A HIERARCHICAL ANALYSIS OF HOW INSTITUTIONAL, FACULTY, AND STUDENT CHARACTERISTICS RELATE TO INTERCULTURAL MATURITY

By

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ABSTRACT

The purpose of this study is to investigate the relationship between institutional characteristics of colleges and universities and Intercultural Maturity. More specifically, the study looked at two relationships: (1) the institution's emphasis on diversity and faculty emphasis on Intercultural Maturity in the classroom, and (2) the institution's emphasis on diversity and student gains in Intercultural Maturity. This national study included 4,274 senior college students, 1,371 general education faculty members, and 80 four-year higher education institutions.

Findings that focused on faculty emphasis on Intercultural Maturity indicated that the strongest predictors were those that represented how faculty spent their time in class: the extent to which faculty emphasized diversity in their course content and the inclusion of a service learning project were significant positive predictors of faculty emphasis on Intercultural Maturity. The institution's emphasis on diversity varied in predicting faculty emphasis on Intercultural Maturity: emphasizing student contact with diverse others was a strong significant positive predictor, inclusion of diversity in the undergraduate curriculum was a negative significant predictor, and inclusion of diversity in the mission statement was not a significant predictor. Female faculty, faculty of color, faculty in a soft discipline, or those who were not on the tenure track were more likely to emphasize Intercultural Maturity than their respective peers who were male, white, in a hard discipline, or tenured /on the tenure track.

When looking at variables that predicted student gains in Intercultural Maturity, student experience variables were the strongest predictors. Those experience variables included participating in a learning community, incorporating diverse perspectives in class, participating in class group work, and practicing reflective learning. Institutional promotion of student contact

with diverse others was a strong significant predict of student gains in Intercultural Maturity but emphasizing diversity in the mission statement and the undergraduate curriculum were not significant predictors of the outcome measure. Faculty emphasis on diversity and reflective learning in the classroom was also not a significant predictor of student gains in Intercultural Maturity. Students who were female, non-white, or traditional aged made greater gains in Intercultural Maturity than their respective peers who were male, white, or non-traditional aged.

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To all of you, I thank you.

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CHAPTER 1: INTRODUCTION

The population in the United States is becoming increasingly diverse. For example, data from the 2010 Census indicates that the majority of the population growth in the last ten years stems from those who are Hispanic (Census, 2011). Additionally, the proportion of the US population that identifies as non-Hispanic White decreased from 69% to 64% during the past decade (Census, 2011). The 2012 *Almanac of Higher Education* also reports an increase in the number of students of color enrolling in colleges and universities (The Chronicle of Higher Education, n.d.). Further, the National Center for Education Statistics projects the following enrollment increases from 2009 to 2020: 46% for Hispanic students, 25% for Black students, 25% for Asian Pacific Islanders, and 1% for White students (Hussar & Bailey, 2011). Increasing levels of diversity on campus can lead to increased conflict (Hurtado, 1996). At the same time, it has been recognized that institutions of higher education have a unique opportunity to foster openness to diversity (Chang, 2002a; Gurin et al., 2002; Hurtado, 1996; Smith, 2009) because college often provides young adults one of their first opportunities for prolonged interaction with others who are different than themselves (Miller et al., 1998; Rankin & Reason, 2005).

The purpose of this study is to investigate the relationship between institutional characteristics of colleges and universities and Intercultural Maturity. More specifically, the study looks at Intercultural Maturity from two perspectives: (1) what institution characteristics and faculty characteristics are related to faculty emphasis on Intercultural Maturity, and (2) what institution and student characteristics are associated with student gains in Intercultural Maturity. Intercultural maturity is a holistic model that can be used to look at student development related to cognitive, intrapersonal, and interpersonal development (King & Baxter Magolda, 2005). In this model, cognitive development relates to how a person understands issues related to diversity;

intrapersonal development connects how a person views his or herself as well as that person's sensitivity to diversity; and interpersonal development ties interactions with diverse others, how the person respects others and stays true to him- or herself. More details about this model will be provided later in this chapter and again in Chapter 2.

Context of the Study

Leading researchers in the area of cultural diversity have recognized the need for colleges to play a role in preparing citizens for a pluralistic future (Gurin et al., 2002; Hurtado, 1996; Smith, 2009). In higher education, the context of learning plays an important role in student outcomes and a culturally diverse campus influences student learning, both in and out of the classroom (Chang, 2002a; Gurin et al., 2002; Hurtado, 1992, 1996; Hurtado et al., 1998). As students from different racial and ethnic backgrounds interact, learning and changes in behavior related to race occur (Fulford, 2009). Still, some argue that colleges and universities should shift the outcome of diversity from a demographic measure to a measure of education (Milem, Chang, & Antonio, 2005). Others indicate that today's students need more than knowledge about diversity; they need to be able to apply their knowledge effectively in a variety of contexts (King & Baxter Magolda, 2005). Recognizing these perspectives, my study seeks to better understand what colleges and universities are doing to promote Intercultural Maturity.

Engaging with diversity in college increases the likelihood that a student will later choose to live and work in a diverse environment (Laird, Engberg, & Hurtado, 2005). At the same time, as diversity on campus increases so does the potential for conflict (Hurtado, 1996). Faculty members play an important role in students' perceptions of racial tension on campus; for example, students who view faculty to be interested in student development perceive less racial tension on campus (Hurtado, 1996). My study further investigates faculty member's potential

role in promoting a positive racial climate on campus by looking at how they promote Intercultural Maturity in students, an outcome that students can take into the community after graduation. Additionally, my study investigates relationships between Intercultural Maturity and institutional characteristics, such as the mission statement, inclusion of diversity in the undergraduate curriculum, promotion of student contact with other diverse students, and faculty efforts related to emphasizing diversity and reflective learning in their classrooms.

In order to respond to the opportunities, needs, and challenges described above, it is necessary to look at how various efforts of the college are related to students' Intercultural Maturity. First, it is important to know to what extent there are connections between institutions (i.e., institution characteristics such as size and control as well institution emphasis on diversity) and how faculty incorporate components of Intercultural Maturity in their classroom. Second, it is necessary to know how the institution (again, basic characteristics and institution emphasis on diversity) the faculty (through various emphases in their general education courses) affect the extent to which students make gains in Intercultural Maturity.

The importance of considering diversity in relation to campus culture and climate is not necessarily new and efforts to make improvements in this area have existed for quite some time. For example, the American Council on Education endorsed policies supporting diversity within the campus climate in the 1980s (Crosson, 1988). The goals of 30 years ago are not unlike those seen on today's campuses: enhancing the recruitment and retention of minority faculty and students, adjusting teaching pedagogy to better reach a diverse student population, infusing diversity into the curriculum, and promoting a pluralistic campus environment (Appel et al., 1996; Bok, 2006; Crosson, 1988; Gurin et al., 2002; Hurtado, 2007; Hurtado, Engberg, & Ponjuan, 2003; Martinez, Aleman, & Salkever, 2001; Milem, Chang, & Antonio, 2005; Miller et

al., 1998; Nussbaum, 1997; Smith, 2009; Williams, Berger, & McClendon, 2005). My study builds on this literature by incorporating faculty members' perspectives on the institution's commitment to diversity. More specifically, my study sees if there is a relationship between the institutional commitment to diversity and the extent to which faculty promote Intercultural Maturity in class.

Recent history finds increasing levels of students of color coming through the ranks of K-12 education, yet many communities and schools remain racially segregated, resulting in low levels of contact with diverse individuals (Miller et al., 1998; and Rankin & Reason, 2005). In addition to this, students who have low levels of exposure to diversity may be more drawn to students who look like themselves (Fisher & Hartmann, 1995; Fulford, 2009; Jones, 2005). Juxtaposing these two sets of findings demonstrates the importance of understanding what promotes Intercultural Maturity, which could help break the cycle of self segregation.

There has also been some research on students' "openness to diversity" (Cabrera et al, 2002; Pascarella et al., 1996; Pike, 2002; Whitt et al., 2001), which is similar to Intercultural Maturity in that it seeks to understand how students interact with others who are racially different. The data sources of these early studies are based on students beginning college in 1992, 15 years before the students in this study. Research has shown that generations change in how they engage with social and political issues (Broido, 2004). Thus, the college students from recent years may be different than those from the early 1990s in how they become more or less open to diversity. Additionally, none of these studies included the institution's mission statement or the role faculty play in promoting students' openness to diversity and each study measured all of the variables at the student level.

A final aspect about college students that brings importance to this topic is that belonging to more than one identity group (i.e., gender and race) is an important component of student development (Smith, 2009). To get students to belong to more than one group institutions can provide meaningful participation with a variety of individuals and promote the sense that students can connect with a variety of groups on campus and that they matter (Smith, 2009). Because classrooms, especially general education classrooms, are a place with numerous combinations of students from different backgrounds, it is an ideal place to promote and study meaningful interactions among students from different groups. Further, if promoting activities in the classroom that are related to understanding self, understanding others, and working with others is found to be related to student's self-reported levels of Intercultural Maturity, it could be something to recommend for best practices tied to student development.

Research Questions

Through this study I look at two sets of possible relationships with Intercultural Maturity: (a) the institution's emphasis on diversity and faculty emphasis on Intercultural Maturity in the classroom, and (b) the institution's emphasis on diversity (including the aggregate faculty emphasis on diversity in the general education classroom) and students' Intercultural Maturity. The following two research questions investigate these relationships:

Question 1: What institutional and faculty characteristics are associated with faculty members spending time promoting interactions that encourage Intercultural Maturity?

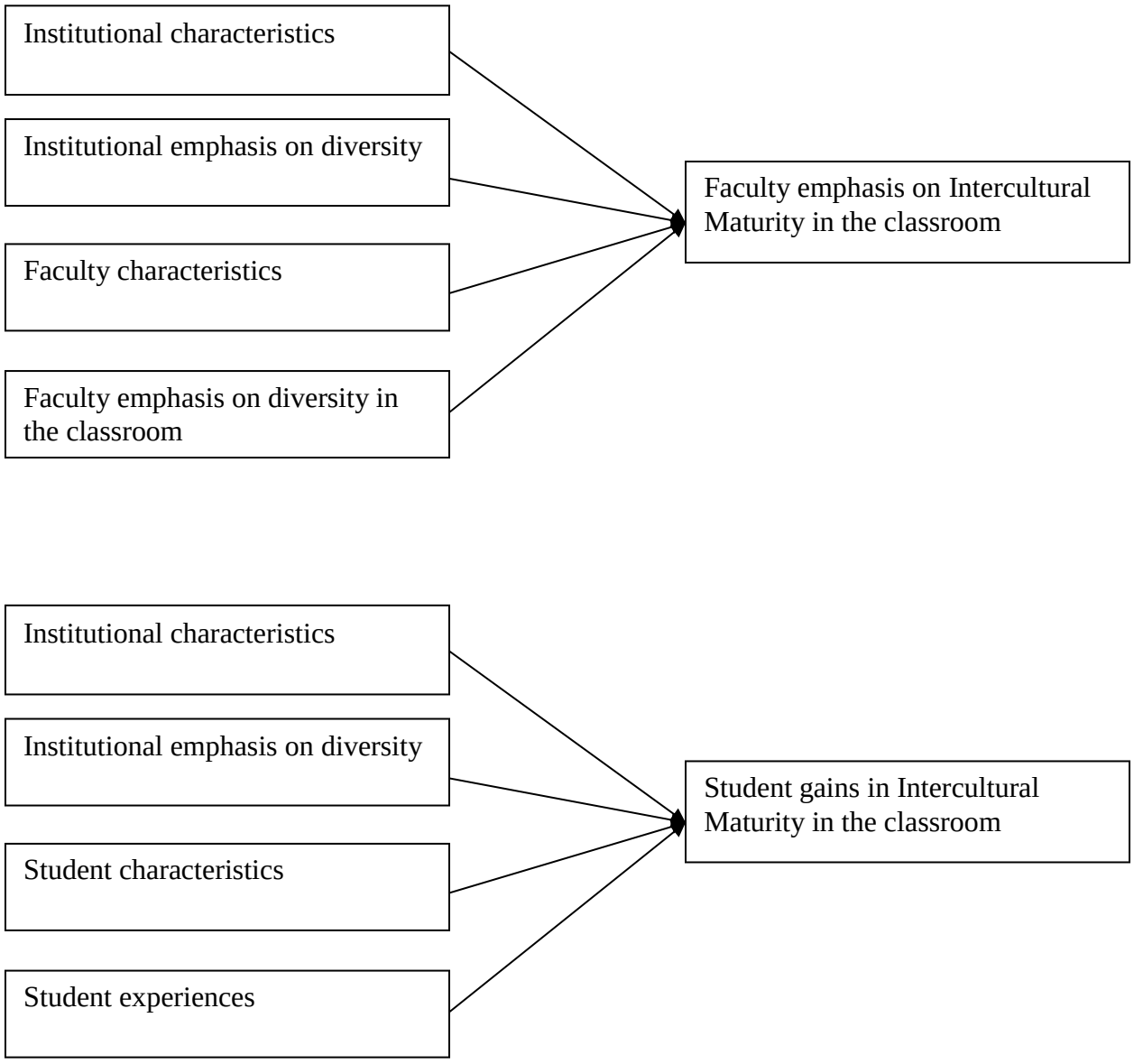
Question 2: What institutional (including average faculty characteristics) and student characteristics are related to student gains in Intercultural Maturity?

I hypothesize that institution that have greater emphases on diversity through purposeful initiatives in their curriculum, student opportunities, and mission statement will have faculty who are more likely to report emphasizing Intercultural Maturity in their classrooms and will have

students who are more likely to make greater gains in Intercultural Maturity. To look at the relationships in the first research question I use institutional characteristics such as the mission statement, inclusion of diversity in the undergraduate curriculum, and institutional promotion of student contact with diverse others to measure the institutional climate related to diversity. Faculty emphasis on Intercultural Maturity in the classroom is measured by the Faculty Survey of Student Engagement (FSSE), a national survey on student engagement that questions the extent to which faculty emphasize student growth in: (a) understanding self, (b) understanding others who are racially or ethnically different than oneself, and (c) working effectively with others. FSSE did not intend to measure faculty emphasis on Intercultural Maturity in their survey. So, the three variables just described (which closely parallel the developmental areas of Intercultural Maturity) are combined to make a proxy composite variable for Intercultural Maturity.

To look at the relationships in the second research question, I use the same institutional characteristics just mentioned and add the institution's aggregate frequency that faculty incorporate diversity into the classroom as a third measure of institutional emphasis on diversity. Students' Intercultural Maturity is measured through students' responses in the National Survey of Student Engagement (NSSE) that address their own development in the following three areas: (a) understanding self, (b) understanding others who are racially or ethnically different than oneself, and (c) working effectively with others. As described in the previous paragraph, these measures are made into a composite variable to approximate Intercultural Maturity. Figure 1.1 provides a representation of these two relationships.

Figure 1.1. Investigation of the relationships in the research questions.



The self-reported measures about student development that are collected by the NSSE are used to approximate students' gains related to Intercultural Maturity. Many of the measures from FSSE are focused on the same NSSE measurements that approximate Intercultural Maturity. The following two questions illustrate the parallel nature of the surveys:

1. To what extent has your experience at this institution contributed to your knowledge, skills, and personal development in … understanding people of other racial and ethnic backgrounds? (NSSE)

2. To what extent do you structure your selected course section so that students learn and develop in … understanding people of other racial and ethnic backgrounds? (FSSE)

Additional detail supporting the theoretical rationale for this study is highlighted later in this chapter and then expanded upon in Chapter 2. The remainder of this chapter outlines the scope of the study, highlights the conceptual framework that guides this research, and describes the significance of this research compared to the existing body of literature on Intercultural Maturity, especially in light of openness to racial and ethnic diversity.

Scope of the Study

My study includes all non-profit four-year institutions that have completed both the College Student Report from the National Survey of Student Engagement (NSSE) and the course-based Faculty Survey of Student Engagement (FSSE) surveys from 2007, which are 80 institutions. NSSE asks students questions about various experiences they have had at their respective institutions and also asks students to self-report various outcome measures. FSSE focuses on perceptions of faculty regarding how students spend their time. Faculty also indicate the extent to which they value various student outcomes and specify how they organize the time they spend at work, both in and out of the classroom, as well as their perception about the institution's inclusion of diversity in the undergraduate curriculum. Data from these two surveys are complimented with institutional data collected from a website review and from the Integrated Post Secondary Education Data System (IPEDS). These latter sources provide information about the institution's mission statement, size, control (public or private), and selectivity in student admission. Together, these four sources allow for comparison between institutional

characteristics related to purposefully emphasizing diversity (i.e., mission statement, inclusion of diversity in the undergraduate curriculum, promotion of student contact with diverse others, and faculty emphasis on diversity and reflective learning in the classroom) as well as characteristics such as size, control, selectivity, and structural diversity.

Linear and hierarchical regression analyses are both used in this study, however, data from NSSE and FSSE is collected and shared in a way that protects the institution's, faculty members, and students identities. As such, it is not possible to link students to a specific faculty member and consequently not possible to build a three-level hierarchical model (students nested within a specific faculty member's class nested within a specific institution). To overcome this limitation, the faculty members who are included in the survey are those who responded to the survey about a general education course they teach to undergraduate students. The reason for narrowing the faculty to this subset is because student respondents from the NSSE survey are more likely to have had that faculty member in class, which provides a more accurate analysis of the relationship between faculty emphasis on diversity and students' Intercultural Maturity. Additionally, student respondents from the NSSE survey are restricted to those with senior status to maximize the time the student has had to be influenced by the faculty and the institution.

It has been said that research that looks at the relationship between diversity and student outcomes falls into one of three categories: structural diversity, encountering diversity naturally, and the extent to which the institution incorporates programs that purposefully promote diversity (Terenzini et al, 2001). My study is most interested in how purposeful diversity efforts, expressed through commitments and efforts of the institution as well as behaviors and emphases faculty demonstrate in their classroom, are related to students' Intercultural Maturity. Structural

diversity, measured by diversity of the faculty and student body, is included as a secondary point of interest.

Conceptual Framework

Scholars and administrators alike have difficulty determining a common definition for concepts such as Intercultural Maturity and intercultural competence (Deardorff, 2006). Key words and phrases that are often cited in defining these concepts include "knowledge of others, knowledge of self, skills to interpret and relate…" and the meanings behind these words and phrases are often used interchangeably with similar intentions (Deardorff, 2006, p. 247). The following paragraphs provide a specific framework for Intercultural Maturity as it is used to guide my study.

One of the guiding questions for the Intercultural Maturity model is "How do people come to understand cultural differences in ways that enable them to interact effectively with others from different racial, ethnic, or social identity groups?" (King & Baxter Magolda, 2005, p. 571). King and Baxter Magolda's model intentionally focuses on *maturity* rather than *competence* because maturity focuses more on growth and development while competence focuses on applying specific skills.

As mentioned earlier in the chapter, interculturally maturity considers student's cognitive, intrapersonal, and interpersonal development (King & Baxter Magolda, 2005). For King and Baxter Magolda, cognitive development represents understanding cultures, intrapersonal development represents the extent to which one knows oneself and can listen and learn from others to form one's own view, and interpersonal development represents sensitivity to others. In their model, students progress through three stages (initial, intermediate, and mature) in each of the three developmental areas. Student development in the three areas (cognitive, intrapersonal,

and interpersonal) is linked. For example, students in the initial stage are likely to look to authorities for information that shapes their point of view, use others' assessment to define themselves, and behave in ways that seek acceptance, which are examples of cognitive, intrapersonal, and interpersonal development, respectively (King & Baxter Magolda, 2005). Intercultural maturation is demonstrated by students when they recognize that cultural viewpoints vary depending on the context, define their own perspectives by challenging and accepting other cultural views, and engage with others who are culturally different in a way that is meaningful and appreciates cultural differences. Figure 1.2 is an adaptation of King and Baxter Magolda's Model.

*Figure 1.2.*Student development in terms of King and Baxter Magolda's model of Intercultural Maturity.

	Initial development	Intermediate development	Mature development
Cognitive development	→	→	→
Intrapersonal development	→	→	→
Interpersonal development	→	→	→

This model recognizes that developing intercultural skills is complex and requires expertise at a variety of levels. The following quote that utilized this model to study Intercultural Maturity provides an example of how a college student can develop in this area:

> Thérèse says that college has taught her to be a well-rounded individual who values diversity (intrapersonal dimension). She thinks about contemporary issues in a more complex way (cognitive dimension), and she believes that she has gained communication skills and the ability to accept different others' perspectives (interpersonal dimension) (King et al., 2007, p. 6).

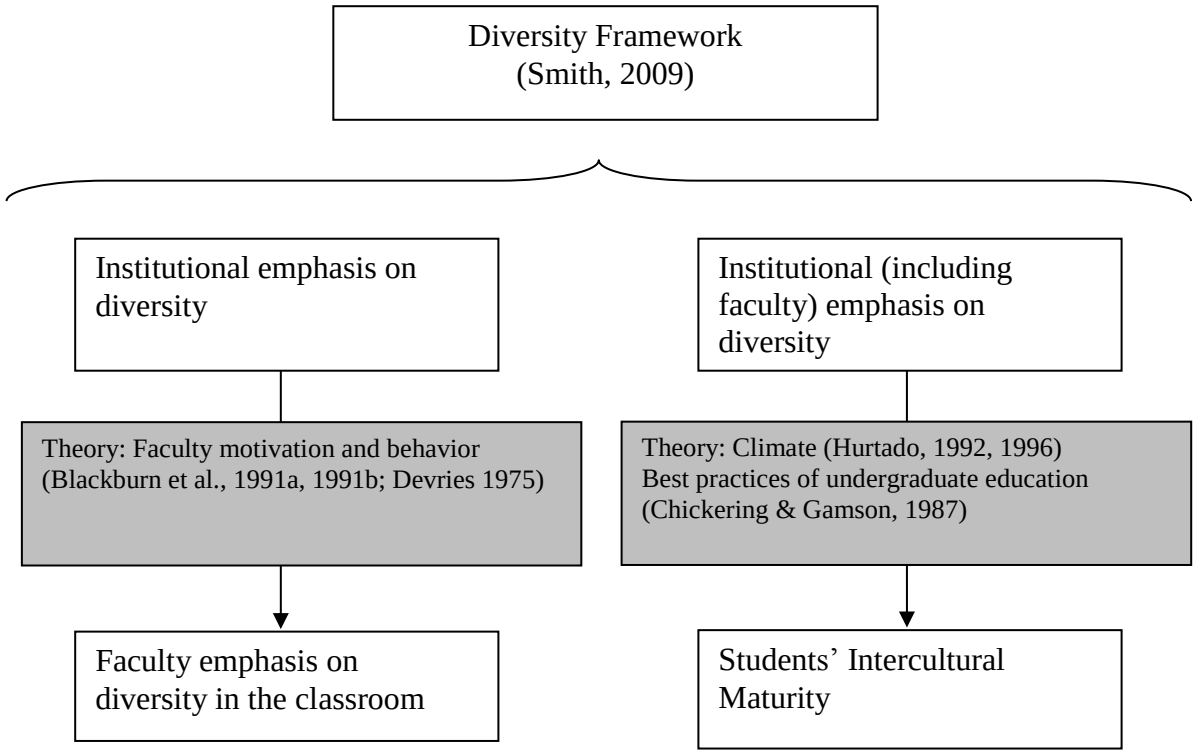
King and Baxter Magolda also ask "How can institutions of higher learning better address the seemingly intractable problems associated with educating for intercultural

understanding?" (2005, p. 571). To answer this question I examine the relationships of the various measures of the institution's emphasis on purposeful diversity discussed earlier in the chapter (i.e., mission statement, the inclusion of diversity in the undergraduate curriculum, promotion of student contact with diverse others, and faculty emphasis on diversity in the general education curriculum) to student responses to the following prompts in NSSE's survey: "To what extent has your experience at this institution contributed to your knowledge, skills, and personal development in the following (three) areas? (a) understanding self, (b) understanding people of other racial and ethnic backgrounds, and (c) working effectively with others. These student measures are compiled into a composite variable that approximates students' development in terms of Intercultural Maturity.

The guiding framework to investigate the context of the institutions in my study comes from Smith's Diversity Framework (2009). She indicates that diversity is an imperative for colleges to be successful, and she makes an analogy to technology as an imperative to be an excellent and forward thinking institution in today's world of higher education. Just as one cannot picture a higher education institution without technology connected to nearly every function, one should not be able to picture a college or university without diversity woven throughout the institution.

