A Dissertation

entitled

The Influence of Diversity Experiences on Undergraduate Students’ Universal Diverse Orientation (UDO)

by

Linda A. Toscano

Submitted to the Graduate Faculty as partial fulfillment of the requirements for the Doctor of Philosophy Degree in Higher Education

__________________________________________
Ronald Opp, Ph.D., Committee Chair

__________________________________________
Debra Gentry, Ph.D., Committee Member

__________________________________________
Penny Poplin Gosetti, Ph.D., Committee Member

__________________________________________
Shanda Gore, Ph.D., Committee Member

__________________________________________
Patricia Komuniecki Dean
College of Graduate Studies

The University of Toledo

December 2012
An estimated one million acts of racially or ethnically motivated violence take place on university and college campuses each year. In response, higher education institutions have implemented various types of diversity programs. However, there exists little research on the success of such programs or whether these programs actually reduce prejudice. This study used the less-researched concept of non-prejudice to determine which student characteristics, institutional characteristics, previous diversity experiences, and perception of campus climate variables influence students’ Universal Diverse Orientation (UDO) as measured by the Miville-Guzman Universality Diversity Scale-Short form (M-GUDS-S). Participants were 522 undergraduate students from 21 U.S. colleges and universities who participated in a National Coalition Building Institute (NCBI) workshop and answered a 47-item survey. The research incorporated three theoretical models, including Astin’s Input-Environment-Output model, which was used as a framework to address the research questions. A blocked stepwise regression analysis found 10 significant positive predictors of UDO and that student involvement in diversity experiences has a positive association with their appreciation and value of the similarities
and differences in others. By identifying characteristics that contribute to a higher total UDO, especially within-institution predictor variables, this research hopes to improve students’ educational experiences and to assist colleges and universities in implementing programs and supportive services to enhance students’ multicultural educational experiences so as to prepare them to be more productive members of the global community. The researcher, a former University of Wyoming (UW) administrator, was motivated by campus events following the hate crime against UW student, Matthew Shepard, in December, 1998.
It has been a long road to the completion of this doctoral journey. This dissertation represents not only my research; it is a milestone that would not have been possible without the support of a number of remarkable people who have helped me along the way. I am thankful for my friends who have been there “mile-by-mile” offering encouragement. Thank you to Laurie, Les, and Gay, my “stick-em-up” friends for help packaging 2000 surveys, Lois for your friendship, Wilma for the e-mails, Char for inspiration; and Lorrie for calling me Dr. early in the process. I am also thankful to my dissertation support group for help in over-coming setbacks.

None of this would have been possible without the patience and love of my family. I would like to acknowledge my siblings (Jeanne, Marilyn and John M.); my aunts (Phyllis and Marie); John B; and my sunshine (Meghan)—thank you for believing in me. I have to give special mention to Eldonna Shields-Kyle, my roommate, friend, and member of my extended family for providing support and “emergency roadside-assistance” that made writing possible.

And finally to my parents: to whom this dissertation is dedicated. You forged a path for me through your love and example. Dr. John Toscano (Dad)—you made me promise to finish this degree—I wish you were here. Margaret Toscano (Mom)—thank-you for reading us The Sneetches—I love you.
Acknowledgements

I am sincerely grateful to my Committee for their guidance and assistance, it has changed my life. First, I wish to thank my advisor and Chairperson, Dr. Ron Opp, for his direction in the framework and methodology of this study and, especially for backing and persevering with me throughout this process. My deepest appreciation also to Dr. Penny Poplin Gosetti, for “re-connecting” me to the higher education program, for her unique ability to “connect the dots” and ensure a better finished product; Dr. Shanda Gore, for her perspective, attention to details, and insights for completion; and Dr. Debra Gentry for bringing “fresh eyes” and experience with UDO to this dissertation.

I am also thankful to some noteworthy resource people for this research study: Dr. Lori Idetta,. Mahalo nui loa—for your passionate interest in my research and assistance in ‘opening gates’ with NCBI; Drs. Miville and Pascarella, I am indebted for the use of your research instruments and have the utmost respect for your research; and The Matthew Shepard Foundation for help. Brent Chartier, I owe earnest thankfulness for editorial expertise and “zombie determination”—to the finish line.

I would like to acknowledge Drs. Benjamin, Gray, Griffith, and Komuniecki, and Ruthann Easterwood at the University of Toledo for academic support; Dr. Roy Church at Lorain County Community College and Dr. Marcia Bordner and Kathleen McCabe at Terra State Community College for the Presidential Fellowship opportunities.
# Table of Contents

Abstract iii

Acknowledgements vi

Table of Contents vii

List of Tables xii

List of Figures xiii

I. Introduction 1

A. Background 3

B. Statement of the Problem 5

C. Theoretical Framework 6

D. Purpose of the Study 8

E. Research Questions 9

F. Methodological Approach 9

G. Significance of the Study 11

H. Delimitations of the Study 12

I. Limitations of the Study 13

J. Definition of Terms 14

K. Summary of Introduction 19
II. Literature Review

A. Historical Foundation

   a. Summary of Prejudice Theories
   b. Summary of Stereotype Theories
   c. Contact Hypothesis

B. Theoretical Constructs

   a. Multicultural Campus Strategies
      1. Models
      2. Programs
      3. Methods
   b. Non-prejudice

C. Models to Test Theory

   a. Miville – Universal Diverse Orientation
   b. Pascarella – Diversity Experiences
   c. Astin – Input-Environment-Outcome
      1. Input characteristics
      2. Environmental characteristics

D. Summary of Literature Review

III. Methodology

A. Research Questions
d. Perception of Institutional Climate 104

C. Dependent variable 105

D. Statistical Process 106

    a. Data Preparation 106
    b. Testing Assumptions 106
    c. Regression Analysis 107

E. Findings 109

F. Research Questions Results 112

    a. Preliminary Questions 112
    b. Research Question One 113
    c. Research Question Two 113
    d. Research Question Three 114
    e. Research Question Four 115

G. Summary of Results 115

V. Discussions, Conclusions, and Recommendations 117

    A. Synopsis 117

    B. Discussion of the Findings 121

        a. Input variables 122

            1. Research Question One 124

        b. Between-institution variables 127
1. Research Question Two
   c. Within-institution variables

1. Research Question Three

2. Research Question Four

C. Implications for Theory and Practice
   a. Implications for Theory
   b. Policy Implications

D. Recommendations
   a. Further Research with UDO
   b. Improving the Database/Survey
   c. Additional Data Analysis

E. Contributions to the Literature

F. Final Summary

References

Appendices
A. Survey

B. List of NCBI Campus Affiliates

C. Human Subjects Review Board Approval
List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>Models to Reduce Bias</td>
<td>35</td>
</tr>
<tr>
<td>Table 2</td>
<td>Effect of Diversity Experiences on Critical Thinking</td>
<td>56</td>
</tr>
<tr>
<td>Table 3</td>
<td>Survey Questions by Topic and Source</td>
<td>88</td>
</tr>
<tr>
<td>Table 4</td>
<td>Institutional Population and Sample by size, level, control, and geographic region</td>
<td>97</td>
</tr>
<tr>
<td>Table 5</td>
<td>Sample Population by Institution</td>
<td>99</td>
</tr>
<tr>
<td>Table 6</td>
<td>Preliminary Questions</td>
<td>100</td>
</tr>
<tr>
<td>Table 7</td>
<td>Student Characteristics</td>
<td>101</td>
</tr>
<tr>
<td>Table 8</td>
<td>Distribution and Frequency of Diversity Experiences Questions 3-13</td>
<td>104</td>
</tr>
<tr>
<td>Table 9</td>
<td>Perception of Institutions’ Multicultural Climate</td>
<td>105</td>
</tr>
<tr>
<td>Table 10</td>
<td>Significant Predictor Variables of Universal Diverse Orientation</td>
<td>111</td>
</tr>
</tbody>
</table>
List of Figures

Figure 1. Diagram of Literature Review Design 22
Figure 2. Conceptual Framework in I-E-O format 84
Chapter One

Introduction

Three key events, when joined together, formed the basis of this study. The first event involved Matthew Shepard, a University of Wyoming student, who was “found beaten, tied to a fence post, and left to die on the outskirts of Laramie, Wyoming—a small, virtually crime-free college town, because he was gay” (Baird & Rosenbaum, 1999, p. 9). In this fatal event, the object of hatred was an individual, but Baird and Rosenbaum (1999) have noted that while targets of hate are always individuals, the impact of hate crimes extends far beyond the victim: “Not only targeted individuals but also their families and their communities [and their campus communities] inevitably suffer when individuals are victims of hate” (p. 11). As a former University of Wyoming (UW) administrator and an advisor to Matthew, I was personally and deeply affected by this incident, and as a result, it became one of the primary reasons for undertaking this research study.

Matthew, his family, the Laramie community, and the UW campus community were all profoundly impacted by this tragic incident. In response, UW sponsored a diversity experience developed by the National Coalition Building Institute (NCBI) to promote tolerance on campus. The NCBI model, known as the “Welcoming Diversity/Prejudice Reduction Workshop,” is a one-day workshop that motivates participants to celebrate common experiences and to acknowledge differences. In the workshop, participants are shown how they have been taught to think and act as members of their racial, gender, or other identity groups, and participants are provided with skills for bridging differences.
The second event underlying the impetus for this study was securing authorization from contacts at the NCBI to survey students at NCBI Campus Affiliate colleges and universities. An NCBI Campus Affiliate includes students, faculty, and administrators who have been trained by NCBI to provide a proactive response to discrimination and inter-group conflicts on campus. Since NCBI Campus Affiliates are active at approximately 52 colleges and universities in the United States, this authorization provided the means to collect data from students at a variety of campuses for this research study.

The third key event occurred while reviewing the literature on prejudice and intolerance, concurrent with literature on a continuum for change model. The majority of the literature focuses on researching situations involving prejudice and a deficit approach, instead of examining situations involving non-prejudice and an abundance approach. According to Phillips and Ziller (1997), “The nature of knowledge is not independent of the method or approach to the knowledge domain. For example, knowledge about the self will vary according to the question (‘Who are you?’ vs. ‘Who are you not?’).” In reviewing these studies, the insight consisted of reversing the way we typically examine the negatively-oriented issues of discrimination and to study the positive perspective of social tolerance instead of prejudice. Previous research studies by Phillips and Ziller (1997), Miville (1999), Pascarella, Edison, Nora, Hagedorn, and Terenzini (1996), and Astin (1993a) were pivotal in creating an intellectual context for this insight to occur and for developing a research approach.
Background

The violent crime committed against UW student Matthew Shepard brought national attention to the issue of hate crimes and sparked both dialogue and debate about the causes of such crimes. Perhaps one of the most important outcomes of this tragedy was that it brought awareness to the alarming number of hate crimes that have occurred proximate to or on college campuses in America.

Researchers, including Erlich (1992) and Pascarella et al. (1996), have documented the growing concern of violence to students, faculty, and administrators in higher education, noting that, “Investigations indicate that nearly 1 million U.S. college students experience racially or ethnically motivated violence annually and that most victims do not report these incidents to any campus official” (p. 54). The hate crime against Matthew Shepard made public that incidents of hate, intolerance, and prejudice are not limited to UW, and that violence is not restricted to race and/or ethnicity.

Acts of intolerance that occur on American college campuses each year may range from relatively minor acts of vandalism to serious episodes of violence. In fact, according to the Southern Poverty Law Center (2005), incidents of hate and intolerance are quite prevalent on college campuses:

Every year more than half a million college students are targets of bias-driven slurs or physical assaults. Every day at least one hate crime occurs on a college campus. Every minute a college student somewhere sees or hears racist, sexist, homophobic, or otherwise biased words or images. . . . No campus advertises its hate crimes or bias incidents . . . but hate happens, and its scars remain for months, sometimes years to come. In the words of one expert, intolerance is “the background noise” of students’ lives. (Willoughby, 2005)

As a result of these incidents, colleges and universities frequently respond to hate crimes through programs aimed at reducing intolerance and prejudice on campus. At
UW, the NCBI model was selected as a response to the hate crime that affected the campus and the larger community. However, limited research has been conducted on the effectiveness of the NCBI model or other diversity experiences designed to reduce prejudice and to promote increased tolerance among members of the campus community. Many campus response efforts and the majority of the research about prejudice have naturally focused on the causes and development of prejudice and intolerance. However, many measures of intolerance and racial prejudice have suffered from psychometric limitations, have been vulnerable to social desirability contamination, and have reflected a negative orientation (Ponterotto, Utsey, & Pederson, 2006).

In *The Nature of Prejudice*, Allport (1954) notes “it is the pathology of bigotry and not the wholesome state of tolerance that, as a rule, interests social scientists. It is not surprising, therefore, that we know less about tolerance than about prejudice” (pp. 425-426). As a result, very few research efforts have explored these issues from an inverse perspective:

Because the activity of science typically begins with a problem, a great deal of research has been directed toward addressing prejudice; attacking the problem “where it exists.” And because science also requires the accumulation of evidence to support a position, failure to investigate where the problem doesn’t exist has resulted in little evidence supporting the position that humans are equally capable of no prejudiced thought. (Phillips & Ziller, 1999, p. 420)

What Phillips and Ziller (1999) and Allport (1954) suggest is that more research needs to be conducted on the non-prejudiced person and the concept of tolerance. So rather than measure the presence and causes of prejudice, a measure of non-prejudice is needed. As a result, explorations of measures of tolerance led to the constructs of the multicultural personality and a universal orientation.
The term *multicultural personality* was first devised by Ramirez (1991) to describe individuals who could successfully negotiate and thrive in multiple cultures simultaneously. Since Ramirez’s early work on the multicultural personality, other researchers have further expanded the construct (see Ponterotto et al., 2006).

Phillips and Ziller (1997) state “investigating the nature of non-prejudice presents the possibility of a new, equally valuable and theoretically distinct, knowledge domain” (p. 420). They propose a theory and measure of the nature of non-prejudice using the following assumption: “Nonprejudice is conceptualized, in part, as a universal orientation in interpersonal relations whereby perceivers selectively attend to, accentuate, and interpret similarities rather than differences between the self and others” (p. 420).

**Statement of the Problem**

The fact that incidents of intolerance and prejudice are prevalent on college campuses is a primary impetus for this research study. The presence of intolerance runs counter to the traditional ideal that our college campuses should provide learning environments free from intolerance and prejudice. Rather, one of the most important goals for college campuses is to provide students with an environment where they can learn to “appreciate and respect similarities and differences” (Miville, 1999). The initial difficulty in assessing campus response efforts is that most research conducted on this topic has focused on measuring intolerance and prejudice (see for example, Hurtado, 1999; Pettigrew & Tropp, 2005) or has focused on evaluating a particular diversity program at a single institution (see for example, Chang, 2000; Gurin, Nagda, & Lopez, 2004; Guthrie, 1996). In response, this research seeks to examine the less researched concept of social tolerance and a range of diversity experiences among students at a
variety of college campuses. Specifically, one important goal of this research is to
determine which student characteristics and institutional characteristics affect students’
scores on a measure of social tolerance, the Universal Diverse Orientation (UDO)
assessment. By determining which characteristics influence UDO, this research hopes to
improve students’ educational experience and assist colleges and universities to
implement programs and/or support services to enhance students’ multicultural
educational experience and to prepare students to be more productive members of the
global community.

**Theoretical Framework**

The research of three notable scholars form the building blocks of this study,
including Miville (1999) and Pascarella et al. (2001), who independently developed the
survey instruments to be used, and Astin (1991), who provides a conceptual model for
framing the data analysis.

Miville’s (1999) multicultural research has extended Phillips and Ziller’s (1997)
work on universal orientation and Ramirez’s (1991) multicultural personality construct.
In the last decade, Miville has published several studies on the process of measuring the
multicultural personality with an instrument called the Miville-Guzman Universality
Diversity Scale (M-GUDS). Miville and colleagues (Miville et al., 1999; Miville,
Rohrbacker, & Kim, 2004) later refined the M-GUDS, and a short-form version was
created, called the Miville-Guzman Universality Diversity Scale-Short form (M-GUDS-
S) (Fuertes, Miville, Mohr, Sedlacek, & Gretchen, 2000). Both M-GUDS and M-GUDS-
S indicate an increased level of multicultural awareness and acceptance. High M-GUDS
and M-GUDS-S scores reflect the presence of three major components of the
multicultural personality: (a) a sense of belonging, (b) diversity of contact, and (c) universality (Fuertes, Miville et al., 2000; Miville et al., 1999). The short-form version (M-GUDS-S) includes a total score and subscales measuring (a) diversity of contact, (b) relativistic appreciation, and (c) comfort with differences. Permission was obtained from Miville to use the M-GUDS-S, but only the total score will be used for the purpose of this research.

The second notable scholar whose work is featured in this research study is Pascarella, who is known for his research exploring the ways in which college influences students’ development. In 2001, Pascarella, Palmer, Moye, and Pierson utilized a survey instrument to assess diversity experiences among college students to determine whether diversity experiences influence the development of critical thinking skills. The purpose of the study was to “estimate the net impacts of a wide range of individual diversity experiences on a standardized measure of critical thinking skills” (p. 259). The study examined the effect of 10 specific diversity experiences at the end of students’ first year at 18 four-year institutions and five community colleges. Students in four-year institutions were tracked through the end of their third year of college to determine which, if any, of the 10 diversity experiences influenced critical thinking for students in different race and gender groupings. Pascarella et al. (2001) found that “diversity experiences may have a generally positive causal influence on the development of students’ critical thinking skills” and that “different experiences also influenced critical thinking at different times in students’ collegiate experiences” (p. 269). Permission was obtained from Pascarella to use the same 10 questions used in his study to explore
diversity experiences and to examine their influence on students’ universal diverse orientation.

The third notable scholar whose work provides a foundation for this study is Astin. Astin’s research has focused on developing the input-environment-outcome (I-E-O) data analysis model. The I-E-O model provides the data analysis framework for this study. In the I-E-O model, outcomes, or student characteristics after exposure to college, are thought to be influenced both by (a) inputs, or student characteristics before and at the time of entry to college, and (b) environments, or various programs, policies, faculty, peers, and educational experiences to which students are exposed while in college (Astin, 1993a). The I-E-O model was designed to “produce information on how outcomes are affected by different educational policies and practices” (p. 37). Using Astin’s I-E-O model to study college student change and development involves studying the impact of one type of activity (e.g., involvement in diversity experiences) on an outcome measure (e.g., a high UDO, score on M-GUDS-S), while accounting for other background and college environment characteristics known to affect the outcome.

**Purpose of the Study**

An extensive literature review has revealed that limited research exists on non-prejudice among college students. There is a need for further investigation of the concepts of the multicultural personality and non-prejudice within higher education. This research study examined the influence of student characteristics, institutional characteristics, previous diversity experiences, and perceptions of campus climate on undergraduate students’ UDO (score on the M-GUDS-S)—with a particular subset of
students across the country who participated in an NCBI “Welcoming Diversity/Prejudice Reduction Workshop.”

Research Questions

Based on the purpose of the study, the following research questions were investigated:

1. What influence, if any, do student characteristics (self-rated UDO, year in college, major area of study, gender, race/ethnicity, age, sexual orientation, spirituality, organized religious activity, [dis]ability status, socio-economic status, political orientation, voluntary/mandatory-attendance at NCBI workshop) have on students’ UDO?

2. What influence, if any, do institutional characteristics (size, level [two-/four-year], type, [public/private], racial/ethnic composition of student body, and geographic location) have on students’ UDO?

3. What influence, if any, does involvement in diversity experiences have on students’ UDO?

4. What influence, if any, do students’ perceived attitudes about the multicultural environment of their campus climate have on students’ UDO?

Methodological Approach

The research methodology employed in this study was quantitative in nature. Information about institutional characteristics was obtained from the National Center for Educational Statistics (NCES). The survey instrument was constructed from four components:
Two questions students’ pre-self-rate UDO.

Twelve questions related to student demographic information.

Twenty-five questions from existing survey instruments, (i.e., 10 questions developed by Pascarella et al., 2001, about diversity experiences) and the M-GUDS-S 15-item short-form version (Fuertes, Miville et al., 2000).

Six questions created based on a review of the literature on the multicultural personality construct and perceptions of the multicultural campus climate.

The participants were comprised of a representative sample of students who participate in an NCBI “Welcoming Diversity/Prejudice Reduction Workshop” at 52 colleges or universities nationwide. The study used as a framework the I-E-O model, focusing on students as inputs (I), the colleges or universities as environments (E), and the scores on the M-GUDS-S as outputs (O). The research procedures for this study were designed to control for input variable effects, and the primary goal was to determine whether any of the college environmental variables or diversity experiences influenced students’ multicultural personality as measured by the M-GUDS-S.

The data collected from the surveys were used to conduct a blocked form of stepwise regression analysis to determine which variables predict students’ UDO on the M-GUDS-S measure (dependent variable). The predictor variables of this study was grouped into five blocks:

- student self-rating of UDO (“preliminary questions”),
- student characteristics,
- institutional characteristics,
- students’ diversity experiences, and
students’ perceived attitudes about the multiculturalism of their respective campus climate.

The writings of many multicultural specialists suggest that multiculturalism expands beyond the dimensions of race and ethnicity. Current definitions of multiculturalism also include differences based on religion, sexual orientation, socioeconomic factors, age, gender, physical (dis)abilities, and even on levels of acculturation and assimilation (Atkinson, Morten, & Sue, 1993; Sue, Ivey, & Pederson, 1996).

**Significance of the Study**

This study is important first because the results may reveal significant theoretical implications by examining a different faction of research on variables that contribute to non-prejudice and multicultural students on college campuses. In researching the effects of attending college, Pascarella and Terenzini (1991) note:

> Indeed, as one looks across the areas of consistent change, it seems clear that colleges, as their founders and supporters might hope, appear to have a generally liberating influence on students’ attitudes and values. Without exception, the nature and direction of the observed changes involve greater breadth, expansion, inclusiveness, complexity and appreciation for the new and different. (p. 326)

Additional studies indicate that education “can succeed in helping us develop sensitivity to and empathy for those from backgrounds and cultures different than our own (Gioseffi, 1993, p. xxix). If the results of these studies are accurate, then this dissertation may further the research on variables that contribute to the development of multicultural students on a variety of college campuses.

Second, this study may be significant because of its potential to add to the body of knowledge on the student and institutional characteristics that influence students’ UDO.
Determining student and institutional characteristics that influence UDO could advance research on college students’ development, creating multicultural college/university environments, and further research utilizing the UDO.

A third significant feature of this research is that it may reveal important policy implications for colleges and universities struggling with how to respond to diversity efforts on their campuses. More specifically, it is anticipated that this research may provide new information on whether involvement in diversity experiences influences students’ multicultural personality. For example, there may be additional policy and practice value for educators, specifically, (a) which of the 10 diversity experiences influence students’ multicultural personality, (b) who benefits from diversity experiences, (c) which institutional characteristics are conducive to students’ multicultural collegiate experience, and (d) whether perceptions about the campus climate influence students’ universal diverse orientation.

**Delimitations of the Study**

This study was restricted in terms of its participants and the environmental variables assessed. Participants are college or university students who participate in an NCBI one-day “Welcoming Diversity/Prejudice Reduction Workshop.” The study is confined to undergraduate college students and their perceptions of select characteristics of their college environment. The separate influences of faculty or peers as environmental variables were not assessed. There is no longitudinal measure.

**Limitations of the Study**

This study was limited in seven specific ways. First, the responses were self-reported and the sensitive nature of the subject may have affected responses. Although
students were asked to respond honestly to each question, their answers might have reflected social desirability or perceived expectations. Second, attitudes toward multiculturalism are complex constructs and are difficult to measure accurately. As a result, the assessment instrument may have only partially measured a universal diverse orientation. Third, as with any survey, potential problems with sampling issues exist—problems that may skew and or limit the interpretation or generalizability of the results. As a survey of convenience, the sampling method was limited to undergraduate students involved in an NCBI workshop; therefore, the distribution was limited in terms of the presupposed conditions and results may have been different than if a true random sample was used. Although the survey was distributed to multiple institutions with a variety of structural characteristics nationwide, the results may not be reflective of all students in every higher educational setting. Fourth, this study did not control for prior diversity experiences, and there was no pretest, per se, administered before the workshops that might account for various levels of pre-existing prejudices. Fifth, results may have been affected due to survey distribution by a variety of workshop facilitators rather than just one. Sixth, the survey itself may have been subject to response bias because it was designed to elicit only closed-ended responses, which does not allow participants the opportunity to provide more in-depth responses. Responses may also have been affected if participants did not respond to all questions, misinterpreted the instructions, and/or if participants’ involvement in the NCBI workshop was mandatory instead of voluntary. Lastly, this study included a blocked stepwise regression analysis. Although this practice is common in higher education, it is considered by some statisticians to “violate the
mathematical logical system on which parametric statistics are based” (Newton & Rudestam, 1999, p. 183).

**Definition of Terms**

**Bias.** “Bias is any act directed against people or property that is motivated by prejudice based on race, religion, ethnicity, disability, sexual orientation, gender, social affiliation, ability or appearance, or other differences” (Southern Poverty Law Center, 1999, p. 4).

**Campus affiliates.** A college or university becomes an NCBI Campus Affiliate by hosting a three-day, train-the-trainer seminar. In this seminar, students, faculty, and administrators learn how to lead the NCBI prejudice-reduction workshop.

**Cognitive-dissonance theory.** Dissonance is caused by holding two contradictory ideas or cognitions simultaneously. The theory of cognitive dissonance (Festinger, 1957) maintains that people have a motivational drive to reduce dissonance by changing their attitudes, beliefs, and behaviors or by justifying or rationalizing their attitudes, beliefs, and behaviors to make them consistent. When an individual’s thoughts, attitudes, and behaviors are consistent with each other, they are in a state of harmony, or consonance.

**Contact hypothesis.** Allport’s (1954) contact hypothesis predicts that intergroup prejudice will diminish or be eliminated when two groups are brought into contact with one another.

**Culture.** Refers to the beliefs, values, traditions, ways of behaving, and language of any social group. For example, a social group may be racially, ethnically, and/or religiously aligned.
**Discrimination.** To discriminate is to make a distinction between people on the basis of class or category without regard to individual merit. Discrimination is an action based on prejudice (Nelson, 2002).

**Diversity.** This term has many interpretations. Recently, the term has been used to encompass a wider range of criteria than strictly racial or ethnic classifications, such as age, gender, religion, philosophy, and political perspective.

**Diversity experiences.** Attempts to foster meaningful and positive interaction, including efforts to promote inter-group accord (Kenworthy, Turner, Hewstone, & Voci, 2005).

**Environment.** The Environment (E) refers to student’s experiences during their college program (i.e., within- and between-institution environmental variables [Astin, 1993a], which were utilized in this study).

**Ethnicity or ethnic group.** A specific social group sharing a unique cultural heritage (e.g., customs, beliefs, language, etc.). Two people can be of the same race (i.e., White), but be from different ethnic groups (i.e., Irish American, Italian American).

