnerships at Dow Corning Corporation. (2002). *Journal of Organizational Excellence, 22*(1), 13.

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Urbanus employees take diversity training cruise. (2004). *Furniture/Today, 28*(33), 54-54.

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When it's aimed at business goals, "integration" gets a new meaning. (2005). *Training, 42*(5), 24.

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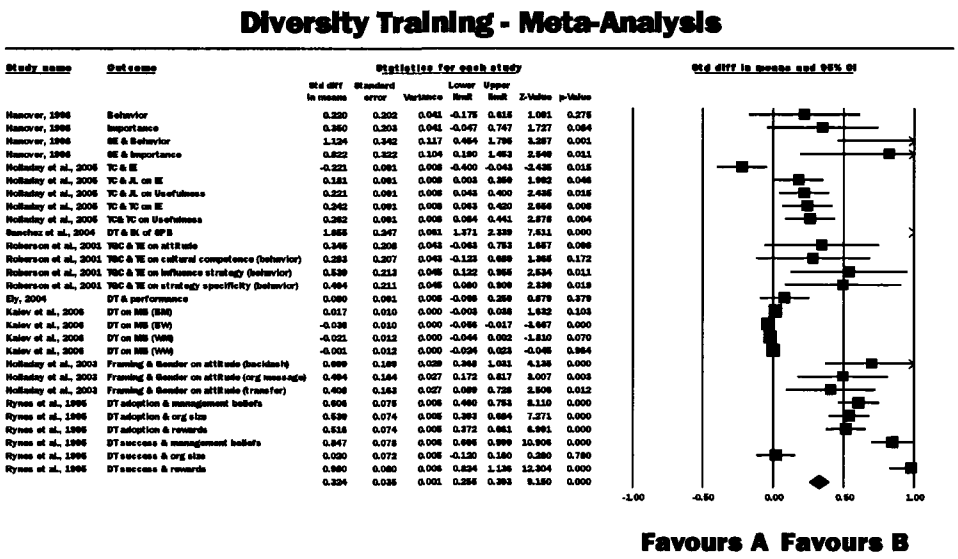
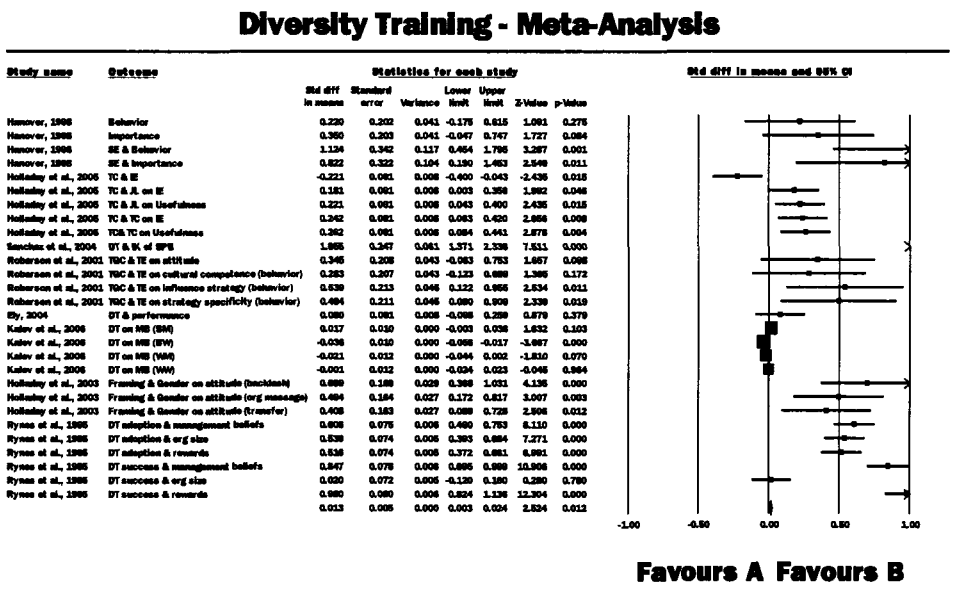
Figures of Effect Size Estimates