Previous research exploring the effect of diversity on student outcomes has looked at diversity in three ways: structural diversity, informal interactional diversity, and classroom diversity (Gurin et al., 2002). The conceptual framework for this study also includes these three measures. Figure 1.3 visually represents how the diversity framework provides an umbrella under which the institution influences the faculty and both the institution and the faculty

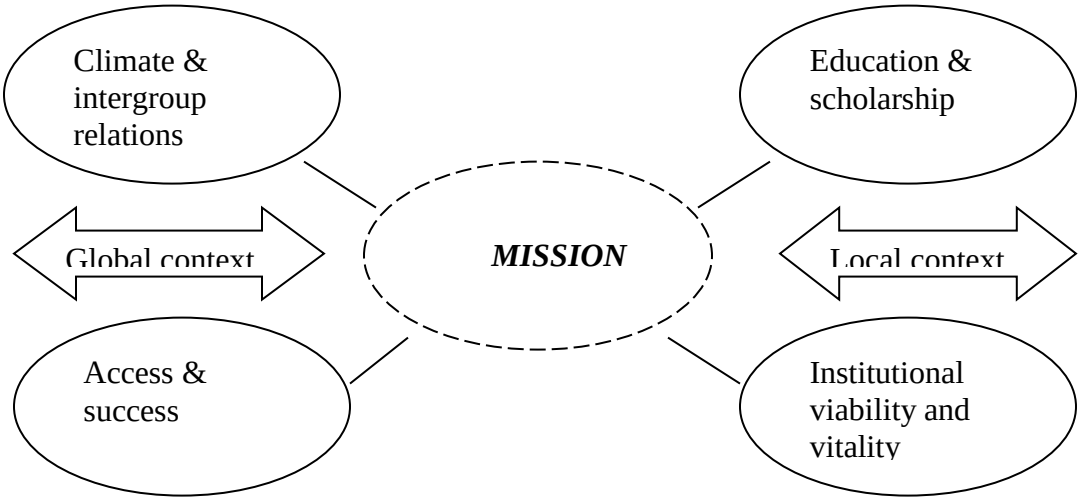
Figure 1.3. A diversity framework is woven throughout the college.



influence the students. This framework is briefly introduced in the following paragraphs and is elaborated in Chapter 2.

As mentioned earlier, the Diversity Framework should weave diversity throughout the institution (Smith, 2009). Figure 1.4 visually represents four key components that need to be considered when integrating diversity into the framework of an institution of higher education: (a) intergroup interactions need to consider the institution's capacity to have difficult conversations about diversity; (b) access and success focuses on how students, especially historically underrepresented students, are included but the institution; (c) education and scholarship needs to consider what the institution is education students to be able to know and do upon leaving the institution; and (d) institutional viability and vitality represent the institution's

Figure 1.4. Smith's Diversity Framework (2009, p. 64) demonstrates how various components of a college are related.



attractiveness to people from diverse communities, the strategic plan, faculty diversity, and staff diversity are aspects of an institution that make it more or less attractive.

The Diversity Framework expressly recognizes that faculty have an important role in institutional diversity in that the core of the academic enterprise is the education and scholarship that occurs on campus (Smith, 2009). As stated above, when institutions think about objectives related to educating students, they need to be sure to include educating students to be successful in an increasingly pluralistic society. As such, it is critical for institutions and researchers to better understand what promotes students' Intercultural Maturity.

While faculty play an important role in institutionalizing diversity, core components of a college, such as the mission, policies, and practices, should also focus on diversity (Smith, 2009). Recognizing this, my study analyzes mission statements, the inclusivity of diversity in the

undergraduate curriculum, and the promotion of student contact with other diverse students to measure the extent to which the institution infuses diversity in its aspirations and daily activities.

One of the questions posed by Smith (2009, p. 178) is particularly salient in my study: "How do we design opportunities for intergroup encounters in such a way that everyone benefits?" From another angle this question could read "Are all students being prepared to function in a diverse society?" These questions are important to my study because they recognize that all groups of students need to benefit from an experience and the classroom, especially general education classrooms, is a place where all students go. As such, the classroom is an ideal environment for promoting intergroup encounters where students can learn from and about others who are different than themselves. The following paragraphs briefly outline the relationships investigated in my study as it relates to the conceptual framework.

The Relationship Between the Institution and the Faculty

Many researchers have found correlations between institutional characteristics and how faculty spend their time (Blackburn et al., 1991; DeVries, 1975; Fairweather & Rhoades, 1995; Milem, Berger, & Dey, 2000). How instructors' perceive their environment and assess their own work priorities affects their behavior and how much time they spend on a given activity, such as teaching (Blackburn et al., 1991). I apply this underlying theory of cognitive motivation to emphasizing diversity. Based on this, the conceptual framework incorporates the relationship between the institutions' emphasis on diversity and the faculty members' emphasis on diversity as well as in the classroom.

The Relationship Between the Faculty and the Student

Students are affected by faculty members' attitudes and behaviors (Lundquist et al., 2002/2003); in fact, student learning may be most affected by faculty attitude and behavior

(Umbach & Wawrzynski, 2005). Furthermore, faculty and their classrooms play a critical role in the institution's racial climate and students' feelings of alienation (Cabrera & Nora, 1994). Building on these concepts, the framework for the current study explores how faculty behavior related to emphasizing diversity effects how students assess their own gains in Intercultural Maturity.

The Relationship Between the Institution and the Student

The campus culture and climate also set the tone for students' experiences. The culture of the institution, which guides the purpose, commitment, and order of an institution, influences decision making in areas such as curricular requirements and strategic plans (Masland, 1985). So, a culture that values diversity may incorporate diversity in its mission statement, strategic plan, and curricular requirements. These examples of incorporating diversity at the institutional level affect the student, either directly (what courses they take) or indirectly (the extent to which behaviors of faculty and staff are guided by the mission). The climate on campus is like the temperature of the institution regarding a given area such as racial interaction, and the climate can influence students' perceptions, behaviors, and outcomes (Hurtado, 1992). My study incorporates components of the campus culture, through its mission statement and curricular requirements, as well as the campus climate, through faculty behaviors related to diversity and student and faculty perceptions of the institution's emphasis on diversity, to better understand the relationship to the student outcome of Intercultural Maturity.

The combination of the above described framework provides a comprehensive way to study students' Intercultural Maturity. The following section describes the significance of my research within the existing literature on this topic.

Significance of the Research

There are two main areas in which this study adds to the understanding of the topic of Intercultural Maturity. First, this study adds to the breadth of what we know about student gains in Intercultural Maturity by incorporating faculty emphasis on diversity and Intercultural Maturity in their coursework. Second, this study adds multi-level knowledge to what we already know about Intercultural Maturity among college students.

The Role of the Faculty

My study seeks to provide additional knowledge about faculty members and their role in promoting students' Intercultural Maturity. Research has identified a relationship between faculty and students in areas such as student retention and student perceptions of the racial climate on campus (Cabrera & Nora, 1994; Tinto, 2006/2007). While we have learned that effective teaching influences student openness to diversity (Cruce et al., 2006), we do not know specific details about what instructors are doing in their classrooms as it is related to openness to diversity and Intercultural Maturity. My study adds variables about the frequency of particular class assignments, the inclusion of activities such as service learning, and the importance faculty place on reflective learning and Intercultural Maturity into its analysis.

Additionally, research has found that the general education curriculum can help to improve the racial dynamics of today's society (Chang, 2002a). I want to know if an emphasis on diversity is infused through courses in general (not just courses that satisfy a diversity requirement) is related to students' Intercultural Maturity.

Research that incorporates data on student engagement from both faculty and students has found a positive relationship between faculty emphasizing a particular practice and students participating in that specific practice (Kuh, Nelson Laird, & Umbach, 2004). Still, we do not

know how faculty behaviors and emphases on diverse perspectives are related to Intercultural Maturity. By investigating that relationship, this study adds understanding about the role of faculty related to advancing students' Intercultural Maturity to the existing literature.

Finally, Astin (1993) looked at the effect faculty and institutional emphasis on diversity can have on student openness to diversity. While the underlying concept is very similar to mine, he did not look at the relationship between the institutional emphasis on diversity and faculty emphasis on diversity. In addition, the measures I am using are different, thus providing a broader understanding of how the institution and faculty are connected to students' Intercultural Maturity.

Multi-level Knowledge

Little existing research on Intercultural Maturity and openness to diversity has utilized multi-level analysis. One study that did incorporate a multi-level methodology investigated student and institutional variables and their relationships with a student's orientation toward diversity (Fulford, 2009). Fulford's study asked the questions: are there significant differences in students' orientation toward diversity based upon their pre-college characteristics? Are there significant differences in students' orientation toward diversity based upon their college characteristics? After controlling for students' pre-college characteristics, what college factors predict students' orientation toward diversity? My study builds on Fulford's by adding different institutional characteristics to the analysis (i.e., faculty emphasis on diversity in class and institutional inclusion of diversity through its mission, curricular emphases, and promotion of student contact with diverse others). Additionally, Fulford's (2009) study took place at a single institution. My study builds on hers by utilizing a national dataset of a variety of institutional types.

Still, most of the existing research on Intercultural Maturity and student openness to diversity has looked at this topic with a single-level analysis (Cabrera et al., 2002; King et al., 2007; Miville et al., 1999; Pascarella et al., 1996, 2004; Pieske, 2011; Pike, 2002; Terenzini et al., 2001; Whitt et al., 2001). While these studies utilized a student-level analysis, they incorporated variables such as students' perception of non-discriminatory racial environment, what students experience in class, and environmental emphasis on activities, these variables were analyzed only at the student level. My study incorporates similar variables but pulls them apart to the institution- and student-level. This helps us better understand if the differences between students' reported levels of Intercultural Maturity are stronger within an institution or between one institution and another. Because my study looks at students' Intercultural Maturity through a hierarchical lens, that is to say both students and faculty are nested within a specific institution, it provides an opportunity to further explore the correlations between institutional characteristics and faculty behavior in addition to relationships between the institution's characteristics and student outcomes.

Organization of the Study

This study has five chapters. This first chapter provided an introduction to the topic and identified the research problem. Next, Chapter 2 presents information regarding Intercultural Maturity, a diversity framework, faculty motivation, campus climate, and best practices of undergraduate education, all of which connect together to build the study's conceptual framework. Additionally, Chapter 2 reviews the relevant literature regarding Intercultural Maturity and student openness to diversity, the institutional context related to diversity, as well as faculty and student characteristics. The research methodology, explanation of the data set, and description of the variables is provided in Chapter 3. Data analysis and results are presented in

Chapter 4. The study concludes with an interpretation of the findings in light of the literature reviewed in Chapter 2 along with suggestions for future research, all of which are presented in Chapter 5.

CHAPTER 2: REVIEW OF THE LITERATURE

Chapter two provides a review of the literature that shaped the conceptual framework for my study on student gains in Intercultural Maturity as well as the literature that informed the selection of the variables. As introduced in Chapter 1, my study investigates two aspects of higher education that may ultimately affect student gains in Intercultural Maturity: (a) the relationship between institutional as well as faculty characteristics and faculty emphasizing Intercultural Maturity in their classrooms, and (b) the relationship between institution characteristics as well as student characteristics and student gains in Intercultural Maturity.

The following conceptual framework further outlines King and Baxter Magolda's (2005) model of Intercultural Maturity as well as the four theories used to better understand how institutions might promote students' Intercultural Maturity: Smith's (2009) Diversity Framework, Hurtado and associates' (1998) concept of campus climate, Blackburn and associate's (1991a, 1991b) research on faculty behaviors, and Chickering and Gamson's (1987) position on best practices for undergraduate education. Following the conceptual framework reviews of the research on the variables of interest including Intercultural Maturity, the institutional context related to diversity, faculty characteristics, and student characteristics. A description about how my study builds on the existing body of knowledge is provided with each area of the literature.

Conceptual Framework

Intercultural Maturity

King and Baxter Magolda (2005) pull together a multidimensional framework to understand how students develop in the area of Intercultural Maturity. As mentioned in Chapter 1, one of the guiding questions behind their framework is "How do people come together to understand cultural differences in ways that enable them to interact effectively with others that

are from different racial, ethnic, or social identity groups?" (p. 571). Asked another way, how do students develop so that they are increasingly aware of other cultures and in turn increasingly able to positively and effectively interact with others who are different than them? The complexity that surrounds developing one's Intercultural Maturity is addressed by incorporating three domains of development in their framework: cognitive, intrapersonal, and interpersonal (King & Baxter Magolda, 2005).

King & Baxter Magolda (2005) recognize that Kegan's (1994) holistic perspective of lifespan development provides the groundwork for their model on Intercultural Maturity. In Kegan's model, cognitive development represents how a person understands knowledge, how that knowledge is gained, and how that knowledge helps a person make meaning and/or a point of view in various situations. Intrapersonal development represents choices and behaviors being based on a person's sense of self, which includes how a person understands his or her values and beliefs. And interpersonal development represents a shift to how a person interacts with others and incorporates others' values, views, and behaviors. According to Kegan (1994), one cannot function adequately without developing in all three areas.

It is worth repeating that this framework focuses on maturity rather than competence (King & Baxter Magolda, 2005). While competencies required to execute a variety of tasks are often the focus of college outcomes, it is difficult to measure multicultural competence and attitudes toward multicultural issues are often proxy variables for competence (King & Baxter Magolda, 2005). With this in mind my study tested how various institution and student characteristics are related to Intercultural Maturity as understood by this framework. Because NSSE does not measure Intercultural Maturity as one of the student gains they track, existing survey variables were identified to be used as proxy measures of Intercultural Maturity. As

described in Chapter 1, those variables included students reported gains in understanding self, understanding other who are different than them in terms of race or ethnicity, and working effectively with others, and were compiled into a composite variable representing Intercultural Maturity.

Previous research indicates that when studying students' openness to diversity, which is conceptually similar to Intercultural Maturity, it is important to incorporate variables about the institution, academic experiences, and the student (Pascarella et al., 1996; Whitt et al., 2001). The conceptual framework that guides my study takes into consideration and looks holistically at how the institution and the academic experiences (as measured by activities faculty promote in the classroom) are related to a student's Intercultural Maturity. It begins with a "diversity framework" put forth by Smith (2009), incorporates what Hurtado and associates (1998) articulate about the campus climate, includes Blackburn and associates' (1991a, 1991b) work on how the institution influences the faculty, and integrates Chickering and Gamson's (1987) best practices for undergraduate education.

Diversity Framework

The overarching theoretical concept for my research is found in Daryl Smith's Framework for Diversity (2009). Her framework looks at how diversity is infused throughout an institution. For the diversity framework to be successfully implemented, it needs to address diversity from four different perspectives. One of those perspectives addresses climate and intergroup relations. How, where, and when do individuals from different identity groups (i.e., race, sex, religion, sexual orientation) interact with each other? These questions are important for students, faculty, and staff. A second perspective is related t the access and success of underrepresented students. This perspective recognizes that getting a diverse group of students to

campus is only part of the goal. The rest of the goal focuses on understanding how students from all backgrounds are successful and promoting opportunities as well as environments that allow students to thrive personally and educationally. A third perspective addresses the education and scholarship of the institution, which Smith (2009) refers to as the "cores of the academic enterprise". The diversity framework recognizes the critical nature of considering diversity in terms of educational outcomes and in order to effectively advance educational outcomes faculty must be soundly invested in the goal, implemental, and measurement of success. The final perspective of the framework is the most comprehensive, it addresses institutional viability and vitality, and it particularly considers how attractive the institution is to diverse communities. As institutions seek to be attractive to diverse communities the need to consider how diversity is aligned with their mission. In order to truly infuse diversity across campus it must be a part of the institution's core, who they are as an organization, it cannot be peripheral. The cultural of the institution must also be considered. Does the culture truly welcome, embrace, and encourage individuals from diverse backgrounds or does it merely allow the door to stay open for people to enter and conform to norms and values that are predominantly rooted in an Euro-centric background? Having diverse faculty, staff, and administrators helps provide the human capital needed to consider multiple perspectives during decision making processes, which leads to a greater likelihood that diversity will be incorporated in the institution's core processes. One final thing to consider in this area is how the institution is perceived by diverse communities. The benefits that can be gained by institutionalizing diversity may never be realized if espoused efforts are not perceived to be reality by diverse communities.

This framework is helpful for my study because it recognizes that diversity is imperative to an institution's success and that the classroom is a central component of promoting diversity

on campus (Smith, 2009). Because my study looks at both the institutional emphasis on diversity through the mission statement, curricular requirements, and student contact with diverse others as well as the faculty emphasis on diversity through the pedagogical techniques used in the classrooms a comprehensive framework is needed to understand the context of these different aspects of higher education. Smith's framework provides this comprehensive point of view as it relates to Intercultural Maturity and diversity.

Research has indicated that the quantity of interaction with diversity may not be as important as the quality of interactions (Cabrera et al., 2002; Closson & Henry, 2008; Gurin et al., 2002; Nelson Laird, 2005; Smith, 2009; Terenzini et al., 2001). Previous research has also alluded to the idea that institutional support of diversity efforts may be an important aspect of having positive contact effects (Pettigrew & Tropp, 2006). While having an emphasis on diversity in the mission statement, strategic planning efforts, accreditation, or department plans does not ensure a quality interaction with diversity, the location of the emphasis on diversity in the core functions of the institution means the efforts are less likely to be marginalized (Smith, 2009). This perspective continues to emphasize the role of the institution for promoting diversity. As such, it is important to include institutional variables in my study on student gains in Intercultural Maturity.

My conceptual framework incorporates additional theoretical concepts under the umbrella of Smith's diversity framework. The following paragraphs outline research on concepts about campus climate, the relationships between institutions and faculty, good practices in undergraduate education to frame the perspective of relationships between the institution and students.

Relationships Between the Institution and Students – Campus Climate

A framework for understanding campus racial climate has been proposed by Hurtado and associates (1998). They suggest that there are four dimensions that impact campus racial climate: (a) the historical legacy of the institutions' inclusion or exclusion of diverse groups, (b) the structural diversity of the campus population, (c) the psychological implications that can stem from the climate, and (d) the effect behaviors can have on students. The latter three dimensions are particularly relevant for my study.

Structural diversity has been previously described as the proportion or numbers of students (and/or faculty) of color on campus. The psychological dimension of climate includes the views of group relations, institutional response to diversity, perceptions of discrimination or racial conflict, and attitudes toward those who are different than you (Hurtado et al., 1998). Additionally, institutional priorities, policies, and practices shape the racial climate and are correlated to the psychological feeling on campus (Hurtado et al., 1998, 1992; Smith, 2009). The mission statement, strategic plans, and curricular requirements are enacted components of the institutional priorities policies, and practices. Finally, behaviors on campus that can affect students include general social interaction, interactions between and among students that have differing racial/ethnic identities, and how intergroup relations play out across campus (Hurtado et al., 1998). Within these behaviors I am particularly interested in the interactions of students from different backgrounds in the classroom and how the faculty promote these interactions.

My study used this framework to identify the following measures of climate: structural diversity, mission statement, curricular requirements, and faculty promotion of interaction with diverse peers in the classroom. It also incorporated components of the psychological dimension of campus through the following survey items: faculty and student perception of institutional

encouragement of contact among students from different backgrounds, frequency that students include diverse perspectives in class discussion or writing assignments, and the frequency that students have serious conversations with students who are different than them. The following paragraphs provide an overview of the existing literature that supports this section of the conceptual framework as well as the inclusion of the variables described above.

A variety of studies have found a positive relationship between an inclusive racial climate and student outcomes (Gurin et al., 2002; Hurtado, 1992, 1996; Nora & Cabrera, 1996; Nelson Laird, 2005; Pascarella et al., 1996; Pettigrew & Tropp, 2006; Whitt et al., 2001). For example, Pettigrew and Tropp (2006) suggest that as the institutional support for contact among diverse groups increases the facilitation of the actual contact becomes easier. Additionally, the institution's commitment to diversity is positively related to minority students' perceptions about racial tension improving (Hurtado, 1992). Conversely, perceived discrimination has been linked to lower cognitive outcomes for students of color (Nora & Cabrera, 1996). Finally, a non-discriminatory racial environment has been found to be positively related to student openness to diversity (Pascarella et al., 1996; Whitt et al., 2001).

Public institutions have been found to struggle more than private institutions when it comes to providing a positive racial climate, opportunities for interactions with diverse peers, and the perception of supporting students academically and socially (Hurtado, 1992; Pike & Kuh, 2006). In a summary of environmental effects, Astin (1993) indicated that public institutions also tend to have negative effects on academic outcomes such as GPA, writing ability, critical thinking, and bachelor's degree completion.

Another study focused on the campus climate investigated the relationships between measures such as respect for other cultures and student satisfaction with the campus climate as

well as cross cultural comfort and satisfaction with the climate for first and third year students at a large eastern university (Helm et al., 1998). Helm and association (1998) used composite variables to represent the two measures: diversity awareness and overall satisfaction. Diversity awareness included measures such as discussing topics related to cultural awareness with friends, recognizing culturally-based behaviors previously unidentified, initiating contact with people who are not of the same ethnic background, and becoming more understanding of racial/ethnic differences. Overall satisfaction included perceptions related to the university providing an environment for open expression of ideas, opinions, and beliefs, and belonging to the university community. Students within Helm and associates' (1998) single-campus study demonstrated a positive relationship between both respect for other cultures as well as cross-cultural comfort and satisfaction with climate for students regardless of race (Helm et al., 1998).

Hurtado (1996) simply sums up the related literature on campus climate, "a climate of inclusion has a positive effect on learning outcomes" (p. 27). Further, Hurtado (1992) suggests that as an institution's commitment to diversity increases student perception of racial tension decreases. Based on the literature reviewed in this section and these two statements, I suspect that Intercultural Maturity would also increase as the institutional commitment to diversity increases. The following section describes what is known about relationships between institutions and faculty when it comes to time spent on activities such as teaching.

Relationships between the Institution and Faculty – Faculty Motivation

Faculty motivation theory tells us that the institution plays a role in faculty behaviors, as measured by time and effort spent in areas such as teaching, research, and service (Blackburn et al., 1991a, 1991b; DeVries, 1975; Fairweather & Rhoades, 1995). The following paragraphs

highlight variables that are correlated to faculty behaviors, such as institutional type, reward structures, socialization, and faculty perceptions of the environment.

For decades we have known that role expectation plays a part in faculty behaviors (DeVries, 1975). For example, the expectations the institution has for faculty are related to how they approach teaching, research, and administration (Blackburn et al., 1991a, 1991b; DeVries, 1975). By using a cognitive motivation framework, which recognizes that a person adjusts how time is spent based on how she or he perceives the environment, Blackburn and associates (1991a, 1991b) looked at how faculty approach activities such as teaching, research, scholarship, and service.

Research has found the institution to influence faculty behaviors in a variety of ways (Blackburn et al., 1991a, 1991b; DeVries, 1975; Fairweather & Rhoades, 1995). Not surprisingly, the institution type (the extent to which it is research focused) predicts faculty time spent on activities such as teaching, research, and service (DeVries, 1975; Fairweather & Rhoades, 1996). Environmental motivators and rewards have also been found to play a role in how much time faculty devote to various activities (Blackburn et al., 1991a, 1991b; Fairweather & Rhoades, 1995). Faculty can also be influenced by the socialization process at the institution along with their perceptions about institutional support and colleague commitment to various activities, such as teaching (Blackburn et al., 1991b; Fairweather & Rhoades, 1995). The following paragraphs outline details of these studies that look at the relationship between institutional emphasis on teaching and faculty emphasis on teaching, which is similar to how my own study looks at the relationship between the institution emphasis on diversity and faculty emphasis on diversity.

Using survey data from institutions that represent a variety of Carnegie classifications, Blackburn and associates' (1991b) analysis indicated that perceptions of the environment was a significant predictor of the time faculty dedicated to teaching. In their study there were three variables that contributed to faculty perception of the environment: the institution's preference to spend time on teaching; colleague commitment to teaching (particularly colleagues in one's own department); and having support and agreement among colleagues about curricular issues (Blackburn et al., 1991b). Related to colleague commitment to teaching, being a female faculty member or a faculty member of color has been found to have a positive relationship with the instructor using practices such as active and collaborative learning opportunities (Kuh, Nelson Laird, & Umbach, 2004; Mayhew & Grunwald, 2006) and faculty of color have been found to be more likely to incorporate diversity into the content of their classrooms (Mayhew & Grunwald, 2006; Tinto, 1997).

In general, faculty who are female are more likely to spend a greater amount of their time teaching than those who are male (Fairweather & Rhoads, 1995). Additionally, women faculty members are more likely to incorporate an interactive teaching style, including student participation in classroom discussion and peer collaboration, in their classrooms than men (Nelson Laird, Garner, & Niskode, 2007; Singer, 1996). Furthermore, learning environments that are student-centered are also more likely to be found in female faculty classrooms than male faculty classrooms (Singer, 1996).

One study used a national database to investigate the relationship between institutional characteristics, such as administrative action and socialization, and faculty behavior related to teaching (Fairweather & Rhoads, 1995). This particular study focused on two outcomes: current teaching effort and future orientation toward teaching. The model used to predict these outcomes

included four constructs: early socialization (graduate school), current socialization and self-motivation, time allocation/workload, and rewards (Fairweather & Rhoads, 1995). Findings indicated that socialization (expectations of peers and superiors) from the current institution played a role in how faculty approached teaching but socialization from their graduate schools did not have the same relationship (Fairweather & Rhoads, 1995). Not surprisingly, faculty rewards were also correlated to the time faculty devoted to teaching (Fairweather & Rhoads, 1995).