**Hate crime.** A hate crime is a criminal act or attempted act against a person, institution, or property that is motivated in whole or in part by the offender’s bias based on race, color, religion, gender, ethnic/national origin group, disability status, or sexual orientation. When bias motivates an unlawful act, it is considered a hate crime.

**I-E-O model.** This methodological approach refers to the Input-Environment-Output theoretical model for data analysis attributed to Astin (1993a).

**Ingroup.** This term refers to a group with whom one affiliates one’s self or any group to which one belongs.
**Inter-group contact.** This phrase refers to a set of theories that test the conditions and results of bringing various groups together in order to reduce prejudice.

**Inter-group dialogue.** This term refers to programs that involve facilitated, face-to-face discussions with members of two groups. The goals are often to resolve conflict or improve ongoing relationships.

**M-GUDS.** Miville-Guzman Universality Diversity Scale, which is a measure of UDO (Miville et al., 1999).

**M-GUDS-S.** The Miville-Guzman Universality Diversity Scale is a 15-item, short-form measure of UDO (Fuertes, Miville et al. 2000). The M-GUDS-S was designed to assess multicultural awareness described as an acceptance of both similarities and differences among people.

**Multiculturalism.** This term refers to participating in or relating to the cultures of different countries, ethnic groups, or religions. An extension of the definition includes advocating or encouraging the integration of people into all areas of society.

**Multicultural personality.** This term refers to Ponterotto’s (2004) theory and research personality traits associated with individuals who relate to more than one culture.

**NCBI.** The National Coalition Building Institute is a non-profit training organization that works to eliminate prejudice and inter-group conflict “whether it stems from nationality, race, class, gender, religion, sexual orientation, age, physical ability, job, or life circumstance” (NCBI Training Manual, 1999, p. 1). NCBI was founded by Cheri Brown and is based in Washington DC.
Non-prejudice. This term is defined as “a universal orientation in interpersonal relations whereby perceivers selectively attend to, accentuate, and interpret similarities rather than differences between the self and others” (Phillips & Ziller, 1997, p. 420).

Outgroup. The opposite of ingroup, this term refers to a group to whom one does not affiliate one’s self or any group to which one does not belong.

Prejudice. According to Nelson (2002), “prejudice is defined as a biased evaluation of a group, based on real or imagined characteristics of the group members” (p. 11). The definition allows for both positive and negative prejudice.

Race or racial background. A sub-group of people possessing common physical or genetic characteristics. Examples include White, Black, and Asian/Pacific Islander.

Religiosity. The outward and often social articulation of belief in higher powers, which may include attendance of public worship and participation in the rituals particular to a faith. In a narrow sense, religiosity deals more with how religious a person is and less with how a person is religious. For the purposes of this research, religiosity refers to students’ self-reported level of practice in organized religious services.

Socio-economic status. “Socioeconomic status is commonly conceptualized as the social standing or class of an individual or group. It is often measured as a combination of education, income and occupation” (http://www.apa.org). For the purposes of this research, socio-economic status is self-reported as (a) raised with less than enough financial resources, (b) raised with enough financial resources, or (c) raised with more than enough financial resources.
**Spirituality.** Common depictions include a belief in a power operating in the universe that is greater than oneself, a sense of interconnectedness with all living creatures, an awareness of the purpose and meaning of life, and the development of personal values. According to Astin, Astin, and Lindholm (2011), spirituality involves an active quest for answers to life’s “big questions” (p. 59).

**Stereotype.** This term refers to “a set of beliefs about the personal attributes of a group of people” (Ashmore & Del Boca, 1981, p. 16).

**Social tolerance.** This term refers to one’s ability to accept other people’s beliefs, characteristics, and behaviors and exhibit fairness toward the people who hold different views. It does not refer to the practice of unconditionally accepting other people’s behavior or attitude or avoiding attempts to change someone else’s behavior or attitude. Social tolerance has been defined as “the ability to accept individuals for who they are, to appreciate and respect differences, and to empathize” (Guthrie, 2005, p. 1).

**Tolerance.** This term is applied to the collective and individual practice of not persecuting those who may believe, behave, or act in ways of which one may not approve. “While people deemed undesirable or different may be disapproved of, ‘tolerance’ would require that the party or group in question be left undisturbed, physically or otherwise, and that criticism directed toward them be free of inflammatory or inciteful efforts (Wandberg, 2002, p. 5).

**Universal Diverse Orientation (UDO).** UDO refers to an attitude toward all other persons that is inclusive, yet differentiating in that similarities and differences are both recognized and accepted. The shared experience of being human results in a sense
of connectedness with people and is associated with a plurality or diversity of interactions with others (Miville et al., 1999, p. 292).

**Universal Diverse Orientation (UDO) Scale.** This term refers to the original 45-item Miville-Guzman Universal Diverse Orientation scale measuring universality.

**Welcoming Diversity Workshop/Prejudice Reduction (the one-day workshop).** NCBI offers one-, two- and three-day “Welcoming Diversity/Prejudice Reduction Workshops.” The three-day program also serves as a train-the-trainer program in which participants learn to conduct NCBI workshops.

**Summary of Introduction**

The first chapter notes that incidents of intolerance and prejudice are prevalent on college campuses. However, most of the research conducted in this area has focused on measuring intolerance and prejudice, or has focused on evaluating a particular diversity program at a single institution. Therefore, this research seeks to examine the less researched concept of non-prejudice and a range of diversity experiences among students at a variety of college campuses. This chapter introduces the concept of *non-prejudice* and presents the Universal Diverse Orientation (UDO) construct, the M-GUDS-S, as a means to measure students’ “multicultural personality.” The chapter also presents a scale to measure diversity experiences through a network of NCBI Campus Affiliates. Specifically, this scale is used to examine whether diversity experiences influence students’ UDO.

This chapter highlights the importance of this study by suggesting that it may reveal significant implications about variables that contribute to non-prejudice and multicultural understanding among students on college campuses. This study is also
important because it may reveal significant policy implications for colleges and universities struggling with how to respond to diversity efforts on their campuses and provide vital information as to which of the 10 diversity experiences most influence students’ multicultural personality.

Chapter Two focuses on reviewing the literature that supports this study. The theoretical constructs of multicultural personality and non-prejudice are presented by first describing the reverse perspective: prejudice and stereotyping. Two models to test the theory of this research study (see Miville, 1999 and Pascarella et al., 2001) are described, and Astin’s (1993a) I-E-O model for data analysis provides the framework for the sections of Chapter Two that follow. The section on inputs presents a review of the literature on the student characteristics included in this study. The section on environment includes a review of the literature on the importance of diversity in higher education, a chronology of diversity experiences, and information from a study on assessing the multicultural perspective. The outcome section describes the multicultural personality that forms the basis of the literature on UDO.
Chapter Two

Literature Review

This chapter provides a review of the literature that supported this study. The literature review begins with a brief overview of the theories of prejudice, stereotyping, and the contact hypothesis in order to provide a historical foundation and context for designing diversity experiences for college students. Two theoretical constructs that build on the previous research and form the basis of this study are then described: a theory and measure of non-prejudice (Phillips & Ziller, 1997) and strategies to create a multicultural campus climate (Ponterotto, 2006).

Three models were used to test the hypotheses of this study: (1) Miville’s (1999) Universal Diverse Orientation (UDO), (2) Pascarella’s (2001) research on diversity experiences, and (3) Astin’s (1993a) Input-Environment-Output (I-E-O) model. The I-E-O model provided the framework to align the literature covering the input variables, environmental characteristics, and the outcome measure of this study. An outline of the literature review is diagrammed in Figure 1.

Historical Foundation

The literature review begins with an overview of several theories of prejudice, stereotyping, and the contact hypothesis. This historical summary forms the foundation for the theory of non-prejudice and establishes the context for exploring diversity experiences to foster a multicultural campus climate for college students.
Figure 1: Outline of literature review used in this study, beginning with an historical review of prejudice and stereotype theories, the theoretical constructs to ensure a multicultural campus climate and theory of non-prejudice, and concluding with the models used in this study, including those from Miville, Pascarella, and Astin’s Inputs-Environments-Outputs (I-E-O) model. The I-E-O format provides the framework for the research design.

Summary of prejudice theories. The majority of the literature on prejudice/non-prejudice does not focus on the concept of promoting social tolerance among college students. Instead, past research has been based on defining prejudice and designing prejudice-reduction models for adults and children. As with many concepts, researchers have defined prejudice in a variety of ways over the last 50-plus years. “The study of prejudice, like any science, has tended to go through periods in which certain theories, approaches, or questions are a popular interest among researchers” (Nelson, 2002, p. 82). The following brief summary presents three time periods and the corresponding
prejudice theories that were emphasized during these time periods, as well as some subsequent criticisms in order to provide working definitions and an academic context for this study.

The first time period extends through the mid-1950’s, because most overviews on the theories of prejudice begin with Allport’s 1954 publication, *The Nature of Prejudice*. Even though this work is more than 50 years old, it is still regarded among scholars as a classic and the foundation for research on the concept of prejudice. “*The Nature of Prejudice* delineated the area of study, set up its basic categories and problems, and cast it in a broad, eclectic framework that remains today” (Dovidio, 2005, p. xiii). Allport (1954) defined prejudice as “an antipathy based upon a faulty and inflexible generalization. It may be felt or expressed. It may be directed toward a group as a whole or toward an individual because he [or she] is a member of that group” (p. 9). Initial definitions of prejudice indicated pre-judgment, or an opinion—especially an unfavorable, negative, and irrational opinion—formed beforehand without thoughtful examination of the pertinent facts, issues, or arguments. Nelson (2002) noted “early theorists tended to define prejudice in terms of its affective basis. . .a strong negative feeling about someone based on a generalization one has about that person’s group” (p. 7). Critics of the early definitions of prejudice have argued that the definition is limited to the negative effect of prejudice toward outgroup members, while ignoring positive prejudice that favors ingroup members (Eagly & Chaiken, 1993; Jones, 1997). Despite these criticisms, however, the ways in which these early definitions were framed formed the basis for subsequent theories.
In the middle time period, roughly from the late 1950s through the 1970s, researchers refined the definition of prejudice. Instead of a negative, affective expression, researchers began to define prejudice as an attitude (Dovidio, Gaertner, Isen, & Lowrance, 1995; Hamilton, Stroessner, & Driscol, 1994; Stephan & Stephan, 1992). During this time, researchers began to regard prejudice as a state of mind or an evaluation of a stimulus. As such, prejudice is essentially an attitude . . . . Prejudice can be based on affective (e.g., anger), cognitive (e.g., beliefs linking hostility to outgroup), or behavioral (e.g., avoidant or hostile) sources and can result in cognitive, behavioral, or affective expressions of prejudice. (Nelson, 2002, p. 8-9)

In framing prejudice as an attitude, these theorists have described prejudice as an attitude, the definition is now broadened beyond the early theorists so that prejudice is now a purposeful way of thinking, as well as a way of behaving. However, these definitions of prejudice have also been criticized. Critics assert that the theory of prejudice as an attitude is problematic because the affective, cognitive, and behavioral components are not always consistent (Devine, Monteith, & Zuwerink, 1991).

In the later time period, the 1980s through the 1990s, researchers such as Smith (1999) and Turner (1985) proposed new interpretations of the concept of prejudice. According to their theories, inter-group interactions are a social emotion and depend on the nature of the group interaction. According to Smith and Ellsworth (1987), two key differences in this approach make it unique: 1) emotions toward other groups are specific, not just positive or negative, and 2) emotions depend on each specific situation. The social emotion theory expands the definition of prejudice to include a specific outward expression of societal groups dependent on the context of the interaction.

Therefore, how we react to any given outgroup member depends on (1) what self-category is salient for us at that moment; (2) in what context the interaction occurs
(competitive, cooperative, etc.); and (3) how that person helps or hinders our movement toward salient personal or group goals at that time. (Nelson, p. 10)

Critics of the social-emotion theory of prejudice fail to take into account “modern racism” or hidden prejudices.

Although these three time periods were crucial in the development of the definition of prejudice, definitions of prejudice have continued to evolve with social forces. How prejudice is exhibited has also changed over time. Before the mid-1960s, expressions of prejudice were openly exhibited in the United States. However, with the social changes that occurred in the 1960s, open expressions of prejudice were no longer tolerated. Researchers noticed that with these changes, the old methods of measuring and defining prejudice were no longer adequate to ascertain a person’s level of prejudice. Some individuals who said they were not prejudiced on self-report measures were indeed quite prejudiced. This type of subtle deception, whether conscious or subconscious, suggests that prejudice can be both overt and subtle, and, in fact, prejudice is even implicated in current definitions of racism. For example, “Modern racism is defined as a subtle form of prejudice that is only expressed when an individual believes it is safe, acceptable, or easily rationalizable” (Stangor, 2001, p. 287).

However, despite these different definitions, Devine (1995), Jones (1997) and others note that researchers generally agree on a few points: “Prejudice: (1) occurs between groups, (2) involves an evaluation (positive or negative) of a group, (3) is a biased perception of a group, and (4) is based on the real or imagined characteristics of the group” (Nelson, 2002, p. 11). The debate as to whether the definition of prejudice is considered an attitude, an emotion, or a social emotion has continued, and a clear-cut, unanimous definition still has not been definitively determined. Adding to the
complexity of the definition of prejudice is the way prejudice has been measured in previous research, but for the purposes of this study, Nelson’s (2002) definition of prejudice is the most useful and comprehensive: “Prejudice is defined as a biased evaluation of a group, based on real or imagined characteristics of the group members” (p. 11). It is important to note that this definition allows for both positive and negative prejudice, which sets the stage for the concept of non-prejudice.

**Summary of stereotype theories.** Stereotypes and prejudice are strongly linked with stereotyping conduct, depicted as the display of prejudicial evaluation. Understanding prior stereotype definitions and theories is important for the purposes of understanding how prejudice-reduction programs have been designed.

The word stereotype was adapted from the reproduction of fixed casts during the printing process (Lippmann, 1922) and has since been used to describe the tendency of people to think of someone or something in similar terms based on a common feature shared by each (Nelson, 2002, p. 4). For the purposes of this study, Ashmore and Del Boca’s (1981) definition of stereotype as “a set of beliefs about the personal attributes of a group of people” (Ashmore & Del Boca, 1981, p. 3) will be used.

As with attempts to measure and study prejudice, attempts to understand stereotyping behavior has tended to go through periods in which certain approaches were utilized. Seven theoretical approaches to stereotyping and the resulting methods for reducing prejudice are briefly described in order to foretell strategies to promote a multicultural campus climate.

The first approaches to understanding stereotypes through the 1950s, the early time period, “examined the ‘affective’ factors that lead individuals to stereotype others”
Initial research on behaviors that lead individuals to stereotype others suggested that people differ in personal traits that predispose them to prejudice. *The Authoritarian Personality*, summarized in studies by Adorno, Frenkel-Brunswick, Levinson, and Sanford (1950), proposed that some individuals possess personality characteristics that cause them to be prejudiced. During this early period, a second approach viewed differing learning styles as a contributor to prejudiced attitudes. “Skinner (1953) and other learning researchers suggested that a primary reason that certain attitudes are formed and maintained is that the expression of such attitudes were followed by reinforcing the events (e.g., social approval)” (Nelson, 2002, p. 13). These early definitions focused on stereotypes as a negative characteristic associated with particular individuals and aligned with the early definitions of prejudice as a negative affect. Prejudice-reduction programs designed around personality traits or learning styles stressed the importance of providing an opportunity to acquire alternative learning styles and having them positively reinforced. “The extent that prejudice reduction programs are based on personality structure, they target the promotion of more positive traits, such as greater openness and flexibility” (Wittig & Grant-Thompson, 1998, p. 797).

The third and fourth approaches in the early time period focused on “cultural and broader group-level explanations for stereotyping and prejudice” (Nelson, 2002, p. 15). This definition of stereotypes focused on “thoughts or beliefs about, feelings toward, and behavior toward a particular group” (Nelson, 2002, p. 6). The group-level approaches attributed stereotyping behavior to members' need to protect their own group members' access to scarce resources from members of the outgroup. Sherif and Sherif (1953) studied the origin of stereotyping behavior in social groups in a classic study.
called the Robber’s Cave Experiment. In the experiment, boys were assigned to separate, competitive groups with limited resources, which led to between-group hostility and prejudice. Next, the boys were placed in situations in which the two groups needed to cooperate to reach superordinate goals. The Robber's Cave Experiment is often cited to demonstrate how easily opposing group hostilities can form, but it is also an example of a conflict resolution method whereby satisfying superordinate needs can reduce inter-group conflict. The fourth approach is one of the earliest and is associated with increased contact, known as the Contact Hypothesis. Allport’s (1954) approach to stereotyping and prejudice was to determine the conditions that facilitate and inhibit the use of stereotypes in making judgments about others. These early studies provided insights for stereotype-reduction models to identify how increasing contact and working toward common goals reduces inter-group conflict.

Because prejudice during the middle timeframe—the late 1950s through the 1970s—was defined as an attitude, research during this time focused on the motivation for stereotyping and the rationale of categorization. A fifth approach to the factors that influence stereotyping shifted toward a more social-cognitive approach to understanding the causes of behavior. To understand the motivation for stereotyping, Festinger’s (1957) cognitive dissonance theory suggested that people are motivated to maintain consistent cognitions, or consistency between cognition and behaviors, and that lack of cognitive consistency led to a state of dissonance. Festinger proposed that people are strongly motivated to reduce this dissonance by changing either their behavior or their cognition. As recently as 1999, Kunda and Sinclair noted that motivation plays an important role in social-cognition. They concluded that people are more likely to apply a
stereotype to a target when doing so supports the desired impression they were attempting to make on others. Motivation can thus be defined as the impetus to engage in or avoid a particular behavior and to keep doing it to meet one’s goals. Prejudice-reduction programs designed around the social-cognitive approach emphasize motivation as a change agent to reduce prejudice. A sixth approach focused on the cognitive process of categorization as a possible explanation for stereotyping (Fiske, 1998). In the *Cognitive Aspects of Prejudice*, Tajfel (1969) determined that categorizing people makes it easy to develop stereotypes about them. The person’s relationship within a social context plays an important role in this process.

An array of social cognitive approaches (e.g., Brewer, 1991; Hewstone & Brown, 1986) has examined the usefulness of stereotyping and its basis in our tendency to categorize people into social groups, leading to prejudicial attitudes, discriminatory behavior, and inter-group conflict. (Wittig & Grant-Thompson, 1998, p. 797)

The motivational and social-cognitive approaches have led to understanding the conditions under which people are likely to stereotype others in order to design prejudice-reduction models intended to promote better inter-group relations (Dovidio, 1989).

During the later time period—1980s through the 1990s—several theorists defined stereotyping as inter-group attitudes partitioned into three components: cognition, affect, and behavior. A seventh approach to measuring stereotyping focused on inter-group interactions, since prejudice was viewed as a social emotion. Hamilton and Trolier (1986) defined stereotype as “a cognitive structure that contains the perceiver’s knowledge, beliefs, and expectations about a human group” (p. 133). Other researchers added the affect and behavior component to the definitions of inter-group attitude, indicating that “stereotypes represent only the cognitive portion of any inter-group
attitude (Dovidio et al., 1996; Fiske, 1998; Hamilton & Trolier, 1986). These researchers view stereotypes as cognition, discrimination as a behavior, and prejudice primarily as an emotion. The definition of discrimination emerged from this approach: "any negative behavior directed toward an individual based on his/her membership in a group" (Nelson, 2002, p. 6). Prejudice-reduction programs designed around cognitive perspectives suggest that increasing contact between members of different groups promotes more accurate beliefs between members of different groups about the other and, with the proper conditions, better relations are promoted between them. In the later time period, a few researchers, have “interestingly, come full-circle to accept Allport’s Contact Hypothesis,” noting that social interventions could reduce prejudice and “appropriately structured inter-group contact could effectively decrease bias at the individual level” (Dovidio, 2005, p. 8).

**Contact hypothesis.** One of the earliest strategies to the problems of inter-group stereotyping and prejudice was Allport's contact hypothesis. The history and influence of Allport’s (1954) observations on inter-group contact are of particular interest to this study because “the most common approach to changing stereotypes is to provide individuals with information that their stereotypes are false” (Stangor, Sechrist, & Jost, 2001, p. 15). Allport noted that changing attitudes is “not as simple . . . [as] assembling people without regard for race, color, religion, or national origin” (p. 261). Rather, group contact progresses until the inter-group relationship becomes a peaceful one. A number of factors impact inter-group contact and influence whether the effects of prejudice are reduced or exacerbated as a result of the interaction. “The effect of contact will depend on the kind of association that occurs, and on the kinds of persons who are involved”
To account for inconsistencies in the contact situation, Allport adopted a “positive factors” approach. Reduced prejudice will result when four positive features of the contact situation are present: 1) equal-status members, 2) common goals, 3) inter-group cooperation, and 4) the support of legitimate authority (Allport, 1954, p. 281).

Since Allport's initial investigations, other researchers have tested the contact hypothesis. The research literature on inter-group contact has expanded both in terms of the number of inter-group contact studies performed and the types of groups examined. Studies conducted since Allport’s original hypothesis generally have supported the importance of his four key conditions for inter-group contact to reduce prejudice. In 2004, Pettigrew and Tropp conducted a meta-analysis of 515 studies that examined relationships between inter-group contact and prejudice. The studies under analysis were conducted from the 1940s through 2000 and represented responses from 250,493 individuals in 38 nations. The analysis found that the number of contact studies has increased steadily over the years. “Of the 515 studies, only 35 (7%) were conducted before 1960, 55 (11%) during the 1960s, 106 (21%) during the 1970’s, 126 (26%) during the 1980s, and 178 of the studies (35%) were conducted between 1990 and 2000” (Dovidio, 2007, p. 266). Overall, results from the meta-analysis indicated that greater levels of inter-group contact are typically associated with lower levels of prejudice . . . . Contact studies have also extended far beyond their original focus on racial and ethnic groups to test the effects of contacts with groups that differ in terms of age, sexual orientation, disability, and mental illness . . . . The largest effects emerge for contact between heterosexuals and gays and lesbians.” (Dovidio, p. 267)

Additional studies have found that other types of information, such as acquiring knowledge about the unique attributes of individuals that help to disconfirm stereotypes
about other group members, also known as perspective taking, effectively reduces ingroup bias (e.g., Miller, Kenworthy, Stenstrom, & Canales, 2008). Similarly, exchanges between members of different groups in which the members are able to empathize and create a common identity can reduce prejudice and discrimination (Gaertner, Mann, Dovidio, Murrell, & Pomare, 1990). Perspective taking and empathy have a number of positive consequences for inter-group relations (Galinsky & Moskowitz, 2000). It can increase the perception that a universal humanity and destiny is shared with another group. Many theorists have found that greater contact and familiarity typically contribute to increased acceptance (Zajonc, 1968). Dovidio concluded that cross-group friendship is thought to be one of the best predictors of positive inter-group attitudes because of its capacity to reduce anxiety and threat, but

There is still a need to extend Allport’s approach beyond a general conceptualization of contact’s effects, to examine distinct points of concern and responses to inter-group contact across different inter-group relationships. As such, future contact research should consider the ways in which contact situations might best be tailored to accommodate the diverse concerns that are likely to be relevant when different groups come into contact. (Dovidio, 2007, p. 273)

Theoretical Constructs

Two theoretical constructs shaped this study: First, strategies designed to foster a multicultural campus climate; and second, the theory and measure of non-prejudice. These two theories build on the previous foundation and form the theoretical structure for the models that tested the hypotheses of this study.

Multicultural campus strategies. Until recently, strategies to foster a multicultural collegiate environment have focused on countering prejudice and increasing contact. The benefits of diverse interactions on college campuses has drawn from the literature on the positive effects of inter-group contact, and success of these diversity
efforts has often been measured using prejudice as the dependent variable. Activities to increase diversity in higher education have included initiating policies to increase racial representation on campus, diversifying the curriculum, and establishing diversity experiences to promote awareness and sensitivity to minority groups (Gurin et al., 2004; Zuniga, Williams, & Berger, 2005).

However, research since Allport’s ideas as to when contact is most effective has been extended to describe how contact works. This section describes how several models, programs, and methods of students’ diversity experiences have been implemented in higher education environment. Several key developments since Allport, most notably studies by Gurin, Nagda, and Lopez (2004), Chang (1999), Astin (1993b), and Pascarella et al., (2001), are also described, since their research directly relates to this study. It is important to describe how campuses expose students to a multicultural environment, since students may experience it in several ways.

What kinds of diversity initiatives foster a multicultural campus climate? Meta-analytic conclusions by Pettigrew and Tropp (2004), and Voci and Hewstone (2003), indicate that contact, by itself, typically has a reliable and independent effect on the reduction of prejudice. Allport focused primarily on whether contact can reduce inter-group bias, but more recent work has examined the matters of when and how contact reduces bias. Dovidio (2005) outlined some of the recent models, indicating how contact reaches “below the surface” and “considers the factors that moderate and mediate its effects” (p. 276).

**Models.** A review of the literature revealed several types of models already in use to reduce bias among students in higher education. Table 1 shows the types of models in
use, a description of each, the theorist behind the model, and examples of each model as it is applied on campus. The models listed show the range of within-institution efforts to reduce prejudice among students.

**Programs.** Successful attitude and behavior changes are dependent on the program content and the manner in which program contents are conveyed (Stephen & Stephen, 1992). With the exception of contact, it seems that all other content can either facilitate or inhibit positive changes, depending upon the way in which it is delivered.