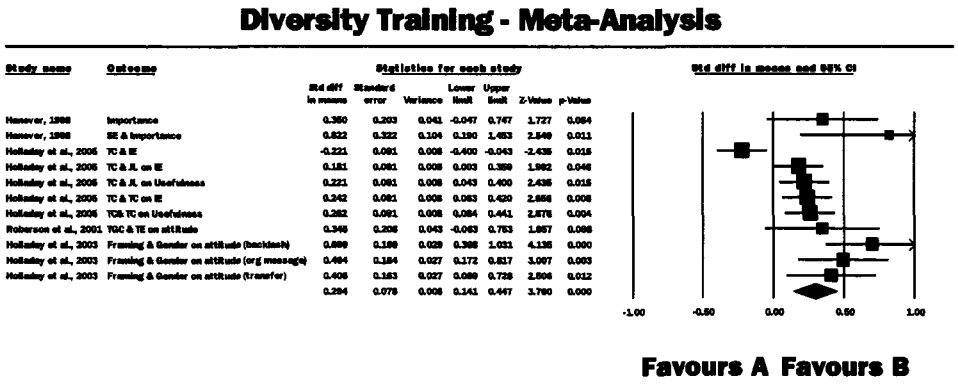
Overall Effect Sizes – Random Effects Model



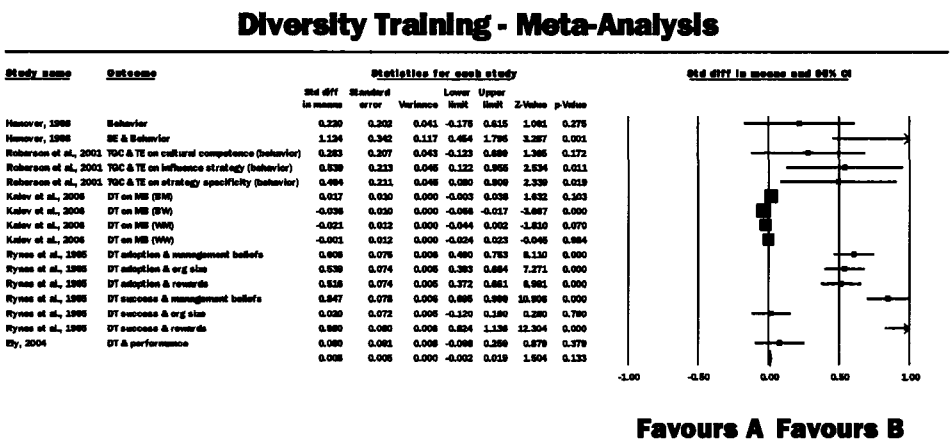
Overall Effect Sizes – Fixed Effects Model



Effect Size - Attitude



Effect Size - Behavior



Research Meta-analysis Timeline

This table provided a projected timeline for this research meta-analysis.

Proposed Project Timeline

	Project Tasks	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.	Begin to implement plan submitted to and approved by committee	→											
2.	Refine and focus topic	→	→										
3.	Define search terms in topic		→										
4.	Conduct preliminary literature searches		→	→									
5.	Conduct formal literature searches and level 1 screening		→	→									
6.	Code abstracts			→	→								
7.	Assess reliability of level 1 screening			→	→								
8.	Conduct additional searches and reference chasing				→	→							
9.	Write synthesis development plan					→							
10.	Revise and finalize meta-analysis development plan					→							
11.	Read and code articles for included studies					→	→						
12.	Assess reliability of level 2 screening (coding)					→	→						
13.	Summarize design and characteristics of included studies						→	→					
14.	Develop organization of report						→	→	→				
15.	Conduct meta-analyses						→	→	→				
16.	Write draft of report						→	→	→				
17.	Conduct a review of draft report							→	→				
18.	Revise and finalize report									→			