The only hierarchical study related to this component of my conceptual framework focuses on variables that are related to the amount of time an instructor spends doing research with students (Lambert et al., 2009). This study looked at factors from both the institution- and faculty-level and found that variables such as course load, research activity, discipline, and number of years spent teaching are related to the amount of time the faculty member spends doing research with students (Lambert et al., 2009).

The above described studies demonstrate a positive relationship between the institution's emphasis on teaching and the faculty's emphasis on teaching. The review also indicates a relationship between the socialization at the institution and emphasis on various activities. Recognizing this, the proportion of faculty in areas such as gender and race are included in the study to see if similar trends are found in the area of incorporating diversity in the classroom. My study used the above findings, especially those from Blackburn and associates (1991a, 1991b) to shape part of the conceptual framework. I build on the findings outlined in this section by replacing the emphasis on teaching with an emphasis on diversity to determine if a similar relationship exists. While this section outlined relationships between the faculty and the institution, the following section addresses research on good practices in higher education.

Faculty Characteristics and Students – Good Practices

Faculty promote a cultural context for learning on campus, students are impacted by faculty members' attitudes and behaviors (Jaasma & Koper, 1999; Milem 1998; Umbach & Wawrynski, 2005), and faculty influence students' approach to lifelong learning (Kuh, 2009). In fact, some say that student learning may be most affected by faculty attitude and behavior (Umbach & Wawrzynski, 2005). Still, we do not know how faculty behaviors and emphases on diverse perspectives relate to students' Intercultural Maturity.

The final component of the conceptual framework for this study focuses on the principles for best practice in undergraduate education (Chickering & Gamson, 1987), which include:

1. Encouraging contact between students and faculty
2. Developing reciprocity and cooperation among students
3. Using active learning techniques
4. Giving prompt feedback
5. Emphasizing time on task
6. Communicating high expectations
7. Respecting diverse ways of learning

The NSSE, which measures educationally purposeful activities, is based on these practices (Kuh et al., 2007). Educationally purposeful practices have been found to be beneficial for all students and most beneficial for underrepresented students (Kuh et al., 2007). My study incorporated data collected from NSSE to further explore the relationship between faculty and students as it relates to educationally purposeful activities.

Faculty have been found to influence the normative environment of the classroom which in turn influences students' values (Milem, 1998). More specifically faculty behaviors and how faculty engage students play a role in how students' attitudes are shaped (Milem, 1998). Research also indicates that learning about and interacting with diverse people is positively related to students' racial and cultural understanding (Gurin et al., 2002). Additionally, infusing

content-based diversity in the classroom has been found to be positively related to problem solving skills and group work skills (Terenzini et al., 2001) as well as student's academic self-confidence, social agency, and disposition for critical thinking (Nelson Laird, 2005).

The perception of a non-discriminatory classroom environment is positively related to student's openness to diversity (Pascarella et al., 1996; Whitt et al., 2001) and negatively related to feelings of discrimination (Cabrera & Nora, 1994). One way to measure a non-discriminatory environment is to include the extent to which the course content reflects experiences of students of color (Pascarella et al., 1996; Whitt et al., 2001). Using these concepts my study incorporated educationally purposeful activities and faculty behaviors, especially behaviors that promote incorporating diverse perspectives to better understand students' Intercultural Maturity. To do this I used data from FSSE to measure how often a faculty member has students engage in activities that promote Intercultural Maturity (understand themselves, understand others of different races/ethnicities, and work effectively with others) and diverse perspectives (i.e., have class discussions or writing assignments that include diverse perspectives, have serious conversations in class with students of a different race/ethnicity than their own). These measures are used to predict the outcome variable of student's Intercultural Maturity, which is measured through students reporting their own growth in areas such as understanding self, understanding people of other racial/ethnic backgrounds, and working effectively with others. Student outcome measures were collected through NSSE.

Merging the Theories Together for a Comprehensive Framework

This chapter describes how existing theories and knowledge from a variety of areas fit together to view Intercultural Maturity. The overarching umbrella of the framework recognizes the need for higher education to embrace diversity and to do so in a way that makes it integrated

with, not parallel to, core activities and functions of the institution (Smith, 2009). The framework also incorporates various influential relationships on campus: the institution on the student; the institution on the faculty; and the faculty on the student. The following section outlines research that connects to the variables of interest in my study.

Variables of Interest

Both the institution and the faculty can influence the diversity climate on campus (Astin, 1993; Cabrera & Nora, 1994; Hurtado, 1992; Milem et al., 2005; Miller et al., 1998; Terenzini et al., 2001; Umbach & Kuh, 2006). The following sections outline what is known about the variables of interest for my study. Because student gains in Intercultural Maturity is the primary variable of interest, research on Intercultural Maturity and student openness to diversity is presented first. Of the predictor variables for student gains in Intercultural Maturity, this student is especially interested in how the institution's emphasis on diversity is related to student gains in Intercultural Maturity. So, research focused on the institutional context related to diversity is presented next. The literature review and chapter closes with an overview of what student and faculty characteristics have been found to be association with student outcomes.

Intercultural Maturity and Student Openness to Diversity

The literature recognizes the importance of institutions providing formal and informal educational opportunities that introduce and inform students about racial and ethnic diversity (Hurtado et al., 1998; Jones, 2005; and Miller et al., 1998). This section outlines the studies that have focused on Intercultural Maturity, openness to diversity, cultural awareness, and commitment to promoting racial understanding as student outcomes. As described earlier, for the purposes of my study Intercultural Maturity is approximated by NSSE questions focused on

students' understanding of themselves, understanding others who are racially/ethnically different, and working effectively with others.

Because King and Baxter Magolda's (2005) model of Intercultural Maturity is relatively new, research using that exact framework is limited. However, three recent doctoral dissertations have incorporated Intercultural Maturity in their studies (Fulford, 2009; Pieske, 2011; Salisbury, 2011). One of these dissertations focused on the effect of study abroad on intercultural competence (Salisbury, 2011), another focused on the development of pre-service teachers' intercultural sensitivity through cultural immersion experiences (Pieski, 2011), and the third focused on preparing college students to work in a globally diverse world (Fulford, 2009). The first two studies focused primarily on how international experiences are related to Intercultural Maturity, sensitivity, and competence (Pieski, 2011; Salisbury, 2011). The third dissertation (Fulford, 2009) is more closely related to my study in that the context in which cultural diversity is studied is domestic rather than international and it uses hierarchical analysis to investigate both student and institutional characteristics as they relate to students' orientation toward diversity.

Fulford's (2009) study used the Miville-Guzman Universality Diversity Scale (M-GUDS) to measure diversity of contact, relativistic appreciation, and overall attitude toward diversity for undergraduate students at Bowling Green University. She found that students who were female, first-generation college goers, or non-white had more positive orientations toward diversity than their peers who were male, had at least one college educated parent, or white. Four student-level variables that connected to their college experiences were positively related to students' orientation toward diversity: (a) considered their ability to discuss controversial topics a major strength, (b) often interacted with race/ethnicity groups other than their own, (c) took a diversity course, and (d) completed a diversity course. The college characteristics that were related to

orientation toward diversity fell into two categories: academic and involvement (Fulford, 2009). Academic variables included participation in a learning community (of any kind), completion of the required cultural diversity education course, presence at a diversity program, and interaction with students from different racial and ethnic groups while studying. The involvement variables included participation in activities such as student clubs/organizations, volunteer opportunities, and discussions on race and ethnicity.

Other research in this area has focused on the outcome of student openness to diversity. Two of these studies looked at the relationship between student openness to diversity and challenge and the environmental emphasis of the institution was studied based on data from the early 1990s (Pascarella et al., 1996; Whitt et al., 2001). These studies found the institution's climate (as measured by students' perception of nondiscriminatory practices) was positively related to openness to diversity for students in their first three years of college. Conditional effects were also noted, with female students, older students, and students of color demonstrating higher openness to diversity levels than their counterparts who were male, younger, or white. Other environmental variables that were measured and found to be non-significant were: peer openness to diversity; environmental emphasis on the development of academic, scholarship, and intellectual qualities; environmental emphasis on being critical, evaluative, and analytical; and the environmental emphasis on the development of vocational and occupational competence. Incoming openness to diversity was the most significant predictor of openness to diversity during these students' first three years of college (Pascarella et al., 1996; Whitt et al., 2001).

In these two studies, the student's academic experience was not found to have a significant relationship to openness to diversity and challenge (Pascarella et al., 1996; Whitt et al., 2001). The specific components of the academic experience that were measured in the study

included credit hours completed, hours spent studying per week, number of courses taken in various academic disciplines, composite variables that measured the student's experience in class (examples include taking detailed notes in class, participating in class discussion, explaining material to someone else, and reading additional material on the topic), as well as faculty-student interaction.

Pascarella and associates (2004) followed up these studies with a more specific focus on first generation students. In this later study, openness to diversity and challenge was positively related to volunteer work, number of term papers or written reports, institutional selectivity, and academic effort and involvement of the student (Pascarella et al., 2004).

Research that investigates the relationships between faculty and student openness to diversity indicates that effective teaching and interaction with faculty is related to openness to diversity (Cruce et al., 2006). Their study utilized longitudinal data from a representative sample of higher education institutions. The dependent variable was openness to diversity and challenge, which they considered to be an orientation toward learning. When controlling for incoming student characteristics, the institutional type, and other first-year experiences, two predictor variables were found to have a positive relationship with openness to diversity and challenge. The first variable was effective teaching and interaction with faculty, which was a composite variable that included measures such as instructor feedback to students, instructional organization and preparation, and quality of non-classroom interaction between students and faculty. The second variable was interactions with peers, which was a composite variable that included measures such as instructional effort on cooperative learning, course related interactions with peers, and cultural and interpersonal involvement.

A nation-wide study that collected data from approximately 25,000 students from 217 four-year institutions asked two particularly relevant questions to my study: “How are students' values and beliefs about other races and cultures affected by their institutions' policies on diversity and multiculturalism?” and “What difference does it make in students' attitudes and behavior when their professors emphasize diversity issues in the classroom or in their research?” (Astin, 1993, p. 44). Data were collected from students when they were freshmen in 1985 and then again as seniors in 1989. Seven environmental measures were included when Astin measured diversity in this study, these measures were related to the institutional emphasis on diversity, faculty emphasis on diversity in the classroom and in their research, and experiences students have with diversity. The specific student experiences that were measured included enrollment in ethnic or women’s studies courses, attendance at racial/cultural awareness workshops, discussions about racial or ethnic issues, and socialization with someone from another racial or ethnic group. Findings from Astin’s (1993) study include a positive relationship between student enrollment in ethnic/women’s studies courses and student’s cultural awareness and commitment to promoting racial understanding as well as a negative relationship between enrollment in those courses and the belief that racial discrimination is no longer a problem in the United States.

Looking at the topic from another angle, students have also shown an interest in promoting Intercultural Maturity (Fisher & Hartmann, 1995; Helm, Sedlacek, & Prieto, 1998). Both African American and white students have indicated an interest in resolving racial tension through more positive interracial interactions and multicultural learning opportunities (Fisher & Hartmann, 1995) and students from African American, Asian, Hispanic, and white backgrounds have higher levels of satisfaction with the institution when they are more comfortable in cross-

cultural situations and have more respect for other cultures (Helm et al., 1998). Institutions of higher education can maximize the students' interest in enhancing race relations by promoting opportunities for students to interact with others who are different than themselves. Because students do not want to be in the minority socially, this is tough to do in social groups (Fisher & Hartmann, 1995), which makes the classroom an ideal place to build intergroup interactions because it is not as social of an environment.

Based on the findings from these studies, my study incorporated the academic experience by measuring the time faculty dedicate to promoting diversity in their classroom as well as measuring the relationship between the institution's emphasis on diversity and faculty promotion of Intercultural Maturity. These variables include the institution's mission, curricular requirements, and classroom assignments as well as student level variables such as: gender, race, major, frequency of including diverse perspectives in assignments, having conversations with diverse others, and working with others in and out of class.

Institutional Context Related to Diversity

The context of the institution plays an important role in how diversity is promoted, perceived, and experienced on campus (Appel et al., 1996; Astin, 1993; Chang, 2002a; Hurtado, 2007, 2005; Hurtado, Engberg, & Ponjuan, 2003; Ingle, 2005; Martinez Aleman & Salkever, 2001; Milem et al., 2005; Pike & Kuh, 2006; Smith, 2009, 2004; Williams, Berger, & McClendon, 2005). This section outlines research related to the institutional context in areas such as contact theory, structural and purposeful diversity, and educational efforts in and out of the classroom.

Contact Theory

Some of the previous research has been guided by contact theory: that the more people are exposed to individuals who are different than themselves, the less prejudice they will be toward groups other than their own (Allport, 1954; Dixon, Durheim, & Tredoux, 2005; Pettigrew & Tropp, 2006). Four conditions that optimize Allport's (1954) contact theory include having equal status, common goals, intergroup cooperation, and the support of authorities. Pettigrew (1998), who builds on Allport's contact theory, proposes four processes of change for intergroup contact. These four processes include learning about the out-group, changing behavior through ongoing or repetitive opportunities to change your attitude, establishing connections from other racial groups that are different than you, and reappraising how you view your perspective compared to other's perspectives (Pettigrew, 1998).

A meta-analytic study indicates that intergroup contact does in fact decrease intergroup prejudices (Pettigrew & Tropp, 2006). The same study goes on to indicate that not all of Allport's four conditions for optimal contact need to be present for prejudice to be reduced (Pettigrew & Tropp, 2006).

These four processes are represented in my study as faculty build in ongoing opportunities in their classrooms to learn about other races, interact and establish ties with individuals from other races, value student's reflective learning (which includes examining the strengths and weaknesses of their own view, understanding someone else's view by imagining how an issue looks from his or her perspective, and learning something that changes the way the student understands an issue), and by including students' self report on the extent to which they understand people from other racial/ethnic backgrounds, work effectively with others, and practice reflective learning. In short, through the lens of contact theory and intergroup contact,

my study tested the hypothesis that faculty promoting interactions for students who are different than each other increases students' Intercultural Maturity.

Structural and Purposeful Diversity

There are two ways to promote diversity on campus: purposefully and structurally (Terenzini et al., 2001). Purposeful diversity can include demonstrating the importance of diversity by an emphasizing it in the institution's mission statement, providing diversity workshops for faculty and/or students, or placing a diversity course requirement in the general education curriculum (Closson & Henry, 2008; Gurin et al., 2002; Terenzini et al., 2001). Structural diversity typically includes the percent of faculty, staff, and students that are from different racial and ethnic backgrounds (Closson & Henry, 2008; Gurin et al., 2002; Terenzini et al., 2001). Studies that investigate structural and purposeful diversity indicate that structural diversity is an important component of the diversity climate, but increasing enrollment diversity alone will not change the campus climate (Cabrera et al., 2002, 1999; Gurin et al., 2002; Hurtado, 2007; Hurtado et al., 1998, 2003; Milem et al., 2005; Muthuswamy, Levine, & Gazel, 2006; Pike & Kuh, 2006; Smith, 2009).

Additionally, both structural and purposeful diversity have been found to be related to student outcomes such as problem solving, democracy, attitudes toward race, group work, and collaborative learning (Hurtado et al., 2003; Muthuswamy et al., 2006; Pike & Kuh, 2006; Terenzini et al., 2001; Umbach & Kuh, 2006). These studies found both structural diversity and purposeful diversity to be correlated to the given outcome but that purposeful diversity exerted a stronger correlation.

Structural diversity.

Exposure to diverse ideas and individuals has been found to promote student outcomes related to social agency as well as critical and complex thinking (Gurin et al., 2002; Nelson Laird, 2005; Terenzini et al, 2001; Smith, 2009). Positive effects such as students' intellectual, social, and civic development stem from cross-racial interaction. More specifically, cross-racial interactions may make student question their previous beliefs, further developing critical thinking and reflection (Chang, Astin, & Kim, 2004). In theory, the percent of students of color on campus increases cross-racial interactions for white students, thus increasing the educational benefits without any formal programming or coursework (Chang et al., 2004; Levin et al., 2006). In reality, just enrolling more students of color does not guarantee an increase in cross-racial interaction, especially if the campus is largely commuter or part-time (Cabrera et al., 2002, 1999; Gurin et al., 2002; Hurtado, 2007; Hurtado et al., 1998; Hurtado et al., 2003; Milem et al., 2005; Muthuswamy et al., 2006; Pike & Kuh, 2006; Smith, 2009).

Research based on a nation-wide sample indicates that structural diversity at the faculty level is positively related to the use of educationally effective practices at the institution (Umbach & Kuh, 2006). Research has also found faculty diversity to be positively related to cultural awareness and the promotion of cultural understanding (Astin, 2003). Additionally, positive relationships have been found between the perceived supportiveness of the campus environment and structural diversity as well as interactional diversity and structural diversity (Pike & Kuh, 2006).

Purposeful diversity outside the classroom.

In a review of 125 research studies that focused on the educational effects diversity can have on students, Appel and associates (1996) found the following factors to play a role in

preparing students for a pluralistic society: faculty involvement, changes in the curriculum, and efforts that fit with the institutional commitment to diversity. The literature review also indicated that student's perception about the institution's commitment to students' learning about diversity was related to the student's understanding of racial differences (Appel et al., 1996). With this in mind, the current study attempts to look more deeply than the number of diverse students or faculty with whom students can interact with to how the institution and faculty promote diversity and diverse perspectives on campus and in their core operating functions and classrooms.

One study (Miller et al., 1998) based on a single, large, public institution in the Midwest found that students were more likely to perceive a positive campus environment for diversity if they thought the administration valued diversity. More specifically, when campus leadership supported multicultural policies, such as recruiting diverse students, hiring diverse administrators, addressing race related issues, and clearly stating the institution's commitment to diversity, there is an increase in student perception of campus climate (Miller et al., 1998). Further, students who perceive the institution as providing a positive climate for diversity also perceive an institutional commitment to diversity and an effort to incorporate diversity-related course learning in the curriculum (Mayhew et al., 2005). And students have been found to be more likely to promote a diversity initiative if they saw the administration promoting the initiatives (Miller et al., 1998). This fits with statements that institutions that want to provide a diversity friendly climate need to make diversity an institutional priority (Jones, 2005; Smith, 2009).

The above highlighted studies discuss outcomes such as student perceptions of the diversity climate and understanding racial differences. These studies demonstrate how students' perceive the institution's commitment to diversity, which in turn has an effect on how the student

feels about racial tension and student promotion of diversity initiatives. The following section describes how the academic environment is associated with to diversity related outcomes.

Purposeful diversity inside the classroom.

A paper commissioned by the Association of American Colleges and Universities (AAC&U) indicates that existing research demonstrates the importance of the classroom environment, especially the incorporation of diverse perspectives, when considering how diversity can thrive on campus (Milem et al., 2005). Research that incorporates student and faculty data on student engagement looks at the extent to which there is a positive relationship between faculty emphasizing a particular practice and students participating in a specific practice (Kuh, Nelson Laird, & Umbach, 2004). This analysis indicates a positive relationship between four areas of faculty emphasis and the student score for diversity experience: (a) academic challenge, (b) active and collaborative learning, (c) diversity experiences, and (d) higher order thinking. Additionally, when faculty emphasize diversity experiences students report higher scores for integrative learning, gains in general education, and gains in practical competencies. However, an increased emphasis on diversity by the faculty does not lead to student reported personal or social gains.

Research on college students indicates that studying diversity in the classroom leads to more interactions with diverse peers out of the classroom (Nelson Laird, 2005) and also reduces racial prejudice and increases the extent to which students of different racial backgrounds understand each other (Chang, 2002b). Students who have enrolled in a diversity course score higher in areas such as social agency, academic self-confidence, and attitude toward problem solving (Nelson Laird, 2005). Enrolling in a diversity course has also been found to increase students' democracy outcomes, which includes shaping one's perspective and racial/cultural

understanding (Gurin et al., 2002). Additionally, the extent to which diversity is infused into the classroom has been found to be related to the institution's diversity climate (Mayhew et al., 2005). Students who perceive the academic curriculum to have a diverse perspective, measured by the inclusion of perspectives from minority and non-dominant cultures, were likely to view a positive climate for diversity at their institution (Mayhew et al., 2005).

Gurin and associates (2002) utilized a national data set as well as an institutional data set to look at components of classroom diversity and educational outcomes. This study defined classroom diversity as content-based diversity and learning from diverse peers. Measures of classroom diversity at the single, large, public institution in the Midwest included two questions that asked if students had exposure to "information and activities devoted to understanding other racial/ethnic groups and interracial/ethnic relationships", and if the student took a course that changed their view on "racial/ethnic diversity and multiculturalism" (Gurin et al., 2002, p. 345). The national dataset, which was constructed by the Cooperative Institutional Research Program (CIRP), included a single question which indicated if fourth-year students had taken an ethnic studies course. From the results of their analysis, Gurin and associates (2002) found a positive relationship between diversity experiences and democracy outcomes as well as learning outcomes and consequently stress the importance of interacting with students who are racially or ethnically different than oneself and how the classroom plays an important role in promoting this interaction.

Based on entering students from a variety of institutions during 1985, Astin (1993, p. 44) asked the following question: "How are students' values and beliefs about other races and cultures affected by their institution's policies on diversity and multiculturalism?" His study found that the emphasis faculty placed on diversity was related to student outcomes such as

cultural awareness and satisfaction with the college experience above and beyond the institution's emphasis on diversity. Other research that supports the important role faculty play in the racial climate on campus finds that the tipping point of alienation on campus is in the classroom (Cabrera & Nora, 1994).

Clearly faculty play an important role in how students experience college. In fact some claim that faculty behaviors may have one of the strongest influences on student learning (Umbach & Wawrzynski, 2005). My study builds on this knowledge by analyzing the hierarchical relationship between the institution and the faculty as well as the institution and the students. More specifically, my study incorporates how faculty structure their classroom, including the extent to which faculty incorporate collaborative learning in their courses, how the institution incorporates diversity courses in their curriculum, and how faculty promote diverse perspectives in their classrooms.

Further, students have identified both faculty and their peers as important factors in their learning (Beyer, Gilmore, & Fisher, 2007). My study builds on this by incorporating the extent to which faculty promote peer interaction in class. By incorporating students' and faculty's perception of the institution's commitment to diversity (collected through NSSE and FSSE data) my study builds on what we know about campus climate and its relationships to student outcomes, particularly as it relates to student gains in Intercultural Maturity.

Institutional Characteristics

Selectivity in the admissions process has been found to be positively related to student outcomes such as retention, graduation, and other student success outcomes (Alon & Tienda, 2005; Fry, 2002, 2004; Gansemer-Topf & Schuh, 2006; Kim, Rhoades, & Woodard, 2003; Schmitz, 1993; Scott et al., 2006; Velez, 1985). These findings apply to all students, regardless

of background (Alon & Tienda, 2005). Additionally, institutional selectivity in the admissions process has been found to be positively related to the institutions fostering good practices in undergraduate education (Pascarella et al., 2006).

When looking at selectivity and campus racial climate, Hurtado (1992) finds a positive relationship between selectivity and racial tension. Yet another study in the literature review analyzed the relationship between selectivity and interactional diversity but failed to find a significant relationship between the two variables (Pike & Kuh, 2006). Higher selectivity is not always related to negative outcomes. For example, research has widely found that there is a positive relationship between selectivity and persistence (Alon & Tienda, 2005; Fry, 2002, 2004; Kim et al., 2003; Schmitz, 1993; Scott et al., 2006; Titus, 2004; and Velez, 1985).

Research has found that private institutions, compared to public institutions, are more likely to have student perceptions of racial tension, especially for white students (Hurtado, 1992). In a study that investigated the relationship between institutional size and diversity related variables, findings indicated that size was not related to informal interactional diversity but was negatively related to perceived campus environment (Pike & Kuh, 2006).The institution's size has also been found to be negatively related to outcomes such as quality of instruction, GPA, degree aspirations, and graduating with honors (Alon & Tienda, 2005; Astin, 1993; Bailey et al., 2005; Pascarella & Terenzini, 1991, 2005; and Toutkoushian & Smart, 2001).

These findings support the inclusion of variables such as the institutional commitment to diversity (as demonstrated in the mission statement, undergraduate curriculum, and contact with diverse others), faculty commitment to diversity as elements of purposeful diversity, and the demographic make-up of the faculty and student bodies in my study on students' Intercultural Maturity. It also supports the use of institutional characteristics such as control, selectivity, and

size. The following section explains more about how educational efforts both in and out of the classroom are correlated to students in areas related to diversity. The following paragraphs outline how institutional characteristics such as control, selectivity, and size are related to the campus climate.