The success of inter-group relations programs depends on several factors. Many of these elements are concrete and relate to the quality of the program, the skill of the trainers or facilitators, the receptivity of the audience, and the presence of possible precipitating events (such as racial incident), that motivated the organization to seek outside consultation. (Dovidio, Glick, & Rudman, 2005, p. 263)

In addition to program delivery, a wide range of programs to improve inter-group relations among multiple types of groups has been planned to facilitate productive relations and mutual respect. Four main programs have emerged from the social psychology models and been implemented in higher education settings. These include: multicultural education, diversity training, inter-group dialogues, and cooperative learning groups (Stephan & Stephan, 2005, p. 431). Multicultural education programs provide knowledge about different racial, ethnic, religious, and cultural groups, often educating students about systems of inequality.
### Table 1

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Theorist(s)</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Decategorization</strong></td>
<td>Helps members of groups get to know outgroup members as separate individuals rather than as group members.</td>
<td>Brewer &amp; Miller (1984)</td>
<td>Orientation for new students where advising is done individually rather than in groups; random assignment of roommates; alphabetical assignment of seating in classes</td>
</tr>
<tr>
<td><strong>Recategorization, or common ingroup identity model</strong></td>
<td>Redefine outgroup members to be perceived as ingroup members in order to be accorded the benefits of ingroup status.</td>
<td>Gaertner &amp; Dovidio (2000)</td>
<td>Living-learning programs consisting of diverse students; where cultural identities are de-emphasized and a new, common identity is defined by the theme of the program (e.g., Environmental Scholars)</td>
</tr>
<tr>
<td><strong>Identity model or Intragroup solidarity theory</strong></td>
<td>Keep outgroups separate to develop group solidarity and as a basis for social change. Negative, stereotyped conceptions of membership ingroup are reinterpreted as positive in relationship to other groups (e.g., &quot;Black is beautiful&quot;).</td>
<td>Tajfel (1974); Bocian, (1997); Solorzano, Ceja, &amp; Yosso, (2000)</td>
<td>Ethnic-themed houses, clubs, separate orientation programs for different ethnic/racial groups; women's studies courses. Ingroup solidarity programs that help students support each other</td>
</tr>
<tr>
<td><strong>Mutual differentiation model and Dual identity model</strong></td>
<td>Members maintain distinct group identities while they function in a total group. Members of groups can be simultaneously attached to their separate group identities while engaging in common tasks with members of other groups.</td>
<td>Gaertner &amp; Dovidio (2000); Hewstone &amp; Brown (1986)</td>
<td>Athletic team membership within the campus community</td>
</tr>
<tr>
<td><strong>Intergroup dialogues</strong></td>
<td>Facilitated, face-to-face meetings of students from different social identity groups. The purpose of the meetings are to explore personal and other group’s cultural identities and differences, analyze how power and inequality affect their groups, and examine ways to bridge the intergroup differences.</td>
<td>Zuniga, Nagda, &amp; Sevig (2002); Gurin &amp; Nagda (1999)</td>
<td>Campus programs often consist of 10 to 12 weeks of facilitated training, pairing students from differing identity groups (e.g., African American and White, male and female, Christian and Muslim, LGBTQ [lesbian, gay, bisexual, transgender, and queer] and heterosexual</td>
</tr>
</tbody>
</table>
Also known as formal education programs, one of the primary goals of these programs is to improve inter-group relations by helping students acquire the knowledge, attitudes, and skills needed to participate in the cultural life of a diverse society. Studies of multicultural education programs have focused on students in primary and secondary schools, graduate students in counseling, teacher-training programs, and undergraduate students. The results of studies on multicultural education programs indicate they generally “have predominantly, but not uniformly, positive outcomes” (Stephan & Stephan, p. 434).

Diversity-training programs, or group-retraining methods, were first used in the U.S. military (Landis et al., 1984; Tansik & Driskell, 1977) and later became popular in business organizations. Diversity training typically attempts to increase the participants’ awareness of dissimilarity among racial, ethnic, and cultural groups and encourages participants to value these differences. These programs use both didactic (e.g., lectures and readings) and interactive techniques (e.g., role playing simulation games). The focus of diversity training is often on changing the attitudes and behaviors of members of the majority group. Although many assessments of diversity programs have been conducted, most are anecdotal, and only a small number of studies have been published on the effects of diversity training on inter-group relations (Dovidio, 2005, p. 435). One nine-year program that was conducted in a large Midwestern school district concluded that communication and recognition of one’s own cultural background were the “first steps to live peacefully in a culturally diverse society” (Nikels, Mims, & Mims, 2007, p. 133).

Most inter-group dialogue programs involve facilitated, face-to-face discussions and exercises between members of two groups. Often, they take place in higher
educational settings. The goals of these dialogue programs range from solving a specific conflict, to improving ongoing relations among members of groups with a history of negative relations. These discussions are based on Allport’s contact hypothesis—equal status, collaboration on common goals, and support by authority figures. The emphasis on social justice and social action in inter-group dialogue programs is stronger than in most other programs. Unlike most other programs, conflict is often brought into the open and discussed. Participants are encouraged to express their emotions and to discuss their reactions to prejudice, stereotyping, and discrimination. Studies of dialogue groups with first-year students from divergent groups (e.g., Whites and African Americans) indicate that this approach has a number of positive effects on inter-group relations (e.g., changing inter-group attitudes and creating a better understanding of discrimination and its causes) (Gurin et al., 2004). One study found predominantly positive effects three years after the completion of a one-semester program, suggesting such programs can have lasting effects (Gurin & Nagda, 1999). Gurin et al., (2004) also found “When inter-group dialogues are successful, students’ gain an understanding of both commonalities and differences between groups” (p. 20). The National Coalition Building Institute (NCBI) Campus Affiliate Program is an example of an inter-group dialogue group on college campuses.

Cooperative learning usually involves placing students from two or more ethnic groups, both sexes, and of varying academic abilities in smaller groups in which the task and reward structure require interaction in a situation in which students can only reach their individual goals through the success of the group. (Dovidio, p. 438)

In evaluations of cooperative learning groups, Johnson and Johnson (1991, 2000) found that cooperative learning produced more cross-racial friendships than competition or individualistic learning. Another review of studies of cooperative learning found that
cooperative learning generally has more positive effects on intergroup relations than individual learning (Slavin, 1995).

**Methods.** Researchers, Gurin (1999) and Terenzini, Cabrera, Colbeck, Bjorklund, and Parente (2001) have identified three ways in which students' experience diversity in the college or university environment. The first is structural diversity, which represents the demographic composition of the student body. The second is classroom diversity and/or incorporation of cultural diversity in the curriculum. The third is interactional diversity, “the purposeful methods in which students from diverse backgrounds come into contact and interact in educational ways” (Gurin, Dey, Hurtado, & Gurin, 2002, p. 333). Building on the work of Gurin (1999), Milem, Umbach, and Liang (2004) expanded classroom diversity to include all meaningful formal and informal cross-group interaction inside and outside the classroom and diversity-related initiatives, such as diversity courses, cultural and social awareness workshops, and inter-group dialogues.

Research on the educational benefits of diverse interactions with peers on the college campus indicates efforts to increase structural and curricular diversity are associated with a variety of student development outcomes (Chang, 2000; Gurin et. al., 2002; Hurtado, 1999). In relation to structural diversity, Chang (1999) found that attending a university with a diverse "student population increases the likelihood that a student will socialize with someone of a different race" (p. 386) and that the students will discuss racial issues. He found the variable "socializing with someone of another racial and ethnic group" had a direct effect on college satisfaction and social self-concept, and an indirect effect on retention and intellectual self-concept. In addition, he discovered that "discussed racial and ethnic issues" had a direct effect on intellectual self-concept.
and an indirect effect on student retention, satisfaction with college, and social self-concept. Chang's (2000) study indicated that a racially diverse student body has a positive effect on educational outcomes. In 2004, Chang, Astin, and Kim noted that the positive effects of different types of campus diversity are cumulative and complementary. For example, diversity courses and related initiatives appear to benefit students who are exposed to them on predominantly White campuses, but their impact appears to be stronger on campuses that have greater racial diversity. (p. 551)

A major contribution to the research on the outcome of classroom diversity is Astin's (1993b) analysis of 217 four-year colleges and universities. Astin gathered responses from 25,000 students and found that six variables (a) taking ethnic and women's studies courses, (b) faculty involvement, (c) institutional support, (d) cross-racial socialization, (e) cultural awareness workshops, and (f) discussing racial issues positively affected students' academic and personal development. Other researchers also support the view that racial/ethnic diversity in the classroom has positively impacted student-learning outcomes. Antonio noted “that interaction with diverse peers in and outside the classroom is the crucial way in which diversity produces educational benefits for students” (2001, p. 593).

Participation in diversity experiences generally includes formal campus programs and informal campus associations. Numerous studies show that experiences with interactional diversity have positive effects for virtually all students in all types of postsecondary institutions with a range of desirable outcomes (Hurtado, 2002; Orfield, 2001). Other studies have examined the positive impact of interaction with diverse peers on students' openness to diversity and challenging their own beliefs and experiences (Pascarella et al., 1996; Whitt, Edison, Pascarella, Terenzini, & Nora, 2001); promoting
racial understanding (Astin, 1993b; Milem, 1994); leadership development and cultural knowledge (Antonio, 2001); acceptance of people of different races/cultures, cultural awareness, tolerance of people with different beliefs, and leadership abilities (Hurtado, 2001); and multicultural competencies (Hu & Kuh, 2003). Astin (1993b) found that participating in cultural awareness workshops is positively associated with undergraduate retention, six different measures of satisfaction, and six measures of academic development, including critical thinking, general knowledge, public speaking ability, listening ability, writing ability, and preparation for graduate school (p. 47). More recently, two multi-institutional longitudinal studies have established that students' interaction with diverse peers have a positive effect on outcomes such as citizenship engagement and racial engagement (Gurin et al., 2002), and social action engagement (Hurtado et al., 2002).

While most previous research on formal campus diversity experiences has indicated that participation in such experiences results in a host of generally positive outcomes for students, it has been most consistently noted for White students (Engberg & Mayhew, 2007). Whitt et al., (2001) found increased engagement in co-curricular diversity experiences was linked to increased openness to and appreciation of cultural diversity among Whites. Positive gains from participation in formal diversity experiences have also been documented for racial and ethnic minority students, although there is less research on these groups. Gurin et al. (2004) found enrollment in diversity courses influenced racial attitudes across racial groups, such as learning about other groups’ contributions and campus political participation, and Spanierman, Neville, Liao, Hammer, and Wang (2008) found that participation in formal campus experiences is
important for White, Black, and Latino students in predicting critical awareness of racial issues and diversity appreciation, while informal experiences were important only for White students. Many college campuses combine elements of the models, programs, and methods. In this study, structural diversity, described as the demographic composition of the student body, classroom diversity as delineated in the curriculum, and interactional diversity, described as the ways in which students from diverse background are brought into contact in educationally purposeful ways, were examined. For purposes of this study, participation in formal campus diversity experiences refers to courses, extracurricular workshops, cultural events, and other campus-sponsored interventions designed to engage students. In addition, the multicultural campus climate is examined through students’ experiences.

Building a multicultural campus climate does not begin at a neutral point. Many students will have pre-interaction attitudes and/or experiences that may lead them to negative interactions (Johnson & Johnson, 2000): “Positive attitudes lead to an expectation of having rewarding interactions, whereas negative attitudes lead to an expectation of non-rewarding interactions” (p. 243). This leads to the second theoretical construct of this study, the theory and measure of non-prejudice.

**Non-prejudice.** There is a broad history of attempting to understand the issues related to prejudice and to design structured experiences to counter prejudice. However, a newer and much less researched approach known as non-prejudice examines these issues from a contrasting perspective. This section describes a few of the limitations of previous approaches and some of the reasons for studying non-prejudice. This is followed by a few notable exceptions to the previous research that focused on prejudice
(i.e., Allport’s *Tolerant Personality*, Phillips and Ziller’s *Theory and Measure of Non-prejudice*, and Ponterotto’s *Multicultural Personality*). In 1997 Phillips and Ziller’s proposed a theory and measure of non-prejudice and in 2004, Ponterotto proposed a theory on the multicultural personality. This section includes a brief account of Phillips and Ziller’s (1997) theoretical concept of non-prejudice and Ponterotto’s (2004) subsequent theory on the multicultural personality.


Phillips and Ziller (1997) believe there is inherent bias in the studies on prejudice and stereotyping that has affected the results. They propose that most, if not all, definitions of prejudice are negatively oriented, and that “a negative approach to the study of interpersonal relations is reflected in the resulting knowledge about interpersonal relations (i.e., that prejudice is inevitable)” (p. 420). Not only can the approach to an investigation and the definitions it uses predispose a topic, but also the research design. “Because science requires the accumulation of evidence to support a position, failure to investigate where the problem doesn’t exist has resulted in little evidence supporting the position that humans are equally capable of nonprejudiced thought” (Phillips & Ziller, 1997, p. 420).

The premise of non-prejudice is illustrated by a character in *Nineteen Minutes*, a novel by Jodi Picoult, who said “when you ask a patient ‘How do you feel?’ what was wrong wasn’t nearly as important as what was right” (2007, p. 25). Focusing on
differences may lead to results that are negative, “Through the simple act of orienting toward differences between self and others, the foundation is set for conflict rather than accord” (Phillips & Ziller, 1997, p. 430). Ultimately, Phillips and Ziller suggested “a different approach may reveal a more optimistic, less depressing model of human thought” (p.420).

Non-prejudice needs to be studied because previous theories and approaches have “unwittingly contributed to the perception that nonprejudice does not exist” (Phillips & Ziller, 1997, p. 421). Phillips and Ziller argue that studies of prejudice have been restricted by their approach, negative definitions and research design. It is often assumed that human thought and behavior are limited by natural information processing tendencies, such as the tendency to categorize. “Measures of prejudice such as the authoritarian personality (Adorno, Frennkel-Brunswik, Levinson, & Sanford, 1950) identify prejudice through respondents' endorsement of prejudiced attitude statements….this approach has led investigators to conclude that prejudice is inevitable” (as cited in Phillips & Ziller, 1997, p. 420; see also Ehrlich, 1973; Hamilton, 1979; Tajfel, 1981). Failure to endorse such statements is typically assumed to indicate a low-prejudiced personality, but because the instruments were designed to measure prejudice, they do not directly measure low prejudice and completely neglect to consider non-prejudice. Phillips and Ziller state “Consequently, researchers have not been equipped to conceptually distinguish nonprejudice from low prejudice, and this subtle bias has gone unchallenged” (1997, p. 421). In the approach to prejudice research, what is asked is as important as how it is asked. Phillips and Ziller (1997) assert “the nature of knowledge is not independent of the method or approach to the knowledge domain. . . . Investigating
the nature of nonprejudice presents the possibility of a new, equally valuable and theoretically distinct, knowledge domain” (p. 420). The assumption that categorizing differences between the self and others results in prejudice, is reversed to classify non-prejudice based on similarities. In *Toward a Theory and Measure of the Nature of Nonprejudice*, Phillips and Ziller (1997) cite four research works emphasizing the rationale for attending to similarities rather than differences.

1. Being able to sort and classify in terms of similarity is fundamental to recognition, learning, and judgment (Shepp, 1978; Tversky, 1977; Tversky & Gati, 1978).

2. The ability to draw connections between differentiated stimuli, forming more wholistic dimensions or characteristics, is regarded as the key to the integration process (Goldstein & Blackman, 1978; Lewin, 1935; Schroder, Driver, & Streufert, 1967; Werner, 1948; Woike, 1994).

3. Integration ("connected knowing") the process of connecting oneself to others by seeing perceiver-object similarity and investigating individual differences in the use of differentiation and integration processes (Woike, 1994).

4. The perception of similarity between the perceiver and outgroup members has been linked to a reduction in intergroup discrimination and bias (Brewer & Miller, 1984; Dovidio, Gaertner, Iser, & Lowrance, 1995).

There have been some exceptions to the majority of research that has focused on the study of prejudice that preceded Phillips and Ziller’s (1997) theory and measure of non-prejudice. Allport noted

> It is disease more than health that interests the medical researcher. And it is the pathology of bigotry and not the wholesome state of tolerance that, as a rule, interests social scientists. It is not surprising, therefore, that we know less about tolerance than about prejudice. (1954, pp. 425-426)

Even though Allport’s *The Nature of Prejudice* is often cited for theory and research on the concept of prejudice, less noted is his chapter 16 on the “Tolerant Personality.”
Allport’s *Tolerant Personality* is the predecessor for Phillips and Ziller’s (1997) theory and measure of non-prejudice. Important components of the tolerant personality, according to Allport are empathetic ability (*Menschenkenntnis*), and the ability to “put oneself in another person’s shoes (*Menschenkenner*)” (Allport, 1954, pp. 435-436).

Listed below are many characteristics Allport attributed to the tolerant personality:

- “on friendly terms with all sorts of people. . .with no distinction of race, color, or creed” (p. 425)
- uninterested in group distinctions (p. 428)
- more likely to be liberal in political views (p. 431)
- more educated; there is a correlation, although—“not high”—that education “apparently helps engender tolerance” (p. 434)
- high degree of self-insight, ability to be self-critical, and tolerant of ambiguity (p. 436)
- sense of humor; “One who can laugh at oneself is unlikely to feel greatly superior to others” (p. 437)
- “intropunitive” - a tendency to look inward for responsibility, a feeling of genuine sympathy for the “underdog,” and “happiness in helping improve the lot of his [sic] fellow man” (p. 438)

Allport argued that prejudice is not an inevitable development in personality and even though he did not use the term non-prejudice, “it was surely his intent when he referred to ‘habitual open-mindedness’ (p. 24) in opposition to prejudice” (Phillips & Ziller, 1997, p. 420).

Phillips and Ziller (1997) proposed a theory and measure of non-prejudice. Non-prejudice was defined “as a universal orientation in interpersonal relations whereby perceivers selectively attend to, accentuate, and interpret similarities rather than differences between the self and others (cognitive integration vs. differentiation)” (p.
In the theory of non-prejudice, the principle that attraction between self and others is directly related to similarity between self and others is extended to include perceiving similarity as being directly related to a universal orientation.

The theory of non-prejudice is based on the premise that non-prejudice is obtained from acknowledging commonalities and similarities, rather than relying on categories and exaggerating differences.

In contrast to the study of prejudice, the study of nonprejudice is placed squarely within the broad area of interpersonal relations. Furthermore, we propose that orientation to similarity between the self and other (social integration) is critical to nonprejudice, whereas a difference orientation between self and other (social differentiation) sets the stage for prejudice. (Phillips & Ziller, 1997, p. 421)

According to Phillips and Ziller (1997), the key to non-prejudice might be the integration of the self and others. “Nonprejudice might be the cognitive integration of the self and others, which quite likely results from the continual connections one makes, or commonalities one sees, due to the universal orientation of selectively attending to and accentuating self-other similarities” (p. 429). Phillips and Ziller note that non-prejudice begins with an orientation toward similarities between the self and other, followed by an integration, or the perception of unity, between the self and other, leading to one then seeing the self-reflected in the other. Universal orientation avoids the separation of self and other, the negative evaluation process in interpersonal perception, and results in the integration of self and others.

To measure universal orientation and the extent of self-other integration, Phillips and Ziller (1997) developed a 20-item questionnaire Universal Orientation Scale (UOS). The UOS was developed to investigate the perceptions and judgments of universally-oriented people and non-prejudiced thought. The hypothesis behind the UOS is that
perceived similarity rather than actual similarity is the fundamental link to accepting, helping, understanding, and even reducing prejudice. This interaction of personality and cognitive processes, linked to the perception of similarities between the self and others is referred to as universal orientation. In two studies, participants rated photographs of persons differing in ethnicity. Universally-oriented participants were more accepting and less discriminating between minority and non-minority control targets than less universally-oriented participants. These two studies supposedly indicate the UOS is a reliable, valid instrument; however many questions remain unanswered. For example, do universally-oriented people gain the same sense of self from the various social groups to which they belong, or do they have expanded ingroups, seeing themselves or maintaining an identity that considers humanity as the ingroup? Markus and Kitayama (1991) support the concept that people who are universally oriented have a more interdependent sense of self. They claim

interdependent people tend to see themselves as connected with others rather than separate from others and that their experience is characterized by a heightened mutuality or awareness of the other and one's relation to others rather than the self's distinctiveness or uniqueness. (p. 427)

Research by Gaertner, Dovidio, and their colleagues (Dovidio et al., 1995; Gaertner et al., 1990) also supports the concept that universally-oriented people have expanded outgroups, making group distinctions less salient and less important to their sense of self. Their research advocates that a common, one-group identification with others reduces intergroup bias. The expansion of the ingroup to include a greater number of groups would increase identification with a greater number of people and should ultimately result in non-prejudice.
Subsequent to Phillips and Ziller’s research, Ponterotto et al., (2006) built on their theory of non-prejudice and integrated several theories into a concept described as the multicultural personality defined as:

an individual who is emotionally stable; is secure in her or his racial, ethnic, and other identities; embraces diversity in her or his personal life and makes active attempts to learn about other cultures and interact with culturally different people (e.g., friends, colleagues); has a spiritual essence with some sense of connectedness to all persons; has wide-reaching empathetic ability in multiple contexts; is self-reflective and cognitively flexible; has a sense of humor; effectively negotiates and copes with multiple roles and cultural contexts; possesses the ability to live and work effectively among different groups and types of people; understands the bias inherent in his or her own world view and actively learns about alternative world views; understands the impact of internalized racism (and homophobia) and unearned privilege in her or his personal life; and is a social activist, empowered to speak out against all forms of social injustice (e.g., racism, homophobia, sexism, ageism, domestic violence, religious stereotyping). (2006, p. 130)

The term multicultural personality was actually first used by Ramirez (1991) to describe individuals who could successfully negotiate and thrive in multiple cultures simultaneously. Ramirez’s work focused on helping culturally diverse clients develop bicultural skills and a multicultural orientation to life. Ramirez defines the multicultural personality as a “synthesis and amalgamation of the resources learned from different peoples and cultures to create multicultural coping styles, thinking styles, perceptions of the world and multicultural identities” (p. 26).

In 2006, Ponterotto et al. extended the multicultural personality theory further to build on racial and ethnic identity development studies and to integrate theory and research from social psychology, organizational psychology, feminist psychology, and African-centered psychology. Ponterotto stated, “The multicultural personality is hypothesized to correlate with both life success in increasingly culturally diverse environments (such as the United States) and with quality of life in general” (p. 131).
Seven areas form the foundation of Ponterotto’s multicultural personality model: 1) Racial and ethnic identity (Cross & Vandiver, 2001; Helm, 1990), 2) coping with cultural diversity within the US (Coleman et al., 2001), 3) Allport’s Tolerant Personality (1954), 4) Universal Diverse Orientation (Miville et al., 1999; short form-Fuertes, Miville et al., 2000), 5) an expansionist theory of gender roles (Fischer et al., 2000); 6) African-centered values and mental health (Grills & Longshore, 1996; Jones, 2003); and, 7) expatriate adjustment literature (Van der Zee & Van Oudenhoven, 2000). The final stages of several models of racial, ethnic, and gender development are the critical components of the multicultural personality.

In summary, Phillips and Ziller’s (1997) and Ponterotto’s (2004, 2006) research does not discredit previous prejudice research or discourage diversity initiatives. Instead, Phillips and Ziller state their research is intended to outline a theory of non-prejudice and to make a distinction between appreciation of differences and appreciation of similarities.

We cannot see how we are all alike until we have first learned to appreciate how we are all different. Such a realization or world view allows one to acknowledge without threat that we are all capable of evil, ignorance, stupidity, and weakness, just as we are all capable of goodness, insight, love, strength, and tolerance.” (p. 432)

The significance of Phillips and Ziller’s research is that their distinction between studying prejudice and non-prejudice highlights possibilities researchers previously overlooked. Of particular interest to this study were the concepts of non-prejudice and the universal diverse orientation (UDO) measure.
Models to Test Theory

Three models are used in this study: UDO, Miville et al., 1999), student involvement in diversity experiences (Pascarella, 2001), and the Input-Environment-Output model (Astin, 1993a).

Miville – Universal Diverse Orientation. The UDO concept was introduced by Miville and colleagues, who assert the “simultaneous recognition that people are both similar to and different from each other . . . forms the basis of universal-diverse orientation (UDO)” (Miville et al., 1999, p. 292). Miville et al.’s (1999) UDO construct also appears to be based on Phillips and Ziller’s (1997) work on universal orientation (cited earlier), which addresses the tendency toward multicultural tolerance through perceived similarities between the self and diverse others. The UDO construct has been cited in other research (i.e., Ponterotto, 2005; Singley & Seldacek, 2004; Fuertes, Miville et al., 2000). Ponterotto (2006) noted “the UDO model (Miville et al.), is perhaps the most focused” of the building blocks of the multicultural personality (p. 144). As opposed to measures of prejudice, which target negative attitudes of behaviors toward a specific group, “alternatively, it is useful to examine a person’s level of appreciation and acceptance of people and cultures that are different from her or his own . . . . UDO indicates a general desire to be involved with diverse cultures and people” (Singley & Seldacek, 2009, p. 404). Furthermore, Fuertes, Miville et al. (2000) emphasize:

An awareness of how people are alike and different is important to effective interactions with others. Such an understanding allows one to build an alliance with others on the basis of similarities (e.g., commonality of being human) while at the same time being able to accept and value others for being different than oneself (e.g., by race, gender, or sexual orientation). (p. 157)
Miville and her colleagues proposed the UDO construct to help explain differing attitudes people have toward others from diverse backgrounds. Similarities refer to those aspects of being human that are seen as common or universal between oneself and others. Differences refer to aspects that are unique or diverse among people, based on cultural and group member characteristics, as well as individual factors such as personality functioning. Miville et al. (1999) noted that commonality and diversity exist on a variety of levels (e.g., age, gender, race, abilities, and sexual orientation). Fuertes, Sedlacek et al. (2000) stated:

We know relatively little about diversity. Researchers have largely concentrated their studies on racial and ethnic identity, while attitudes toward diversity in terms of gender, sexual orientation, physical disabilities, and religious beliefs have not received equivalent scrutiny. (p. 48)

Miville et al. (1999) proposed that an awareness of people’s similarities and differences would allow one to bond with those who are similar and to accept, appreciate, and understand those who are different. UDO is the realization and acceptance that differences and similarities exist concurrently among diverse groups of people. UDO is defined as:

an attitude toward all other persons that is inclusive yet differentiating in that similarities and differences are both recognized and accepted; the shared experience of being human results in a sense of connectedness with people and is associated with a plurality or diversity of interactions with others awareness and acceptance of both the similarities and differences that exist among people. (Fuertes, Miville et al., 2000, p. 162)

Conceptually, UDO is “an awareness and potential acceptance of both similarities and differences in others that is characterized by interrelated cognitive, behavioral, and affective components” (Fuertes, Miville et al., 2000, p. 158). These components are interrelated and interact whenever a person seeks diversity of experience with others.
A person with UDO may seek a diversity of experiences with others (behavioral) because he or she values both similarities and differences among himself or herself and others (cognitive). These experiences might then reinforce UDO values and result in a sense of connection with others (emotional). (Miville et al., 1999, p. 292)

The construct of UDO reflects a level of multicultural awareness and an attitude of acceptance toward both differences and similarities among people. Higher UDO scores represent components of the multicultural personality (i.e., a higher, simultaneous appreciation of the similarities and differences in individuals culturally different than ourselves). A 45-item scale was developed to measure the construct called the Miville-Guzman Universality-Diversity Scale (M-GUDS). The M-GUDS consists of three interrelated subscales: Diversity of Contact (behavioral component), which reflects an interest in participating in diverse activities; the Relativistic Appreciation (cognitive component) to measure the impact of similarities/differences on one's self-understanding and personal growth; and, Sense of Connection (affective component) that reflects comfort with diverse individuals. Collectively, findings indicate that individuals high in UDO have correspondingly high levels of positive racial identity, healthy narcissism, empathy, feminist views, androgyny, multicultural-focused education, academic self-concept, interdependent self-construal (identified as a person who is connected, attentive, and responsive to others), self-efficacy, openness, positive thinking and coping skills, and correspondingly low levels of dogmatism and homophobia (Fuertes, Sedlacek et al., 2000; Miville, Rohrbacker, & Kim, 2004; Miville et al., 1999; Thompson, Brossart, Carlozzi & Miville, 2002; Yeh & Arora, 2003).

A short form of the M-GUDS was developed in 2000 by Miville et al., referred to as the M-GUDS-S. M-GUDS-S is a 15-item questionnaire with items rated on a 6-point
Likert-type scale ranging from strongly disagree (1) to strongly agree (6). M-GUDS-S produces a total score and scores from three, five-item subscales that assess the cognitive, behavioral, and affective components of UDO. In a new-student orientation survey, the short form predicted directions related to religious tolerance, attitudes toward gay and lesbian persons, and having close friends of another race (Fuertes, Miville et al., 2000).

A review of the literature indicates that most of the studies involving the UDO have been linked to counselor training and studies measuring empathy or personality development (Thompson et al., 2002). One study found significant relationships between UDO and “healthy attributes of personality,” but post hoc analyses indicated the demographic variables of age and education were also significantly correlated with UDO (Roberts, Laux, & Burck, 2005). Recent studies have used UDO to measure pre-college academic achievement with first-year students, transfer students, first-generation students, nursing students, international students (Padget & Johnson, 2012) and students in living-learning environments. A 2009 ACPA “Emerging Best Practices” award winner (France & Finney) used M-GUD-S to explore the effectiveness of orientation programming. However, a review of the literature only revealed one study researching differences in UDO by race/ethnicity and gender, and another study researching participation in campus diversity experiences on students’ UDO. Singley and Sedlacek (2004) contend “the concept of Universal-Diverse-Orientation (UDO) may provide an important new direction for assessment in diversity programming” (p. 84).

**Pascarella – diversity experiences.** As previously discussed, strategies to create a multicultural climate incorporates a wide range of models, programs, and methods. In addition, there are several theories relating to non-prejudice. However, there is limited
information on involvement in diversity activities as they relate to a measure of non-prejudice and/or UDO for a varied set of college students. Three key studies by Pascarella et al. (1996, 2001, 2006) and one instrument were the most relevant to this research study.

In one study, Pascarella et al. (1996) applied the college impact and college development theories of Astin (1993a) and Chickering (1993) in a model to study openness to diversity. They used four groups of college influences to predict openness to diversity: pre-enrollment student characteristics, institutional environment, student academic experiences, and student co-curricular experiences. Also of note from this study is Pascarella et al.’s finding that

Often, students' perceptions about their campuses may be just as influential as their experiences. Pascarella et al. (1996) determined that students' openness to diversity was influenced by the perception that their campus was nondiscriminatory, so there is empirical evidence that students' perceptions of the campus racial climate do have an influence on their attitudes about race and ethnicity in general. (p. 289)

In a second study, Pascarella et al. (2001) examined the net effect of 10 specific diversity experiences on end-of-first-year critical thinking for students grouped according to gender and race in 18 four-year institutions and five community colleges. In selecting these diversity experiences, Pascarella et al. utilized existing research on diversity experiences and general cognitive development (e.g., Gurin, Dey, Hurtado, & Gurin, 2002). A small body of research has examined the impact of diversity experiences on objective, standardized measures of students' cognitive development. For example, Gurin et al. (2002) found that discussing racial or ethnic issues had a significant, positive, net effect on the Analytical subtest score of the Graduate Record Examination, and Terenzini, Springer, Pascarella, and Nora (1995) reported that attending a racial or
cultural awareness workshop had a small but significant positive influence on end-of-first-year scores on a standardized test of critical thinking skills.

Of particular relevance to the current research study, Pascarella and colleagues (2001) developed an eight-question instrument about diversity experiences. These questions appeared in two surveys researchers used with college students. In the study, the number of diversity courses taken, and whether or not students had taken part in a racial or cultural awareness workshop appear in the demographics portion of the survey, while other items appeared in a separate section. A typical item included “Had serious discussion with students from a country different from yours,” and items were coded on a four-point scale, from 1 (never) to 4 (very often). Pascarella et al.’s (2001) survey instrument was used for this current research study.

Pascarella et al. (2001) found students' involvement in diversity experiences during college had statistically significant positive effects on their scores on an objective, standardized measure of critical thinking skills; but as noted in Table 2, different diversity experiences influenced critical thinking for students in groups based on gender and ethnic identity at different points in their college experience.

In the first-year analysis, eight of the 10 diversity experiences had significant net impacts on critical thinking for at least one subgroup. In the third year, only five of the 10 diversity experiences had at least one significant effect on end-of-third-year critical thinking. Taking diversity courses, making friends with students whose race was different from theirs, participating in a racial or cultural awareness workshop, making friends from another country, and having discussions with other students about different
lifestyles and customs had no statistically significant net impact on third-year critical thinking for any of the four subgroups (Pascarella et al., 2001, p. 258).

Table 2

*Effect of Diversity Experiences on Critical Thinking by Gender, Ethnicity, and Level*

<table>
<thead>
<tr>
<th>Diversity Experience</th>
<th>White Men</th>
<th>W-Wmn</th>
<th>Men/Color</th>
<th>Wmn/Color</th>
<th>Men</th>
<th>Wmn</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4-yr.</td>
<td>1st</td>
<td>3rd</td>
<td>4-yr.</td>
<td>1st</td>
<td>3rd</td>
</tr>
<tr>
<td>Participation in a racial or cultural awareness workshop</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having discussions with students whose political opinions were different</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having discussions with other students about major social issues</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Making friends with students of a different race</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having discussions with students from a different country</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having discussions about different lifestyles or customs</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having discussions with students whose philosophy of life or personal values were different</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having discussions with students whose religious beliefs were different</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In a third study, Pascarella (2006) found student characteristics and institutional characteristics can potentially affect student collegiate experiences and outcomes. This led to the conclusion that “diversity enables students to perceive differences both within groups and between groups and is the primary reason why significant numbers of students of various groups are needed in the classroom” (p. 360). Pascarella et al. (1996) and Whitt et al. (2001) concluded that interactional diversity experiences have a positive effect on openness to diversity (critical thinking) (Pascarella et al., 2001) and other desirable gains from college (Hurtado, 1999). “One of the major conclusions from the last decade on college impact is that, on balance, racial diversity enriches the postsecondary academic and social experience and enhances the intellectual and personal impact of college” (Pascarella, 2006, p. 511). The most recent study by Rude, Wlniak, and Pascarella (2102) found there is a significant change in students’ racial attitudes during the college years. This conclusion is supported by Gurin and Nagda (2004) and Antonio (2001), who assert that interaction with diverse peers in and outside the classroom is a crucial way in which diversity produces educational benefits for students. An awareness and acceptance of similarities and differences among students seems an essential “orientation” for any benefits to accrue for students in a multicultural college environment. One interesting question emerged from the literature on diversity experiences and student development: Does a person with a high level of non-prejudice engage in diversity activities more frequently, which then reinforces non-prejudice? The frequency with which students engage in and are affected by these diversity experiences may be explained in Astin’s (1993a) theory of Student Involvement.
Astin – Input-Environment-Outcome. The Astin I-E-O model is the skeletal framework that identifies the need for multiple inputs and environments that may influence universal diverse orientation. According to Astin’s (1993a) theory, students learn by becoming involved. Educators want to know how students learn and why some students change differently than others. Astin’s (1993a) model, one of the first college impact models, has become known as the Inputs-Environment-Outcome (I-E-O) model of change. In the higher education literature, the I-E-O model has been well tested in national studies to assess the impact of college on students. The I-E-O framework was designed to “produce information on how outcomes are affected by different educational policies and practices” (Astin, 1993a, p. 37). Several studies have used the I-E-O model as a lens to examine student behaviors and assess educational excellence. Astin (1993a) calls his alternative approach to educational assessment the “talent development conception of excellence,” noting “excellent institutions are, in this view, those that … add the most value, to the students’ knowledge and personal development” (p. 7).

According to Astin (1993a), for this excellence to occur in higher education, assessment activities can contribute to talent development through direct effects on the student and by indirectly enlightening the educator (p. 14).

Astin’s early studies indicated that educational assessment projects need data on student inputs, student outcomes, and the educational environment to which the student is exposed. In the I-E-O model, "outcomes," or student characteristics after exposure to college, are thought to be influenced both by "inputs," or student characteristics before and at the time of entry to college, and "environments," or various programs, policies, faculty, peers, and educational experiences that students are exposed to while in college.
The main purpose of the I-E-O model is to measure the effect of the environment by controlling for certain inputs. The I-E-O model allows researchers to examine students at two time periods: input and outcome. Researchers are then able to obtain information about what happened during the interim, between the input and the outcome time periods (Astin, 1993a).

Outcomes, refers to the “talents” we’re trying to develop in our educational program; inputs refers to those personal qualities the student brings initially to the educational program; and the environment refers to the students actual experiences during the educational program. Environmental information is especially critical here, since environment includes those things that the educator directly controls in order to develop the student’s talents. (Astin, 1993a, p. 18)

Astin’s I-E-O model addresses the complexities of research in higher education by stressing the interdependence between inputs, environments, and outputs. Astin also believed natural experiments were enhanced by the I-E-O model because of its focus on realistic experiences, versus artificially-created experimental environments. Furthermore, Astin (1993a) asserted that natural experiments allow the researcher to examine multiple effects simultaneously. These advantages are hindered by the lack of random assignment to educational environments, but result in a significant design trade-off. Despite this design trade-off, the I-E-O model is an assessment tool that allows researchers to examine phenomena holistically.

However, Astin contends that research examining how the college environment may influence student change or development will always be biased unless measures are taken to control for as many pre-college characteristics as possible. It is important for research to take into account the different stages of development and dissimilar backgrounds, aspirations, and values of students in forming conclusions about the impact of college on student outcomes.
Astin (1993a) defined inputs as the characteristics inherent to a student. These characteristics are most commonly demographic descriptors or personal qualities revealed in the student at the time of enrollment. These qualities are categorized into either fixed attributes or characteristics that change with time.

Astin (1993a) also suggested that researchers incorporate several measures of the college environment in their studies in order to understand the interaction of the student and the educational process. Environmental characteristics generally refer to institutional characteristics, curricular measures, faculty environments, student peer groups, and indicators of student involvement that attempt to demonstrate the many environmental variables that students are exposed to while in college. “In the broadest sense, the environment encompasses everything that happens to a student during the course of an educational program that might conceivably influence the outcomes under consideration” (Astin, 1993a, p. 81). Astin identified two types of environmental measures: characteristics of the total institution, and particular educational experiences within an institution.

“Outcomes are the desired aims and objectives of the educational program” (Astin, 1993a, p. 38). Astin (1993a) classified outcomes as either cognitive or affective in nature. The I-E-O model studies the relationship between the inputs and the environment in order to evaluate their separate and joint influence on an outcome (Astin, 1993a). In his use of the I-E-O model, Astin states, “outputs must always be evaluated in terms of inputs” (Astin, 1993a, p. 17).
Since this study followed the Astin I-E-O model, some previous research is briefly described to delineate the rationale for inclusion of several student inputs and college environment characteristics in the following sections.

**Input characteristics.** A review of the literature for this study indicates a limited number of studies on non-prejudice and the universal diverse orientation with college student characteristics. However, previous studies reference involvement theory and most of the 12 input characteristics this study used: (a) year in college, (b) major area of study, (c) gender, (d) race/ethnicity, (e) age, (f) sexual orientation, (g) religiosity, (h) [dis]ability status, (i) socioeconomic status, (j) political orientation, (k) participation in an NCBI workshop (voluntary or mandatory), and (l) self-rating of UDO.

The first two variables—year in college and major area of study—have been used in previous studies as a way to account for pre-college characteristics. Studies on students’ change during college indicate a difference between freshman and seniors in cognitive capabilities and skills (Pascarella & Terenzini, 1991). Zuniga, Williams, and Berger (2005) used Astin’s I-E-O model and decided on gender, race, socio-economic status, and year in college as the individual input characteristics likely to affect students’ motivation to “actively reduce their own prejudices” (p. 665). Fuertes, Seldlcek et al. (2000) correlated the universal diverse orientation among first-year university students and found that students with higher M-GUDS-S scores were less fearful of new experiences and diversity of contacts.

Pascarella and Terenzini (1991) found that a student’s major field of study creates a “sub-environment” that focuses intellectual efforts in a particular direction, which, in turn influences “the kinds of students and faculty with whom one interacts” (p. 614). The
impact of academic major has been shown to have more impact in cognitive areas than non-cognitive areas. A 2007 study assessed the cultural competency of engineering students using the M-GUDS (Bielefeldt & High, 2007). While the M-GUDS was considered valid, the results did not compare scores to other major areas of study, varied widely on the two campuses surveyed, and failed to correlate engineering skills with cultural competency. Springer (2006) controlled for socioeconomic status, parents’ education and degree aspirations and found that both sex and college major were significantly related to students’ pre-collegiate attitudes toward diversity on campus. Springer also found that students who participated in racial or cultural awareness workshops developed more favorable attitudes toward diversity on campus, which was significant because the students enrolled in conservative majors (especially males) started college with considerably less favorable attitudes toward diversity on campus.

The next six variables were included because they are the variables most used in previous studies on prejudice and because most colleges and universities have a non-discrimination policy that prohibits discrimination on the basis of gender, race/ethnicity, age, sexual orientation, religion, and/or [dis]ability. Gender, age, race/ethnicity, and sexual orientation have been used in previous studies on prejudice as a method to predict openness to diversity.

Prior literature on gender and prejudice indicates women have a higher openness to diversity than men (Pascarella et al., 1996; Pike, 2002; Whitt et al., 2001). Singley and Sedlacek (2009) found “women have significantly higher scores than men on two of the three M-GUDS-S subscales as well as the overall full scale score” (p. 407). According to Gilligan (1993), one explanation for the difference is that women focus more on
developing a sense of caring, intimacy, and interdependence. Gilligan believes women’s focus on these traits leads them to seek connection and attachment to others, which leads to an increased openness to diverse interactions. A more recent study, by Goodman and Salisbury (2009); controlled for the background characteristics of race, gender, parents’ educational attainment, and economic status, and used the M-GUDS to measure the development of intercultural effectiveness. Goodman and Salisbury found that being male produced a significant negative effect and White students made smaller gains on intercultural development.

Race/ethnicity has been the most studied aspect of prejudice research. Students of color have been shown to have a higher openness to diversity than White students (Pascarella et al., 1996; Pike, 2002; Whitt et al., 2001). Differences in race and openness to diversity have been explored by Helms (1995), who researched the racial identity development of students of color and White students. According to Helms, because students of color are more likely to be in a minority group within the dominant community, they more likely have developed diverse perspectives and openness to diversity by the time they reach college. This is less true of White students, particularly among those who have lived in relatively segregated environments. Other studies support the concept that there are differences in diversity perspectives by race/ethnicity and gender. Singley and Sedlacek (2009) suggest that students of color are more concerned about racial-ethnic relations because their minority status directly affects their campus life. Other campus climate studies have found that students of color have more negative campus experiences (Ancis, Sedlacek, & Mohr, 2000), perceive the campus social climate as less friendly (Greiger, 1996), and have a lower level of satisfaction with
campus life (Fisher & Moradi, 2001). Fuertes, Miville et al. (2000) compared racial-ethnic groups, expecting to find that racial and ethnic minority groups would have higher levels of UDO, but did not find a statistically significant difference between Anglo, Asian, and African Americans. In a single-institution study on students’ cognitive growth, Volkwein, King, and Terenzini (1986) used the student characteristics of age, socioeconomic status, intended educational goals, and campus diversity experiences as variables to study the effectiveness of racial and cultural awareness programs on the attitudes of White students. And Opp (2002) stated “Involvement theory suggests that policies and practices focusing on the retention of students of color should be more effective when they encourage high levels of interaction between students of color and college faculty and administrators” (p. 152).

Age has been studied as one facet of college student development, and increasing age has been found to be a significant demographic predictor of openness to diversity (Pascarella et al., 1996; Whitt et al., 2001). College student development theories have explored the ways in which increasing maturity and age are associated with accomplishing increasing levels of development, such as establishing identity and freeing interpersonal relationships (Baxter-Magolda, 2001; Chickering & Reisser, 1993; King, 2000).

Two studies link sexual orientation to UDO and diversity among college students, a dissertation that studied intellectual development and tolerance for diversity among college students (Guthrie, 1996) with sexual orientation as a variable and a study by Wade and Donis (2007) on sexual orientation, male identity and a universal diverse
orientation. Neither study examined the influence of diversity experiences on UDO by sexual orientation.

No studies were found specifically relating religion to non-prejudice. The idea of using religiosity (how religious a person is, not how a person does or does not practice religion) as a variable was based on two studies. One study examined UDO among first-year college students and used religiosity as a demographic variable (Spanierman et al., 2008). Religiosity was also studied by Allport (1954) when he asked more than 400 students “To what degree has religion been an influence in your upbringing?” (p. 451) Allport found that prejudice was higher among students who indicated religion was a slight or nonexistent factor. However, Allport cited other studies that indicated “individuals having no religious affiliation show on the average less prejudice than do church members” (1954, p. 451). Allport surmised that belonging to a church “is likely to be the mark of an authoritarian character and to be linked with prejudice” (p. 453). While a few studies examined particular religions in relation to prejudicial attitudes, no studies related non-prejudice to level of religious influence.

[Dis]ability has been added to the study as a result of a pilot test on a group of students not included in this study. In addition, discrimination based on disability was included as a protected class in most college’s non-discrimination policies following the adoption of Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination based upon disability. As a result, [dis]ability has been included as a demographic variable in several studies with college students, but no studies were found that used [dis]ability as a variable in relation to non-prejudice.
Singley and Sedlacek (2009) hypothesized that socioeconomic status, UDO, and perceptions of adjustment would predict life satisfaction, regardless of racial or ethnic background. However, they found the effects of UDO on the relationship between socioeconomic status and life satisfaction was supported only for White students. Sheu et al. (2009) concluded that attitudes toward diversity may play a different role in life satisfaction for Anglo-American students than for students of color.

Political and religious conservatism have been linked to attitudes toward outgroups and the potential threats they may represent (Marcus & Kitayama, 1991). Allport (1954) stated that the tolerant person’s political orientation “is likely to be liberal. . . .Prejudiced individuals are more often conservatives” (p. 431). Allport defined “liberal” as someone who “wants progressive social change,” “de-emphasizes rugged individualism and business success,” “would diminish the power of business by increasing the role of labor and government,” and “takes an optimistic view that human nature can be changed for the better” (p. 431). Feldman and Newcomb (1994) stated that the definitions of conservative and liberal vary with time and locality. They describe the label “conservative” as “applied to a person who believes in self-advancement by personal exertion and essential rightness of social and economic inequalities. . . .By contrast, the liberal. . . .position is one which favors change” (p. 19). Political orientation was included in this study to determine whether and if it impacts students’ UDO.

Voluntary or mandatory participation in an NCBI workshop was added as a variable because it may be related to openness to diversity. The reason students participate in an NCBI workshop has been added as an input characteristic because it is anticipated there may be a relationship between this characteristic and the student
outcome measure, and Astin (1993a) noted the importance of controlling for the effects of student input characteristics. Previous studies have indicated that students who choose to participate in diversity experiences generally have a more tolerant disposition.

Because some students will be more inclined (inputs) to participate in (the environment) than will other students, the outcomes associated with this participation may not reflect the impact of participation, but may simply represent differences in the characteristics of students who are likely to get involved. (Astin 1993b, p. 252)

Self-rating of UDO was included as an input variable as a way to control student inputs that could be related to both the outcome and environmental measures. Astin (1993a) noted “The most crucial inputs to include are pretests on the various student outcomes. When pretesting is not feasible for a particular outcome, a good substitute is to assess the students’ expectations for that outcome” (p. 80). Students’ self-assessment of their universal diverse orientation was the last input variable in this study.

High school achievement, as measured by a standardized test of academic achievement, is often included as an input characteristic, but it was not included because a review of the literature indicated it was only significant in predicting openness to diversity in the first year of college (Pascarella et al., 1996; Whitt et al., 2001). This finding is consistent with other studies noting that standardized tests predominantly predict only the first year of college experiences (Sedlacek, 2004).

*Environmental characteristics.* Characteristic of Astin’s studies are the environmental measures of between-institution variables, or structural characteristics of the institution (e.g., size, level, selectivity), which could affect all students at the institution, and within-institution variables, or more individual students’ experiences. Between-institution data pertaining to the entire institution can involve the use of mean
answers about a standard set of questions as a measure of the environment, whereas the within-institution data, in this study, including participation in diversity experiences and perception of campus climate, are student specific. Astin (1993a) stressed the importance of within-institution environmental data, stating “Perhaps the richest source of data on the students’ environmental experiences is the students themselves” (p. 85).

The between-institution structural characteristic of an ethnically diverse campus’ effect on enhancing students’ development has been noted in several ways: learning outcomes (Gurin et al, 2002), openness and understanding of diversity (Antonio, 2001; Astin, 1993b; Chang, 1999), higher levels of academic development (Milem et al., 2004), enhanced critical thinking (Pascarella et al., 1996), and intellectual self-concept (Chang, 1999). There is a vast amount of literature that encourages colleges and universities to promote interaction and to structure intercultural experiences among students as a way to further diversity and multicultural competence. Conversely, in a review of the impact of college on students, Pascarella and Terenzini (1991) note that structural features of institutions (i.e., size, control, selectivity, percentage of minority students) generally have only an indirect influence on students, their effects being mediated through experiences students have in the institution’s general environment.

Several studies are germane to environmental variables. One related study by Astin and Sax (1998) investigated how undergraduates are affected by service participation. While the analyses controlled for the student’s major as well as structural characteristics of the institutions studied, the variable of interest was the within-institution environmental variable of service learning. Even though the variable differs in this study, Astin and Sax (1998) raised several applicable issues. First,
Because some students will be more inclined (inputs) to participate in service (the environment) than will other students, the outcomes associated with this participation may not reflect the impact of service participation, but may simply represent the characteristics of students who are likely to get involved in service. (p. 252)

This is applicable to measuring UDO as well, and points out the need to control for student input characteristics. A second related issue addressed by Astin and Sax (1998) was the fact that the variable of central interest may also be partially confounded with college environmental variables: Some colleges or types of colleges may be more or less multicultural and diverse in orientation, location, and/or programming. Therefore, these college environmental characteristics will also be taken into account.

A final environmental block examines students’ perception of their campus environment and their motivation to participate in diversity experiences. Pascarella et al. (1996) noted that the extent to which students perceived that their college was nondiscriminatory, participated in racial and cultural awareness workshops, and interacted with diverse peers all predicted greater openness to diversity and challenge. Astin (1993b) incorporated three types of environmental measures relating to issues of diversity or multiculturalism: institutional diversity emphasis, faculty diversity emphasis, and student diversity experiences. According to Astin’s (1993b) study, the strongest positive effects of institutional diversity emphasis are on cultural awareness and commitment to promoting racial understanding. The strongest positive effects for direct student experience with diversity were on cultural awareness, commitment to promoting racial awareness, campus protests, political liberalism, listening ability, foreign language skills, and attending recitals and concerts. However, Astin (1993a) cautioned that “a problem with the perceptual approach to measuring environmental characteristics is that
the student’s perception of the college environment can be affected by what the environment is really like and by how the student has been influenced by that environment” (p. 88). Another environmental consideration was identified by Stephan and Stephan (2005), who noted that the success of diversity experiences and non-prejudice in students depends on several factors, including the skill of the facilitators, the receptivity of the audience, and the presence of possible precipitating events (such as a racial incident) that motivated the institution to seek outside consultation (i.e., NCBI). Therefore, students’ perceptions and the institutions’ motivation for NCBI campus affiliation are included as environmental considerations. Gurin and Nagda (1999) noted the college environment can combine numerous elements, but “the multicultural environment operates through students experiences” (p. 360).

**Summary of Literature Review**

There is a long history of attempting to understand prejudice and stereotyping, and to design structural experiences to counter prejudice and discrimination. For many students, higher education may be the first opportunity to experience a diverse community. “There are few places so well equipped to educate for diversity as colleges and universities and few times in life when individuals are as open to new experiences and change as during the college years” (Dalton, 1991, p. 1).

The college or university environment could provide favorable conditions to increase positive diverse interaction. Pascarella et al. (2001) found “diversity-related experiences can be a critically challenging element of students’ collegiate experience (p. 270). “Studies focusing on the impact of diversity initiatives (e.g., diversity courses, racial awareness workshops, intergroup dialogues) on student outcomes suggest that
participation in such programs is linked with positive socio-cognitive development and commitment to civic and racial engagement” (Zuniga et al., 2005, p. 660). It has also been shown that friends and peers are a significant source of influence on students’ openness to diversity (Pascarella et al., 1996). Studies on college campuses have found a positive correlation between increasing, positive cross racial/ethnic interaction and academic development (e.g., critical thinking) and satisfaction with college (Astin, 1993b; Helms, Sedlacek, & Prieto, 1998).

However, much less researched is the theory of non-prejudice, the concept of the multicultural personality, and of a universal diverse orientation (UDO). Measurement of prejudice has often focused on negative attitudes toward outgroups, without understanding the aspects and dimensions of non-prejudiced attitudes or universal orientations. As the college campus environment becomes increasingly diverse, it continues to be important to learn more about students’ diversity attitudes and behaviors. To more accurately gauge a campus climate for diversity, attention must focus on how students experience this increasing diversity. The literature review describes the concept of non-prejudice and UDO as the ability to accept individuals for who they are, to appreciate and respect differences and the practice of diversity-related actions that educational leaders increasingly believe is a critical goal of higher education.

Singley and Sedlacek (2009) noted that measuring the presence or absence of prejudice may not be enough to develop constructive campus diversity programs . . . the concept of UDO might be useful to guide campus diversity programming efforts . . . UDO represents a simple yet comprehensive assessment of individuals’ attitudes regarding diversity” and may help determine the areas of greatest need [on college campuses]. (p. 84)
An awareness and acceptance of similarities and differences among people seems essential to accrue the benefits of a diverse university environment. Studies by Chang (1999) noted that there is a greater probability of socializing with someone of another racial group within a diverse setting. Having a better understanding of the relationship between UDO and diversity experiences may be explained in Astin's (1993a) theory of Student Involvement, which states that students learn by becoming involved.

“Consideration of students’ levels of UDO may offer additional information about students’ appreciation for cultural differences that will be useful for student development staff when creating diversity awareness and sensitivity training programs” (Fuertes, Sedlacek et al., 2000, p. 55). The current study investigated whether the influence of students' involvement in diversity experiences has a positive association with the ability to appreciate similarities and value differences.