Faculty and Student Characteristics

Research has found that faculty characteristics are correlated to student outcomes (Ehrenberg & Zhang, 2006; Jacoby, 2006; Kuh, et al., 2004; Nelson Laird, Garver, & Niskode, 2007). Like faculty characteristics, student characteristics are also related to students' outcomes and perceptions. For example, many studies have indicated that students of color and white students experience a different campus climate (Ancis et al., 2000; Fisher & Hartmann, 1995; Helm et al., 1998; Hurtado, 1992; Levin et al., 2006; Miller et al., 1998; Rankin & Reason, 2005; Suarez-Balcazar et al., 2003). This section outlines the importance of various faculty and student characteristics that are included in my study.

Faculty Characteristics

Research has found that a faculty member's discipline area is a predictor of his or her teaching paradigm (Singer, 1996). More specifically, disciplines that are considered "soft" disciplines (i.e., ethnic studies, philosophy, and psychology) in Biglan's model were found to be more likely to experience dissonance in the classroom (Singer, 1996). Instructors in these areas have been found to use a teaching paradigm that accounts for dissonance. Diversity topics are also found to cause dissonance (McFalls & Cobb-Roberts, 2001). As such, faculty in the soft disciplines may be more likely to promote diversity in their classrooms because they are accustomed to conflicting points of view in their content areas.

Other research (Nelson Laird et al., 2007, 2008) had similar findings in that "deep approaches to learning" were more likely to be found in disciplines that would be classified as soft-pure-life disciplines in Biglan's model. In this study, deep approaches to learning incorporated integrating learning from a variety of contexts and learning by communicating with others (Nelson Laird et al., 2007, 2008). Because my research incorporates measures such as having conversations with those who are different than you and having writing assignments that incorporate diverse perspectives, faculty from soft-pure-life disciplines (anthropology, ethnic studies, and psychology) may be more likely to foster these interactions.

Studies based on national data have determined that the ratio of part-time faculty has a highly significant and negative impact on graduation rates at both two- and four-year colleges (Ehrenberg & Zhang, 2006; and Jacoby, 2006) and that faculty rank is a predictor of the amount of time an instructor spends on teaching with assistant professors more likely to spend a greater amount of time teaching than their senior colleagues (Fairweather & Rhoads, 1995). Student outcome variables have also been linked to tenure status. For example, the percent of faculty who are tenured or on tenure track is positively related to students' graduation rate (Ehrenberg & Zhang, 2006). Additionally, full-time faculty are more likely to demonstrate effective educational practices than part-time faculty (Kuh et al., 2004). My study included faculty status (full-time versus part-time as well as tenure track) to see if a similar relationship exists when the student outcome is Intercultural Maturity.

Faculty characteristics such as gender and race have also been found to be related to time spent teaching (Fairweather & Rhoads, 1995). Those who spent more time teaching were more likely to be women and non-white (Fairweather & Rhoads, 1995). Research using national datasets found that women faculty are more likely to use collaborative pedagogical techniques in

the classroom than men and that faculty of color are more likely to use collaborative learning techniques in class than male or White faculty (Kuh, Nelson Laird, & Umbach, 2004; Nelson Laird, Garver, & Niskode, 2007). Because my study incorporates the extent to which faculty promote in-class interactions, faculty discipline, gender, and race included in the analysis.

Student Characteristics

Like faculty, student characteristics have been found to predict various dispositions or outcomes. For example, student characteristics such as sex, age, and race have been found to be related to Intercultural Maturity, with female students being more open to diversity than males, older students being more open to diversity than their younger classmates, and students of color being more interculturally mature (Cabrera et al., 2002; Fulford, 2009; Pascarella et al., 1996; Powers & Ellison, 1995).

Cabrera and associates' (2002) found that both men and women had the same predisposition to collaborative learning and that regardless of gender students of color were more predisposed to collaborative learning. They stated that collaborative learning promotes "collective responsibility in a diverse world" (Cabrera et al., p. 30).

Research supports the speculation that different racial groups have different perceptions about the multicultural efforts made by the campus with white students on the positive end of the spectrum and African American students on the negative end (Miller et al., 1998). In connection with this, Rankin and Reason (2005) found that students of color are typically more optimistic about the outcome of educational efforts toward recognizing diversity than white students. When it comes to the perception of the how the campus values diversity white students are more likely than students of color to perceive that the campus values diversity (Ancis et al., 2000). Yet, African American and Hispanic students are found to have more cross cultural comfort than their

white peers (Ancis et al., 2000). Because of these findings, my study looked at Intercultural Maturity by gender, race, and age to see if specific diversity initiatives impact students differently by these characteristics.

The previous paragraphs provided a backdrop for what we already know about the various relationships between the institution and faculty as well as students, relationships between faculty and students, and how students can experience campus and class differently based on gender and race. The literature review highlighted the importance of the conceptual framework, especially regarding King and Baxter Magolda's (2005) model for Intercultural Maturity and Smith's (2009) diversity framework. Research explained foundational elements to the study such as how faculty and students can be influenced by the climate of the institution and the extent to which the institution incorporates diversity in their core operating practices. Additionally, faculty and their pedagogical strategies play an important role in what students learn. And finally, both students and faculty have individual-level characteristics that are related to aspects of this study such as time spent teaching, incorporating collaborative learning and in the classroom, and orientation toward diversity. The following chapter describes the methods I used to further study student gains in Intercultural Maturity.

CHAPTER 3: DATA and METHODOLOGY

Chapter 3 describes the data and methodology planned for my study on Intercultural Maturity. The subsequent paragraphs include: a brief overview of the study, an introduction to the datasets that have been analyzed, a detailed explanation of the research questions and variables, an outline of the statistical analysis methodology, and a review of the study's limitations.

Overview of Study

The purpose of my study is (1) to see if the institution's emphasis on racial and cultural diversity is related to the faculty's emphasis on Intercultural Maturity and (2) to investigate the relationship between the institution's emphasis on diversity and students' Intercultural Maturity (Figure 3.1). The following two research questions will be used to investigate these relationships:

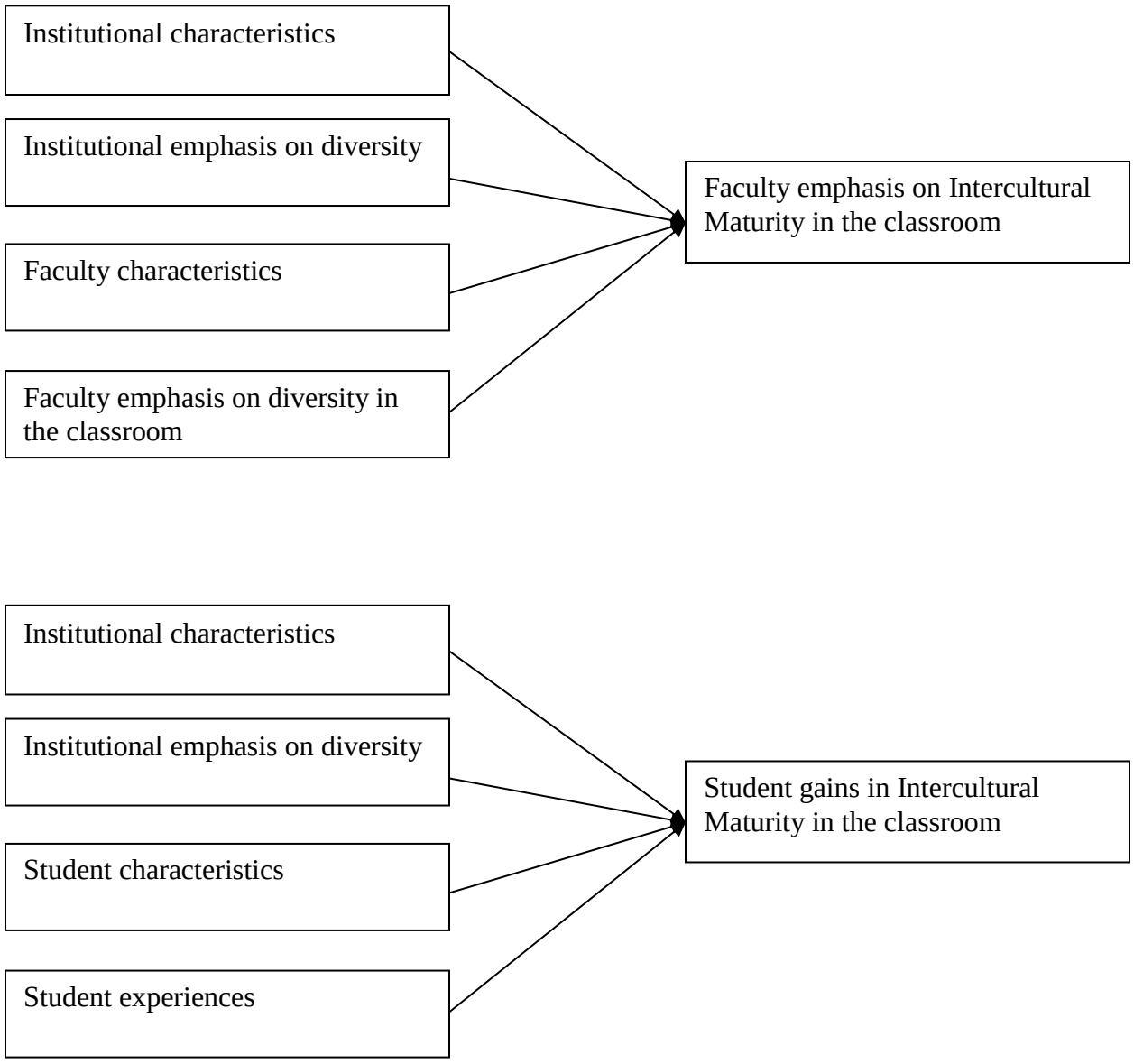
Question 1: What institutional and faculty characteristics are associated with faculty members spending time promoting interactions that encourage Intercultural Maturity?

Question 2: What institutional (including average faculty characteristics) and student characteristics are related to student gains in Intercultural Maturity?

Constructing an Integrated Dataset

To answer the first research question, three data sources are used: the Faculty Survey of Student Engagement (FSSE) 2007, the Integrated Post Secondary Education Data System (IPEDS) 2007, and data collected through a structured review process of the institutions' websites. Four datasets were used to answer the second research question: the National Survey of Student Engagement (NSSE) 2007, aggregated data from FSSE 2007, IPEDS 2007, and institution data from their respective websites. By linking these data sources for their respective research questions I have combined a wider variety of variables to investigate the relationship between the institution and the faculty as well as the institution and the student when it comes to

Figure 3.1. Investigation of the relationships in the research questions.



emphasis on or gains in Intercultural Maturity. Additionally, linking these specific datasets is important because it allows for the nested nature of relationships on a college campus. For example, relationships exist between the institution and the faculty as well as the institution and the students. The following paragraphs provide greater detail about the data sources that have been utilized in my study.

Data for Research Question 1

FSSE 2007

FSSE is a national survey that focuses on faculty perceptions regarding how students spend their time. Faculty also indicate the extent to which they value various student outcomes and specify how they organize the time they spend at work, both in and out of the classroom. The survey is available to any four-year institution. To be eligible to administer FSSE, the institution has to have administered NSSE in the past or administer it concurrently with FSSE. In 2007, 151 four-year institutions in the United States participated in FSSE (http://nsse.iub.edu/). Of this group, 147 institutions concurrently administered the NSSE (http://nsse.iub.edu/).

The FSSE data set was selected for a variety of reasons. In addition to providing background characteristics for faculty (i.e., gender, race, discipline) it provides data that describes the extent to which instructors structure their courses to promote activities that approximate the student outcome of interest (Intercultural Maturity). Additionally, the survey reveals the frequency of activities that I hypothesize will contribute to students' Intercultural Maturity. The survey also brings to light the faculty perception of the institution's emphasis on encouraging contact between students of different backgrounds as well as the institution's emphasis on diversity in the undergraduate curriculum. This information allows me to see if there is a relationship between the institutional emphasis on diversity and faculty emphasis on incorporating Intercultural Maturity in the classroom.

Recent research has recognized that information and data that can be gleaned from faculty are underutilized sources for research on college students (Nelson Laird & Garver, 2010). Further, the literature review identified only four studies that connected data from NSSE and FSSE surveys (Kuh, et al., 2004, 2007; Nelson Laird et al., 2008; Umbach & Wawrzynski,

2005). Two of these studies aggregated the student and faculty data to institutional level data, one of these studies did regression analysis on faculty and students separately and compared the two, and two of the studies aggregated the faculty data to make it institutional and nested the student data under the aggregated data (this is the approach I have used). Finally, research has found that student and faculty evaluations of instructional effectiveness show significant agreement between the two populations (Marsh, Overall, & Kesler, 1979). This validates using both NSSE and FSSE data to look at both student and faculty perspectives about diversity in the classroom.

The FSSE survey is a web-based survey and institutions can choose to implement one of two different versions of the survey (http://nsse.iub.edu/). The *course-based survey* asks faculty to respond to questions based on a specific course that they are teaching while the *typical-student survey* asks faculty to respond to questions based on the typical student enrolled in the classes they teach. A faculty member must be teaching at least one undergraduate course during the year the survey is administered to be included in the survey sample. Institutions must select which of the two surveys will be used; the faculty member does not have the option to choose between the two. Initial discussions with NSSE and FSSE representatives indicated that approximately 66% of institutions implementing FSSE elect the course-based survey. To maximize the sample size, I have used the course-based survey for my research. This decreased the sample size of institutions using the FSSE and NSSE from 147 to 94.

Of the questions that I used in my research, only one differs from the course-based to the typical-student survey. The course-based survey reads: “To what extent do you structure your selected course section so that students learn and develop in (given outcome)?” while the typical student survey reads: “To what extent has the typical [first-year/senior/student] experience at this

institution contributed to his or her knowledge in (given outcome)?" While these two questions do differ I believe that both provide information that is beneficial to this research. Other items from the survey that will be utilized in my study did not differ significantly from the course-based to the typical-student survey, thus supporting the selection of the course-based survey as the ideal instrument to incorporate into my research.

IPEDS 2007

IPEDS, one of several post-secondary education data collection sources within the National Center for Education Statistics, is also used in my study. An IPEDS survey collects data at an institution level and provides variables in areas such as institutional characteristics, enrollment, and degree completion rates. The specific IPEDS surveys that are used in my study include the institutional characteristics survey, the enrollment survey, the human resource survey, and the student financial aid survey. All institutions that participate in the Title IV program, which includes federal financial aid, are required to provide specific data to IPEDS on an annual basis, making it a data source that represents a comprehensive set of institutions.

For the purposes of my study I used IPEDS data to represent various aspects of the institution that are related to the campus climate. This source was selected because it has comprehensive institution-level data about all of the colleges and universities participating in NSSE and FSSE in 2007. Details about what these variables measure will be described in the section "Research Questions and Variables".

Institutional Website Review

To include data about the institutions' mission statements, my study reviewed the website of each institution in the sample. Each institution's website is provided by IPEDS. After

gathering this list of websites from IPEDS I systematically reviewed each website to gain more information about how diversity is or is not incorporated into the institution through its mission.

Previous research on mission statements (Morphew & Hartley, 2006) guides this review process. When analyzing mission statements, they used the institutions' websites and looked only at material that was specifically labeled "Mission Statement". In their research, they coded statements based on when the particular point of reference (i.e., diversity) was mentioned. One code represented diversity being mentioned in the first three sentences, another code represented diversity being mentioned in the latter part of the statement, and a third code represented an omission of diversity. Another study (Wang et al., 2007) built on Morphew and Hartley's (2006) work by looking explicitly at diversity in mission statements in Texas. Wang and associates (2007) used the following words to determine if a diversity theme was included in the mission statement: cultural diversity, cultural awareness, and cultural understanding. I broadened this list slightly to reflect the conceptual framework provided in Chapter 1. The following prompts guided the systematic review:

Mission statement:

1. Locate the institution's mission statement
2. Look for the following words/phrases
    a. diversity
    b. cultural
    c. pluralistic
3. Indicate if the mission statement addresses any of the above in the first three sentences, in the latter part of the statement, or not at all.

Data collected from the website review was included in my research because it provides information about the institutional environment and climate that cannot be gathered by the other datasets used in this study. Research on institutional climate indicates that the mission plays an important role in how the student experiences college (Cabrera & Nora, 1994; Helm et al., 1998;

Hurtado, 1992; Jones, 2005; Mayhew et al., 2005; Rankin & Reason, 2005; Schneider & Ward, 2003; Terenzini et al., 2001). As such, it is critical to incorporate the website review and this element into the analysis.

Data for Research Question 2

NSSE 2007

NSSE's College Student Report (commonly referred to as NSSE) is an annual survey of undergraduate students at four-year institutions. The survey asks students questions about various experiences they have had at their respective institutions, which then provides student-level data. In particular, NSSE questions focus on experiences that research tells us are "good practice" that promote desirable student outcomes (Kuh et al., 2007). Over the past 11 years more than 1,400 institutions around the world have participated in NSSE (http://nsse.iub.edu/). In 2007, 589 institutions in the United States participated in NSSE's College Student Report (http://nsse.iub.edu/). Institutions that administer NSSE must include all freshman and senior students in their sample and can administer the survey electronically or by paper and pencil. Because my study is interested in the effect the faculty and the institution have had on students' Intercultural Maturity, my study restricts the sample to respondents who are classified as seniors. Doing this maximizes the amount of time available for the institutional influence to have an effect on the student.

NSSE was selected as a data source because the survey is designed to tell interested parties about how students report spending their time in college and the outcomes they perceive gaining while in college. More specifically, the survey collects data that describes the student perspective about how the institution and its faculty members implement various practices related to diversity, such as engagement with diversity in the classroom and the extent to which

the institution encourages students to interact with others from different ethnic/racial backgrounds. NSSE also provides students' self-reported assessment about how they have developed in areas such as understanding self, understanding others with different ethnic or racial backgrounds, and ability to work effectively with others, which are measures that are used to approximate the outcome variable "Intercultural Maturity". Students' self reported data about student outcomes, especially those in connection with environmental factors, has been found to be appropriate for scholarly research (Pike, 2011). This reinforces the use of NSSE as a data source for my study.

FSSE 2007

Data from FSSE was aggregated to an institutional score to reflect average curricular experiences for the student. It was necessary to aggregate the data because the student could not be linked to a specific faculty member, making it inappropriate to next the student data within the faculty data (Raudenbush & Bryk, 2002). For example, questions focus on the extent to which instructors value students examining the strengths and weaknesses of their views on a topic or issue, the extent to which instructors value students better understanding someone else's views by imagining how an issue looks from that person's perspective, and the extent to which instructors value students learning something that changes the way they understand an issue of a concept. Additionally, in 2007, the FSSE survey tested the question "How inclusive of diversity is your institution's undergraduate curriculum?" Answers from this last question were averaged for each institution to make an aggregate score representing diversity in the undergraduate curriculum.

IPEDS 2007

IPEDS data was also used to better understand the relationships between institutional characteristics and student gains in Intercultural Maturity. Data such as proportion of students and faculty who were female as well as the proportion who were non-white was provided by IPEDS. Other variables such as institutional enrollment size and control were obtained through IPEDS.

Institutional Website Review

Each institution's mission statement was included in the analysis of students' gains in Intercultural Maturity. This data and method collection was identical to what was described for research question one focusing on faculty emphasis on Intercultural Maturity.

Merging the Datasets

These four datasets were collected in a variety of ways. Data from the NSSE and FSSE surveys were requested and purchased through the NSSE organization. I identified the specific data that they gathered, sorted, and provided to me. I utilized the IPEDS website (http://nces.ed.gov/ipeds/) to gather institutional data provided by this public source. To gather climate data from the institutions' websites I followed the protocol identified in the previous section. In order to protect the anonymity of the institutions participating in NSSE and FSSE, each variable collected through IPEDS and the website review had to have at least five institutions with the same value for a given variable. In order to do this, some variables' measures had to be grouped together in increments. For example, when measuring the percentage of the faculty who are non-White, the values represent increments that include at least five institutions. Specific details about the increments for each variable will be provided later in this chapter. Each dataset began as its own excel spreadsheet, was then converted to its own

SPSS file, merged into a comprehensive SPSS file for the appropriate research question, and finally converted into a file compatible with the HLM 7 software. Additional information about HLM 7 is provided later in the chapter.

Research Questions and Variables

As indicated in Chapter 1, the purpose of this study is (1) to see if the institution's emphasis on racial and cultural diversity is related to the faculty's emphasis on Intercultural Maturity and (2) to investigate the relationship between the institution's emphasis on diversity and student's Intercultural Maturity. The following paragraphs will outline specific details about the variables identified to answer these two research questions.

Question One

Question 1: What institutional and faculty characteristics are associated with faculty members spending time promoting interactions that encourage Intercultural Maturity?

Dependent Variable – Faculty Emphasis on Student Intercultural Maturity.

Three measures from FSSE were merged together to make the composite variable of Intercultural Maturity. The measures were taken from the following prompts:

The extent to which faculty structure courses so students develop in the following areas…

1. Understanding self
2. Understanding others with a different ethnic or racial background
3. Working effectively with others

The composite variable stems from research that indicates classrooms are a place for intergroup dialogue, which fosters relationships between students (Smith, 2009). Additionally, research indicates that faculty contributions critically influence the cultural context of the institution (Smith, 2009; Umbach & Wawrzynski, 2005). Components of this composite variable are selected because they are parallel to the measures proposed to reflect students' Intercultural Maturity (a detailed description of Intercultural Maturity will follow in the explanation of the

dependent variable in research question two). These three areas of development were averaged on a four-point Likert scale representing very little at one end of the scale and very much at the other end. To form the composite variable scores from the three measures are added together and analyzed as a continuous variable. A factor analysis with varimax rotation indicated that the composite variable was reliable (Cronbach's alpha = .672). If the "Working effectively with others" measure was removed from composite variable the reliability score would be .754. However, I determined two reasons made it worth the lower alpha score: (a) the composite variable better follows the Intercultural Maturity model and (b) because there are only three items in the scale/composite variable the alpha score is lower than it would typically be if there were more items. So although .672 is in the "questionable range" (.600-.699) many other scales that have a larger number of items are likely to have higher reliability scores but not necessarily higher correlations (Tabachnik & Fidell, 2001).

Furthermore, the following findings also support a parallel measure between faculty emphasis on Intercultural Maturity and students' reported gains in Intercultural Maturity. Positive relationships have been found between faculty emphasis in areas such as writing skills, academically challenging experiences, and collaborative learning and student engagement in activities related to these experiences (Kuh et al., 2004). The same research found a positive relationship between faculty emphasizing diversity experiences (as measured by the frequency that students encountered diverse perspectives in the classroom) and self reported measures of student's diversity experience (Kuh et al., 2004).

Independent Variables

The following list of independent variables has been selected as possible predictors of faculty emphasis on students' Intercultural Maturity.

Institution-level independent variables for research question one.

- Institution's mission statement references diversity (website)
- Inclusivity of diversity in undergraduate curriculum (FSSE)

These two variables represent purposeful diversity from the institution. As mentioned earlier in the chapter, the mission statement falls into three responses: 0 = diversity is not included in the mission statement; 1 = diversity is included in the latter part of the statement; and 3 = diversity is included in the first three sentences of the statement. After reviewing the data for this particular variable, it was determined that it was not normally distributed, so the measures that represented diversity mentioned early in the statement and late in the statement were merged into a single measure representing diversity being mentioned in the mission statement, making the variable dichotomous for regression analysis (0 = diversity not included in the mission statement and 1 = diversity included in the mission statement). Inclusivity of diversity in the undergraduate curriculum is measured on a seven point scale ranging from not at all inclusive to inclusive and is also treated as a continuous variable.

- Percent faculty of color (IPEDS)
- Percent faculty female (IPEDS)

IPEDS data indicates how many faculty from each race are represented at the institution. I subtracted the number of full-time and part-time white faculty from the total number of full-time and part-time faculty to determine the percent of white faculty and divided the number of white faculty from the total number of faculty to determine the percentage of faculty on campus who are white. Then I subtracted that percentage from 100% to determine the percentage of faculty of color. A similar process was followed to determine the percentage of female faculty. Appendix A lists the increments identified for these two variables to comply with the anonymity

requirements of the NSSE. Both the percent faculty of color and percent faculty female are treated as continuous variables for regression analysis.

- Control (IPEDS)

Institutions report if they are publicly or privately controlled, which is connected to their major funding sources. For regression analysis, this variable is dummy coded so that a public = 0 and a private = 1. One institution in the dataset is private for-profit. Because only one institution fits this profile it does not comply with NSSE anonymity parameters and therefore had to be excluded from the study.