One of the major conclusions from the wide body of research is that diversity experiences enrich the academic, social, intellectual, and personal impact of college for students. The current study seeks to link the previous studies on diversity experiences with universal orientation among college students in a variety of college environments. In this way, this study hopes to advance research by providing new information on whether participation in diversity experiences fosters increased awareness and acceptance of the similarities and differences among and between people diverse in the higher educational environment. As a result, this study hopes to provide guidance for institutional policies and contribute to the knowledge about the influence of diversity experiences with a measure of awareness and acceptance of both the similarities and differences among people.
Chapter Three

Methodology

This chapter describes the conceptual framework, research methodology, and design of this research study, exploring the influence of diversity experiences on students’ Universal Diverse Orientation (UDO). This chapter also includes a clarification of the sample and population to be studied as well as the instrumentation to be utilized. In addition, the procedures for collection of data and an explanation of the data analysis are covered.

Research Questions

The following four research questions were investigated:

1. What influence, if any, do student characteristics (age, year in college, gender, race/ethnicity, sexual orientation, major area of study, socio-economic status, political orientation, and religiosity) have on students’ UDO?

2. What influence, if any, do institutional characteristics (size, location, type [two/four-year, public/private], racial/ethnic composition [student body, institution], and reason for offering NCBI) have on students’ UDO?

3. What influence, if any, does involvement in diversity experiences have on students’ UDO?

4. What influence, if any, do students’ perceived attitudes about the multicultural environment of their campus climate have on students’ UDO?

Hypotheses

A review of the literature did not reveal any previous research on students’ UDO and the impact of college diversity experiences. Due to the lack of research conducted in
this area, this study investigated the influence of student characteristics, institutional characteristics, involvement in diversity experiences, and students’ perceived attitudes about the campus climate on students’ UDO. The following hypotheses were developed:

- Student characteristics and institutional characteristics will have little, if any, influence on students’ UDO.
- Involvement in diversity experiences and perceptions of a “multicultural” campus climate will be predictive of high UDO.

**Data Analysis Framework**

Astin’s (1993a) Input-Environment-Outcome (I-E-O) model provided the data analysis framework that guided this study. The I-E-O model “provides a powerful framework for the design of assessment activities and for dealing with even the most complex and sophisticated issues in assessment and evaluation” (Astin, 1993a, p. 16). The I-E-O model provides a method to categorize factors that may influence student outcomes and development. Additionally, the model provides researchers a tool to assess the influence of input and environment factors on student outcomes and to study the correlation between inputs and outputs, and between environments and outputs. The I-E-O model emphasizes relationships among three types of variables: inputs (demographic characteristics and background characteristics that students bring with them to college), environments (college experiences and environments that students encounter during college), and outcomes (student outcomes at the end of their college experience). This model posits that student outcomes are a function both of inputs and environments. While the inputs are presumed to affect outcomes directly, they are also expected to affect outcomes indirectly through ways in which students engage with their
environments. Thus, while the main focus of the I-E-O model is on college impact, the model adjusts for the confounding effect of students’ pre-college characteristics.

This research study uses Astin’s (1993a) I-E-O model to understand how students’ UDO may be influenced by participation in diversity activities. Using the I-E-O model to study change and development among college students involves studying the impact of one type of activity (i.e., involvement in diversity experiences) on an outcome (i.e., higher UDO) while accounting for other background and college environment characteristics known to affect the outcome (i.e., students’ personal circumstances and previous experiences).

Astin’s (1993a) data analysis framework, the I-E-O model, was used to group and analyze the variables for this research study. The I-E-O model was chosen for this research in order to examine the influence of background traits and collegiate experiences on student learning outcomes. This study used the I-E-O model to examine the possible relationships between the input (student characteristics), three environmental aspects (institutional characteristics, diversity experiences, and perception of campus climate), and the selected output (UDO) variables. For this study, the input (I) component includes 13 student characteristics. The environmental (E) component includes six institutional characteristics, 11 diversity experiences, and five questions about campus climate. The output (O) measure is the student’s score on the M-GUD-S.

**Input variables.** A key to successfully using Astin’s I-E-O model is controlling for student inputs in order to avoid the biasing influence of these variables while interpreting the influence of the environment on the outcomes. Furthermore, controlling for inputs minimizes errors in assessing the environmental effects on the outcomes being
studied. “Any application of the I-E-O model to assessment data requires the inclusion of input data for two basic reasons: (a) inputs are always related to outputs; and (b) inputs are almost always related to environments (educational programs and practices)” (Astin, 1993a, p. 64).

Astin (1993a) defined inputs as personal characteristics that are either fixed or that change with time. Examples of fixed student characteristics include demographic characteristics such as racial/ethnic background and gender. Examples of characteristics that can change with time are aspirations, values and attitudes, and other measures such as religious preference or practice. Astin considered a pre-test as one of the most crucial inputs to include in a research study. However, Astin noted that when a pretest is not an option, one solution is to obtain students’ predicted or expected self-rating on the output measure. Therefore, one of the input questions of this study asks students to self-rate their UDO.

This study examined 13 input variables: (a) self-rating of UDO, (b) year in college, (c) major area of study, (d) gender, (e) race/ethnicity, (f) age, (g) sexual orientation, (h) socioeconomic status, (i) political orientation, (j) religiosity, (k) spirituality, (l) [dis]ability status, and (m) participation in the NCBI workshop (voluntary or mandatory). The first input measure, students’ self-rating of UDO, was added as a substitute for a pretest as a way to minimize bias in assessing the impact of the college environment on student outcomes.

The next eight variables were chosen for inclusion in this study because they represent value, attitude, and educational background characteristics that are often included in definitions of multiculturalism and/or have been used in previous studies of
prejudice as a way to account for pre-college characteristics. Religiosity (i.e., students’ self-reported level of practice in organized religious services) and spirituality (i.e., students’ self-reported level on the role of spirituality in every-day life) were included following a literature review. [Dis]ability has been added to the study as a result of a pilot test on a group of students not included in this study. The final input measure, voluntary or mandatory participation in an NCBI workshop, has been added because it is anticipated a relationship may exist between this characteristic and the student outcome measure.

**Environmental variables.** Environmental variables measure a wide continuum of college experiences and environmental experiences that students encounter during college. An advantage of an environmental assessment is being able to measure the continuum of experiences to which students are exposed. “In its broadest sense, the environment encompasses everything that happens to a student during the course of an educational program that might conceivably influence the outcomes under consideration” (Astin, 1993a, p. 81). According to Astin, the continuum of environmental experiences can range from the entire institution to more specific or “proximate” experiences for the student, making environmental assessment the most difficult, neglected, and complex challenge in the field of assessment. This range of experiences presents two challenges researchers must address when assessing any student’s environmental experiences. The first challenge is “to define the person or thing on which we focus our attention” (p. 81), otherwise known as the unit of observation. The second challenge in assessing the student’s environment is to somehow account for the fact “that any student’s environment is, to a certain extent, self-produced” (p. 83). In other words, students can make
decisions and create their own experiences within their chosen educational environment. As a result, Astin has suggested it is “unrealistic to enumerate, much less measure, all or even most of the important self-produced environmental experiences that a typical college or university student might encounter” (p. 83). Astin noted that these two challenges are related. “The source of environmental data is related to the unit of observation and the problem of self-produced environmental variables” (p. 85).

While environmental data can be obtained for an institution by using “the mean answer of a standard set of questions from a sample of people at the institution as the measure of the environment” (Astin 1993a), Astin argues that “perhaps the richest source of data on the students’ environmental experiences is the students themselves” (p. 85). Data from individual students can be aggregated to produce environmental measures to describe the characteristics of groups of students. Multi-institutional studies in which different institutions are being compared and contrasted, can also “be aggregated by institution to produce scores describing the entire student body” (p. 85).

According to Astin (1993a), there are two broad classes of environmental measures: (a) between-institution environmental variables, which are “the characteristics of the total institution (its size, selectivity, etc.) which can, in theory at least, affect all students at the institution, and (b) the particular educational experiences within the institution” (p. 85), called within-institution variables. Between-institution environmental variables refer to structural characteristics of the institution, such as size, selectivity, highest level of degree offered, or geographic region. Between-institution measures can assess an individual student’s environmental experiences or student characteristics based on the average characteristics of other students in that environment.
When assessing an individual student’s environmental experience, it is possible to “confound outcomes with environments” (p. 88).

A problem with the perceptual approach to measuring the environmental characteristics is that the student’s perception of the college environment can be affected both by what the environment is really like and by how the student has been influenced by that environment. (Astin, 1993a, p. 88)

Within-institution measures refer to the “particular educational experiences within the institution . . . to which only some of the students at a given institution are exposed” (Astin, 1993a, p. 85). Astin has suggested that “the most important type of environmental information comes from within-institution experiences to which some, but not all, students are exposed . . . it offers the greatest opportunity for learning how particular educational experiences affect student development” (p. 93).

This study has three environmental blocks. The units of observation span the continuum of environmental experiences. One environmental block involves the entire institution, and the other two are more proximate to the student experience. The first block is composed of common, structural characteristics of an institution that may be pertinent to this study. The second block, diversity experiences, and the third block, student’s perception of the multiculturalism of their campus, are more proximate measures and use the perceptions of students themselves as the source of environmental data. “The more proximate the measure is to the student, the greater the significance that measure is likely to have for most student outcomes” (Astin, 1993a, p. 82). The second and third blocks are within-institution variables and, therefore, “offer the greatest opportunity for learning how particular educational experiences affect student development” (p. 93). The institutional characteristics block was included to help avoid confounding outcomes with environments. The other two environmental blocks—
diversity experiences and perception of climate—are included in this research study to determine their influence on the outcome and how these particular educational experiences affect student development and possibly, educational programming.

**Outcome variable.** The I-E-O model is specifically designed to determine how the educational environment influences the student outcome under investigation.

“Outcomes refer to those aspects of the student’s development that the institution either does influence or attempts to influence through its educational programs and practices” (Astin, 1993a, p. 38). As for assessing outcomes, Astin notes that outcome measures are value based, and it is important to determine from whose perspective the outcome is being assessed. The term *outcome* is used to refer to student’s performance on an outcome measure at a particular point in time and does not delineate any pre-causal factors that may account for that performance (Astin, 1993a). Specific to this study, Astin has suggested that outcome assessment should include affective measures.

Concern for others is one of the qualities that higher education institutions should try to foster in their students. Under these conditions it would seem appropriate for any attempt at outcome assessment to include measures of qualities such as empathy, concern for others, tolerance, and social responsibility. (1993a, p. 58)

Astin believed these qualities and personal values were important so that higher education institutions could design programs and practices to influence student development.

As previously defined, the output characteristic for this study is students’ UDO as measured by the M-GUDS-S. This is a short-term, affective study, and it is from the student perspective. The M-GUDS-S was selected as the outcome measure for this study because it is designed to assess the construct of UDO in less time than the M-GUDS. The M-GUD-S was also chosen because it includes measures of qualities, such as
“concern for others,” and personal values, such as “helping to promote racial understanding” (Astin, 1993a, p. 61).

Miville et al. (1999) conducted four studies to create an instrument to measure the UDO construct and to establish initial evidence for the reliability and validity of the scale. The Miville-Guzman Universality Diversity Scale (M-GUDS) was developed by Miville et al. (1999). The M-GUDS is a 45-item Likert-type scale consisting of three interrelated subscales: Diversity of Contact (behavioral component) that reflects an interest in participating in diverse activities; the Relativistic Appreciation (cognitive component) that measures the impact of similarities/differences on one's self-understanding and personal growth; and, Sense of Connection (affective component) that reflects comfort with diverse individuals. The M-GUDS is interpreted as a single factor, and the total scores range from 45 to 270. High scores on the M-GUDS indicate higher levels of UDO (i.e., simultaneous appreciation of the similarities and differences in individuals culturally different than their own). The M-GUDS requires 15 to 25 minutes for completion. Sample items include “I can best understand someone after I get to know how he/she is both similar and different from me” and “It’s really hard for me to feel close to a person from another race” (reverse scored). Collectively, findings indicate that individuals high in UDO have correspondingly high levels of positive racial identity, healthy narcissism, empathy, feminist views, androgyny, multicultural-focused education, academic self-concept, interdependent self-construal (i.e., a person is connected, attentive, and responsive to others), self-efficacy, openness, positive thinking, and coping skills, and correspondingly low levels of dogmatism and homophobia (Fuertes, Miville et
Following construction of the M-GUDS, Fuertes, Miville et al. (2000) constructed a short form to measure UDO, referred to as the M-GUDS-S. The M-GUDS-S is a 15-item questionnaire with items that are rated on a 6-point, Likert-type scale ranging from strongly disagree (1) to strongly agree (6). The M-GUDS-S produces a total score and scores from three, five-item subscales. The three subscales that assess the respective cognitive, behavioral, and affective components of UDO are (a) relativistic appreciation of oneself and others, which involves recognition and acceptance of the similarities and differences among people, (b) diversity of contact, which assesses both previous and future intended behaviors relevant to interpersonal contact with people of different demographic backgrounds, and (c) sense of connection, involving the emotional bond one feels with the larger society or humanity as a whole. A study by Fuertes, Miville et al. provided evidence that scores on the M-GUDS-S may offer researchers three advantages over the original scale. First, the M-GUDS-S requires less time for completion, but measures as well as the longer form. Second, the “factor structure scores on the short form and the relationship among its scales are more clearly delineated” (p. 167). Third, the M-GUDS-S allows for an analysis of the UDO subscale scores. The short form correlated in predicted directions with items from a new student orientation survey related to religious tolerance, attitudes toward gay and lesbian persons, and having close friends of another race. Fuertes, Miville et al. also demonstrated construct validity of the M-GUDS-S through a confirmatory factor analysis.
Research Methodology

The research design for this study was quantitative in nature. The primary method of data collection was a 47-question survey. The primary goal of this study was to investigate a college/university’s effects on the development of students UDO, while controlling for student background and institutional characteristics.

The data collected from the surveys was used to conduct a blocked form of stepwise regression analysis to determine which variables predict students’ scores on the M-GUDS-S—measure of UDO (dependent variable). To statistically analyze the relationships, the predictor variables of this study were grouped into five blocks and entered in the following order:

- self-rating of UDO,
- students’ characteristics,
- institutional characteristics,
- students’ diversity experiences, and
- students’ perceived attitudes about the multiculturalism of their respective campus climate.

Research Design

The study will adapt the I-E-O model with students as inputs (I), college or university as environments (E), and the measure on the M-GUDS-S as the output (O). The primary goal of the procedure is to control for input variable effects and to determine whether any of the college environmental variables or diversity experiences influences students’ multicultural personality as measured by the M-GUDS-S.
Figure 1 illustrates the I-E-O data analysis framework for this study. The input (I) or control variables included two self-rating of UDO questions and 12 student characteristics questions. The environmental (E) components, or independent variables, included eight institutional characteristics, 11 diversity experiences as measured with Pascarella et al.’s (2001) 11-item questionnaire about specific diversity experiences, and seven questions to measure students’ perception of diversity of campus climate modified from an Astin (1993b) study. The output (O) measure (or dependent variable) is the degree to which students demonstrated characteristics of a multicultural personality as determined by their scores on the M-GUDS-S (Fuertes, Miville et al. 2000).

Figure 2. The I-E-O format provided the framework for the research design. The inputs consist of students’ self-rating of Universal Diverse Orientation (UDO) and student characteristics. The environmental variables consist of institutional characteristics, diversity experiences, and perception of climate. The output is students’ UDO as measured on the Miville-Guzman Universal Diversity Scale Short form (M-GUDS-S).
**Population**

The population consisted of students participating in a National Coalition Building Institute (NCBI) one-day “Welcoming Diversity/Prejudice Reduction Workshop” from 52 undergraduate colleges and universities nationwide. Currently, there are 52 NCBI Campus Affiliates. Ten campus affiliates are at community colleges (19%), and three campus affiliates are at technical colleges or universities (6%). Thirty-nine of the campus chapters are at four-year colleges or universities (75%). Of these, 11 (21%), are private and 28 (48%) are public or state institutions. A complete list of NCBI Campus Affiliates used in this study appears in Appendix B. NCBI recommends a maximum of 30 participants to attend the one-day workshop. Participants generally include faculty, staff, and students from a wide range of diverse backgrounds. Participation in the workshop is usually voluntary; however, there are occasionally mandatory sessions.

The sample was drawn from the aforementioned population and included ‘healthy’ undergraduate college students, 18+ years old, who attended a “Welcoming Diversity/Prejudice Reduction Workshop” at an NCBI Campus Affiliate and who completed a 10-15 minute survey. Minors, faculty, staff, and/or graduate students were excluded. The research was not limited to any particular age, gender, ethnic, or racial group and did not include any vulnerable populations targeted for subject recruitment. The survey’s directions offered participants an opportunity to opt out of the research. Subjects did not incur any financial obligations as a result of participating in this research with the exception of 10-15 minutes of their time. Also, each participant received an
“Erase Hate” wristband from the Matthew Shepard Foundation as an incentive for their participation.

Subjects were not directly recruited by the researcher. Intact groups were used at campuses with an NCBI affiliation. Contact (e-mail and phone call) was with the NCBI coordinator at each campus. The coordinator or workshop facilitator distributed the surveys, cover letter, and pre-addressed postage-paid return envelopes. In addition, the coordinator/facilitator was asked to respond to two environmental questions as to why his/her campus became an NCBI Campus Affiliate, rate the degree of diversity on his/her campus, and indicate whether the survey was distributed prior to the start of the NCBI workshop as preferred.

It was anticipated that half of the 52 Campus Affiliates (26) would participate in the research, and half of the 30 students (15) from these participating institutions would complete the surveys. As such, the sample was estimated to include a minimum of 390 student surveys. The minimum number of participants required for this study was 300 completed surveys.

**Instrumentation**

The survey instrument consisted of an original, four-page, paper-based, 47-item questionnaire. The survey instrument was constructed from four components: (a) student UDO self-rating (two questions) and student demographic information (12 questions), (b) two survey instruments, including 11 questions developed by Pascarella et al. (2001) about diversity experiences and the M-GUDS-S 15-item short-form version (Fuertes, Miville et al., 2000), and (c) seven questions adapted from the literature (i.e., Astin, 1993a) designed to elicit students’ perceptions of the multicultural climate of their
campus. A pilot test of the survey instrument was administered prior to an NCBI workshop at a campus without an NCBI affiliation to clarify items to be used on the survey. After the original 30 questionnaires were reviewed, changes were made to the survey instrument that was used in this study. Institutional characteristic questions related to this study were not included on the survey instrument. The institutional characteristics questions describe standard, widely accepted institutional features and were obtained from the National Center for Educational Statistics (NCES).

Preliminary questions regarding students’ self-rating of UDO were formulated following a review of the literature (i.e., Astin, 1993a; Miville, 2000) as a substitute for a pretest. The student demographic information questions were chosen for inclusion in this study because they represented characteristics often included in definitions of multiculturalism and/or have been used in previous studies of prejudice to account for pre-college characteristics. The two existing survey instruments (i.e., Pascarella et al., 2001; Miville et al., 2000) were chosen for inclusion in this survey for their relevance and after securing permission from the authors. The survey by Pascarella et al. was designed to study whether diversity experiences influence critical thinking, but since the questions were used in a previous study regarding diversity experiences, their inclusion in this survey was applicable for a different outcome measure.

Survey questions that relate to the students’ perspective of their institution’s multicultural environment were adapted from a national study that explored the relationship between students’ perceptions of their campus climate and campus diversity policies (Astin, 1993a). Astin’s (1993b) study incorporated three types of environmental measures, including institutional, faculty, and student diversity emphasis. In Astin’s
(1993b) study, the institutional diversity responses were obtained from faculty; in this study, an adaptation of these questions was posed to students. The questions exploring students’ perceptions of their campus multicultural climate were included in the survey after conducting a review of the literature and because they might be significant to the outcome measure.

Finally, the questions for the outcome measure were taken directly from the M-GUDS-S (Fuertes, Miville et al., 2000). The short form has been shown to be a reliable and valid instrument in other studies and was included in the final section of this survey instrument to limit the length of the questionnaire. Since this study was interested in examining the effect of overall level of UDO, the total score yielded by the M-GUDS-S were used for analyses. Table 3 is formatted to depict the structure of the survey.

Table 3

Portrayal of Survey Questions Accompanied by Topic and Source

<table>
<thead>
<tr>
<th>Question Number(s)</th>
<th>Topic</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 &amp; 2</td>
<td>Self-rating of UDO</td>
<td>Adapted from Miville (2000)</td>
</tr>
<tr>
<td>3 – 13</td>
<td>Diversity Experiences</td>
<td>Pascarella et al. (2001)</td>
</tr>
<tr>
<td>14 – 28</td>
<td>M-GUDS-S</td>
<td>M-GUDS-S (Fuertes, Miville et al., 2000)</td>
</tr>
<tr>
<td>29 – 40</td>
<td>Demographic information</td>
<td>Previous studies</td>
</tr>
<tr>
<td>42 – 47</td>
<td>Perception of campus multiculturalism</td>
<td>Adapted from Astin (1993b)</td>
</tr>
<tr>
<td>+</td>
<td>Institutional characteristics</td>
<td>NCES</td>
</tr>
</tbody>
</table>

See Appendix A for a copy of the survey instrument.

**Reliability and validity.** Results of studies by Miville et al. (1999) and Fuertes, Miville et al. (2000) have shown that the M-GUDS and M-GUDS-S have high levels of reliability, both internally and over time, “although the latter emerged from only one small sample. Construct validity of the M-GUD-S was evidenced in the pattern of
correlations between the M-GUDS and a number of other scales” (Miville et al., p. 303).
To examine the construct validity of the M-GUDS, Miville, Romans, Johnson, and Lone (2004) conducted an exploratory factor analysis of the 45-item scale. The results of their analysis suggested that a significant proportion of variance from the M-GUDS scores can be accounted for by a single general factor. A subsequent examination of subscale correlations showed significant inter-correlations between .65 and .69 (Miville et al., 1999). Scores on the M-GUDS-S from a heterogeneous sample of college students had a reliability coefficient of .93 and a test-retest reliability of .94. “Although criterion-related validity was not a focus of Miville et al.’s (1999) investigations, some evidence of criterion-related validity is available using Walsh and Betz’s (1990) Group–Differences Approach” (Burkard, Boticki, & Madson, 2000, p. 346). Across the four studies, Miville et al. (1999) examined the concurrent, convergent, and discriminate validity of the M-GUDS. An examination of the correlation patterns between the M-GUDS-S and several other scales produced significantly positive correlations with androgyny, empathy toward others, healthy aspects of narcissism, positive attitudes toward feminism, and positive aspects of African American and White racial identity. Significantly negative correlations emerged with dogmatism (closed-mindedness), negative attitudes toward gays and lesbians, and the more negative aspects of African American and White racial identity attitudes. Among White respondents, it was also found that M-GUDS scores did not correlate significantly with SAT verbal scores, the Fantasy and Personal Distress subscales of the Empathy Scale (Davis, 1983), or social desirability scores. “Convergent and discriminate validity scores indicate that the M-GUDS-S is significantly related to measures of racial identity, homophobia, dogmatism, feminism, and androgyny in
theoretically expected ways; it is not significantly related to SAT scores” (Fuertes, Miville et al., p. 158). The series of four studies presented evidence of the validity of the M-GUDS-S and indicated that the research value of the instrument is potentially high.

Miville, Romans et al. (2004) found that UDO was significantly related to a variety of wellness variables such as self-efficacy, coping skills, and positive thinking; they suggested that UDO might be linked with personality traits, particularly with those related to the successful functioning of the individual. “However, no study has yet linked UDO with personality traits” (Thompson et al, 2002, p. 327). With respect to social desirability, mixed results were obtained.

That is, with respect to UDO, it is likely that most people would like to believe they are ‘tolerant’ of others. But the extent to which they truly and consistently experience and express ‘tolerance’ and genuine acceptance of others who are different from themselves is another matter. (Thompson et. al., 2002, p. 304)

The short form of the M-GUDS-S was created by selecting the five highest structure coefficients in each of the three subscales. “The correlation between the total score of the short form and the long form was .77 (p < .001), indicating considerable overlap and shared variance between the two forms” (Fuertes, Miville et al., 2000, p. 163). Scores on the M-GUDS-S from a heterogeneous sample of college students had a reliability coefficient of .93 and a test-retest reliability of .94. Overall estimates for the M-GUDS-S have been found to range from .89 to .95. A series of four studies by Fuertes, Miville et al. (2000) presented evidence of the validity of the M-GUDS-S and indicated that the research value of the instrument is potentially high: “Convergent and discriminate validity scores indicate that the M-GUDS-S is significantly related to measures of racial identity, homophobia, dogmatism, feminism, and androgyny in theoretically expected ways; it is not significantly related to SAT scores” (p. 158).
It is expected that this survey instrument would have face validity because the majority of questions included in the survey consist of preexisting survey items from previous research studies. In addition, the outcome measure in this study, the M-GUDS-S, has been shown to be adequately reliable and valid (Fuertes, Miville et al., 2000).

**Procedures**

The risk classification of this study was minimal with a low likelihood of adverse events. To minimize any risks or discomforts, participants were informed that participating in the study was voluntary. Participants were also informed that they would be asked questions about sexual orientation and attitudes concerning other races/ethnicities, but they were free to stop answering questions at any time. Aside from the incentive of a wristband, the primary benefit to students who participated in the research was that others might benefit by learning about the results of this research. If students were interested, they had the opportunity to e-mail the researcher to receive an executive summary of the research. Potential benefits are the advancement of knowledge about the variables that contribute to non-prejudice and multiculturalism on college campuses and/or possible benefits to campus administrators and future students. The potential for advancement of knowledge outweighs the minimal risk that completing a 10-15 minute survey might cause.

Following a proposal defense and the human research approval process, each campus with an NCBI Campus Affiliate was contacted via e-mail to identify the coordinator and ascertain the schedule of upcoming “Welcoming Diversity/Prejudice Reduction Workshops.” A follow-up included a telephone contact and a second e-mail with a video link that explained why this study is important. Once contact was
established, each campus facilitator was sent 30+ surveys and cover letters, including
informed consent information and self-addressed postage-paid envelopes for each survey.
NCBI coordinators are jointly authorized by NCBI and generally appointed by their
institutions to be the contact regarding NCBI workshops, a responsibility that may or may
not appear in their job descriptions. Facilitators are students, faculty, staff, and/or
administrators who have completed a three-day “Train-the-Trainer” workshop in order to
lead the one-day “Welcoming Diversity/Prejudice Reduction Workshop.” Additional
surveys were sent to the same institutions for distribution at subsequent workshops in
order to obtain the minimum of 300 surveys required for this study.