- Selectivity (IPEDS)

IPEDS does not formally measure selectivity, so incoming SAT and ACT scores are used as a proxy variable for selectivity. A guide provided by ACT (n.d.) was used to determine the relationship between SAT and ACT scores. Following this guide, the SAT scores in Critical Reading, Math, and Writing were added together to represent a composite SAT score. Composite SAT scores were then set in a range which corresponded to a single ACT composite score. Institutions with higher average scores are considered more selective than those with lower average scores. Score increments were identified in order to be merged with NSSE data and will be analyzed as a continuous variable (see Appendix A).

Faculty-level independent variables for research question one.

- Faculty perception of the extent to which the institution emphasizes encouraging contact among students from different economic, social, racial, or ethnic backgrounds (FSSE)

FSSE asks faculty "To what extent does your institution emphasize…encouraging contact among students from different economic, social, racial, or ethnic backgrounds?" Faculty respond to this question using a Likert score from 1 – 4 with 1 representing very little and 4 representing very much. This score is treated as a continuous variable.

- Course includes diversity (composite variable of the below three items that measure the amount of time faculty spend in a given area)
  - Students developing skills necessary to work effectively with people from various cultural backgrounds
  - Emphasizing contributions to their respective field by people from multiple cultures
  - Including diversity in selected course section (generally stated)

Factor analysis indicated a Cronbach's alpha score of .725 for this composite variable, which is in the acceptable range for internal reliability (Tabachnick & Fidell, 2001). The three measures were added together to determine the composite variable and is treated as a continuous variable for regression analysis.

- Faculty's perspective of institution's inclusiveness of diversity in undergraduate curriculum.

Faculty indicate their perspective regarding how much the institution includes diversity in the undergraduate curriculum. Response items range on a scale from 1 (not at all inclusive) to 7 (totally inclusive) and are analyzed as a continuous variable.

- Tenure status (FSSE)

Responses to this measure include: tenured, on tenure track but not tenured, not on tenure track but institution has a tenure track system, and no tenure track system at the institution. These responses were dichotomously coded so that not on tenure track but institution has a tenure track system or no tenure track system at the institution = 0 and tenured or on tenure track but not tenured = 1.

- Full-time status (FSSE)

FSSE participants respond to the following question related to their teaching appointment: "During this term, does your institution consider you to be employed full-time or part-time?" The dichotomous answer is dummy coded for regression analysis so that part-time = 0 and full-time = 1.

- Discipline (FSSE)

In the FSSE survey faculty identify their discipline by typing it in to the survey. FSSE then codes the discipline into one of the following nine categories:

1. Arts and humanities
2. Biological Sciences
3. Business
4. Education
5. Engineering
6. Physical Science
7. Professional
8. Social Science
9. Other

The variable recognized the following disciplines as hard disciplines (0) according to Biglan's classification of disciplines: Biological Sciences, Engineering, Physical Sciences, and Professional Education. Arts and Sciences, Business, Education, Social Science, and Other were classified as soft disciplines (1) (Nelson Laird et al., 2007).

- Race or ethnic identity (FSSE)

Faculty elect one of the following to identify their racial or ethnic identification:

- American Indian or other Native American
- Asian, Asian American, or Pacific Islander
- Black or African American
- Mexican or Mexican American
- Puerto Rican
- Other Hispanic or Latino/a
- White (non-Hispanic)
- Multiracial
- Other
- Prefer not to respond

Race/ethnicity was dichotomized into white or non-white where white faculty = 0 and faculty of color = 1.

- Female (FSSE)

Within the demographic section of FSSE, faculty identify if they are male or female. This was dummy coded for regression analysis.

Question Two

Question 2: What institutional (including average faculty characteristics) and student characteristics are related to students' Intercultural Maturity?

To determine which institutional and student characteristics predict students' Intercultural Maturity, the following variables were identified:

Dependent Variable – Student Gains in Intercultural Maturity

Three questions from the NSSE survey were merged together to make the composite variable that approximated student gains in Intercultural Maturity. The three questions measured students reported gains in:

1. Understanding self
2. Understanding others with different ethnic or racial background
3. Working effectively with others

I first analyzed each individual measure of the composite variable and then the combined measure. This composite variable was constructed based on King and Baxter Magolda's (2005) model of Intercultural Maturity. Looking at the measures individually and as a group responds to their model in that students develop in each individual area (cognitive, intrapersonal, and interpersonal) and that the areas together reflect a holistic view of Intercultural Maturity. These three individual areas of development are measured on a four-point Likert scale representing very little at one end of the scale and very much at the other end. To form the composite variable score the three measures were averaged together and analyzed as a continuous variable (α=.750).

Independent Variables

Institution-level independent variables for research question two.

- Mission statement (website)
- Inclusivity of diversity in undergraduate curriculum (FSSE)

The description for how these variables were measured was described in the overview of research question one.

- Percent student of color (IPEDS)
- Percent of students older than the traditional age (IPEDS)
- Percent of students that are female (IPEDS)

These variables were calculated in the same way as the description provided for percent faculty of color in research question one. Increments were identified in order to merge external data with NSSE and FSSE data (see Appendix A for supporting detail).

- Reflective learning in classes (FSSE)
    - Extent to which faculty value students' examining the strengths and weaknesses of their views on a topic or issue
    - Extent to which faculty value students' better understanding someone else's views by imagining how an issue looks from that person's perspective
    - Extent to which faculty value students learning something that changes the way they understand an issue or a concept

This composite variable passes the reliability test ($\alpha = .766$), is calculated by adding the three measures together, and analyzed as a continuous variable during the regression analysis.

These measures of purposeful diversity are included because when a class incorporates a variety of perspectives, students can begin to see how "diversity affects knowledge" (Smith, 2009, p. 23) and we can see if it is also related to Intercultural Maturity. As described in research question one, FSSE participants respond to the above items through a four-point Likert scale, with one end of the range being very little and the other end very much. As previously mentioned, because of restrictions that protect the student's and faculty's identity, participants of

NSSE cannot be directly linked to a specific faculty member's class. Because of this, these variables are aggregated to the institution-level. The process for aggregating these variables is the same as those outlined in the description of the FSSE dataset.

- Size (IPEDS)

Size is represented by the number of full-time and part-time students enrolled at the institution. Ranges had to be identified to allow for this variable to be merged with the NSSE and FSSE variables and will be treated as a continuous variable (see Appendix A).

- Selectivity (IPEDS)
- Control (IPEDS)

Measurements for selectivity and control were described in Research Question 1.

Student-level variables for research question two.

- Student perception of the extent the institution emphasizes encouraging contact among students from different economic, social, racial, or ethnic backgrounds (NSSE)

This variable is measured on a four-point scale ranging from very little to very much and will be considered continuous for regression analysis.

- Participated in a learning community (NSSE)

Students responding to this survey indicated if they had participated in a learning community or not. As such, it is analyzed as a dummy coded variable with participation in the activity = 1 and non-participation = 0.

The remaining student experiences were included to account for the extent to which students engaged themselves in various activities (NSSE):

- How often have you…
    - included diverse perspective (different races, religions, genders, political beliefs, etc.) in class discussions or writing assignments?
    - had serious conversations with students of a different race/ethnicity than your own?
    - focused on reflective learning? (measured the same as described in research question 1, $\alpha = .806$)

These variables are measured as: very often, often, sometimes, and never and will be treated as a continuous variable for regression analysis.

- Age (NSSE)
- Sex (NSSE)

Age was originally measured as a continuous variable. However, the distribution was heavily skewed because there were many more traditional aged students than non-traditional aged students. To shift the distribution toward normal, age was dummy coded so that 17-24 represents traditional age (0) and 25 and older represents non-traditional age (1). This matches the non-traditional age range specified by the IPEDS variable that measures the percent of students on campus that are non-traditional age. Like research question 1, sex will be dummy coded so that 0 = male and 1 = female.

- Race/ethnicity (NSSE)

Students have the same response options for race as described for FSSE respondents and were analyzed in the same manner. Race/ethnicity was dichotomized into white and non-white, with white =0 and non-white=1.

- Discipline (NSSE)

  Discipline (or major) is coded the same for NSSE as it was for FSSE:

  1. Arts and humanities
  2. Biological Sciences
  3. Business
  4. Education
  5. Engineering
  6. Physical Science
  7. Professional
  8. Social Science
  9. Other

Student's major was broken into the following hard and soft disciplines according to Biglan (Nelson Laird et al., 2007): Biological Sciences, Engineering, Physical Sciences, and Professional Education were coded as hard disciplines (0); Arts and Sciences, Business, Education, Social Science, and Other were coded as soft disciplines (1). This concludes the review of the variables included in this study. The following section will outline the statistical analysis component of my research design.

Statistical Analysis Methodology

SPSS version 16 and Hierarchical Linear and Nonlinear Modeling version 7 (HLM 7) software were used to analyze the data in my study. SPSS software was used to run descriptive statistics and factor analyses as well as to run ordinary least squares regression models when needed. The HLM software was selected because it estimates model coefficients at multiple levels while also predicting the random effects at the student-, faculty-, and institutional-level (http://www.ssicentral.com/hlm/index.html).

Various analyses were employed to understand the data and answer the research questions. Descriptive statistic analysis, factor analysis, ordinary least squares regression, and hierarchical regression analysis were all included in my study. The descriptive statistics

illustrated how many institutions, faculty members, and students are in the study as well as describe various characteristics about these populations. Factor analysis allowed me to succinctly identify the variables used in my study (Green, Salkind, & Akey, 2000). The hierarchical regression determined if those linear regression models varied significantly between institutions (Raudenbush & Bryk, 2002). Hierarchical analysis continued if significant differences were detected between the institutions and ordinary least squares regression was implemented if there was a lack of significant differences between the institutions. These analyses provided a better understanding of how the institution is related to faculty emphasis on Intercultural Maturity as well as how the institution is related to student gains in Intercultural Maturity.

Screening the Data

Prior to running the full analysis on the data, the variables were screened for integrity and to better understand the data. Upon receiving the NSSE and FSSE data files the search for institutional data began. During this search I identified 10 of the 94 institutions provided by NSSE to be branch campuses of a main campus. These institutions were excluded due to complications gathering information from IPEDS as well as the website review.

In order to have viable aggregate variables, there had to be at least three faculty responses in an institution. This resulted in excluding four institutions from the study, making the final number of institutions 80. As outlined earlier in the variables description, a factor analysis was run on both of the dependent variables as well as the on the independent variables.

The data set had no missing data at the institutional level. There was a very small amount of missing data at the student level (the maximum amount of missing data for any given variable was 3.3% with most variables missing less than 1%). The maximum amount of missing data for any given variable at the faculty level was 13.9%, which was for the variable that represented

faculty member's perspective of inclusivity of diversity in the undergraduate curriculum. This variable (and others with more the 5% missing data) was dummy coded to measure faculty who answered the question and those who did not. A correlation analysis was run on the dummy coded variables to determine if the missing data was randomly distributed (Green, Salkind, & Akey, 2000). The maximum correlation was .114 (p=.001), which was determined to be too weak to warrant the exclusion of the variable from the study.

The final screening step was to check for normal distribution and collinearity of the variables. A few changes were made based on the rule that a skew statistic greater than one indicates potential problems with normalcy (Tabachnik & Fidell, 2001). Changes related to the distribution of variables were explained earlier in the chapter for each variable that was not considered normally distributed. The data was then tested for collinearity using the following rules: delete a variable or compile the variables if correlation > .900; consider deleting or compiling variables if correlation is between .700 and .899 (Tabachnik & Fidell, 2001). No correlation problems were identified for the faculty data. Two sets of variables were considered for deletion in the student data set: percent of faculty who are non-white and percent of students who are non-white; as well as percent of faculty who are female and percent of students who are female. After further consideration, the variables were merged into pairs in order to preserve the measures of structural diversity: percent of faculty and students who are non-white became representation of people of color (Chronbach alpha=.793) and percent of faculty and students who are female became representation of women (Chronbach alpha=.840).

Modeling Process

HLM was selected as the final statistical analysis technique because it helps the researcher make inferences about two levels of data (i.e., the student and the institution) at the

same time (Raudenbush & Bryk, 2002). For example, I wanted to know if the levels of students' Intercultural Maturity were different from campus to campus and if so were there relationships between student gains in Intercultural Maturity and the institutional characteristics included in my study. More generally asked, does a variable at the student level interact with a variable at the institution level? However, as described below, in the case that HLM was determined to not be an appropriate form of analysis, ordinary least squares regression methodologies were used.

Like other hierarchical research, this study looked to see if individual student's measures for Intercultural Maturity are more similar within each institution than between each institution. If that is the case, then emphasis on diversity is *dependent* on the institution and violates an assumption of linear regression (Miles & Shevlin, 2006). When this happens it is appropriate to use hierarchical regression modeling (Raudenbush & Bryk, 2002). Further, HLM will help explain the variation in the relationships between the dependent variable and the independent variables among the different institutions. One of the greatest benefits of using HLM is that it identifies if there is a significant difference in slopes from institution to institution (Raudenbush & Bryk, 2002). For example, does the amount of emphasis the faculty place on diversity have a stronger relationship with Intercultural Maturity at institution A compared to institution B?

To determine if there was significant difference between institutions for the variables focused on faculty emphasis on Intercultural Maturity (Research Question 1) an intraclass correlation analysis was run (Table 3.1). HLM7 software was used to determine if the dependent variables differed significantly from institution to institution, as represented by the following equation:

$$\beta_{0j} = \gamma_{00} + u_{0j}$$

$$\beta_{1j} = \gamma_{10} + u_{1j}$$

Table 3.1

Intraclass correlations for faculty emphasis on Intercultural Maturity (Research Question 1)

	Intercultural Maturity
Variance components	
Within institution (Level 1) (σ^2)	0.684
Between institution (Level 2) (τ_{00})	0.010
Intraclass correlation (ρ)	1.38%

In this equation, which is often referred to as the null, unconditional, or one-way ANOVA model, β_{0j} is the individual outcome measure for the faculty member 0 in school j, γ_{00} is the grand institutional mean, which is the average mean for all institutions or the intercept of the regression equation, u_{0j} is the unique increment to the intercept associated with the institution j, β_{1j} is the slope of the regression model, γ_{10} is the average outcome slope for the population, and u_{1j} is the unique increment to the slope of the regression model that is associated with institution j.
The dependent variables did not differ significantly between the institutions, as demonstrated by the lack of statistical significance in the between institution variation (τ_{00}). Because no significant variance was detected between institutions, the remainder of the analysis for faculty emphasis on Intercultural Maturity utilized ordinary least squares regression. Detailed findings of this analysis will be presented in Chapter 4.

An analysis of intraclass correlations for Research Question 2, which focused on student gains in Intercultural Maturity, was also performed to see if there was significant variance between institutions for this set of outcome measures (see Table 3.2). Because significant variance ($p<.001$) between the institutions was detected for the outcome measure hierarchical

Table 3.2.

Intraclass correlations for Dependent Variables in Research Question 2

	Intercultural Maturity
Variance components	
Within institution (Level 1) (σ^2)	0.58
Between institution (Level 2) (τ_{00})	0.02***
Intraclass correlation (ρ)	3.0%

*p<.05. **p<.01. ***p<.001

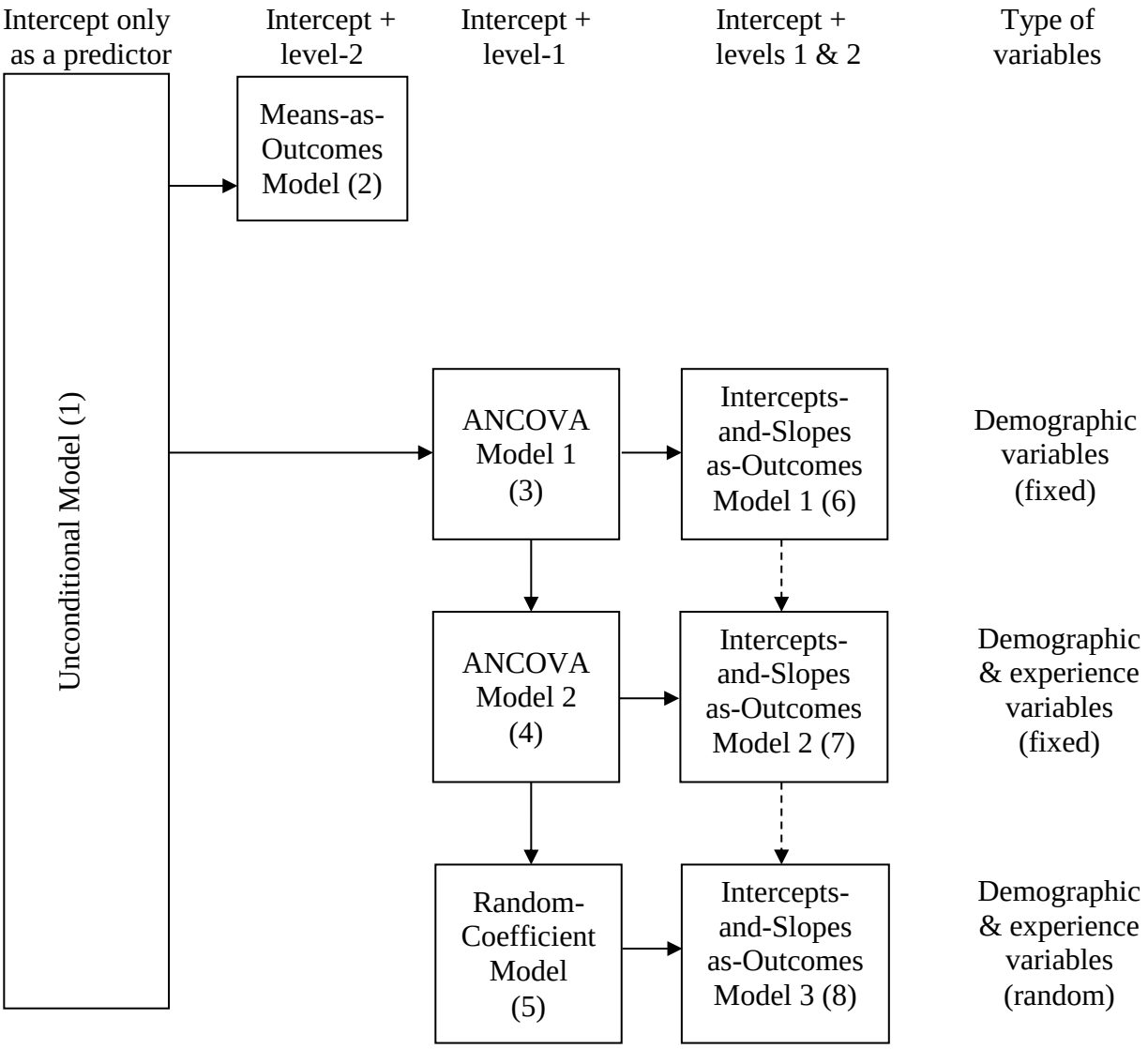
linear modeling was determined to be the optimal regression technique for this research question. The following section outlines the methodology used to build the hierarchical models.

Explanation of the Nested Models

Although the proportion of variance in student reported gains in Intercultural Maturity is small between institutions, it is significant and therefore warrants further exploration with a hierarchical analysis for the second research question (see Figure 3.1 for a visual representation of the nested models). The next step in the analysis was to add institutional variables to the regression equation to see how these variables predict the outcome variables. As described earlier in this chapter, the six institution-level variables included: the proportion of students and faculty who are non-white as well as female (Non-white Representation and Female Representation) as continuous variables; the institutional control (0=Public, 1=Private), the inclusion of Diversity in the Mission Statement (0=not included, 1=included); and faculty perspective regarding the institution's emphasis on Diversity in the Undergraduate Curriculum as well as the inclusion of Reflective Learning in the General Education Courses (continuous

Figure 3.1

Nested Models for Hierarchical Analysis



Note: Solid lines indentify relationships that were tested with variance equations, dashed lines represent how the model was conceptually built when there was not a corresponding equation.

variables). This model that adds these level-two variables to the regression equation is the Means-as-Outcomes model (see Appendix H for corresponding data for the nested models). The Means-as-Outcomes regression model allows the institutional variables to vary, which identifies the best fitting line for each institution rather than identifying the best fitting line for the grand

mean of the institutions (all institutions together). By allowing these variables to vary, one can better understand how the different measures (i.e., Diversity in Mission and Diversity in Curriculum) predict the outcome variables differently at each institution. The combination of variance components from the Means as Outcomes model and the Unconditional model describe the proportion of the unconditional model that is explained by adding these six level-two variables.

The third model, was the first of two One-Way ANCOVA models, which adds demographic characteristics of the student to the Unconditional model. No institutional variables are included in the One-Way ANCOVA models. Six student experience variables were added to the third model to make the fourth model. These student experience variables include: (a) the student's perception of the Institution Promoting Contact with Diverse Others; (b) students including Diverse Perspectives in Class, particularly in their discussions and writing assignments; (c) students practicing Reflective Learning; (d) students having Serious Conversations with Diverse Others; (e) student participation in a Learning Community; and (f) participating in Class Group Work. All of the student-level variables are fixed in these two models which means the average for the dependent variable is the same in each institution, but the mean score for the dependent variables is adjusted for the student variables.

A Random-Coefficient model is the fifth model in the hierarchical analysis. Like the fourth model, this model includes both the demographic and experience-based student variables. However, this allows the student-level predictors to be random, that is they are allowed to vary across the schools. By combining the variance components from the respective One-way ANCOVA and Random-Coefficient models and the Unconditional model the proportion of

institutional variance in the Unconditional model that is explained by the specific student-level variables in the ANCOVA/Random-Coefficient models is explained.

Models six, seven, and eight, follow the same progression as models three, four, and five: they begin with fixed demographic characteristics of the student, then add fixed student experience variables, and finally allow all student-level predictors to vary. What is different in models six through eight is that they also include institution-level variables. In these three models all six of the institution variables are included and all are allowed to vary. These models are referred to as the Intercepts-and-Slopes-as-Outcomes models or fitted models. By analyzing the variance components of each the parallel models (i.e., the ANCOVA model with student demographic characteristics to the fitted model with student demographic characteristics) the percent of the average level-two variance that is explained by adding these specific level-two variables is identified. This analysis is conducted in a way that uses nested models (Hox, 1995). Nested models allow a researcher to begin with a general model (i.e., the unconditional model) and remove parameters step by step until you get to a very specific model. This analysis followed the nested methodology used by Rumberger & Palardy (2004) in their study of school effectiveness for student achievement. In their study they built a nested model, much like the previous paragraphs described. Where their study stopped in the building of the nested models was at the first fitted model. Although there may be significant variance in the model left to be explained, which could justify building additional fitted models, the first fitted model begins to identify the cross-sectional effects between the level-one and level-two variables. Future research can further analyze those effects.

Limitations

Recently a debate has sparked about the use of NSSE data to compare institutions on their behaviors, attitudes, and success for various student outcomes (Olivas, 2011). Critics of NSSE question the validity of using this source to compare institutions (LaNasa, Cabrera, & Trangsrud, 2009) and especially challenge its applicability to underrepresented populations in higher education (Dowd, Sawatzky, & Korn, 2011). Still, NSSE data remains one of the most comprehensive sources of student-level data on engagement. Combining this wealth of information about students with the information FSSE puts forth on faculty may not be perfect but can provide initial research interpretations to be followed up on by later qualitative research.

At this point in time, NSSE does not intentionally measure Intercultural Maturity as a student outcome they track. So, other outcomes that are measured were identified as components of Intercultural Maturity and combined together to approximate the outcome variable of interest: Understanding Self, Understanding Others who are Different than you in Terms of Race or Ethnicity, and Working Effectively with Others. This is a limitation in that it is not the purest measure of Intercultural Maturity. However, it does closely follow the theoretical underpinnings King and Baxter Magolda (2005) put forth for Intercultural Maturity. Additionally, it allows research to explore this outcome variable on a national scale.

Another limitation stems from merging public data, gathered from IPEDS with NSSE and FSSE data. In order to strictly protect the anonymity of the institutions participating in the NSSE and FSSE surveys, the values of external variables must be general enough that the external researcher cannot identify the institution. So, all but one of the IPEDS variables that were truly continuous (i.e., size, percent of faculty who are female) had to be set in increments. To make the most of this limitation the increments were set to be as small and as fixed as possible. While this

is not the ideal way to use the IPEDS variables, it still provides additional knowledge that could not be gained without incorporating the variables. Additionally, the institution's emphasis on teaching or research was not collected at the onset of the research project. Although it was later identified as a potential variable, it was too late to add to the data set.

Ideally, this study could have utilized three levels of data when analyzing student gains in Intercultural Maturity: *student data* nested within *faculty/classroom data* nested within *institution data*. However, as previously described, this would have violated confidentiality agreements with the NSSE organization. So, faculty data was restricted to data addressing general education courses and then aggregated to represent the general education experience at the institution. Another challenge relating to aggregating faculty data to represent the general education experience is that some institutions only had three faculty complete the survey referencing a general education course. Although this is a small number of faculty to represent the institution, it was included in the study in order to keep the smaller institution in the analysis.