Data collection consisted of utilizing the facilitator of the earliest scheduled
“Welcoming Diversity/Prejudice Reduction Workshop” at each of the 52 participating
college campuses with an NCBI chapter to distribute the 47-item survey to the group of
participants. Each participant received a survey, cover letter, and self-addressed-
postage-paid envelope prior to the start of the workshop. The cover letter to the survey
invited undergraduate students to participate in this research study, assured participants of
the confidentiality of their responses, and provided the researcher’s e-mail address for
questions. To minimize discomfort, participants were informed that certain questions
might cause them to be uncomfortable, but that they were free to discontinue
participation at any time. To assure confidentiality, there was no personally identifiable
information beyond institutional affiliation. Participants were directed to individually
place their completed surveys in a pre-addressed, postage-paid envelope and personally
mail the envelope to the researcher. In addition to thanking respondents, the cover letter
provided participants with contact information for the chairpersons of this research study and of the Institutional Review Board at the University of Toledo.

Assurances were also guaranteed for the records obtained from the National Center for Educational Statistics (NCES) for the environmental block on institutional characteristics, as the records reviewed were limited to institutional characteristics (i.e., size, location, level of degree offered, public or private, religious affiliation, composition of student body), and the researcher had no contact or interaction with the subjects from whom the data were collected or record with any identifiers that could potentially identify human subjects.

The timeframe for collection of data from the surveys was August, 2011 through February, 2012. The timeframe of the records reviewed for the institutional characteristics was from the 2010 NCES institutional data available for participating institutions.

Data Analysis

Regression analysis was used to explore possible correlations between independent and dependent variables and to answer the research questions. In multiple regression analysis, variables are entered into the regression model one at a time in a temporal sequence. The first variable selected for inclusion into the regression model is the predictor variable that has the highest correlation with the criterion variable. The next predictor variable selected is the one with the highest partial correlation with the criterion variable, with the effects of the first variable removed. This variable will result in the predictor variable that accounts for the greatest amount of the remaining variance in the criterion variable after the effect of the first predictor variable has been removed. The
next predictor variable is similarly selected. The regression is terminated when the increase in the remaining variance is no longer statistically significant or all the predictor variables are included, whichever comes first (Jurs, Hinkle, & Wiersma, 1988, p. 479).

Stepwise regression analysis is a variation of the forward selection method. In stepwise regression, predictor variables are entered one at a time but can be deleted if they do not contribute significantly to the regression when considered in combination with newly entered predictors (Jurs et al., 1988, p. 480). In the first step of stepwise multiple-regression, selection begins with no predictors in the regression equation. The predictor variable that has the highest correlation with the criterion variable is entered into the equation first. If the probability associated with the test of significance is less than or equal to .05, the predictor variable with the largest correlation with the criterion variable enters the equation first. In the second step, the second variable is selected based on the highest partial correlation. If the test of significance is less than or equal to .05, it also enters the equation.

From step three on, stepwise selection differs from forward selection because the variables already in the equation are examined for removal according to the removal criterion of less than or equal to .10. In step four, variables not in the equation are examined for entry. Variable selection ends when no more variables meet entry and removal criteria. In a stepwise multiple regression analysis, the number of predictors to be selected and the order of entry are both decided by statistical criteria (e.g., entry or removal criterion) (www.visualstatistics.net.html).

Astin (1998) noted that “the most versatile method for implementing the I-E-O model is blocked stepwise regression analysis” (p. 252). This study employed the
blocked stepwise regression analyses using Astin’s I-E-O model as the framework. The basic procedure is to control for input and environmental variable effects and to determine whether diversity experiences add to the prediction of the dependent variable. Sets of independent variables are entered (blocked) in sequence, and the value of each variable is assessed as a predictor of UDO. If adding the variable contributes to the research, it is retained. Then, all other variables in the model are re-tested to determine whether they are still contributing to the investigation. If they no longer contribute significantly to the model, they are removed. According to Irwin and McClelland (2001), this approach provides an efficient method for identifying the most salient predictor variables: “This method should ensure that you end up with smallest possible set of predictor variables included in your model” (p. 105).

**Summary of Methodology**

To help frame this research study, Astin’s Input-Environment-Outcome (I-E-O) model was used to address four research questions. The major variables were discussed using Astin’s I-E-O model. The population and sample were clarified, followed by a brief review and description of the instrumentation and data collection procedures. The validity and reliability of the M-GUDS-S instrument was discussed, and this chapter concluded with an explanation of data analysis method for this study.
Chapter Four

Results

In this chapter, the results of the statistical methods used in this research study are explained. First, the population and sample are described. Second, the research process is clarified, including a description of the data preparation, statistical assumptions, and regression analysis. Finally, the results are presented and organized around each of the research questions.

Description of the Population and Sample

The population of this study consisted of undergraduate students participating in a one-day “Welcoming Diversity/Prejudice Reduction Workshop” from 52 National Coalition Building Institute (NCBI) Campus Affiliate colleges and universities nationwide from August, 2011 through February, 2012. To involve the population, contact was made with the NCBI board member responsible for institutional research, who subsequently e-mailed the coordinator of each of the 52 colleges and universities with an NCBI Campus Affiliate. After initial contact, 30 surveys, cover letters, and pre-addressed postage-paid return envelopes were sent to each of the 52 NCBI Campus Affiliates (1,560) with four Campus Affiliates requesting additional surveys, for a total of 1,708 undergraduate students in the total survey population.

Institutions. Table 4 shows the 52 colleges and universities by institutional size, level, control, and geographic region. The institutions are somewhat evenly distributed by size, but are more heavily represented by four-year institutions (77%) and public colleges and universities (81%). The institutions are widely dispersed geographically with the exception of the Plains and Rocky Mountain regions that had one institution
represented from each area. Of the institutions in the population, only one is a historically Black institution and it did not participate in this research study.

Table 4
Institutional Population and Sample by Size, Level, Control, and Geographic Region

<table>
<thead>
<tr>
<th></th>
<th>Population</th>
<th></th>
<th>Sample</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Size</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,000-4,999</td>
<td>11</td>
<td>21</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>5,000-9,999</td>
<td>12</td>
<td>23</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td>10,000-19,999</td>
<td>12</td>
<td>23</td>
<td>6</td>
<td>29</td>
</tr>
<tr>
<td>20,000 +</td>
<td>17</td>
<td>33</td>
<td>6</td>
<td>29</td>
</tr>
<tr>
<td>Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-year</td>
<td>12</td>
<td>23</td>
<td>6</td>
<td>29</td>
</tr>
<tr>
<td>4-year</td>
<td>40</td>
<td>77</td>
<td>15</td>
<td>72</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>10</td>
<td>19</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>Public</td>
<td>42</td>
<td>81</td>
<td>17</td>
<td>81</td>
</tr>
<tr>
<td>Geographic Region</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Far West</td>
<td>7</td>
<td>13</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Southwest</td>
<td>3</td>
<td>6</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Plains</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Great Lakes</td>
<td>4</td>
<td>8</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>Southeast</td>
<td>14</td>
<td>27</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td>Mid-East</td>
<td>16</td>
<td>31</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>New England</td>
<td>6</td>
<td>11</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Rocky Mountain</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Historically Black</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Of the 52 institutions with Campus Affiliates, 21 (40%) distributed the surveys. A list of all 52 colleges and universities with an NCBI Campus Affiliate is included in Appendix B. The institutions represented in the sample are similar to the survey population, except for a slight difference in geographic location. As noted in Table 3, the sample is larger in the Great Lakes region and smaller in the Mid-East region.

The sample population by institution is depicted in Table 5, illustrating the Campus Affiliates and number of undergraduate students who participated in an NCBI workshop and returned a completed survey. A total of 522 (67%) of the distributed surveys were valid and used in the data analyses for this study.

Summary of Descriptive Data

With the exception of the institutional characteristic data, information used for data analysis was obtained from the 522 completed surveys. The survey questions were organized into the following four sections: “you compared to others” (preliminary questions), demographic questions (student characteristics), questions rating involvement in “diversity experiences,” and questions rating perceived institutional multiculturalism. Descriptions and frequencies on each of the sections follow.
Table 5

Sample Population by Institution

<table>
<thead>
<tr>
<th>Institutions</th>
<th># of Participants</th>
<th>Geographic Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bowling Green State University</td>
<td>23</td>
<td>Great Lakes</td>
</tr>
<tr>
<td>California State University – Fresno</td>
<td>16</td>
<td>Far West</td>
</tr>
<tr>
<td>Central Michigan University</td>
<td>5</td>
<td>Great Lakes</td>
</tr>
<tr>
<td>Del Mar College</td>
<td>11</td>
<td>South-West</td>
</tr>
<tr>
<td>Edinboro University of Pennsylvania</td>
<td>25</td>
<td>Mid-East</td>
</tr>
<tr>
<td>Emory University</td>
<td>22</td>
<td>Southeast</td>
</tr>
<tr>
<td>Frostburg State University</td>
<td>51</td>
<td>Mid-East</td>
</tr>
<tr>
<td>Greenville Technical College</td>
<td>18</td>
<td>Southeast</td>
</tr>
<tr>
<td>Hudson Valley Community College</td>
<td>4</td>
<td>Mid-East</td>
</tr>
<tr>
<td>Maryville College</td>
<td>16</td>
<td>Southeast</td>
</tr>
<tr>
<td>Michigan Technological University</td>
<td>8</td>
<td>Great Lakes</td>
</tr>
<tr>
<td>Middlesex Community College</td>
<td>15</td>
<td>New England</td>
</tr>
<tr>
<td>North Shore Community College</td>
<td>15</td>
<td>New England</td>
</tr>
<tr>
<td>Ohio State University</td>
<td>34</td>
<td>Great Lakes</td>
</tr>
<tr>
<td>Roger Williams University</td>
<td>5</td>
<td>New England</td>
</tr>
<tr>
<td>Stetson University</td>
<td>14</td>
<td>Southeast</td>
</tr>
<tr>
<td>University of Hawaii</td>
<td>114</td>
<td>Far West</td>
</tr>
<tr>
<td>University of Maryland</td>
<td>69</td>
<td>Mid-East</td>
</tr>
<tr>
<td>University of Northern Iowa</td>
<td>30</td>
<td>Plains</td>
</tr>
<tr>
<td>University of South Florida</td>
<td>14</td>
<td>Southeast</td>
</tr>
<tr>
<td>Windward Community College</td>
<td>13</td>
<td>Far West</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>522 (67%)</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Preliminary questions.** The first section of the survey asked students to self-evaluate when compared to other college students, their “ability to recognize differences and accept similarities in other people” and their “ability to empathize and interconnect
with culturally diverse people.” Conceptually, since the two questions were asked prior to completing the M-GUDS-S and are an adapted definition of universal-diverse-orientation; the questions serve as a pre-self-assessment to the dependent variable (M-GUDS-S). The survey results of the preliminary questions are displayed in Table 6. On the first question regarding their ability to recognize differences and accept similarities when compared with other college students, the majority of students rated themselves as “Above average” (252 or 48.5%) and 133 (25.5%) responded in the “Highest 10%.” On a Likert-type scale of one (Lowest 10%) to five (Highest 10%), the mean response for this question was 3.98 and the median response was a 4. Similarly, on the second question asking students to self-rate their ability to empathize and interconnect with culturally diverse people, the majority of the students (229 or 43.9%) rated themselves as “Above average” and 133 (25.5%) in the “Highest 10%.” The mean response on the second question was 3.92 with a median response of 4.

Table 6

Preliminary Questions: “Compared to Other College Students, How Would You Rate Your Ability . . .”

<table>
<thead>
<tr>
<th></th>
<th>Highest 10%</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Lowest 10%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>To recognize differences &amp; accept similarities in other people</td>
<td>133</td>
<td>25.6</td>
<td>253</td>
<td>48.7</td>
<td>125</td>
<td>24.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To empathize &amp; interconnect with culturally diverse people</td>
<td></td>
<td></td>
<td>2</td>
<td>.4</td>
<td>229</td>
<td>43.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>144</td>
<td>7.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
<td>.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>.4</td>
</tr>
</tbody>
</table>
**Student characteristics.** Table 7 displays the demographic information for the study sample. The majority of undergraduate student-respondents identified themselves as freshmen, White/Caucasian, age 18-23, heterosexual, and without a disability. There was a disproportionately high representation of Asian American/Pacific Islanders in the sample population due to the large number of responses from the University of Hawaii. The majority of respondents self-reported that they attend organized religious activities occasionally and value spirituality moderately or highly. The preponderance of respondents were raised with “enough” financial resources and consider their political orientation to be “moderate.” Slightly more than half of the respondents were female and more than half of the students in the sample identified either Arts and Sciences or Education/Health or Social Science as their major area of study. In addition, almost half of the students attended the NCBI workshop “voluntarily.”

**Table 7**

*Student Characteristics*

<table>
<thead>
<tr>
<th>Year</th>
<th>n</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>254</td>
<td>48.7</td>
</tr>
<tr>
<td>Sophomore</td>
<td>87</td>
<td>17.0</td>
</tr>
<tr>
<td>Junior</td>
<td>73</td>
<td>14.0</td>
</tr>
<tr>
<td>Senior</td>
<td>97</td>
<td>18.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Major area of study</th>
<th>n</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts &amp; Sciences</td>
<td>185</td>
<td>35.4</td>
</tr>
<tr>
<td>Business</td>
<td>58</td>
<td>11.1</td>
</tr>
<tr>
<td>Education; Health or Social Science</td>
<td>156</td>
<td>29.9</td>
</tr>
<tr>
<td>Engineering or Technical Studies</td>
<td>42</td>
<td>8.0</td>
</tr>
<tr>
<td>Other</td>
<td>80</td>
<td>15.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>n</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>271</td>
<td>51.9</td>
</tr>
<tr>
<td>Category</td>
<td>Count</td>
<td>Percentage</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>Male</td>
<td>249</td>
<td>47.7</td>
</tr>
<tr>
<td>Transgender</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Indian/Alaskan Native</td>
<td>12</td>
<td>2.3</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>111</td>
<td>21.3</td>
</tr>
<tr>
<td>Black/African American</td>
<td>109</td>
<td>20.9</td>
</tr>
<tr>
<td>Latino/Latina/ Hispanic</td>
<td>41</td>
<td>7.9</td>
</tr>
<tr>
<td>White/European</td>
<td>189</td>
<td>36.2</td>
</tr>
<tr>
<td>Multiracial</td>
<td>60</td>
<td>11.5</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>479</td>
<td>91.8</td>
</tr>
<tr>
<td>25-39</td>
<td>26</td>
<td>5.0</td>
</tr>
<tr>
<td>40-64</td>
<td>14</td>
<td>2.7</td>
</tr>
<tr>
<td>60 or older</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>Sexual Orientation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bisexual</td>
<td>25</td>
<td>4.8</td>
</tr>
<tr>
<td>Asexual</td>
<td>7</td>
<td>1.3</td>
</tr>
<tr>
<td>Heterosexual/Straight</td>
<td>428</td>
<td>82.0</td>
</tr>
<tr>
<td>Gay/Lesbian/Queer</td>
<td>35</td>
<td>6.7</td>
</tr>
<tr>
<td>Questioning</td>
<td>27</td>
<td>5.2</td>
</tr>
<tr>
<td><strong>Role of Spirituality in Everyday Life</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not at all valued</td>
<td>63</td>
<td>12.1</td>
</tr>
<tr>
<td>Somewhat valued</td>
<td>134</td>
<td>25.7</td>
</tr>
<tr>
<td>Moderately valued</td>
<td>149</td>
<td>28.5</td>
</tr>
<tr>
<td>Highly valued</td>
<td>161</td>
<td>31.8</td>
</tr>
<tr>
<td><strong>Organized Religious Activity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never attend</td>
<td>133</td>
<td>25.5</td>
</tr>
<tr>
<td>Attend occasionally</td>
<td>262</td>
<td>50.2</td>
</tr>
<tr>
<td>Attend frequently</td>
<td>127</td>
<td>24.3</td>
</tr>
<tr>
<td><strong>Disability Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No disability</td>
<td>440</td>
<td>84.3</td>
</tr>
<tr>
<td>Undisclosed disability</td>
<td>29</td>
<td>5.6</td>
</tr>
<tr>
<td>Disability not requiring accommodations</td>
<td>41</td>
<td>7.9</td>
</tr>
<tr>
<td>Disability requiring accommodations</td>
<td>12</td>
<td>2.3</td>
</tr>
<tr>
<td><strong>Socioeconomic Background</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raised with Less Than Enough financial resources</td>
<td>107</td>
<td>20.5</td>
</tr>
<tr>
<td>Raised with Enough financial resources</td>
<td>316</td>
<td>60.5</td>
</tr>
<tr>
<td>Raised with More Than Enough financial resources</td>
<td>98</td>
<td>18.8</td>
</tr>
<tr>
<td><strong>Political Orientation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very liberal</td>
<td>71</td>
<td>13.6</td>
</tr>
<tr>
<td>Political Affiliation</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>------------</td>
</tr>
<tr>
<td>Somewhat liberal</td>
<td>118</td>
<td>22.6</td>
</tr>
<tr>
<td>Moderate</td>
<td>260</td>
<td>49.8</td>
</tr>
<tr>
<td>Somewhat conservative</td>
<td>56</td>
<td>10.7</td>
</tr>
<tr>
<td>Very conservative</td>
<td>15</td>
<td>2.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attendance at NCBI workshop</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntary</td>
<td>246</td>
<td>47.1</td>
</tr>
<tr>
<td>Encouraged</td>
<td>180</td>
<td>34.5</td>
</tr>
<tr>
<td>Required</td>
<td>96</td>
<td>18.4</td>
</tr>
</tbody>
</table>

**Diversity experiences.** Table 8 indicates how often students participated in a variety of diversity experiences (questions 3-13). The majority of respondents occasionally/never “took diversity courses” (77.6%, question 3) or “participated in a racial or cultural awareness workshop” (65.2%, question 5). Conversely, the majority of respondents indicated they very often/often “made friends with students from a different race” (83.3%, question 4), “participated in a service learning experience” (60.6%, question #6), “made friends with students from another country” (58%, question 7), “had serious discussions with students whose philosophy of life or personal values were different from yours” (63.8%, question 8), “had serious discussions with students whose religious beliefs were different from yours” (58.6%, question 9), and “had discussions with other students about different lifestyles and customs” (66.4%, question 13).

*Occasionally* was the most frequent response to “had serious discussions with students whose political opinions were very different from yours” (37%, question 10), “had serious discussions with students from a country different from yours” (40.2%, question 11) and “had discussions with other students about major social issues” (34%, question 12). The complete distribution and frequency of responses regarding participation in or discussion about the diversity experiences (survey questions 3-13) is shown in Table 8.
Table 8

Distribution and Frequency of Diversity Experiences, Questions 3-13

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>Never</th>
<th>Occasinally</th>
<th>Often</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Freq</td>
<td>%</td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td>(3) Take diversity courses</td>
<td>171</td>
<td>32.8</td>
<td>234</td>
<td>44.8</td>
</tr>
<tr>
<td>(4) Make friends different race</td>
<td>3</td>
<td>0.6</td>
<td>84</td>
<td>16.1</td>
</tr>
<tr>
<td>(5) Take cultural workshop</td>
<td>170</td>
<td>32.6</td>
<td>170</td>
<td>32.6</td>
</tr>
<tr>
<td>(6) Do service learning</td>
<td>39</td>
<td>7.5</td>
<td>167</td>
<td>32.0</td>
</tr>
<tr>
<td>(7) Make friends different country</td>
<td>27</td>
<td>5.2</td>
<td>192</td>
<td>36.8</td>
</tr>
<tr>
<td>(8) Discuss different values</td>
<td>34</td>
<td>6.5</td>
<td>159</td>
<td>30.5</td>
</tr>
<tr>
<td>(9) Discuss different religious beliefs</td>
<td>41</td>
<td>7.9</td>
<td>174</td>
<td>33.3</td>
</tr>
<tr>
<td>(10) Discuss different politics</td>
<td>66</td>
<td>12.6</td>
<td>191</td>
<td>36.6</td>
</tr>
<tr>
<td>(11) Discuss international issues</td>
<td>78</td>
<td>14.9</td>
<td>210</td>
<td>40.2</td>
</tr>
<tr>
<td>(12) Discuss social issues</td>
<td>48</td>
<td>9.2</td>
<td>178</td>
<td>34.1</td>
</tr>
<tr>
<td>(13) Discuss different lifestyles</td>
<td>17</td>
<td>3.3</td>
<td>158</td>
<td>30.3</td>
</tr>
</tbody>
</table>

Perception of institutional climate. Table 9 displays students’ perception of the multiculturalism of their campus. Students were asked to rate their institution’s commitment to the following five diversity objectives:
Table 9

*Perception of Institutions’ Multicultural Climate*

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Excellent/Good</th>
<th>Average</th>
<th>Below Average/Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing the number of women and minority faculty</td>
<td>283</td>
<td>54.4</td>
<td>206</td>
</tr>
<tr>
<td></td>
<td>39.5</td>
<td>32</td>
<td>6.2</td>
</tr>
<tr>
<td>Increasing the number of minority students</td>
<td>347</td>
<td>66.6</td>
<td>144</td>
</tr>
<tr>
<td></td>
<td>27.6</td>
<td>30</td>
<td>6.2</td>
</tr>
<tr>
<td>Developing an appreciation for multiculturalism</td>
<td>258</td>
<td>68.7</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>25.9</td>
<td>28</td>
<td>6.2</td>
</tr>
<tr>
<td>Provide multicultural campus programs and/or activities that provide opportunities to interconnect with culturally diverse people</td>
<td>360</td>
<td>69.1</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>25.9</td>
<td>26</td>
<td>5.0</td>
</tr>
<tr>
<td>Provide a campus environment that recognizes differences and accepts similarities among people</td>
<td>345</td>
<td>66.2</td>
<td>145</td>
</tr>
<tr>
<td></td>
<td>27.8</td>
<td>31</td>
<td>6.0</td>
</tr>
</tbody>
</table>

In addition, students were asked to rate their institutions’ degree of diversity, with 405 students (77.8%) indicating *very diverse/moderately diverse* and 115 (22.2%) responding *somewhat/not at all diverse*. Overall, the majority of students perceived their institution to be above average or higher in its commitment to provide a diverse campus environment and considered their campuses to be very/moderately diverse.

**Dependent Variable**

The dependent variable for this study was the score on the M-GUDS-S. Possible M-GUDS-S scores range from zero–90. The scores in the sample population ranged from 38-90, (\(\bar{x} = 68, M=68, SD=10.15\)).
Statistical Process

The statistical process in this study includes a description of the data preparation, statistical assumptions, and regression analysis. The statistical procedures for this study were specified in Chapter Three.

Data preparation. Each survey was entered, by question, into the SPSS (Statistical Package for the Social Sciences) computer statistics program. Several questions were recoded for statistical analysis. Five questions in the dependent variable were recoded because they needed to be reverse-scored. Several of the student characteristic questions and geographic location of the institution variable were categorical variables and were recoded into dummy variables for analysis. Additional variables that were recoded included students’ year in college (to eliminate other undergraduate as a response); as well as, students’ gender and students’ rating of the degree of diversity on their respective campuses (to reverse score).

Additional data were obtained from the 2010 Integrated Postsecondary Education Data System (IPEDS) on the institutional variables of size, level (two-/four-year), control (public/private), geographic location, and composition of student body (racial/ethnic and gender). The IPEDS data on institutional variables was added to the SPSS program for this research study.

Testing assumptions. Linear regression models with standard estimation techniques make a number of assumptions about the predictor variables, the response variables, and their relationships. In this study three statistical assumptions were made.

The first assumption uses a statistical technique (a two-tailed Pearson correlation technique) to test the strength of a linear association between each of the 37 variables for
a “line of best fit” with the dependent variable. The results of the two-tailed Pearson correlation found that 34 of the 37 independent variables were significant at the $p < .05$ level. The student characteristic variables of major, race, sexual orientation, and voluntary participation in NCBI were dummy coded and one or more of the dummy-coded variables were significant at the $p < .05$ level. The four independent variables that were not significantly related to the dependent variable were the student characteristic variables of age, role of spirituality in everyday life, disability status, and the institutional characteristic of size.

A second assumption of regression analysis is to determine if any of the predictor variables were redundant (having two or more perfectly correlated predictor variables). To verify a lack of multicollinearity in the predictors, the bivariate correlations from a Pearson’s correlation were examined. The results indicated that no two variables were related at the .9 level or higher, which indicates that no two variables contain the same information about the dependent variable. The only two that were close, but not significant, were level (two-/four-year) and gender (.85) and “made friends with students whose race was different from yours” and level (two-/four-year) (.81).

A third assumption determines whether the survey sample was representative of the population in the study. Institutions participating and not participating were examined using a chi-square bivariate correlation. The results of the test indicate there is no significant difference between the size, level, control, and/or geographic region in the sample and population in this study.

**Regression analysis.** A bivariate correlation between the dependent variable and each of the predictor variables was analyzed to determine how and to what extent the two
variables were linearly related. The zero-order (pairwise) correlations between the dependent variable and both Preliminary questions questions, all 11 of the diversity experiences questions, the student characteristic variables of major (A & S, Engineering, Education/Social Services), gender, Latino/Latina, socioeconomic status, and political orientation were statistically significant at the p < .01 level. Engineering major, business major, White/Caucasian race/ethnicity, heterosexual/straight sexual orientation, “more than enough” financial resources and required participation in the NCBI workshop all had a negative relationship with the dependent variable. All six of the perceived multiculturalism of the campus questions was statistically significant with the dependent variable as well as the geographic locations (Far West, Southeast, and New England), level, control, and percentage of Asian or Pacific Islanders by institutional characteristics.

Subsequent to the major assumptions being tested and correlations analyzed, a blocked form of stepwise multiple regression analysis was run to identify the subset of predictor variables that had the strongest relationship with the dependent variable (UDO). Missing values were replaced with the mean. The 37 predictor variables of this study were grouped into five blocks (see Figure 2, Chapter Three for a complete listing of variables in each block), and entered in the following order:

- Block One: Preliminary questions - Self-rating of UDO (2 variables),
- Block Two: Students’ characteristics (12 variables),
- Block Three: Institutional characteristics (six variables),
- Block Four: Students’ diversity experiences (11 variables), and
- Block Five: Students’ perceived attitudes about the multiculturalism of their respective campus climate (six variables).
All 37 independent variables were included in the initial regression analysis. After recoding race and sexual orientation into a binary groupings (i.e., White/minority and heterosexual/other) and dummy coding major, the regression was run again. The student characteristic variables of age, role of spirituality in everyday life, disability status, and the institutional characteristic of size did not result in a significant relationship at the $p < .05$ level and were trimmed from the final regression analysis. The final regression analysis was run with 33 independent variables. While the variables of major, race, sexual orientation, socioeconomic status, and mandatory participation in NCBI had a significant relationship with the dependent variable, none of these variables emerged as predictor variables.

In blocked stepwise regression, selection begins with the variable with the highest correlation. The table of correlations indicated that the variable with the strongest individual relationship with the dependent variable was the second Preliminary questions question (“Compared with other college students, how would you rate your ability to empathize and interconnect with culturally diverse people?”). This variable was entered at the first step of the stepwise regression. Variables were deleted if they did not contribute significantly to the regression when considered in combination with the newly entered predictors. For each model of the stepwise regression analysis, the next most significant predictor variable is added to the model.