Like all research that uses national datasets, this study is limited by the data that is already in existence in the surveys identified (IPEDS, NSSE, and FSSE). I cannot obtain some information that has previously been found to effect student openness to diversity such as student's incoming perspective about and exposure to diversity as well as previous participation in community service or volunteer work (Fulford, 2009; Pascarella et al., 1996; Whitt et al., 2001). Additionally, I could not ask clarifying questions about any of the variables. For example, what types of efforts from the institution influence how faculty and students perceive the institution to promote student contact with diverse others? What types of activities and assignments were included in the service learning projects? What were the learning communities like for the students? Questions such as these were often pondered during the analysis of the

data. Still, my study minimizes this limitation by compiling a comprehensive data set from three different nationally recognized surveys. Additionally, my study includes a website review to add institutional-level data that is excluded from the IPEDs survey. The analysis of this data seeks to shed light on Intercultural Maturity by examining the complex relationship between students, faculty, and institutions.

This chapter described how the data were collected, how variables were measured, and how the variables were screened prior to analysis. The two research questions were presented and the statistical software package and analysis were reviewed. The next chapter outlines the results of this study on Intercultural Maturity.

CHAPTER 4: RESULTS

The purpose of this study is to better understand (1) the relationships between institutional as well as faculty characteristics and faculty emphasis on students' Intercultural Maturity and (2) the relationships between institutional as well as student characteristics and student's Intercultural Maturity. To address this purpose, the study first looked at the relationships between institutional characteristics, as well as faculty characteristics, and faculty's self-reported scores for emphasizing proxy measures of Intercultural Maturity. The proxy measure was a composite of the variables that indicated the extent to which faculty structure their course so that students make gains in: (a) understanding self; (b) understanding others who are different in terms of racial and ethnic backgrounds; and (c) working effectively with others. After analyzing those relationships the study investigated the relationships between institutional characteristics, along with student characteristics, and student's self-reported gains in the proxy measure of Intercultural Maturity, as mentioned above.

Descriptive statistics for the variables used in both research questions are presented first in this chapter. Following the descriptive statistics is a report of the initial analysis, and then an explanation of the regression analysis of research question one: *What institutional and faculty characteristics are associated with faculty members spending time promoting interactions that encourage Intercultural Maturity?* After a thorough review of the findings for research question one the chapter shifts to research question two: *What institutional and student characteristics are related to student's Intercultural Maturity?*

Descriptive Statistics

Student Characteristics

Demographics

There were 4,274 college seniors who participated in the NSSE in 2007 (see Table 4.1 for corresponding descriptive statistics tables for the Student Characteristics). The majority of these senior students were white (69.2%), female (68.4%), majoring in a soft discipline (76.1%), and traditional aged (68.7%). In addition to the demographic characteristics just described, this study also included variables measuring students' experiences at their respective college institutions.

Student Experiences

More than half (66%) reported including diversity in their writing assignments or course discussions sometimes or often while 28% reported including diversity in their assignments very often. The majority of students (61%) self-reported moderate gains in Reflective Learning, with 31% reporting high gains, and only 7% reporting low gains. About half (51%) of the students had serious conversations with students of a different race than their own often or very often. A little over one-third of students had those conversations sometimes; leaving 13% of the students to never have that conversation. Only 27% reported participating in a learning community while at college. Working with students during class was common: 41% did this sometimes, 32% did this often, 18% did this very often, only 9% never worked in groups during class.

Student Gains in Intercultural Maturity (Dependent Variable for Research Question 1)

The overall mean score for student's self-reported gains in Intercultural Maturity was 2.85 (SD=2.320). The mean scores within the various student characteristics (i.e., mean scores for male and female) were significantly different from one another. More specifically, Students of Color reported significantly greater gains in Intercultural Maturity than White students; and

Table 4.1

Student Characteristics

Characteristic	n	%
Race		
White	3,025	69.2
Student of Color	1,344	30.7
Missing	5	0.1
Gender		
Male	1,381	31.6
Female	2,992	68.4
Missing	1	0.0
Discipline		
Hard	1,001	22.9
Soft	3,329	76.1
Missing	44	1.0
Age		
17-24	3,004	68.7
25+	1,304	29.8
Missing	66	1.5
Included diverse perspectives in assignments		
Never	256	5.9
Sometimes	1,322	30.2
Often	1,567	35.8
Very often	1,228	28.1
Missing	1	0.0
Reflective Learning		
Low	320	7.3
Moderate	2,679	61.2
High	1,371	31.3
Missing	4	0.1
Had serious conversations with students of a different race than their own		
Never	556	12.7
Sometimes	1,577	36.1
Often	1,151	26.3
Very often	1,084	24.8
Missing	6	0.1

Table continued on next page

Table 4.1 Continued.

Characteristic	n	%
Learning community		
Did not participate in learning community	3,165	72.4
Did participate in a learning community	1,199	27.4
Missing	10	0.2
Worked in groups during class		
Never	397	9.1
Sometimes	1,795	41.0
Often	1,389	31.8
Very often	792	18.1
Missing	1	0.0

Female students reported significantly greater gains than Males; students majoring in a Soft Discipline reported significantly greater gains than those majoring in a Hard Discipline; and those who were traditional aged (18-24) reported greater gains than their older classmates (25+).

The greatest significant difference within a given student predictor variable was for participating in a Learning Community which had a difference in mean scores of approximately .3 ($p<.001$) with those who participated in a learning community scoring higher than those who did not participate. Students at private institutions reported slightly greater gains ($p<.001$) than their peers at public institutions and students at institutions that expressly focus on diversity in their mission statement reported greater gains ($p<.05$) than students at institutions with no focus on diversity in their mission Intercultural Maturity ($p<.05$) (see Table 4.2).

Table 4.2

Independent Samples T-test for Student Characteristics and Experiences – Student Gains in Intercultural Maturity

			Intercultural Maturity
	M	SD	t(df)
Overall Mean Score	2.85	.773	
Race			
White	2.82	.753	-3.45(2382)***
Stu. of Color	2.91	.813	
Gender			
Male	2.75	.772	-5.73(2662)***
Female	2.90	.770	
Major			
Hard Discipline	2.81	.773	-2.30(1636)*
Soft Discipline	2.87	.771	
Age			
Traditional Age	2.87	.747	2.20(2242)*
25+	2.81	.832	
Learning community			
Did not Participate	2.77	.771	-12.65(2254)***
Participated in LC	3.09	.729	
Mission includes diversity			
Diversity not mentioned	2.81	.761	-2.38(2850)*
Diversity mentioned	2.87	.779	
Control			
Public	2.82	.784	-4.88(2357)***
Private	2.94	.738	

*p<.05. **p<.01. ***p<.001

A one-way analysis of variance was conducted to better understand the relationships between the student gains in Intercultural Maturity and the following student experience variables: Diverse Perspectives in Class Discussions and Assignments, Had Serious Conversations with Diverse Others, Worked in Groups During Class, and Student Contact with Diverse Others, each of which were measured on a 1-4 scale with 1 representing never and 4 representing very often (see Table 4.3 for supporting detail). The ANOVAs for all of the mean scores for the predictor variables had significant variation at the .001 level. The following findings outline those variables with moderate or large effect sizes following the rule of thumb that Eta squared scores of .01 have small effect sizes, scores of .06 are moderate, and .14 are large (Green et al., 2000). Student gains in Intercultural Maturity had moderate effect sizes from Diverse Perspectives in Class Discussions or Assignments and Had Serious Conversations with Diverse Others ($F(3, 4348)=177.50$, $\eta^2=.109$ and $F(3, 4346)=62.96$, $\eta^2=.073$, respectively) and a strong relationship was detected for the student's perspective of the extent to which the institution encouraged Student's Contact with Diverse Others ($F(3, 4343)=467.89$, $\eta^2=.244$).

Faculty Characteristics

Demographics

One thousand three hundred seventy-one faculty who participated in the 2007 FSSE taught General Education Courses. The majority of the faculty in this study were white (68%) and male (54%). Of all the faculty members in the sample, slightly more than half (57%) were tenured or on a tenure track (see Table 4.4 for descriptive statistics of the faculty). Biglan's classification model was used to analyze discipline. As such, hard disciplines included Biological

Table 4.3

One-way Analysis of Variance

		Intercultural Maturity			
Source	df	SS	MS	F	η^2
Diverse Perspectives in Class Discussions or Assignments					
Between groups	3	283.90	94.63	177.50***	.109
Within group	4348	2318.13	.53		
Total	4351	2602.03			
Had Serious Conversations with Diverse Others					
Between groups	3	188.88	62.96	113.42***	.073
Within group	4346	2412.40	.56		
Total	4349	2601.28			
Worked in Groups During Class					
Between groups	3	123.28	123.28	72.10***	.047
Within group	4347	2477.44	2477.44		
Total	4350	2600.72			
Student's Contact with Diverse Others					
Between groups	3	635.19	211.73	467.89***	.244
Within group	4343	1965.30	.45		
Total	4346	2600.49			

***p<.001

Sciences, Engineering, Physical Sciences, and Professional Education, while soft discipline included Arts and Sciences, Business, Education, Social Science, and Other (Nelson Laird et al., 2007). Two-thirds of the faculty in this study taught in a soft discipline. Three-quarters of respondents were considered full-time faculty.

Curricular

Two variables represented how faculty members spend their class time. One of the variables represented the extent to which their respective general education course includes diversity (see Table 4.4). The Course Includes Diversity measure includes faculty responses to survey questions that ask about incorporating content in their field from different cultural perspectives, spending time so that students develop skills necessary to work effectively with people from different racial and ethnic backgrounds, and including diversity in their course generally speaking. The majority of faculty (45%) report that they incorporate a moderate amount of diversity in their course and 34% incorporate very much diversity in their course. About 12% of faculty reported incorporating very little diversity in their general education course. The other variable that addressed how faculty spend time in their courses indicated if that particular course included a Service Learning project or not. Of the general education faculty that responded to this study, 30% included service learning as part of their course expectations.

Table 4.4.

Descriptive Statistics of Faculty Characteristics

Characteristic	n	%
Race		
White	933	68.1
Faculty of color	410	29.9
Missing	28	2.0
Gender		
Male	745	54.3
Female	595	43.4
Missing	31	2.3

Discipline		
Hard (BiolSci, Engr, PhysSci, and ProfEd)	376	27.4
Soft (A&S, Bus, Educ, SocSci, and Other)	914	66.7
Missing	81	5.9
Tenure Status		
Not on tenure track/no track at institution	581	42.4
On tenure track/ tenured	777	56.7
Missing	13	.9
Employment Status		
Part-time	321	23.4
Full-time	1,040	75.9
Missing	10	.7
Course Include Diversity		
Very Little (3-6)	166	12.2
Moderate (7-11)	622	45.3
Very Much (12-15)	464	33.8
Missing	119	8.7
Service Learning		
Did not include Service Learning in course	951	69.4
Included Service Learning in course	415	30.3
Missing	5	.4

Faculty Emphasis on Intercultural Maturity (Dependent Variable, RQ1)

Response options to faculty emphasis on students' Intercultural Maturity ranged from one (very little) to four (very much). The overall mean score for faculty emphasis on Intercultural Maturity was 2.61 (SD=.84). The independent samples t-tests found the mean scores of the dependent variable to vary significantly for the different categories within the following predictor variables that measured faculty characteristics: Race, Gender, Discipline, Tenure Status, Employment Status, and Service Learning (see Table 4.5). Service Learning had the most sizable differences in that those classes that included a service learning component had a mean score of 3.12 while classes that did not include Service Learning had a mean score of 2.38, a difference of approximately .7 ($p<.001$). Faculty of color reported significantly greater emphases on student gains in Intercultural Maturity as did female faculty compared to their male

counterparts, and faculty in a soft discipline compared to those in a hard discipline. Interestingly, no significant differences in mean scores were detected based on the institution's inclusion of diversity in the mission statement or based on institutional control.

Institutional Characteristics

Eighty four-year institutions across the United States were included in this study. As mentioned in Chapter 3, these institutions all participated in the NSSE and FSSE surveys during 2007. Of these institutions, 45 were public and 35 were private. The institutions varied in size, control, selectivity, purposeful diversity, and structural diversity (Table 4.6).

The study specifically looked at the emphasis on diversity in the institution's mission statement as posted on their website. Thirty-one institutions (38.8%) did not mention diversity in their mission statements, while 49 (61.2%) did address diversity in their statement. Additionally, the study assessed the institution's emphasis on diversity in the undergraduate curriculum, which was measured through each institution's aggregate faculty rating of the question: *How inclusive of diversity is your institution's undergraduate curriculum*? Faculty could answer this with a

Table 4.5.

Independent Samples T-tests for Faculty Variables – Faculty Emphasis on Intercultural Maturity

	Intercultural Maturity		
	M	SD	t(df)
Overall all Mean Score	2.61	.84	
Race			
White Faculty	2.55	.84	-3.87(793)***
Faculty of Color	2.74	.82	
Gender			
Male Faculty	2.42	.82	-9.66(1289)***
Female Faculty	2.85	.80	
Discipline			
Hard Discipline	2.17	.80	-12.79(684)***
Soft Discipline	2.79	.79	
Tenure Status			
Not on Track/No track	2.79	.81	7.15(1262)***
Tenured/On track	2.47	.83	
Employment Status			
Part-time	2.78	.86	3.91(515)***
Full-time	2.56	.82	
Service Learning			
No Serv. Learn.	2.38	.80	-17.44(917)***
Included Serv. Learn.	3.12	.68	
Mission statement			
Diversity not Mentioned	2.56	.85	-1.52(951)
Diversity mentioned	2.64	.83	
Control			
Public	2.61	.85	.24(590)
Private	2.60	.80	

*p<.05. **p<.01. ***p<.001.

Table 4.6.

Institutional Characteristics

Characteristic	n	%
Size		
555-1,499	12	15.0
1,500-2,999	10	12.5
3,000-4,999	19	23.8
5,000-7,499	10	12.5
7,500-9,999	8	10.0
10,000-14,999	8	10.0
15,000-24,999	8	10.0
25,000+	5	6.3
Control		
Public	45	56.3
Private	35	43.8
Selectivity (Average ACT Score)		
<20	20	25.1
21-25	7	8.8
26-32	7	8.8
Mission Statement		
Diversity not included	31	38.8
Diversity included	49	61.2
Undergraduate Curriculum Includes Diversity		
1: Not at all Inclusive	0	.0
2	1	1.3
3	5	6.3
4: Moderately Inclusive	46	57.5
5	28	35.0
6	0	0
7: Totally Inclusive	0	0

Table Continued on Next Page

Table 4.6 Continued.

Characteristic	n	%
Percent of Faculty who are Non-White		
0-9%	23	28.8
10-19%	32	40.0
20-29%	11	13.8
30-49%	7	8.8
50-99%	7	8.8
Percent of Students who are Non-White		
0-9%	5	6.3
10-19%	18	22.5
20-29%	18	22.5
30-49%	16	20.0
50-99%	23	28.8
Percent of Faculty Women		
0-39%	13	16.3
40-49%	41	51.3
50-59%	20	25.0
60-74%	6	7.5
Percent of Students Women		
20-49%	9	11.3
50-59%	30	37.5
60-69%	31	38.8
70-91%	10	12.5
Percent of Students Non-traditional Aged		
0-29%	40	50.1
30-39%	19	23.8
40-49%	11	13.8
50-69%	10	12.5

seven-point Likert scale ranging from 1 = Not at all inclusive and 7 = Totally inclusive. The minimum, maximum, and mean scores for this measure were 2.86, 5.94, and 4.75 (SD = .57108) respectively.

Characteristics of the general education curriculum were also included, to measure the extent to which faculty who taught general education courses integrated diversity and reflective

learning into their general education courses. After cleaning and screening the data, two aggregate faculty variables remained to represent the curricular experience in the general education courses, both of which were composite variables: Course Includes Diversity (α = .725) and Reflective Learning in Class (α = .766) (see Table 4.7).

Table 4.7.

Aggregated Faculty Information Representing the General Education Curriculum

Characteristic	n	%
Course Includes Diversity		
Never	2	2.5
Rarely	31	38.8
Moderately	43	53.8
Often	4	5.0
Very Often	0	0.0
Reflective Learning in Classes		
Never	0	0.0
Rarely	0	0.0
Moderately	14	17.5
Often	61	76.3
Very Often	5	6.3

When looking at the measure Course Includes Diversity, roughly half (53.8%) of faculty scores are in the middle of the range, indicating that general education courses' faculty incorporate diversity in their courses a moderate amount. The measure "Course Includes Diversity" was a composite of three survey items measuring how much the faculty member included the following: contributions to their respective field by people from multiple cultures; opportunities for students to develop the skills necessary to work effectively with people from various cultural backgrounds; and including diversity in aspects of their selected course such as purpose, content, teaching methods, assignments, and students. Scores for this variable could range from three (the faculty included that area very little) to 15 (the inclusion was very much).

The respective minimum, maximum, and mean measures for Course Includes Diversity were 3.00, 15.00, and 10.18 (SD 3.026).

Reflective Learning was also a composite variable, including items that asked how important it is to the instructor of that general education course that the student: examines the strengths and weaknesses of his or her view on a topic; learns something that changes the way the student understands an issue or topic; and tries to understand someone else's view by imagining how the issue looks from that person's perspective. Scores this composite variable could range from three (the instructor never focused on that area) to 12 (the instructor always focused on that area). The vast majority of the faculty (76.3%) reported including Reflective Learning in their course very often. Respective minimum, maximum, and mean measures for Reflective Learning in Class were 7.00, 11.67, and 9.58 (SD .79683).

Regression Analysis – Faculty Emphasis on Intercultural Maturity

As described earlier in this study, faculty emphasis on Intercultural Maturity is a composite variable that measures the extent to which a faculty member structures his or her course so that students develop in the following three areas: understanding self, understanding others who are different, and working effectively with others. Because the FSSE survey did not initially set out to measure faculty emphasis on or students gains in Intercultural Maturity, these are proxy measures for Intercultural Maturity.

A bi-variate analysis was run to get a snap shot of the relationships between each pair of variables in Research Question 1 (see Appendix B). The analysis detected one large correlation, which was between faculty emphasis on Intercultural Maturity and Course Includes Diversity (.675, $p<.01$). This is likely because the measures are very similar conceptually, although they are not the same. For example the composite variable for faculty emphasis on Intercultural

Maturity includes the extent to which faculty members structure their general education course so that student develop in the following areas: understanding self, understanding others who are racially or ethnically different, and working effectively with others. Similarly, the composite variable Course Includes Diversity includes faculty responses to survey questions that ask about incorporating content in their field from different cultural perspectives, spending time so that students develop skills necessary to work effectively with people from different racial and ethnic backgrounds, and including diversity in their course generally speaking. Based on this analysis, I expect Course Includes Diversity to be a strong predictor of faculty emphasis on Intercultural Maturity.

Chapter 3 indicated that significant differences were not detected between institutions when it came to faculty emphasis on students' Intercultural Maturity. As such, a sequential multiple regression approach was used to understand the predictor variables in research question one. These variables were clustered into three groups of variables. The first group incorporated five demographic characteristics of the faculty: (a) Race (white or non-white), (b) Gender (male or female), (c) Discipline (hard or soft), (d) Tenure Status (not on tenure track/no tenure track available or on tenure track/tenured), and (e) Employee Status (part-time or full-time).

Six variables focusing on institutional characteristics made up the second group. The first two variables measured the control of institution and the number of students enrolled at the institution. Specifically including diversity in the mission statement was the third variable. The fourth variable focused on the inclusivity of diversity in undergraduate curriculum, which was determined by aggregating faculty responses to the FSSE question "How inclusive of diversity is your institution's undergraduate curriculum?" Faculty also responded to the question "To what extent does your institution encourage contact among students from different economic, social,

and racial or ethnic backgrounds?" which was the fifth variable. The sixth and seventh variables in this group measured the percent of full-time faculty who are non-white and the percent of full-time faculty who are women.

Two variables that represented pedagogical choices in the classroom made up the third and final group of variables: course included diversity and course included service learning. The first variable, course included diversity, was a composite variable that measured three things: how much the faculty member included contributions to their respective field by people from multiple cultures; opportunities for students to develop the skills necessary to work effectively with people from various cultural backgrounds; and including diversity in aspects of their selected course such as purpose, content, teaching methods, assignments, and students (α=.725).

The tolerance values and variance inflation factors (VIF) were used to help detect collinearity among the variables (Miles & Shevlin, 2006). The variable "number of students enrolled" had the highest VIF score of 2.251 (tolerance value = .444), which was not close enough to four, the recommended score to flag collinearity problems (Miles & Shevlin, 2006). So, all variables were included in the final regression model which predicted 55.8% of the variance in faculty emphasis on Intercultural Maturity (Table 4.8).

Table 4.8.

Model Summary of Faculty Emphasis on Intercultural Maturity

	Model	R^2	Significance
Intercultural Maturity	3	.558	.0001

Model 3 – Faculty characteristics + Institutional characteristics + Classroom characteristics

Interpreting the Predictor Variables for Faculty Emphasis on Intercultural Maturity

Each block of variables significantly predicts the outcome variable, but not every independent variable significantly predicted faculty emphasis on Intercultural Maturity (Table

4.9). Of the variables that significantly predicted Intercultural Maturity, the strongest weighted variable was Course Includes Diversity (.558), followed by Service Learning (.194), Soft Discipline (.138), Female (.122), Institutional Curriculum Includes Diversity (-.091), Institutional promotion of Student Contact with Diverse Others (.085), and finally, Tenured/On Tenure Track (-.069).

Table 4.9.

Regression Analysis for Faculty Emphasis on Intercultural Maturity (Research Question 1)

	Final Block		
	Intercultural Maturity		
	Unstandardized Coefficients		Standardized Coefficients
Variables	B	Std. Error	Beta
Faculty of Color	.062	.116	.011
Faculty Female	.615	.104	.122***
Soft-discipline	.758	.116	.138***
Tenure Status	-.347	.123	-.069**
Full-time	.002	.141	.000
Private	-.219	.153	-.038
Size	-.070	.032	-.064*
Diversity in Mission	.027	.058	.010
Diversity in Curriculum	-.158	.040	-.091***
Student Contact w/ Diverse Others	.231	.059	.085***
% Faculty Non-white	-.026	.041	-.015
% Faculty Female	.008	.066	.003
Course Includes Diversity	.462	.020	.558***
Service Learning	1.055	.113	.194***
F			103.55***
R^2			.558

***p<.001. **p<.01. *p<.05.

So, of the variables that measured purposeful diversity efforts, the significant positive predictors of faculty emphasis on Intercultural Maturity were Course Includes Diversity, Course

Includes Service Learning, and Institution Promotes Student Contact with Diverse Others. The purposeful diversity measure of Institutional Curriculum Includes Diversity was a significant negative predictor of faculty emphasis on Intercultural Maturity. When looking at significant demographic characteristics of the faculty, being in a soft discipline and being female were positive predictors of faculty emphasis on Intercultural Maturity and being Tenured or on the Tenure Track was a negative predictor. The six variables that are not significant predictors in the regression model included: faculty of color, full-time status, institutional control, emphasis on diversity in the mission statement, and diversity (both race and gender) of the faculty body. However, as previously described, the independent samples t-tests did find faculty of color to report a significantly greater emphasis on Intercultural Maturity than their white peers and part-time faculty reported a significantly greater emphasis on Intercultural Maturity than their full-time peers.

Regression Analysis – Student Reported Gains in Intercultural Maturity

The regression models for Research Question 2 focus on student reported gains in Intercultural Maturity. Because NSSE does not intentionally measure Intercultural Maturity, the following three survey questions that measure the extent to which the student reports experiences from the college institution contributes to his or her development in a number of outcomes were compiled together to approximate Intercultural Maturity: development in understanding self, development in understanding others who are racially or ethnically different than you, and working with others.

A correlation analysis among the dependent and independent variables was run to determine if there may be collinearity problems with the data (see Appendix C for supporting detail). Three large significant ($p<.01$) correlations were detected: percents of students and

faculty of color (.756); percents of students and faculty who are women (.703); and size and public control (-.595). These first two sets of variables were merged together as a composite variable for the regression analysis so as to avoid multicollinearity. Once the institutional characteristics were set, a bi-variate analysis was run to view the relationships of each pair of variables (see Appendix C). Only one of the correlations for the final independent variables in Research Question 2 is large: that between representation of people of color (including both student and faculty bodies) and the extent to which diversity is included in the undergraduate curriculum (.533, $p<.01$).