**Findings**

The stepwise regression analysis produced 12 models where a new independent variable entered as significant each time. Table 9 includes six columns for each of the variables that entered into the last model as significant predictors of UDO. The first
column of the table lists the variable, and the second column shows the block in which that variable entered into the stepwise regression. Zero \( r \) in the third column indicates the simple correlation between the listed variable and UDO. The fourth column displays the step beta (\( \beta \)), which is the position that the variable entered the model. The fifth column is the beta (\( \beta \)) weight for each independent variable as it appears in the final model. The beta weight acts as a partial correlation by distributing the influence among the other variables; this explains how strong of a predictor the variable is on the dependent variable. The last column notes the \( F \) value. The \( F \) score paired with a p-value, tests the null hypothesis (that the variables have no relationship to the dependent variable).

Results of an ANOVA performed on the results of the regression analysis, indicated that the regression model was statistically significant, \( F (11, 510) = 39.24, p = .001 \) level. The multiple correlation in the final model of .69 indicates a strong, positive linear relationship. The measure of effect (Adjusted R Square) accounts for 48% of the variance that can be explained by the regression model using the data provided with a standard error of the estimate of 7.4. Ten of the predictor variables in the first model were statistically significant predictors in the final model. Two predictor variables in the last model were not significant at the \( p < .05 \) level, a preliminary question asking students to “rate their ability to recognize differences and accept similarities in other people” and student characteristic of major area of study (Arts and Sciences).
### Table 10

**Significant Predictor Variables of Universal Diverse Orientation**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Zero $r$</th>
<th>$\beta$</th>
<th>Final Step $\beta$</th>
<th>$F$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compared with other college students, how would you rate your ability to empathize and interconnect with culturally diverse people?</td>
<td>1</td>
<td>0.32**</td>
<td>0.42***</td>
<td>113.22***</td>
</tr>
<tr>
<td>Compared with other college students, how would you rate your ability to recognize differences and accept similarities in other people?</td>
<td>1</td>
<td>0.43**</td>
<td>0.11**</td>
<td>59.75***</td>
</tr>
<tr>
<td>Gender (Female)</td>
<td>2</td>
<td>0.32**</td>
<td>0.31***</td>
<td>68.68***</td>
</tr>
<tr>
<td>Major A &amp; S</td>
<td>2</td>
<td>0.18**</td>
<td>0.12**</td>
<td>54.76***</td>
</tr>
<tr>
<td>Years in college</td>
<td>2</td>
<td>0.19**</td>
<td>0.11**</td>
<td>46.29***</td>
</tr>
<tr>
<td>Political Orientation (Liberal)</td>
<td>2</td>
<td>0.19**</td>
<td>0.09*</td>
<td>39.96***</td>
</tr>
<tr>
<td>Geographic Region (Southeast)</td>
<td>3</td>
<td>0.23**</td>
<td>0.16***</td>
<td>38.22***</td>
</tr>
<tr>
<td>Level (4-year colleges/universities)</td>
<td>3</td>
<td>0.18**</td>
<td>0.09**</td>
<td>34.74***</td>
</tr>
<tr>
<td>Made friends with students whose race was different</td>
<td>4</td>
<td>0.35**</td>
<td>0.31***</td>
<td>43.29***</td>
</tr>
<tr>
<td>Had discussions with other students about different lifestyles and customs</td>
<td>4</td>
<td>0.40**</td>
<td>0.17***</td>
<td>42.70***</td>
</tr>
<tr>
<td>Had serious discussions with students whose religious beliefs were very different</td>
<td>4</td>
<td>0.33**</td>
<td>0.08**</td>
<td>39.48***</td>
</tr>
<tr>
<td>Rate your institution’s commitment to the goal of developing an appreciation for multiculturalism?</td>
<td>5</td>
<td>0.23**</td>
<td>0.15***</td>
<td>39.24***</td>
</tr>
</tbody>
</table>

*Note: Sample size $n=522$, $R^2=.479$, Adjusted $R^2=.467$, *$p<.05$, **$p<.01$, ***$p<.001$*
In examining the final regression model, two possible concerns were identified. First, all of the institutions in the study were predominately White institutions except the University of Hawaii (UH), which comprised a large percentage of the respondents (21%). To address this concern, the regression analysis was re-run eliminating UH responses. The results of the regression analysis, without UH, produced no significant differences with the last model. In particular, minority status and/or Asian American race/ethnicity remained unchanged. Second, the Southeast geographic region was an unanticipated predictor variable. To test a possible reason for the emergence of the Southeast geographic region as a predictor variable, a selectivity score was obtained from the Carnegie Foundation. The regression analysis was re-run with selectivity as a variable to determine if selectivity in undergraduate admissions might affect the predictor variables in the final model. Selectivity did not emerge as a significant predictor and the Southeast geographic region remained in the final data analysis. This is an interesting finding that might warrant further research.

**Research Questions Results**

To further describe the results of the regression analysis, the results have been organized based on the research questions of this study. The input variables consisted of two preliminary questions and nine student characteristics (Research Question 1). Between-institution variables were composed of the institutional characteristics (Research Question 2), diversity experiences (Research Question 3), and students’ perceived attitudes about the multiculturalism of their campus (Research Question 4).

**Preliminary questions.** One of the two preliminary questions was identified as being a significant predictor in the final model. The question asked students to *rate their*
ability to empathize and interconnect with culturally diverse people ($\beta=.17, p<.001$). The second preliminary question asked students to rate their ability to recognize differences and accept similarities in other people was included in the final model of the regression analysis, but it was not significant at the .05 level.

**Research question one:** What influence, if any, do student characteristics (age, year in college, gender, race/ethnicity, sexual orientation, major area of study, socio-economic status, political orientation, and religiosity) have on students’ UDO?

In Block Two, after eliminating age, role of spirituality, and disability status, three of the nine variables were included in the final model. Gender, years in college, and political orientation were all positive predictors of a high UDO. Females scored higher on the M-GUDS-S than males, ($\beta=.27, p<.001$) and seniors (90+ semester hours) scored higher on the M-GUDS-S than students in other classes ($\beta=.13, p<.001$). Political orientation, meaning the “very liberal” identified students, were more likely to attain high M-GUDS-S scores than the “liberal,” “moderate,” conservative,” or “very conservative” identified students ($\beta=.07, p<.05$). The results suggest that when students’ compare themselves to others and rate highly their ability to empathize and interconnect with culturally diverse people, they are more likely to have a high M-GUDS-S. In addition, the student characteristics of gender (female), years in college (senior), and political orientation (liberal) have a positive influence on UDO.

**Research question two:** What influence, if any, do institutional characteristics (size, level [two-/four-year], control [public/private], geographic location, composition of student body [racial/ethnic and gender], and reason for offering NCBI) have on students’ UDO?
In the second research question, two of the six institutional characteristic variables (institutional level and the Southeast geographic region) were found to be significant predictors of the UDO score in the final regression model. Attending a four-year college/university versus a two-year college was found to be a positive predictor of the dependent variable ($\beta=.11, p<.01$). The IPEDS data on geographic location was listed by regional name, so it was dummy-coded. The Southeast Region is classified as the states of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. A total of 84 respondents were from the Southeast region, which in this study, included the institutions of Emory, Greenville Technical College, Maryville College, Stetson University, and the University of South Florida. The dummy variable described as Southeast had a positive influence on students’ UDO. The institutional characteristic of Southeast geographic region had a positive influence on UDO scores ($\beta=.09, p<.01$).

**Research question three:** What influence, if any, does involvement in diversity experiences have on students’ UDO?

In the third research question of this study, involvement in diversity experiences, three of the 11 predictor variables were determined to be significant in the final regression model. The three variables that positively influenced UDO are made friends with students whose race was different from yours ($\beta=.27, p<.001$), had discussions with other students about different lifestyles and customs ($\beta=.12, p<.01$), and had serious discussions with students whose religious beliefs were very different from yours ($\beta=.08, p<.05$). These results imply that the more often students are involved with discussing different lifestyles and religious beliefs and making friends with students of a different
race, the more likely they will have a high UDO. These results will be discussed in more depth in Chapter Five.

**Research question four:** What influence, if any, do students’ perceived attitudes about the multicultural environment of their campus climate have on students’ UDO?

The final research question of this study included six variables designed to ascertain students’ perceived attitudes about the multiculturalism of their respective campus climate. One variable was observed to be significant in the final regression model, the question asking students to rate your institution’s commitment to the goal of developing an appreciation for multiculturalism (β=.15, p<.001). It appears that if a student believes his/her institution is committed to the goal of developing an appreciation for multiculturalism, the student scored high on a measure of multiculturalism (UDO).

**Summary of results**

In this chapter, the results of the statistical methods used in this research study were described. A blocked form of stepwise regression analysis was conducted to examine which institutional, diversity, and perceived campus climate variables are significant in contributing to a high UDO score. In summary, the research population for this study consisted of 52 colleges and universities nationwide with an NCBI Campus Affiliate. Surveys were sent to the student population, and results were obtained from 522 undergraduate students from 21 colleges and universities within the sample population.

The research process was clarified and results of the final blocked stepwise regression analysis were explained. There were a total of 10 significant predictor variables, four input variables and six between- and within-institution variables. One
significant input variable was the pretest variable “compared with other college students how would you rate your ability to empathize and interconnect with culturally diverse people?” The input variables of gender (female), years in college (senior/+ 90 semester hours), and political orientation (liberal) were also positive predictors of a high UDO score. The six between-and within-institution variables, including institutional characteristic variables (level [4-year] and geographic location [Southeast]), and three diversity experiences (“Made friends with students whose race was different from yours,” “Had discussions with other students about different lifestyles and customs,” and “Had serious discussions with students whose religious beliefs were very different from yours”) had a strong, positive relationship to the dependent variable as well as the variable on perception of the multiculturalism of their campus “commitment to the goal of developing an appreciation for multiculturalism.” Of particular interest is that three diversity-experiences predictor variables scored high on the dependent variable (UDO). Chapter Five discusses the implications of the results presented in this chapter.
Chapter Five
Discussion, Conclusions and Recommendations

This chapter concludes this research study and describes the ways in which the study findings may be applied to specific student populations in higher education and how higher education institutions might improve prejudice reduction efforts on campus. The chapter contains a synopsis of the study, a detailed discussion of the findings by research question, findings, implications for policy and practice, and recommendations for future research. A final summary of the study concludes this chapter.

Synopsis

The purpose of this study was to examine what variables influence undergraduate students’ Universal Diverse Orientation (UDO). To provide a foundation, some literature on prejudice and prejudice-reduction strategies were presented from an historical perspective. The theoretical concepts of the multicultural personality, non-prejudice, and UDO were presented, as well as an overview of strategies to promote a multicultural campus climate. Finally, three important research models that provide the structural basis for investigating the variables used in this study were described: Miville’s (1999) measure of UDO, Pascarella’s (1996) diversity experiences instrument, and Astin’s (1999) theory of student involvement.

A review of the literature discovered a limited amount of information on UDO, and even less research linking UDO to diversity experiences or student involvement theory. The theoretical framework of this study combined the Miville-Guzman Universality Diversity Scale-Short form (M-GUDS-S) measure of UDO (2000), with Pascarella’s research (1991, 1996, 2001) on the impact of students’ involvement in, and
openness to, diversity experiences, and Astin’s (1993a) theory of student involvement. The M-GUDS-S was designed to assess multicultural awareness, described as acceptance of both similarities and differences among people. In three separate research studies, Pascarella found that

1. “students’ perceptions of the campus racial climate have an influence on their attitudes about race and ethnicity in general” (1996, p. 289),

2. involvement in diversity experiences during college had statistically significant positive effects on their scores on an objective standardized measure of critical thinking skills, but different diversity experiences influenced critical thinking for students in groups based on gender and ethnic identity at different points in their college experience (2001), and

3. diverse student and institutional characteristics can affect student collegiate experiences and outcomes (2006). Astin’s (1993a) theory of student involvement is described as the amount of physical and psychological time and energy the student invests in their educational process. Astin’s (1993a) research asserts that the more social activities and academic programs that students are involved in during their college experience, the more students learn and develop.

Permission from the National Coalition Building Institute (NCBI) to survey students at an NCBI Campus Affiliate provided the researcher with access to a variety of undergraduate students from 52 colleges and universities nationwide. The population of this study consisted of 1,708 undergraduate students participating in an NCBI one-day “Welcoming Diversity/Prejudice Reduction Workshop” from August, 2011 through February, 2012. Of the 52 institutions with Campus Affiliates, 21 (40%) distributed the
surveys to attendees at their workshops. A total of 522 (67%) of the 778 distributed surveys were valid and used in the data analyses for this study.

The conceptual model used to help examine the research questions was Astin’s Input-Environment-Output (I-E-O) model. The I-E-O model provides a framework to examine student characteristics (I), the total institutional characteristics and particular educational experiences within the institution (E), and the desired objectives of the program (O). In this study, the outcome, or dependent variable is the undergraduate students’ UDO as measured by score on the M-GUDS-S.

The I-E-O conceptual model was useful for this study because the predictor variables—input and environment variables—could be formulated in a way to help understand their separate and joint influences on the outcome variable. The input variables of this study included preliminary questions (i.e., students’ self-rating of UDO) and student characteristics (i.e., years in college, major, gender, race/ethnicity, age, sexual orientation, spirituality, participation in organized religious activities, disability status, socioeconomic background, political orientation, and voluntary/mandatory participation in the NCBI workshop). These input variables were included in this study to determine what characteristics, if any, may have influenced their M-GUDS-S score. The environment variables of this study included between-institution characteristics (i.e., size, location, level, type, and composition of the student body) to determine what institutional characteristics, if any, influenced the dependent variable. The main purpose of the study, however, was to examine which of the within-institution environment characteristics (i.e., involvement in diversity experiences and students’ perceptions of their respective campus climates), if any, might influence students’ UDO.
The statistical processes included entering the data into SPSS, importing the IPEDS 2010 institutional data, and testing assumptions. It was determined that the survey sample was representative of the population of the study, because a Chi Square analysis indicated no statistically significant difference between the sample and population distribution for the institutional characteristics of size, level, control, or geographic region. The use of Pearson’s correlation tests also indicated that there was a strong, linear relationship with 29 of the 37 variables, and a lack of multicollinearity between the variables. A zero-order, pairwise correlation between the dependent variable and each predictor variable found a significant positive relationship with both preliminary questions, all 11 diversity experiences questions, majors (A & S, Education), gender, race (Latino/Latina), socioeconomic background (“raised with less than enough financial resources”), political orientation, campus geographic locations (Far West, Southeast, New England), level, control, and racial composition of the institution, and six multicultural campus climate variables. A significant, negative relationship was found between the dependent variable and the predictor variables of major (Engineering, Business), race (White/Caucasian), socioeconomic background (“raised with more than enough financial resources”), heterosexual, and mandatory participation in the NCBI workshop.

A stepwise regression analysis was conducted with blocks of variables to identify the predictor variables that had a significant relationship with the dependent variable. The blocked form of stepwise regression was chosen because it determines which factors influence the dependent variable and also identifies subsets of predictor variables that
potentially predict responses on a dependent variable. Five blocks of variables were entered in sequence, based on the I-E-O model. The input blocks consisted of:
(a) preliminary questions (two variables) and (b) students' characteristics (12 variables).

The environmental blocks included: (c) institutional characteristics (six variables), (d) students' diversity experiences (11 variables), and (e) students' perceived attitudes about the multiculturalism of their respective campus climate (six variables). The output block, the students’ scores on M-GUDS-S (15 variables), was entered last.

A total of 37 variables were initially entered. After performing a simple correlational analysis between each variable and the predictor variable, four variables were removed. A total of 33 variables were entered into the final regression analysis in five blocks. Selection began with the variable with the highest correlation, which was the first preliminary question. Variables were deleted if they did not contribute significantly, when considered in combination with the newly entered predictors. The blocked stepwise regression analysis produced 11 models where a new independent variable entered as significant each time. Ten of those variables emerged as significant predictors of UDO at the last step of the model.

**Discussion of the Findings**

The dependent variable (UDO) was measured by a score on the M-GUDS-S. Possible scores on the M-GUDS-S are 0-90. Sample population scores ranged from 38-90, with a mean and median score of 68 and a standard deviation of 10.15. The measure of UDO varied by student and campus environment. This study found that when surveying 522 participants from 21 NCBI campus affiliates, 10 of the independent variables included in the final regression analysis were significant predictors of UDO.
The regression model was statistically significant (F (11,510) = 42.18, p<.001 level (ANOVA), with a multiple correlation of .69, indicating a strong, positive, linear relationship. The measure of effect accounts for 48% of the variance explained by the model (Adjusted R Square).

The research questions guiding this study focused on the variables that influence undergraduate students’ UDO. It was determined that involvement in diversity experiences does influence student outcomes (score on UDO) separately, and in association with student and institutional characteristics.

In addition to the preliminary questions from the first block, three additional input variables from the second block (i.e., female, years in college, and liberal political orientation) were significant predictors of high UDO. Two between-institution variables from the third block, (i.e., Southeast geographic region and level of institution) were significant positive predictors of UDO. Four within-institution variables, three from the fourth block (i.e., "made friends with students whose race was different from yours," "had discussions with other students about different lifestyles and customs," and "had discussions with students whose religious beliefs were very different from yours") and one from the fifth block (i.e., "rate your institution's commitment to the goal of developing an appreciation for multiculturalism") were significant positive predictors in the final model.

**Input variables.** The input variables consisted of two preliminary questions and 12 student characteristics. One of the preliminary questions and three of the student characteristics were significant positive predictors of high UDO in the final model.
While both preliminary questions were significant in the step beta, only one of the preliminary questions was a significant positive predictor of high UDO in the final model (i.e., "compared with other college students, how would you rate your ability to empathize and interconnect with culturally diverse people"). The preliminary questions asked students to self-rate themselves regarding a modified definition of UDO. The questions were designed to measure non-prejudice, as opposed to prejudice. As noted in Chapter Two of this study, there is no clear consensus on a definition of prejudice, but there is primarily one definition of non-prejudice and it is viewed in a positive frame. Important components of the tolerant personality, according to Allport are empathetic ability (Menschenkenntnis), and the ability to “put oneself in another person’s shoes” (Menschenkenner) (Allport, 1954, p. 436). Also, in the design of this research study, the use of preliminary questions as input variables was an attempt to account for students’ level of non-prejudice before taking the M-GUDS-S. The self-rating of UDO was completed prior to responding to the M-GUDS-S questions and was used as an input variable in order to control student inputs that could be related to both the outcome and environmental measures. Astin (1993a) noted that “The most crucial inputs to include are pretests on the various student outcomes. When pretesting is not feasible for a particular outcome, a good substitute is to assess the students’ expectations for that outcome” (p. 80).

In this study, the students' self-rating of their level of non-prejudice as "high" on the first preliminary question was a significant positive predictor of high UDO. This finding is consistent with Phillips and Ziller's (1997) theory of non-prejudice and studies by Miville et al. (1999, 2000). Non-prejudice has been defined “as a universal
orientation in interpersonal relations whereby perceivers selectively attend to, accentuate, and interpret similarities rather than differences between the self and others” (Phillips and Ziller, 1997, p. 420). In the theory of non-prejudice, the perceived similarity between self and others is directly related to a universal orientation. This finding is consistent with a study by Miville et al. (1999), who found

A person with UDO may seek a diversity of experiences with others because he or she values both similarities and differences among himself or herself and others. These experiences might then reinforce UDO values and result in a sense of connection with others. (p. 292)

**Research question one.** The first research question of this study asked, what influence, if any, do student characteristics (self-rated UDO, year in college, major area of study, gender, race/ethnicity, age, sexual orientation, spirituality, organized religious activity, [dis]ability status, socio-economic status, political orientation, voluntary/mandatory-attendance at NCBI workshop) have on students’ UDO?

Three of the student characteristic variables emerged as significant positive predictors of UDO. Females scored higher on the M-GUDS-S than males, students with more years in college (i.e., seniors/undergraduate students with 90+ semester hours) earned a higher score on the M-GUDS-S than did underclass members, and students who identified their political orientation as "very liberal" were more likely to attain high M-GUDS-S scores than “moderate” or "very conservative" identified students. Although the zero-order (pairwise) correlations between the dependent variable and the student characteristic variables of engineering major, business major, White/Caucasian race/ethnicity, heterosexual/straight sexual orientation, “more than enough” financial resources, and required participation in the NCBI workshop all had a negative relationship with the UDO, race/ethnicity, sexual orientation, major area of study,
religiosity, [dis]ability status, and mandatory participation in an NCBI workshop did not emerge in the final model as significant predictors of UDO. The majority of studies in the literature relate to activities to reduce prejudice, and many of these studies are related to race/ethnicity (Gurin et al., 2004; Spanierman et al., 2008). However, there are a few noteworthy studies directly related to the findings of this research study.

Consistent with this research study, prior literature on gender and prejudice indicates that women have a higher openness to diversity than men (Pascarella et al., 1996; Pike, 2002; Whitt et al., 2001). Singley and Sedlacek (2009) found that “women have significantly higher scores than men on two of the three M-GUDS-S subscales as well as the overall full scale score” (p. 407). One explanation for the difference, according to Gilligan (1993), is that women focus more on developing a sense of caring, intimacy, and interdependence than do men. Gilligan believes that focusing on these traits leads women to seek connection and attachment to others, which leads to an increased openness to diverse interactions. A more recent study by Goodman and Salisbury (2009) controlled for the background characteristics of race, gender, parents’ educational attainment, and economic status, and used the M-GUDS-S to measure the development of intercultural effectiveness. Goodman and Salisbury (2009) found that being male produced a significant negative effect, and White students made smaller gains on intercultural development than students of other races.

Students with additional years in college (i.e., seniors/undergraduate students with 90+ semester hours) earned a higher score on the M-GUDS-S than did underclass members. Three noteworthy studies support the findings of this research study. Pascarella and Terenzini, (1991) used year in college and major area of study as a way to
account for pre-college characteristics, and concluded students’ change during college indicates a difference between freshman and seniors in cognitive capabilities and skills. Zuniga et al., (2005) used Astin’s I-E-O model and determined gender, race, socio-economic status, and year in college were the individual input characteristics most likely to affect students’ motivation to “actively reduce their own prejudices” (p. 665). Fuertes, Sedlacek et al. (2000) correlated the UDO among first-year university students and found that students with higher M-GUDS-S scores were less fearful of new experiences and diversity of contacts.

Students who identified their political orientation as "very liberal" were more likely to attain high M-GUDS-S scores than “moderate” or "very conservative" identified students. An early citation in Chapter Two of this study affirms this finding. One of the characteristics of Allport's (1954) tolerant personality is liberalism. Allport (1954) stated that the tolerant person’s political orientation “is very likely to be liberal. Prejudiced individuals are more often conservatives” (p. 431). Allport defined “liberal” as someone who: “wants progressive social change,” “de-emphasizes rugged individualism and business success,” “would diminish the power of business by increasing the role of labor and government,” and “takes an optimistic view that human nature can be changed for the better” (p. 431). Political and religious conservatism have been linked to attitudes toward outgroups and the potential threats they may represent (Marcus & Kitayama, 1991). Feldman and Newcomb (1994) stated that the definitions of conservative and liberal vary with time and locality. They describe the label “conservative” as “applied to a person who believes in self-advancement by personal exertion and essential rightness of social and economic inequalities . . . By contrast, the liberal . . . position is one which
favors change” (Feldman & Newcomb, 1994, p. 19). It is an interesting finding that, more than 50 years after the publication of Allport's signature book on the tolerant personality, political orientation is a significant predictor of UDO in this research study.

**Between-institution variables.** There is a vast amount of literature that encourages colleges and universities to promote interaction and to structure intercultural experiences among students as a way to further diversity and multicultural competence. Conversely, in a review of the impact of college on students, Pascarella and Terenzini (1991) note that structural features of institutions (e.g., size, control, selectivity, percentage of minority students, etc.) generally have only an indirect influence on students—their effects being mediated through experiences students have in the institution’s general environment.

**Research question two.** Research question two of this study asked, what influence, if any, do institutional characteristics (size, level, control, geographic location, composition of the student body, and reason for offering NCBI) have on students' UDO? Two of the between-institution variables (i.e., level and geographic region) emerged as significant positive predictors of UDO.

Students at 4-year colleges/universities scored higher on the M-GUDS-S than did students at 2-year colleges. This finding is affirmed in a study by Pascarella et al. (2001), who found students' involvement in diversity experiences during college had statistically significant positive effects on their scores on an objective, standardized measure of critical thinking skills; but different diversity experiences influenced critical thinking for students in groups based on gender and ethnic identity at different points in their college experience.
Students in the Southeast geographic region scored higher on the M-GUDS-S than other geographic regions. Further research on the geographic region variable might help explain the increase in UDO. In 2004, Chang, Astin, and Kim noted that

The positive effects of different types of campus diversity are cumulative and complementary. For example, diversity courses and related initiatives appear to benefit students who are exposed to them on predominantly White campuses, but their impact appears to be stronger on campuses that have greater racial diversity. (p. 551)

In this study, while campuses in the Southeast geographic region were predominately White campuses, they were not remarkably different from the other campuses in this research study. In fact, the far west geographic region was excluded in one regression analysis to determine whether the large sample size the large percentage of Asian-American students from the University of Hawaii exerted undue influence on the UDO. The exclusion yielded no significant change in the final regression analysis. Another related possible explanation was addressed by Astin and Sax (1998), who noted that the variable of central interest may also be partially confounded with college environmental variables: Some colleges or types of colleges may be more or less multicultural and diverse in orientation, location, and/or programming. The specific campuses included in this research study (Emory University, Greenville Technical College, Maryville College, Stetson University, and the University of South Florida) did not differ from the sample population. Separate regression analyses were run in order to test whether students' high M-GUDS-S scores from the Southeast region were due to public/private designation, but the separate analysis resulted in no significant findings for the explanation. The possible explanation of more diversity initiatives at the campuses in the Southeast geographic region warrants additional investigation.
**Within-institution variables.** Astin (1993a) stressed the importance of within-institution environmental data by stating, “Perhaps the richest source of data on the students’ environmental experiences is the students themselves” (p. 85). In this study, students were asked to indicate their level of involvement in 11 different diversity experiences. Participation in diversity experiences generally includes formal campus programs and informal campus associations. The results of numerous studies show that experiences with interactional diversity have positive effects for virtually all students in all types of postsecondary institutions with a wide range of desirable college outcomes (Hurtado, 2002; Orfield, 2001). Other studies have examined the positive impact of interaction with diverse peers on students' openness to diversity and challenging their own beliefs and experiences (Pascarella et al., 1996; Whit et al., 2001); promoting racial understanding (Astin, 1993b; Milem, 1994); acceptance of people of different races/cultures, cultural awareness, tolerance of people with different beliefs, and leadership abilities (Hurtado, 2001); and, multicultural competencies (Hu & Kuh, 2003). Astin (1993b) found that participating in cultural awareness workshops is positively associated with undergraduate retention, six different measures of satisfaction, and six measures of academic development (critical thinking, general knowledge, public speaking ability, listening ability, writing ability, and preparation for graduate school).