As described in the intraclass correlation analysis presented in Chapter 3, significant differences in student gains among the institutions in this study were detected. This means that there is something at the institution level that is predicting student gains in Intercultural Maturity above and beyond a single level analysis. This indicates that it is appropriate to further apply a hierarchical analysis to understand the relationships between the institution as well as student variables and student gains in Intercultural Maturity. Table 4.10 describes the fixed effects of the variables included in the analysis, which represents the effect of the variable on the average student at each institution. Variance components are outlined in Table 4.11. In order to determine the final regression model, earlier models are "nested" within each other, which allow the models to build on each other (Hox, 1995). As described in Chapter 3, the nested models begin with the unconditional model and remove parameters with each subsequent model until the final model is built. A detailed description of the findings from the nested models can be found in Appendix D. Results from the intraclass correlation analysis are found in column one, the Unconditional model, within Table 4.10; 3% of the variance in Intercultural Maturity was explained by the differences in institutions.

Table 4.10

Parameter Estimates for Final "Intercultural Maturity" Model

	Intercepts-and-Slopes-as-Outcomes Model 3
Fixed effects	
Model for inst. mean Intercultural Maturity (β_0)	
INTERCEPT (γ_{00})	2.88***
NON-WHITE REPRESENTATION (γ_{01})	0.01
FEMALE REPRESENT. (γ_{02})	0.03**
PRIVATE CONTROL (γ_{03})	0.08*
DIVERSITY IN MISSION (γ_{04})	0.01
DIVERSITY IN CURRIC. (γ_{05})	0.02
REFLECTIVE LEARNING – GEN ED COURSES (γ_{06})	0.04
Model for Intercultural Maturity slope (β_1)	
STUDENT OF COLOR (γ_{10})	0.03
FEMALE (γ_{20})	0.05*
MAJOR: SOFT DISC. (γ_{30})	-0.02
NON-TRAD AGE (γ_{40})	-0.08**
INST PROMOTES CONTACT W/ DIVERSE OTHERS (γ_{50})	0.28***
DIVERSE PERSPECTIVES IN CLASS (γ_{70})	0.10***
REFELCTIVE LEARNING – STUDENT (γ_{60})	0.07***
SERIOUS CONVERSATIONS W/ DIVERSE OTHERS (γ_{80})	-0.03*
LEARN. COMMUNITY (γ_{90})	0.13***
CLASS GROUP WORK (γ_{100})	0.08***

*p<.05. **p<.01. ***p<.001

Interpreting the Hierarchical Regression Models

As identified in the third Intercepts-and-Slopes-as-Outcomes model, the grand mean score for students whose predictor variables were restricted to 0 reported Intercultural Maturity

gains of 2.88 ($p<.001$) (See Table 4.10 for supporting detail). Two of the level-two variables were significant predictors of Intercultural Maturity: Female Representation at the Institution and Private Control. On average, students who were at institutions with one incremental increase in Female Representation in the faculty and student body reported .03 ($p<.01$) greater gains for Intercultural Maturity. In addition, students at Private institutions reported gains .08 ($p<.05$) higher than their peers at Public institutions.

Two student demographic characteristics had significant fixed effects on Intercultural Maturity. On average, the women in the student body reported .05 greater gains than the men ($p<.05$) and Non-traditional Aged students reported .05 lesser gains than students who were Traditional Aged ($p<.01$). When looking at the student experience variables, all six experiences (Student Contact with Diverse Others, Learning Community, Diverse Perspectives in Class Assignments, Class Group Work, and Reflective Learning) were significant at a $p<.001$ level (unless otherwise noted) in predicting the outcome measure. One unit increase in Institution Promotes Contact with Diverse Others results in 0.28 increase in Intercultural Maturity; students who participated in a Learning Community reported 0.13 greater gains than their Non-Learning Community peers; each increase in Diverse Perspectives in Class, Class Group Work, and Reflective Learning has a respective increase in Intercultural Maturity gains of 0.10, 0.08, and 0.07; and finally, each increase in having a Serious Conversation with Diverse Others leads to 0.03 (.<05) lesser gains in Intercultural Maturity.

All eight models for Intercultural Maturity found significant variance between the institutional means remaining to be accounted for, and this significant variance was at the $p<.001$ level (see Table 4.11). There was a large increase in variance when institution level variables were added to the Unconditional model to make the Means-as-Outcomes model (σ^2=0.58 and

Table 4.11.

Variance Components

	Unconditional Model (*1*)	Means-as-Outcomes Model (*2*)	One-Way ANCOVA Model 1 (*3*)	One-way ANCOVA Model 2 (*4*)	Random -Coefficient Model (*5*)	Intercepts-and-Slopes-as-Outcomes Model 1 (*6*)	Intercepts-and-Slopes-as-Outcomes Model 2 (*7*)	Intercepts-and-Slopes-as-Outcomes Model 3 (*8*)
Within institution (Level 1) (σ^2)	0.58	0.96	0.57	0.39	0.37	0.58	0.39	0.37
Between institution (Level 2) institution means (τ_{00})	0.02***	0.01***	0.02***	0.02***	0.02***	0.01***	0.01***	0.01***
Student of Color slope (τ_{11})					0.02*			0.02*
Female slope (τ_{12})					0.01			0.01
Major Soft Disc. slope (τ_{13})					0.01			0.01
Non-traditional Age slope (τ_{14})					0.02			0.02
Contact with Diverse Others slope (τ_{15})					0.00			0.00
Diverse Perspct. in Class (τ_{16})					0.00			0.00
Reflective Learning – Student slope (τ_{17})					0.00			0.00
Serious Conversations with Diverse Others slope (τ_{18})					0.00			0.00
Learning Community slope (τ_{19})					0.00			0.00
Class Group Work slope (τ_{110})					0.00			0.00
Proportion explained								
Institution means	0.030	0.262	0.006	0.332	0.362	0.524	0.403	0.369

*p<.05. **p<.01. ***p<.001

0.96, respectively). The within institution variance returned to a similar size as the Unconditional model for the first One-way ANCOVA model (σ^2=0.57). Like earlier nested models, a sizable decrease in the within institution variance was observed in the second One-way ANCOVA model (σ^2=0.39), in which student experience variables were added to the student demographic variables. A comparison of the variability for Intercultural Maturity from the second One-way

ANCOVA model to the Random-Coefficient model, which allowed the student level predictors to vary randomly, found a slight decrease in within institution variance (σ^2=0.37). The within institution variance for Intercepts-and-Slopes-as-Outcomes model 1 was approximately the same as the One-way ANCOVA model 1 (σ^2=0.58). Like with the ANCOVA models, a sizable decrease in the between student variance from Intercepts-and-Slopes-as-Outcomes 1 and 2 (σ^2=0.39) was also detected. The third Intercepts-and-Slopes-as-Outcomes model (σ^2=0.37) saw a small decrease in within institution variance compared to Intercepts-and-Slopes-as-Outcomes 2. The analysis of these nested models demonstrated that the more we knew about the student, the more variance of student gains in Intercultural Maturity was accounted for by the model.

When looking at the slopes for the Intercepts-and-Slopes-as-Outcomes 3 regression equation, significant variance for Student of Color was unexplained by the model. The significant variance remaining to be explained for this particular slope in this particular model was 7.1%. Consequently, the variable Student of Color has an effect on Intercultural Maturity at both the individual and institution level.

The proportion of variance explained as the models increasingly add more predictors to the regression equations is outlined in Table 4.11. The Unconditional model indicates that 3.0% of the total variability in a student's reported gains in Intercultural Maturity can be explained between the schools. Because all of the between institution variance components were significant, there remains significant variance to be explained and that it is appropriate to continue to add more predictors to the model to better understand the variability between students and schools.

Adding institution-level predictors to The Means-as-Outcomes model explained 26.2% of the variance in the Unconditional model. The proportion of student level variance explained by

the first ANCOVA model, which included four student demographic variables, is less than 1%. However, the second ANCOVA model added six student experience variables to the student demographic variables and the combination of variables accounted for 33.2% of the variance between students. In both of the ANCOVA models the student variables were fixed. The Random-Coefficient model allowed the student-level predictors to vary, which increased the proportion of student-level variance accounted for to 36.2%.

The Intercepts-and-Slopes-as-Outcomes models looked at the proportion of variance that that model explained by adding the institution predictors to the regression equation of the parallel Level-1 models. Adding the institution variables to the fixed student demographic variables accounted for 52.4% of the between institution variance in this model. When institution-level predictors were added to the combination of fixed demographic and experience variables, 40.3% of institutional variance was accounted for in the model. Finally, the model that allowed the demographic, experience, and institution predictors to vary randomly accounted for 36.9% of the variance between institutions. As mentioned earlier, the only slope that varied significantly was Student of Color. Approximately 7% of the variance in the slope for Student of Color was accounted for in this model.

In summary, the three strongest student-level predictors that were significant for student gains in Intercultural Maturity (all of which are positive predictors) were: (a) the student's perception of the Institution Promoting Student Contact with Diverse Others, (b) participation in a Learning Community, and (c) students including Diverse Perspectives in Class. Other smaller, but significant and positive, predictors were Class Group Work, Reflective Learning, Traditional Age, and Female. Additionally, Having Serious Conversations with Diverse Others was found to be a significant and negative predictor for student gains in Intercultural Maturity. The two

significant (positive) institution-level variables that predicted students' Intercultural Maturity included Private Control and Female Representation. In addition to these findings, significant variance between the institutions remained unaccounted for, which means more variables could be added to the model. Additionally, significant variance remained within institutions when looking at the relationship between Students of Color and Intercultural Maturity.

Finally, adding institution level variables to the unconditional model explained 26% of the between institution variance. When looking at the between student variance (columns three, four, and five in the *proportion explained* section of Table 4.11), the demographic variables explain a very small proportion of the variance (1%) in the average reported gain for Intercultural Maturity and adding the student experience variables to the demographic characteristics increases the proportion of variance to 33%. When both student- and institution-level variables are included in the model (Columns 6-8 in Table 4.11) the between institution variance accounted for by the variables decreased as we knew more about the student. Further, the amount of between institution variance hovered between 1 and 3 percent for all of the models in this study, indicating that there is not much variance in students' reported gains in Intercultural Maturity from institution to institution.

Conclusion of the Hierarchical Analysis

The hierarchical analysis of student reported gains in Intercultural Maturity shows that there are significant variances in the reported gains in Intercultural Maturity by the institutions where students attended. In other words, there are institutional characteristics that influence student gains in Intercultural Maturity above and beyond the student-level characteristics that influence the same gains. Second, the student experience variables accounted for much more of the between student variance in student's Intercultural Maturity gains than their demographic

characteristics. Only one of the student-demographic characteristics, race/ethnicity, was found to be a significant predictor, meaning that students of color had significantly greater gains in Intercultural Maturity than their White peers even if they have exactly same individual demographic characteristics, had same college experiences, and attended same higher education institutions.

Summary of Findings

The results presented in this chapter indicate that both faculty and institutional characteristics have a role in predicting faculty emphasis on Intercultural Maturity. The strongest predictors are those faculty characteristics that focus on how they spend their time and/or structure their class (i.e., incorporating diversity in class, including a service learning project). Faculty demographic characteristics (soft-discipline, female, non-tenure track) were the next strongest predictors. Purposeful diversity efforts of the institution (i.e., emphasis of diversity in the undergraduate curriculum and emphasis on promoting student contact with diverse others) played a lesser but still significant role in predicting faculty emphasis on Intercultural Maturity. The weakest significant predictor for faculty emphasis on Intercultural Maturity came from the basic institution characteristic of size.

Similar results were found for student gains in Intercultural Maturity. Although the singly strongest predictor variable was a purposeful diversity measure (institutional emphasis on student contact with diverse others), the regression model with the student experience variables accounted for the most variance in the outcome measure by far. Those student experience variables included participating in a Learning Community, Class Group Work, Reflective Learning, and having Serious Conversations with Diverse Others. While the only significant student demographic characteristic that predicted gains in Intercultural Maturity from the final

hierarchical model was Female, the results from the independent samples t-tests indicate that there is some significant difference in students' gains in Intercultural Maturity for all of the student demographic characteristics: students of color, female students, soft-discipline majors, and traditional aged students have greater gains in Intercultural Maturity that their peers who are white, male, majoring in a hard-discipline, and non-traditional aged, respectively. The basic institutional characteristics of control also played a small but significant role in predicting gains in Intercultural Maturity.

CHAPTER 5: SUMMARY AND DISCUSSION

As the population in the United States continues to diversify (Census, 2011), arguments are made that colleges should focus on diversity education as a student outcome (Milem, Chang, & Antonio, 2005), and that today's students need to be able to apply their knowledge about diversity effectively in a variety of contexts, which indicates a need for colleges and universities to shift the outcome of diversity from a structural measure (i.e., counting the numbers of people of color on campus) to a learning outcome measure (Gurin et al., 2002; Hurtado, 1996; King & Baxter Magolda, 2005; Smith, 2009). Recognizing these perspectives, my study sought to understand how colleges and universities promote Intercultural Maturity or not. Findings from this study can be used to inform policy and practice.

Data from 80 institutions were utilized to better understand the relationships identified above with the intentions of making recommendations to researchers and practitioners about how to use what was learned in this study to advance research and practice in higher education as it relates to Intercultural Maturity. This data came from four sources: the National Survey of Student Engagement (NSSE), the Faculty Survey of Student Engagement (FSSE), the Integrated Post Secondary Education Data System (IPEDS), and a website review of each individual institution. Together, these four sources allowed for comparison between institutional characteristics related to purposefully emphasizing diversity (i.e., mission statement, inclusivity of diversity in the undergraduate curriculum, and faculty emphasis on diversity and reflective learning in the classroom); structural diversity (i.e., proportion of students and faculty who are people of color); as well as institutional characteristics such as size, control, selectivity, and Intercultural Maturity.

Discussion of Findings

Initial findings of this study indicated that there were not significant differences between institutions in the extent to which faculty emphasize Intercultural Maturity. However, between institution differences were significant for student gains in Intercultural Maturity. As such, the analysis for faculty emphasis on Intercultural Maturity primarily focused on ordinary least squares regression and the analysis for student gains in Intercultural Maturity was primarily hierarchical. The following two sections will directly answer the research questions, identify which findings were new, and describe what confirmed early research.

Findings from the first research question, which address what institutional and faculty characteristics are associated with faculty members spending time promoting interactions that encourage Intercultural Maturity, are presented first. Findings addressing research question two, which asked what institution and student characteristics are related to students' Intercultural Maturity are presented second. After the findings are reviewed, implications for theory, future research, and practitioners are then discussed, followed by a conclusion of the study.

Faculty Emphasis on Intercultural Maturity

As previously described, Research Question 1 asked what institution and faculty characteristics are associated with faculty members spending time promoting interactions that encourage Intercultural Maturity. Over half of the variability of the faculty outcome measure emphasizing Intercultural Maturity was predicted by the regression models in this study and each block of variables in the regression analysis were significant. More directly said, institutional, faculty, and classroom characteristics are all significant predictors of the extent to which faculty focus Intercultural Maturity in their general education classroom. Interestingly, the block of variables including institutional characteristics added the least amount of predictability while the

block of variables including classroom characteristics added the greatest amount of predictability to each of the different outcome variables.

A closer look at the different individual variables in this study found faculty member's decisions to include Service Learning or to include Diversity in his or her general education course were the strongest positive predictors of faculty emphasis on Intercultural Maturity. Faculty demographic characteristics were not as consistent or strong in predicting the outcome variable. Discipline significantly predicted that those in the soft fields (i.e., Arts & Sciences, Business, Education, Social Science), compared to those in hard fields (i.e., Biological Sciences, Engineering, Physical Sciences), were more likely to emphasize student growth in Intercultural Maturity. Those faculty members who were female were significantly more likely to emphasize Intercultural Maturity than their male peers. Tenured faculty, or those on the tenure track, were significantly less likely to emphasize Intercultural Maturity than faculty who were not on the tenure track.

Institutional size significantly predicted faculty emphasis on Intercultural Maturity in that faculty members at smaller institutions were more likely to emphasize Intercultural Maturity than those who are at larger institutions. Interestingly, the Mission Statement was not a significant predictor of the outcome measure, but the extent to which faculty perceived the institution to include diversity in the undergraduate curriculum was. However, the faculty who perceived a greater institutional emphasis on diversity in the undergraduate curriculum were significantly less likely to promote those three outcomes in their general education course. Still, if faculty perceived the institution to promote Student Contact with Diverse Others the faculty were significantly more likely to promote students' Intercultural Maturity in their general education courses.

Findings that are New and Warrant Further Exploration

Past research (i.e., Ehrenberg & Zhang, 2005) has found faculty who are tenured or on the tenure track to be positively associated with student outcomes such as graduation rates. My findings contradict that positive association between tenured faculty and student outcomes in that faculty on the tenure track (or already tenured) were significantly less likely to be associated with focusing on students' Intercultural Maturity gains than their peers who are not on the tenure track. Perhaps this is because faculty who are tenured or on tenure track are more focused on research in their discipline than their non-tenure-track peers, allowing more time for non-tenured faculty to focus on components of Intercultural Maturity in their classrooms.

Findings from my study also appear to contradict earlier research on mission statements (Morphew & Hartley, 2006; Wang et al., 2007) as well as research on faculty motivation (Blackburn et al., 1991a, 1991b; DeVries, 1975; Fairweather & Rhoades, 1995). More specifically, earlier research found institution characteristics such as control to be significant predictors of characteristics (i.e., diversity) in the mission statement (Morphew & Hartley, 2006). And prior research on faculty motivation found that characteristics of the institution influence faculty behaviors such as teaching, research, and service (Blackburn et al., 1991a, 1991b; DeVries, 1975; Fairweather & Rhoades, 1995). Considering this, it was expected that the mission statement would be a significant predictor of faculty emphasis on Intercultural Maturity, but that was not the case. However, faculty perception of the extent to which the institution promotes Student Contact with Diverse Others was found to significantly predict faculty emphasis on Intercultural Maturity in the general education classroom. Further research could explore why the institution's emphasis on diversity in the mission statement does not significantly predict faculty emphasis on Intercultural Maturity but faculty perception of the

institution's emphasis on Student Contact with Diverse Others was a significant predictor. Perhaps the difference is in how the institution enacts these two emphases? Perhaps faculty feel the mission statement is detached from the day-to-day operations but initiatives around student contact are more tangible and readily seen in action.

Another finding from this study that does not seem to fit with earlier research or this study's findings about institution emphasis on Student Contact with Diverse Others is that faculty who perceive the institution to place a greater emphasis on diversity in the undergraduate curriculum are less likely to emphasize Intercultural Maturity than their peers who perceive less of an emphasis on diversity in the curriculum. This finding not only appears to be different than the findings in this study surrounding Student Contact with Diverse Others, it also appears to contradict the findings of other researchers that indicate the institutional environment tends to be associated with faculty behaviors and how they choose to spend their time (Blackburn et al., 1991a, 1991b; DeVries, 1975; Fairweather & Rhoades, 1995). Recognizing this, I expected the faculty's perception of the institutional emphasis on diversity in the undergraduate curriculum to significantly positively predict faculty emphasis on the various components of Intercultural Maturity in their general education courses. Perhaps this is because faculty are less likely to emphasize Intercultural Maturity in their specific courses if they think the institution is already focused on student gains in this area. Future research could further explore why certain institutional characteristics predict various faculty behaviors the way they do.

Past research by Blackburn and associates (1991b) as well as Fairweather and Rhoades (1995) has also found faculty members' colleagues to be related to their behaviors in areas such as research and teaching. Recognizing that female faculty and faculty of color are more likely to build a collaborative learning environment and to incorporate diversity in the content of their

courses than their male or white peers (Kuh et al., 2004; Mayhew & Grunwald, 2006; Nelson Laird et al., 2007; Singer, 1996; Tinto, 2007) makes it surprising that the proportion of faculty who where female or non-white was not a significant predictor of the outcome measures. Future research could further explore areas in which peer socialization and influence may take place and what peer characteristics are significantly associated with faculty behaviors.

Findings that were as Expected

My study's findings related to female faculty emphasizing aspects of Intercultural Maturity fits with earlier research that female faculty are more likely than male faculty to focus on classroom interactions and collaborative learning (Kuh et al., 2004; Nelson Laird et al., 2007). Recognizing this, it is not surprising the female faculty in this study positively and significantly promoted Intercultural Maturity in their general education courses.

Likewise, my findings that indicate discipline is a significant predictor of faculty emphasis on Intercultural Maturity tend to fit with existing research. Previous research found that faculty in soft disciplines (compared to hard disciplines) were more likely to expose students to dissonance in the classroom and topics connected to diversity are associated with such dissonance (McFalls & Cobb-Roberts, 2001; Singer, 1996). This supports my findings that being from a soft discipline is a positive significant predictor of faculty emphasis on Intercultural Maturity. Although the faculty member's discipline was a significant predictor of how faculty emphasized Intercultural Maturity in their general education course, the student's major (which was measured by the same disciplines) was not a significant predictor of student gains in Intercultural Maturity.

So, the significance of discipline as it relates to faculty emphasis on Intercultural Maturity does not necessarily lead to similar significant predictions for student gains in

Intercultural Maturity. Perhaps the differences stem from faculty having been immersed in their respective fields for years while students have only just begun to enter their professional lives. Or, it could be that faculty have more of a research and teaching perspective in their field while undergraduate students are preparing to be practitioners. Or, perhaps it is because students' experiences across campus overshadow their experience within a given major, removing the significance of discipline in predicting student gains in Intercultural Maturity. Future research could continue to analyze the differences in relationships between students and their disciplines compared to faculty and their disciplines.

The final set of findings for faculty emphasis on Intercultural Maturity relates to service learning. Previous research has found that an emphasis on service has been linked to decreases in racial bias (Engberg, 2004) and that participants in service learning projects and students who have been immersed in an unfamiliar environment have been found to have higher levels of cultural sensitivity (Fulford, 2009; Pieski, 2011). Recognizing this, it is not surprising that faculty who elected to include a Service Learning component in their general education course were significantly more likely to focus on students' Intercultural Maturity gains in their course.

Student Reported Gains in Intercultural Maturity

Research Question 2 sought to identify what institution and student characteristics are related to students' reported gains in Intercultural Maturity. Within the student demographic characteristics, the significant findings indicate that traditional aged students, female students, and students of color reported greater gains in Intercultural Maturity than their respective peers who were non-traditional aged, male, or white.

All of the student experience predictors significantly predicted student reported gains in Intercultural Maturity. These positive significant experience-based variables included

participation in a Learning Community; incorporating Reflective Learning in their courses; incorporating Diversity in Class Papers, Assignments, and Discussions; participating in Class Group Work; and having Serious Conversations with Other Diverse Students.

Generally speaking, the relationships between institution level variables and student reported gains in Intercultural Maturity were weaker than the experience variables relationships were with students' gains in Intercultural Maturity, yet significant relationships were detected. Unless otherwise noted, the following findings were significant: students at institutions with greater proportions of women on campus reported greater gains than their peers at institution with more men on campus and students at private institutions reported greater gains than those at public institutions. Student perceptions about the extent to which the institution promotes Student Contact with Diverse Others was the strongest significant positive predictor. Interestingly, neither the emphasis on diversity in the Mission Statement nor the emphasis on diversity in the Undergraduate Curriculum significantly predicted student gains in Intercultural Maturity.

Findings that are New and Warrant Further Exploration

As previous research has found students of color to demonstrate higher levels of openness to diversity than their white peers (Pascarella et al., 1996; Powers & Ellison, 1995; Whitt et al., 2001), it was surprising that race did not significantly predict student gains in Intercultural Maturity in the regression analysis. However, the independent samples t-tests did indicate that students of color reported greater gains in Intercultural Maturity than their white peers. Furthermore, the hierarchical analysis did detect a significant within institution difference in how students of color (compared to white students) made gains in Intercultural Maturity. So, there is something happening within the institution that has a different relationships with

Intercultural Maturity gains for students of color than their white peers. Unfortunately the scope of this study did not uncover what it is that explains those different outcomes. Future research could further explore the conditional effects of Intercultural Maturity by race and ethnicities to better understand what variables are significant predictors of student development in this area.

Like the findings for faculty, the Mission Statement was not significant in predicting student outcomes for Intercultural Maturity. Contrary to the faculty findings, Diversity in the Undergraduate Curriculum was not a significant predictor for the students' gains in Intercultural Maturity. Also like the findings for faculty, structural diversity, in terms of the proportion of campus that was female and proportion that was non-white, was less of a predictor of the outcome variables than the perception of the institution promoting Student Contact with Diverse Others. In fact, when looking at the student outcome variable, Institution Promotes Contact with Diverse Others had the strongest fixed effect for Intercultural Maturity. This fits with the existing research that has found that both structural and purposeful diversity to be related to student outcomes such as problem solving, democracy, attitudes toward race, group work, and collaborative learning (Hurtado, Enberg, & Ponjuan, 2003; Muthuswamy, Levine, & Gazel, 2006; Pike & Kuh, 2006; Terenzini et al., 2001; Umbach & Kuh, 2006). Additionally, these studies found both structural diversity and purposeful diversity to be correlated to the given outcome but that purposeful diversity exerted a stronger correlation than structural diversity.