As mentioned in Chapter Two, a number of approaches to increase contact and a variety of diversity programs have been employed in higher educational settings to reduce prejudice. One approach is intergroup dialogue programs designed to explore personal and other group’s cultural identities and differences and examine ways to bridge the intergroup differences (Zuniga, Nagda, & Sevig, 2002; Gurin & Nagda, 1999). Gurin
et al. (2004) also found “When inter-group dialogues are successful, students’ gain an understanding of both commonalities and differences between groups” (p. 20). The NCBI Campus Affiliate program is an example of an inter-group dialogue group on college campuses. As discussed in Chapter Three, less researched are the effects of specific diversity experiences on students' non-prejudice or UDO.

**Research question three.** Research question three of this study asked, what influence, if any, does involvement in diversity experiences have on students' UDO? Three of the 11 diversity experiences from this block emerged as significant positive predictors of UDO (*Made friends with students whose race was different from yours, had discussions with other students about different lifestyles and customs, and had serious discussions with students whose religious beliefs were very different from yours*).

The diversity experience *made friends with students whose race was different from yours* has been affirmed in a number of previous studies (i.e., Antonio, 2001; Astin, 1993b; Chang, 1999; Dovidio, 2005). Dovidio (2005) concluded that cross-group friendship is thought to be one of the best predictors of positive inter-group attitudes because of its capacity to reduce anxiety and threat. Chang (1999) found the variable socializing with someone of another racial and ethnic group had a direct effect on college satisfaction and social self-concept and an indirect effect on retention and intellectual self-concept. In an analysis of 25,000 students from 217 four-year colleges and universities, Astin (1993b) found that cross-racial socialization and discussing racial issues had a positive effect on students' academic and personal development. Antonio (2001) noted “that interaction with diverse peers in and outside the classroom is the crucial way in which diversity produces educational benefits for students” (p. 593).
The diversity experience had discussions with other students about different lifestyles and customs is consistent with findings by Zajonc (1968) who found that greater contact and familiarity typically contribute to increased liking. Other studies have examined the positive impact of interaction with diverse peers on students' openness to diversity and challenging their own beliefs and experiences (Pascarella et al., 1996; Whitt et al., 2001). Galinsky and Moskowitz (2000) found that perspective taking and empathy can increase the perception that a universal humanity and destiny is shared with another group.

The diversity experience had serious discussions with students whose religious beliefs were very different from yours is an interesting finding, given the shortage and inconsistent results cited in the literature. No studies were found specifically relating religion to non-prejudice. One study examined UDO among first-year college students and used religiosity as a demographic variable (Spanierman et al., 2008), and the concept of religion and tolerance was studied by Allport (1954). Allport (1954) found that prejudice was higher among students who indicated religion was a slight or nonexistent factor. However, Allport cited other studies that indicated that “individuals having no religious affiliation show on the average less prejudice than do church members” (p. 451). Allport surmised that belonging to a church “is likely to be the mark of an authoritarian character and to be linked with prejudice” (p. 453). Marginally related is a study by Pascarella et al. (2001) in the first-year taking diversity courses and having serious discussions with students whose religious beliefs were very different from theirs had no significant net impacts on critical thinking.
Research question four. Research question four of this study asked, what influence, if any, do students' perceived attitudes about the multicultural environment have on students' UDO? One of the five questions pertaining to perception of campus climate emerged as a significant positive predictor of UDO. Students who gave high ratings to their institution’s commitment to the goal of developing an appreciation for multiculturalism scored high on the M-GUDS-S.

These finding suggest that the more institutions provide a commitment to the goal of developing an appreciation for multiculturalism, the more students will score well on a measure of UDO. These findings are emphasized in a study by Pascarella et al. (1996) who determined that students' openness to diversity was influenced by the perception that their campus was nondiscriminatory.

Often, students' perceptions about their campuses may be just as influential as their experiences, so there is empirical evidence that students' perceptions of the campus racial climate do have an influence on their attitudes about race and ethnicity in general. (p. 289)

These findings are also supported in an earlier cited hypothesis behind the Universal Orientation Scale that perceived similarity rather than actual similarity is the fundamental link to liking, helping, understanding, and even reducing prejudice (Phillips & Ziller, 1999).

Implications for Theory and Practice

Among the goals of this research study are to support and/or advance theory and provide ideas for policy and practice. The following section describes how this research study contributes to the literature and extends ideas for policy and/or practice within higher educational institutions.
Implications for theory. This study adds to the body of knowledge on UDO and supports research on the variables that contribute to non-prejudice on college campuses (i.e., the influence of college diversity experiences [Pascarella] and Astin's student involvement theory). By researching the UDO concept in conjunction with diversity experiences, this study also adds to the body of knowledge about variables that contribute to non-prejudice and multiculturalism with undergraduate college students. In addition, this study supports previous research on the effects of college having “a generally liberating influence on students’ attitudes and values” Pascarella and Terenzini (1996) and student involvement theory (Astin, 1993a).

An important finding of this study is that a number of student and institutional characteristics influence UDO. This research advances Miville et al.’s (1999) UDO construct and application of the M-GUDS-S measure. This research study also supports the premise of UDO that

An awareness of how people are alike and different is important to effective interactions with others. Such an understanding allows one to build an alliance with others on the basis of similarities (e.g., commonality of being human) while at the same time being able to accept and value others for being different than oneself (e.g., by race, gender, or sexual orientation). (Fuertes, Miville et al., 2000, p. 157)

Second, this research study supports previous research by Pascarella and Terenzini (1991) on the effects of attending college as having a “generally liberating influence on students’ attitudes and values . . . . Without exception, the nature and direction of the observed changes involve greater breadth, expansion, inclusiveness, complexity and appreciation for the new and different” (p. 326). This research study also supports researchers, including Pascarella (2006), who have shown that diversity experiences enrich the academic, social, intellectual, and personal impact of college for
students. In addition, the current study advances research on diversity experiences with universal orientation among college students in a variety of college environments. Previous studies focusing on the impact of diversity initiatives have been linked with positive socio-cognitive development (Zuniga et al., 2005), critical thinking (Astin, 1993b), and satisfaction with college (Helms et al., 1998); however, this study provides new information on the impact of participation in specific diversity experiences that foster increased awareness and acceptance of the similarities and differences among and between students in the higher educational environment.

In addition to using Astin’s I-E-O model as the conceptual framework to research multiple inputs and environments that influence UDO, Astin's (1993a) theory of student involvement is advanced in this research study. In Astin's (1993b) analysis of 217 four-year colleges and universities, he found (a) taking ethnic and women's studies courses, (b) faculty involvement, (c) institutional support, (d) cross-racial socialization, (e) cultural awareness workshops, and (f) discussing racial issues had a positive effect on students' academic and personal development. Astin (1993b) found that participating in cultural awareness workshops is positively associated with undergraduate retention, six different measures of satisfaction, and six measures of academic development (i.e., critical thinking, general knowledge, public speaking ability, listening ability, writing ability, and preparation for graduate school) (p. 47). This study extends Astin’s (1993b) theory of student involvement by finding that three measures of student involvement (cross-racial socialization, discussing different lifestyles, and different religious beliefs) had a positive effect on students' personal development (UDO). Creating opportunities on college and university campuses for students to develop these relationships would be
one way in which these findings and student involvement theory could enhance students’ UDO.

**Policy implications.** This study has important policy implications for colleges and universities diversity initiatives. Higher education administrators may benefit from its findings in five ways: (a) by emphasizing the role of education in helping students succeed in developing a sensitivity to and empathy for those whose backgrounds and cultures differ from their own (Gioseffi, 1993); (b) by providing helpful information for administrators about how the environment influences students’ UDO; (c) by supporting the use of UDO when creating diversity experiences; (d) by targeting three specific diversity experiences to advance; and, (e) highlighting the importance of demonstrated diversity initiatives given the effect that students’ perception of their campus climate have on their UDO.

By applying a measure of UDO with a variety of diversity experiences, this study provides guidance that diversity experiences are important in promoting awareness and acceptance of both the similarities and differences among undergraduate students. Specifically, this research may provide new policy and practice value for educators as to the influence of three particular diversity experiences on students’ multicultural personality and the importance of students’ perceptions about their campus climate with respect to their UDO. Since three diversity experiences were strong predictors of UDO, institutions should examine ways to encourage these activities. These diversity experiences could be incorporated at multiple levels throughout the institution and in several ways (i.e., academic administrators through inclusion in the core curriculum, faculty through in-class discussions, and student affairs through specialized programming
activities). In addition, by noting who benefits from diversity experiences and which institutional characteristics are conducive to students’ multicultural collegiate experiences, college and university administrators can focus their diversity efforts where they will be of the most benefit. As noted by Fuertes, Siedlak et al. (2000), “Consideration of students’ levels of UDO may offer additional information about students’ appreciation for cultural differences that will be useful for student development staff when creating diversity awareness and sensitivity training programs” (p. 55).

Taking into account that students’ perception of the campus climate influences UDO, efforts need to be made at all levels of higher education to make evident a commitment to a multicultural campus climate, including diversifying the faculty and student populations. Chang (1999) found that attending a university with a diverse "student population increases the likelihood that a student will socialize with someone of a different race" (p. 386).

**Recommendations**

Even though this study significantly contributes to the literature by providing innovative research about the influences of student involvement in diversity experiences and the concept of UDO, there is still a need for additional research concerning the subject of involvement in diversity experiences in connection with the concepts of non-prejudice and UDO. This study is a starting point for research on non-prejudice, but non-prejudice needs to be studied more. As noted by Phillips and Ziller (1997), non-prejudice needs to be studied because previous theories and approaches have “unwittingly contributed to the perception that non-prejudice does not exist” (p. 421). Future research is needed to determine ways not only to increase purposeful contact, but also to increase
non-prejudice (Dovidio, 2005). More studies are needed with non-prejudice as the dependent variable.

**Further research utilizing the UDO.** This study is a beginning, but more research needs to be conducted on the types of programs (e.g., inter-group dialogue programs) to facilitate non-prejudice. Some strategies used in early approaches to reduce prejudice need to be studied in relation to programs to promote non-prejudice, specifically, research on programs to promote positive traits, greater openness and flexibility and programs that work toward common goals to reduce conflict and increase inter-group interactions. As with research that contributed to prejudice-reduction and the motivation behind stereotyping behavior, more research is needed into the conditions that contribute to non-prejudice and research on motivation to increase non-prejudiced behavior. Additional studies linking UDO and diversity initiatives “may provide an important new direction for assessment in diversity programming” (Singley & Sedlacek, 2004, p. 84).

In addition, future research could examine the student and institutional characteristics that influence UDO. More research on UDO and college students’ development could support the findings of this study or identify added insights on how to create multicultural college/university environments. Miville et al. (1999) conducted four studies to create an instrument to measure the UDO scale, and Fuertes, Miville et al. (2000) conducted studies to establish evidence for the reliability and validity of the scale, but there is a limited amount of research utilizing UDO, and even less linking UDO to student development. The literature review indicated that the UDO concept has been researched with first-year students, transfer students, first-generation students, nursing
students, with living-learning environments, and to explore the effectiveness of orientation programming. However, a review of the literature only revealed one study researching differences in UDO by race/ethnicity and gender, and another study researching participation in campus diversity experiences on students’ UDO. It may be useful to replicate this study with additional populations, to conduct a similar study using the entire 45-item UDO measure (M-GUDS) at a single institution, or to conduct a qualitative study among institutions whose students had the highest overall scores on the M-GUDS-S.

**Improving the database/survey.** Although every effort was made to solicit responses for this study, more returned surveys from more campuses may have had an impact on the results. It is possible that further participation from additional campuses may have helped to identify why the Southeast geographic region is a significant predictor of UDO. Expanding the sample population to non-NCBI affiliated colleges/universities could provide other useful information. More detailed institutional surveys could provide individual campuses with information to assist administrators in tailoring their distinct individual student and institutional characteristics to provide an environment conducive to fostering UDO with students.

**Additional data analysis.** Further investigation of the data may yield added information. A number of variables had a negative correlation with the dependent variable (e.g., engineering major, business major, White/Caucasian race/ethnicity, heterosexual/straight sexual orientation, “more than enough” financial resources, and required participation in the NCBI workshop), but did not emerge in the final model of the regression analysis. This study used a stepwise regression to conduct the statistical
analysis; a future study could use a different statistical technique to investigate the variables with a negative correlation or to learn if the results would be any different. The exploration of the zero-order pairwise correlated variables or an analysis of the existing data from top institutions with high-UDO scores could be a topic for future research.

Lastly, this study asked participants for additional comments. A number of students responded. Aside from suggestions about the survey instrument, there were a number of comments specific to the participant’s individual campus experience. An analysis of the open-ended responses or a qualitatively-designed study on diversity experiences and UDO could be very thought-provoking future research.

**Contributions to the Literature**

This research contributes to the literature in four ways. First, this research study supports and adds to the concepts of non-prejudice and UDO with undergraduate students.

1. Illustrates that non-prejudice is an important concept, and
2. Student awareness of UDO (how people are alike and different) is important to effective interactions with others.

Second, this study brings together three existing theoretical models (i.e., Miville, Pascarella, and Astin), with a unique focus on the variables that contribute to non-prejudice. The application of the I-E-O model in this study supports the role of student involvement in higher education.

3. Incorporates three theoretical models (a) Miville, (b) Pascarella, and (c) Astin.
4. Applies the I-E-O model to demonstrate the role of student involvement in higher education.
Third, this study provides practical applicability for administrators in higher educational institutions by finding four significant within-institution predictor variables of UDO.

5. Corroborates that involvement in diversity experiences does influence students’ UDO.

6. Three specific diversity experiences and one campus climate issue influence students’ UDO. Administrators, faculty, and student affairs professionals need to focus on providing students with opportunities to:
   a. *Make friends with students whose race was different than theirs,*
   b. *Have discussions with other students about different lifestyles and customs,*
   c. *Have discussions with students whose religious beliefs were very different from theirs*
   d. Promote awareness that the institution is committed to providing students with a multicultural campus climate

Last, this study provides the research to support policies that promote and encourage diversity experiences for students.

7. Institutions of higher education need to strengthen efforts to develop students’ UDO, given the demonstrated benefit to students and institutions

8. Institutions of higher education need to promote and encourage diversity experiences for students
9. Institutions of higher education need to promote strategies that provide students’ with opportunities to ‘build an alliance with others on the basis of similarities’

10. Institutions of higher education need to demonstrate their commitment to the goal of developing an appreciation for multiculturalism.

**Final Summary**

This dissertation examined the influence of student characteristics, institutional characteristics, previous diversity experiences, and perceptions of campus climate on students’ scores on the Universal Diverse Orientation (UDO) Scale short form (M-GUDS-S)—with a particular subset of students from across the country who participated in an NCBI workshop. The main focus of this study was whether the influence of students' involvement in diversity experiences has a positive association with the ability to appreciate similarities and value differences. In this research study, there are a total of 10 predictor variables of UDO—four input variables, two between-institution variables, and four within-institution variables.

“One of the major conclusions from the last decade on college impact is that, on balance, racial diversity enriches the postsecondary academic and social experience and enhances the intellectual and personal impact of college” (Pascarella, 2006, p. 511). This conclusion is also supported by Gurin and Nagda (2004) and Antonio (2001) who assert that interaction with diverse peers in and outside the classroom is a crucial way in which diversity produces educational benefits for students. It is important to foster a campus that promotes non-prejudice, not only because “it is useful to examine a person’s level of appreciation and acceptance of people and cultures that are different from his or her own”
(Singley & Sedlacek, 2009, p. 404), but because “Building a multicultural campus climate does not begin at a neutral point. . . . Positive attitudes lead to an expectation of having rewarding interactions, whereas negative attitudes lead to an expectation of non-rewarding interactions (Johnson & Johnson, 2000, p. 243). An awareness and acceptance of similarities and differences among students is essential for undergraduate students in a multicultural college environment.

The implications of this study are far reaching, and the dialogue it opens should begin a new chapter in the discussion of prejudice reduction efforts in higher education for several reasons. This study is believed to be the first to have applied UDO in evaluating students’ perceptions and institutional approaches to prejudice reduction efforts on campus. From its findings, higher education institutions should be assured—non-prejudice is an important concept for students, and the commitment colleges and universities make to multiculturalism influences their development. Where possible, institutions should advance the three diversity experiences identified as most crucial in the development of their UDO—made friends with students whose race was different from yours, had discussions with other students about different lifestyles and customs, and had serious discussions with students whose religious beliefs were very different from yours. This study’s findings reach beyond the role of higher education diversity program managers to affirmative action measures, faculty and administrative recruitment and hiring, and educational course offerings. As mentioned earlier in this paper, higher education institutions can play a crucial role in preparing students for global citizenship. This study provides direction into how that preparation should proceed.
References


National Survey of Student Engagement (NSSE).


Abrams & M. Hoggs (Eds.), *Social identity and social cognition* (pp. 183-96).

Oxford: Blackwell.


doi:10.1177/01461670201274009


doi:10.1016/0147-1767(92)90007-H


Appendix A

Survey

SURVEY OF STUDENT CHARACTERISTICS INFLUENCING
UNIVERSAL-DIVERSE-ORIENTATION

Thank you for being part of this research study! The survey should take approximately
ten minutes to complete. Your responses will be confidential and only used as total scores.
Frank and honest responses to the questions below are greatly valued and appreciated.

PLEASE READ THE DIRECTIONS FOR EACH SECTION AND MARK YOUR ANSWERS CLEARLY

SECTION 1: YOU – COMPARED TO OTHERS

1. Compared with other college students, how would you rate your ability to recognize differences and
accept similarities in other people?

☐ Lowest 10%  ☐ Below average  ☐ Average  ☐ Above average  ☐ Highest 10%

2. Compared with other college students, how would you rate your ability to empathize and
interconnect with culturally diverse people?

☐ Lowest 10%  ☐ Below average  ☐ Average  ☐ Above average  ☐ Highest 10%

SECTION 2: YOUR DIVERSITY EXPERIENCES

For each item in this section, please mark the response that best describes you

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Occasionally</th>
<th>Often</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Number of diversity courses taken</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>(defined as the cumulative number of</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>courses taken in: women's studies,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latin American studies, African</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American studies, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Made friends with students whose</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>race was different from yours</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Participated in a racial or cultural awareness workshop</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6. Participated in a volunteer or service learning experience</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>7. Made friends with students from another country</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>8. Had serious discussions with students whose philosophy of life or personal values were very different from yours</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>9. Had serious discussions with students whose religious beliefs were very different from yours</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>10. Had serious discussions with students whose political opinions were very different from yours</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>11. Had serious discussions with students from a country different from yours</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>12. Had discussions with other students about major social problems such as peace, human rights, equality, and/or justice</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>13. Had discussions with other students about different lifestyles and customs</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
SECTION 3: STATEMENTS

The following items are made up of statements using several terms which are defined below for you. Please refer to them throughout this section of the questionnaire.

- **Culture** refers to the beliefs, values, traditions, ways of behaving, language of any social group. A social group may be racial, ethnic, religious, etc.
- **Race or racial background** refers to a sub-group of people possessing common physical or genetic characteristics. Examples include White, Black, American Indian.
- **Ethnicity or ethnic group** refers to specific social group sharing a unique cultural heritage (i.e., customs, beliefs, language, etc.). Two people can be of the same race (e.g., White), but be from different ethnic groups (e.g., Irish-American, Italian American).
- **Country** refers to groups that have been politically defined; people from these groups belong to the same government (e.g., France, Ethiopia, United States). People of different races (White, Black, Asian) or ethnicities (Italian, Japanese) can be from the same country (United States).

Instructions: Please indicate how descriptive each statement is of you by filling in the number corresponding to your response. This is not a test, so there are no right or wrong, good or bad answers. All responses are anonymous and confidential.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Disagree a little</th>
<th>Agree a little</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. I would like to join an organization that emphasizes getting to know people from different countries.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>15. Persons with disabilities can teach me things I could not learn elsewhere.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>16. Getting to know someone of another race is generally an uncomfortable experience for me.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>17. I would like to go to dances that feature music from other countries.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>18. I can best understand someone after I get to know how he/she is both similar and different from me.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>19. I am only at ease with people of my race.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>20. I often listen to music of other cultures.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>21. Knowing how a person differs from me greatly enhances our friendship.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>22. It’s really hard for me to feel close to a person from another race.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>23. I am interested in learning about the many cultures that have existed in this world.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>24. In getting to know someone, I like knowing both how he/she differs from me and is similar to me.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>25. It is very important that a friend agrees with me on most issues.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>26. I attend events where I might get to know people from different racial backgrounds.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>27. Knowing about the different experiences of other people helps me understand my own problems better.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>28. I often feel irritated by persons of a different race.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
### Section 4: Background Information

For each item in this section, please mark the response(s) that best describe you.

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
</table>
| 29. Year in College                                                    | - Freshman/ < 30 semester hrs  
- Sophomore/ < 60 semester hrs  
- Junior/ < 90 semester hrs  
- Senior/ > 91 semester hrs  
- Other Undergraduate |
| 30. Major Area of Study                                               | - Arts & Sciences  
- Business  
- Education; Health or Social Sciences  
- Engineering or Technical Studies  
- Other |
| 31. Gender                                                             | - Female  
- Male  
- Transgender |
| 32. Race/Ethnicity [Mark ALL that Apply]                              | - American Indian/ Alaskan Native  
- Asian or Pacific Islander  
- Black/ African American  
- Latino/ Latina Hispanic  
- White/ European |
| 33. Age                                                                | - 18-24  
- 25-39  
- 40-64  
- 65 or older |
| 34. Sexual Orientation                                                | - Bisexual  
- Asexual  
- Heterosexual/ Straight  
- Gay/ Lesbian/ Queer  
- Questioning |
| 35. Role of Spirituality in everyday life                             | - Highly valued  
- Moderately valued  
- Somewhat valued  
- Not at all valued  
- Struggling |
| 36. Organized Religious Services                                       | - Attend Frequently  
- Attend Occasionally  
- Never Attend |
| 37. [Dis]ability status                                                | - No disability  
- Undisclosed disability  
- Disability not Requiring accommodations  
- Disability Requiring accommodations |
| 38. Socio-economic Background                                          | - Raised with Less Than Enough financial resources  
- Raised with Enough financial resources  
- Raised with More Than Enough financial resources |
| 39. Political Orientation                                              | - Very liberal  
- Somewhat liberal  
- Moderate  
- Somewhat conservative  
- Very conservative |
| 40. Your Attendance at the NCBI Workshop                               | - Voluntary  
- Encouraged  
- Required |

---

Please turn to the last page.
### Section 5: Your Institution

For each item in this section, please mark the response that best describes your college or university?

41. What is the name of your college or university? 

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>Below Average</th>
<th>Average</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>42. Rate your institution's commitment to the goal of increasing the number of women and minority faculty?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>43. Rate your institution's commitment to the goal of increasing the number of minority students?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>44. Rate your institution's commitment to the goal of developing an appreciation for multiculturalism?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>45. Rate your institution's ability to provide multicultural campus programs and/or activities that provide opportunities to interconnect with culturally diverse people?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>46. Rate your institution's ability to provide a campus environment that recognizes differences and accepts similarities among people?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

47. Rate the degree diversity on your campus?

- ☐ Very diverse  - ☐ Moderately diverse  - ☐ Somewhat diverse  - ☐ Not at all diverse

In the space below, please feel free to add any additional comment(s):

---

Optional: If you have any questions about this survey or if you would like to receive an executive summary of this research, please contact Linda Toscano at linda.toscano@utoledo.edu

THANK YOU!!!
Appendix B

List of NCBI Campus Affiliates

1. Aiken Technical College
2. Bowling Green State University
3. Buffalo State College
4. Bunker Hill Community College
5. California State University – Fresno
6. California State University - Monterey
7. Central Michigan University
8. Colgate University
9. Columbia University
10. Delmar College
11. Edinboro University of Pennsylvania
12. Emory University
13. Frostburg State University
14. Furman University
15. George Mason University
16. Georgia Institute of Technology
17. Greenville Technical College
18. Hudson Valley Community College
19. Kutztown University of Pennsylvania
20. Loyola College of Maryland
21. Maryville College
22. Massasoit Community College
23. Medical University of South Carolina
24. Michigan Technological University
25. Middlesex Community College
26. North Carolina Central
27. North Carolina State University
28. Northern Essex Community College
29. North Shore Community College
30. Onondaga Community College
31. Oregon State University
32. Rhodes College
33. Roger Williams University
34. Seton Hall University
35. Seton Hill University
36. Slippery Rock University of Pennsylvania
37. Stetson University
38. State University New York at ALBANY
39. State University New York at COBLESKILL
40. State University New York at Oneonta
41. The Ohio State University
42. Tompkins Cortland Community College
43. University of Alaska Anchorage
44. University of Georgia
45. University of Hawaii-Manoa
46. University of Houston - Central
47. University of Montana- Missoula
48. University of Northern Iowa
49. University of South Florida
50. University of Texas-Arlington
51. Washington State University
52. Windward Community College
Appendix C

Institutional Review Board: Letter of Approval

The University of Toledo
Department for Human Research Protections
Social, Behavioral & Educational Institutional Review Board
Office of Research, Rm. 2300, University Hall
2801 West Bancroft Street, Mail Stop 944
Toledo, Ohio 43606-3390
Phone: 419-530-2844  Fax: 419-530-2841
(FWA00010686)

To: Ron Opp, Ph.D. and Linda Toscano
   Department of Educational Leadership

From: Mary Ellen Edwards, PhD., Chair
       Kamala London, Ph.D., Vice Chair
       Walter Ewing, Ph.D., Chair Designee

Signed: [Signature]

Date: 05/25/11

Subject: IRB #107295
Protocol Title: Do Student or Environmental Characteristics Influence Undergraduate Students' Universal Diverse Orientation (UDO)?

On 05/25/11, the Protocol listed below was reviewed and approved by the Chair and Chair Designee of the University of Toledo (UT) Social Behavioral & Educational Institutional Review Board (IRB) via the expedited process. The Chair and Chair Designee noted that a signed and dated Consent form is required prior to an individual taking part in this research. This action will be reported to the committee at its next scheduled meeting.

Items Reviewed:
- IRB Application Requesting Expedited Review
- Consent Form(s) (version date 05/25/11)
- Questionnaire (version date 05/25/11)

This protocol approval is in effect until the expiration date listed below, unless the IRB notifies you otherwise.

Only the most recent IRB approved Consent/Assent form(s) listed above may be used when enrolling participants into this research.

Approval Date: 05/25/2011  Expiration Date: 05/24/12

Number of Subjects Approved: 1,800

Please read the following attachment detailing Principal Investigator responsibilities.