However, questions remain about how institutions enact their purposeful diversity efforts. What is it in students' perception about the institution promoting Student Contact with Diverse Others that forges such a strong relationship with their gains in Intercultural Maturity? Why is that relationship not in place for the inclusion of Diversity in the Mission Statement or the Undergraduate Curriculum? The lack of significant findings for Diversity in the Mission

Statement and Undergraduate Curriculum is surprising, especially while numerous theories and studies focused on climate find that the institution, the faculty, and the classroom all play a critical role in shaping the campus climate (Cabrera & Nora, 1994; Cruce et al., 2006; Fulford, 2009; Gurin et al., 2002; Hurtado, 1992; Hurtado et al., 1996; Nelson Laird, 2005; Pascarella et al., 1996; Smith, 2009; Whitt et al., 2001). This contradiction warrants further investigation to better understand why the mission statement and undergraduate curriculum failed to be significant in my study focused on Intercultural Maturity. Consequently, my study tentatively supports the literature that indicates purposeful diversity, which is a commitment to diversity through the efforts of the institution as well as behaviors and emphases faculty demonstrate in their classroom, has the potential to be more influential than structural diversity.

Findings that were as Expected

This study found that the proportion of women (both students and faculty) on campus is positively and significantly related to student reported gains in Intercultural Maturity. Female students have been found to have a more positive orientation toward diversity than male students and to be more likely to look for experiences with other students who are different than themselves (Fulford, 2009). Combining Fulford's findings with the understanding that the less students' perceive racial tension on campus the more likely they are to develop in terms of perspective-taking (Smith, 2009) supports a greater proportion of women on campus being a significant positive predictor of Intercultural Maturity development for students. Because this measure also includes the proportion of female faculty on campus, and classrooms led by female faculty have been linked to more student interaction compared to male led classrooms (Nelson Laird et al., 2007), the findings that the greater the proportion of women on campus is

significantly and positively related to student gains in Intercultural Maturity fit in the existing literature.

These findings that indicate the proportion of women on campus is a significant predictor of student gains in Intercultural Maturity fits with previous research that has found that structural diversity to be positively associated with a variety of diversity related outcomes such as developing a pluralistic orientation, racial contact, and racial understanding (Closson & Henry, 2008; Engberg, 2007; Umbach & Kuh, 2006). However, the proportion of people of color on campus was not a significant predictor of student gains in Intercultural Maturity contradicted the same literature on structural diversity. As my findings only tentatively support the existing literature, future research could continue to explore how different components of structural diversity are associated with Intercultural Maturity to better understand the differences between gender and racial diversity on campus and student reported gains in Intercultural Maturity.

Earlier research has found that students who have participated in learning communities have a number of positive outcomes such as student involvement, achievement, satisfaction, and persistence (Andrade, 2007/2008; Johnson, 2000/2001; Kuh et al., 2008; Zhao & Kuh, 2004. More specifically, students in learning communities of any kind are more likely to have a positive orientation toward diversity (Fulford, 2009). Earlier research such as this supports the findings from my study that indicate student participation in a learning community is significantly and positively related to student gains in Intercultural Maturity.

Deep learning, which includes the incorporation, integration, synthesis, and reflection on a variety of perspectives (Nelson Laird et al., 2008) is similar to Reflective Learning in this study, which includes examining your strengths and weaknesses of your view of a topic, learning something that changes the way you understand a topic, and trying to understand how someone

with a different perspective thinks about a topic. Findings from research on deep learning, which indicates that students who practice deep learning are more likely to experience greater educational gains in terms of higher grades, and greater satisfaction with college (Nelson Laird et al., 2008), are similar to the my study's findings on reflective learning, which indicate that reflective learning is positively and significantly related to student gains in Intercultural Maturity.

Class group work has been found by my study to be positively and significantly related to the student gains in Intercultural Maturity. This supports earlier research guided by contact theory; that the more people are exposed to individuals who are different than themselves, the less prejudice they will be toward groups other than their own (Allport, 1954; Dixon et al., 2005; Pettigrew & Tropp, 2006). These findings that indicate contact theory is positively associated with a number of student outcomes also support my findings that Serious Conversations with Diverse Others is positively and significantly associated with student gains in Intercultural Maturity. Other research that indicates frequent interactions with diverse others and feeling comfortable talking about controversial topics is positively associated with students' attitudes toward diversity (Fulford, 2009) and research that focuses on interactional diversity also supports this finding (Muthuswamy, Levine, & Grazel, 2006; Nelson Laird, 2005; Pike & Kuh, 2006; Umbach & Kuh, 2006).

Implications for Theory and Future Research

Faculty motivation theory tells us that the institution plays a role in faculty behaviors, as measured by time and effort spent in areas such as teaching, research, and service (Blackburn et al., 1991a, 1991b; DeVries, 1975; Fairweather & Rhoades, 1995), which was partially supported by the findings in my study. The faculty perception of the institution emphasizing diversity in the

undergraduate curriculum was found to be a significant predictor of faculty emphasis on Intercultural Maturity; however, the inclusion of diversity in the mission statement was not a significant predictor for the same outcome measure. Future research could further investigate this to learn more about how institutions incorporate their mission into their daily practice (i.e., is the mission familiar enough to faculty so that they could describe it, if not recite it, to others). Insight could also be gained by better understanding what aspects of the institution lead the faculty to believe the institution focuses on diversity in the undergraduate curriculum.

The framework for understanding campus racial climate that was used in my study was from Hurtado and associates (1998), and suggests that there are four dimensions that affect campus racial climate: (a) the historical legacy of the institutions' inclusion or exclusion of diverse groups, (b) the structural diversity of the campus population, (c) the psychological implications that can stem from the climate, and (d) the effect behaviors can have on students. The latter three dimensions were particularly relevant for my study. As described earlier in the study: structural diversity is the proportion of students (and/or faculty) of color on campus; the psychological dimension of climate includes the views of group relations, institutional responses to diversity, perceptions of discrimination or racial conflict, and attitudes toward those who are different than you, which are shaped by institutional priorities, policies, and practices; and behaviors on campus that can affect students include general social interaction, interactions between and among students that have differing racial/ethnic identities, and how intergroup relations play out across campus (Hurtado et al., 1998).

Like the findings related to faculty motivation, the findings related to climate partially support the theoretical framework from Hurtado and associates (1998). The various measures of structural diversity (i.e., proportion of people of color and women on campus) were sometimes

significant predictors of the outcome measures of Intercultural Maturity. For example, female representation was significant for student gains in Intercultural Maturity but not faculty emphasis on Intercultural Maturity and representation of people of color was not a significant predictor for student gains in nor faculty emphasis on Intercultural Maturity. However, faculty member's perception of the institution's promotion of student contact with diverse others was a significant predictor for their emphasis on Intercultural Maturity and students' perception was a significant predictor for their gains in Intercultural Maturity. Future research could continue to explore the relationships between campus climate and Intercultural Maturity to help us better understand what institutions can do to shape their climate in a way that promotes diversity education, as suggested by Smith (2009).

Smith's (2009) diversity framework was also partially supported by the findings in this study. She recognized that faculty have an important role in institutional diversity and stated that the core of the academic enterprise is the education and scholarship that occurs on campus. Further, she suggested that when we think about our objectives related to educating students we need to be sure to include educating students to be successful in an increasingly pluralistic society. This was supported in that evidence was found that faculty perceptions of the institutional emphasis on encouraging Student Contact with Diverse Others was related to a greater emphasis on Intercultural Maturity in the classroom. However, faculty perceptions regarding the institutional emphasis on diversity in the undergraduate curriculum were significantly but negatively associated with faculty emphasis on Intercultural Maturity and the Mission Statement was not found to significantly predict faculty emphasis on Intercultural Maturity.

Similarly, some institutional influences significantly predicted student reported gains in Intercultural Maturity and some did not. For example, the student's perception of the institution promoting Student Contact with Diverse Others was a strong significant predictor of student gains in Intercultural Maturity, but neither the Mission Statement nor the emphasis on Diversity in the Curriculum were significant predictors. Future research could take a closer look at institutions who are intentionally and purposefully trying to prepare students for a pluralistic society to better understand which institutional efforts are associated with the perceptions, behaviors, and outcomes of students, faculty, and staff.

The lack of significance between the emphasis on diversity in the curriculum and student reported gains in Intercultural Maturity does not support previous research that indicates that faculty behaviors and how faculty engage students play a role in how students' attitudes are shaped (Milem, 1998) or that faculty promote a cultural context for learning on campus and students are impacted by faculty members' attitudes and behaviors (Jaasma & Koper, 1999; Milem 1998; Umbach & Wawrynski, 2005). This non-significant relationship between diversity in the curriculum and student gains in Intercultural Maturity also does not support findings that indicate that when faculty emphasize diversity experiences students report higher scores for integrative learning, cultural awareness, and college satisfaction as well as gains in general education and practical competencies (Astin, 1993; Kuh, Nelson Laird, & Umbach, 2004). However, some previous research has had findings in line with mine in that the student's perception of an institution's commitment to diversity is a predictor of student's understanding of racial differences (Appel et al., 1996) and that the student's academic experience was not found to have a significant relationship to openness to diversity and challenge (Pascarella et al., 1996; Whitt et al., 2001).

These findings that indicated a lack of a significant relationship between the mission statement and faculty emphasis on as well as student reported gains in Intercultural Maturity raise questions that could be addressed by future research. Why is it that the inclusion of diversity in the mission statement has no significant bearing on faculty emphasis on Intercultural Maturity but the faculty perceptions of the institution's emphasis on Diversity in the Undergraduate Curriculum and the institution's promotion of Student Contact with Diverse Others does significantly predict faculty emphasis on Intercultural Maturity? Similarly, why is it that the inclusion of Diversity in the Mission Statement does not significantly predict student gains in Intercultural Maturity but the student's perception of the institution promoting Student Contact with Diverse Others does?

My study sought to operationalize diversity in the mission statement by including measures of structural and purposeful diversity within each institution. While this provided some meaningful findings about the components of structural and purposeful diversity it also uncovered questions about the differences between the significance of diversity in the mission statement and other components of purposeful and structural diversity. Working closely with individuals and specific institutions through qualitative research could uncover more about these seemingly contradictory findings. The following paragraph makes one final recommendation for future research based on limitations of this study.

Unfortunately, the survey did not collect data about students participating in Service Learning, so a comparison between the faculty who included service learning in their course (which was found to be related to faculty emphasizing students' Intercultural Maturity) and students who participated in Service Learning making gains in Intercultural Maturity could not be made. Recognizing that inclusion of a service learning project was a strong significant

predictor for faculty emphasis on Intercultural Maturity in their general education courses prompts me to wonder if student participation in service learning would be associated with significant gains in Intercultural Maturity. Future research could investigate the relationship between students' participation in Service Learning and their reported gains in Intercultural Maturity.

Implications for Practitioners and Faculty

This study produced several findings that can be helpful for practitioners when considering Intercultural Maturity. Perhaps the most notable finding is that institutions that want to enhance student gains in Intercultural Maturity need to consider the extent to which students and faculty perceive the institution to promote student contact with diverse others. Although previous research says that the mission statement and structural diversity on campus can influence student's experience (Hurtado et al., 1998), my study found the perception of Institution Promoting Student Contact with Diverse Others to have the strongest relationship with Intercultural Maturity. In fact, my study would indicate, through a lack of significant findings for the mission statement and only some significant findings for structural diversity, that if an institution wants to improve outcomes related to Intercultural Maturity they do not need to focus on the mission statement at all and would make a greater difference in promoting Intercultural Maturity if they focus on how to encourage students to participate in a Learning Community, Include Diverse Perspectives in their Coursework, and practice Reflective Thinking rather than focus on how to recruit a specific ethnic profile of students and faculty to campus.

While the students in this study could not be nested in specific courses to understand how those courses were related to student gains in Intercultural Maturity, a focus on the general education curriculum allowed the study to get a broad sense of how curricular decisions in the

general education requirements may influence student outcomes. Although faculty who reported including more diversity in their course also reported a greater emphasis on Intercultural Maturity, that emphasis on Intercultural Maturity did not show up in student reported gains for Intercultural Maturity. So, although emphasizing diversity in the classroom has been found to positively predict some student outcomes (Astin, 1993; Kuh, Nelson Laird, & Umbach, 2004) that was not the case for Intercultural Maturity.

However, students who reported Including Diverse Perspectives in their Writing Assignments and Class Discussions, practicing Reflective Learning, having Serious Conversations with Diverse Others, and participating in Class Group Work did report significantly greater gains in Intercultural Maturity than their peers who had less of these experiences. So, although students did not attribute an institutional emphasis on diversity in the classroom to their gains in Intercultural Maturity, the extent to which faculty can encourage students to have the above experiences in their courses are likely to positively influence student gains in Intercultural Maturity. Further, faculty members and practitioners could consider how to increase opportunities for student participation in a Learning Community, as that was a strong and positive significant predictor for student reported gains in all four areas of Intercultural Maturity. Still, because the hierarchical analysis for Research Question 2 found significant differences between institutions for Student of Color (that is to say that there are institutional variables that are affecting the outcome variables differently for students of color compared to white students), institutions may want to monitor how initiatives are received by students of color and white students.

Finally, although there were significant differences in the average reported gains for the different institutions (i.e., there was between institution difference in Intercultural Maturity), that

difference was only 3%. Additionally, there was still significant variance between institutions that remained to be accounted for after including all of the variables in this model. So, this study did not uncover all of the institutional characteristics that account for differences in student reported gains in Intercultural Maturity. Recognizing both the small amount of variance between schools and the fact that the variables in this study could not account for all of that variance may lead practitioners and faculty to focus more on general practices that have been found to enhance student's Intercultural Maturity rather than tailor the program efforts to their specific type of institution (i.e., small and private).

Conclusion

As described at the beginning of this study, there is an opportunity for higher education to play a critical a role in preparing citizens for a pluralistic future (Gurin et al., 2002; Hurtado, 1996; Smith, 2009). The context of learning plays an important role in student outcomes in higher education and a culturally diverse campus influences student learning, both in and out of the classroom (Chang, 2002a; Gurin et al., 2002; Hurtado, 1992, 1996; Hurtado et al., 1998).

My study added a number of significant findings to what is known about Intercultural Maturity. When considering faculty emphasis on Intercultural Maturity, institutional characteristics as well as faculty's demographic and behavioral characteristics significantly predict the extent to which faculty emphasize Intercultural Maturity in their general education courses. The behavioral characteristics (i.e., inclusion of a service learning project, emphasis of diversity in the course) were the strongest predictors while the institution characteristics (i.e., size, control) were the weakest predictors. Similarly, institution characteristics as well as student demographic and experience characteristics were also significant predictors of student reported

gains in Intercultural Maturity. Again, the institution characteristics were the weakest predictors for gains in Intercultural Maturity and the student's experiences were the strongest predictors.

Based on the findings from this study, institutions that choose to include Intercultural Maturity as one of the student outcomes they seek to promote should focus their efforts on how faculty and students perceive the institution's emphasis on promoting student contact with diverse others. Additionally, finding ways to encourage students to seek out opportunities to include diverse perspectives in their class discussions and assignments, practice reflective learning, have serious conversations with diverse others, and participate in learning communities will likely lead to greater gains in Intercultural Maturity.

Interestingly, the institution characteristic that measured the inclusion of diversity in the mission statement was not a significant predictor for faculty emphasis on Intercultural Maturity or student reported gains in Intercultural Maturity. The institution's inclusivity of diversity in the undergraduate curriculum was a significant predictor for faculty emphasis on Intercultural Maturity but not for students' Intercultural Maturity gains. Still, both faculty member's and student's perception regarding the institution promoting student contact with diverse others was a significant and positive predictor for faculty emphasis on and student reported gains in Intercultural Maturity, respectively.

Findings from my study highlight what institutions can do to encourage Intercultural Maturity. The findings also indicate that there remains a lot to learn about Intercultural Maturity, especially as it relates how institutions shape their climate and culture by emphasizing diversity in their mission, curriculum, and day-to-day interactions. In order to best prepare students for a pluralistic society, this topic of Intercultural Maturity needs to be further explored and findings should be seriously considered by key decision makers in higher education.

References

ACT. (n.d.). *Estimated relationship between ACT composite score and SAT CR+M+W score.* Retrieved March 10, 2012, from http://www.act.org/aap/concordance/estimate.html.

Alon, S. & Tienda, M. (2005). Assessing the "mismatch" hypothesis: Differences in college graduation rates by institutional selectivity. *Sociology of Education, 78*(4) p. 294-315.

Allport, G. W. (1954). *The nature of* MA: Addison, Wesley.

Ancis, J. R., Sedlacek, W. E., & Mohr, J. J. (2000). Student perceptions of campus cultural climate by race. *Journal of Counseling and Development 78*(1) 180-185.

Andrade, M. W. (2007-2008). Learning communities: Examining positive outcomes. *Journal of College Student Retention, 9*(1), 1-20.

Appel, M., Cartwright, D., Smith, D. G., & Wolf, L. E. (1996). The impact of diversity on students: A preliminary review of the research literature. *AAC&U American Commitments.*

Astin, A. W. (1993). Diversity and multiculturalism on the campus: How are students affected? *Change, 25*(2), 44-49.

Bailey, T. Calcagno, J. C., Jenkins, D., Kienzl, G. & Leinbach, T. (2005). Community college student success: What institutional characteristics make a difference? Achieving the Dream Report, Community College Count. Community College Research Center.

Beyer, C. H., Gilmore, G. M., & Fisher, A. T. (2007). General learning. In L. Foster (Series Ed.), C. F. Conrad & J. Johnson (Eds.), *College and university curriculum: Placing learning at the epicenter of courses, programs and institutions.* (pp. 746-770). Boston: Pearson Custom Publishing.

Blackburn, R. T., Lawrence, J. H., Bieber, J. P., & Trautvetter, L. (1991a). Faculty at work: Focus on teaching. *Research in Higher Education, 32*(4), 363-383.

Blackburn, R. T., Bieber, J. P., Lawrence, J. H., & Trautvetter, L., (1991b). Faculty at work: Focus on research, scholarship, and service. *Research in Higher Education, 32*(4), 385-413.

Bok, D. C. (2006) Purposes. In L. Foster (Series Ed.), C. F. Conrad & J. Johnson (Eds.), *College and university curriculum: Placing learning at the epicenter of courses, programs and institutions.* (pp. 40-49). Boston: Pearson Custom Publishing.

Broido, E. M. (2004). Understanding diversity in millennial students. *New Directions for Student Services, 106*, 73-85.

Cabrera, A. F. & Nora, A. (1994). College students' perceptions of prejudice and discrimination and their feelings of alienation: A construct validation approach. *Review of Education/Pedagogy/Cultural, 16(3-4),* 387-409.

Cabrera, A. F., Nora, A., Terenzini, P. T., Pasceralla, E. & Hagedorn L. S. (1999). Campus Racial Climate and the adjustment of students to college: A comparison between White students and African American students. *The Journal of Higher Education, 70*(2), 134-160.

Cabrera, A. F., Nora, A., Crissman, J. L., Terenzini, P. T., Bernal, E. M., & Pascarella, E. T., (2002). Collaborative learning: Its impact on college students' development and diversity. *Journal of College Student Development, 43*(1), 20-34.

Census. (n.d.). Retrieved March 10, 2012, from http://www.census.gov.

Chang, M. J. (2002a). Preservation or transformation: Where's the real education discourse on diversity? *The Review of Higher Education, 25*(2), 125-140.

Chang, M. J. (2002b). The impact of an undergraduate diversity course requirement on students' racial views and attitudes. *The Journal of General Education, 51*(1), 21-42.

Chang, M. J., Astin, A. W., & Kim, D. (2004). Cross-racial interaction among undergraduates: Some consequences, causes, and patterns. *Research in Higher Education, 45*(5), 529-553.

Chickering, A W. & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin, (3),* 2-7.

Closson, R. B. & Henry, W. J. (2008). The social adjustment of undergraduate White students in the minority on a Historically Black College campus. *Journal of College Student Development, 49*(6), 517-534.

Crosson, P. H. (1988). Four-year college and university environments. *Chronicle of Higher Education, 11*(4), 365-382.

Cruce, T. M., Wolniak, G. C., & Seifert, T. A., (2006). Impact of good practices on cognitive development, learning orientations, and graduate degree plans during the first year of college. *Journal of College Student Development, 47*(4), 365-383.

DeVries, D. L. (1975). The relationship of role expectations to faculty behavior. *Research in Higher Education, 3*(2), 111-129.

Dixon, J., Durrheim, K., & Tredoux, C. (2005). Beyond the optimal contact strategy: A reality check for the contact hypothesis. *American Psychologist, 60*(7), 697-711.

Dowd, A. C., Sawatzky, M. & Korn, R. (2011). Theoretical foundations and a research agenda to validate measures of intercultural effort. *The Review of Higher Education, 35*(1), 17-44.

Ehrenberg, R. & Zhang, L. (2006). Do tenured and tenured track faculty matter? In Ehrenberg, R. G. (Eds.) (2006). *What's Happening to Public Higher Education? The shifting financial burden*. The Johns Hopkins University Press: Baltimore, MD.

Engberg, M. E. (2004). Improving intergroup relations in higher education: A critical examination of the influence of educational intervention of racial bias. *Review of Educational Research, 74*(4), 473-524.

Fairweather, J. S. & Rhoads, R. A. (1995). Teaching and the faculty role: Enhancing the commitment to instruction in American colleges and universities. *Educational Evaluation and Policy Analysis, 17*(2), 179-194.

Fisher, B. & Hartmann, D. (1995). The impact of race on the social experience of college student at a predominantly white university. *Journal of Black Studies, 26*(2), 117-133.

Fry, R. (2004). *Latino youth finishing college: The role of selective pathways*. Washington, D.C.: Pew Hispanic Center.

Fry, R. (2002). *Latinos in Higher Education: Many Enroll, Too Few Graduate*. Washington, D.C.: Pew Hispanic Center.

Fulford, C. N. (2009). Preparing students to work in a globally diverse world: The relationship of college students' backgrounds and college experiences to their orientation toward diversity. Unpublished doctoral dissertation. Bowling Green University.

Gansemer-Topf, A. M. & Schuh, J. H. (2006). Institutional selectivity and institutional expenditures: Examining organizational factors that contribute to retention and graduation. *Research in Higher Education, 47*(6), 613-642.

Green, S. B., Salkind, N. J. & Akey, S. B. (2000). *Using SPSS for Windows" Analyzing and understanding data.* 2nd edition. London: Prentice Hall International.

Gurin, P., Dey, E. L., Hurtado, S., & Gurin, G. (2002). Diversity and higher education: Theory and impact on educational outcomes. *Harvard Educational Review, 72*(3), 330-366.

Helm, E. G., Sedlacek, W. E. & Prieto, D. O. (1998). The relationships between attitudes toward diversity and overall satisfaction of university students by race. *Journal of College Counseling, 1*(2), 111-120.

Hox, J. J. (1995). *Applied multi-level analysis*. Amsterdam: TT Publications.

Hurtado, S. (1992). The campus racial climate Contexts of conflict. *Journal of Higher Education, 63,* 539-569.

Hurtado, S. (1996). How diversity affects teaching and learning: A climate of inclusion has a positive effect on learning outcomes. *Educational Record (4),* 27-39.

Hurtado, S. (2005). The next generation of diversity and intergroup relations research. *Journal of Social Issues. 61*(3), 595-610.

Hurtado, S. (2007). Linking diversity with the educational and civic missions of higher education. *The Review of Higher Education, 30*(2), 185-196.

Hurtado, S., Engberg, M. E., & Ponjuan, L. (2003). The impact of the college experience on students' learning for a diverse democracy. Paper presented at the Annual Meeting of Association for the Study of Higher Education, Portland, Oregon, November 12-15, 2003.

Hurtado, S., Milem, J., Clayton-Pedersen, A. R., & Allen, W. (1998). Enhancing campus climates for racial/ethnic diversity in higher education: Educational policy and practice. *The Review of Higher Education, 21*(3), 279-302.

Hussar, W. J. & Bailey, T. M. (2011). *Projections of Education Statistics to 2020*. 39th Ed. Jessup, MD: National Center for Education Statistics.

Ingle, G. (2005). Will your campus diversity initiative work? *Academe, 91*(5), 13-17.

Jaasma, M. A. & Koper, R. J. (1999). The relationship of student-faculty out-of-class communication to instructor immediacy and trust to student motivation. *Communication Education, 48*, 41-47.

Jacoby, D. (2006). Effects of part-time faculty employment on community college graduation rates. *The Journal of Higher Education, 77*(6), 1081-1103.

Johnson, J. L. (2000/2001). Learning communities and special efforts in the retention of university students: What works, what doesn't and is the return worth the investment? *Journal of College Student Retention, 2*(3), 219-238.

Jones, W. T. (2005). The realities of diversity and the campus climate for first-year students. In M. E. Upcraft, J. N. Gardner, B. O. Barefoot, & Associates (Eds.), *Challenging and supporting the first-year student* (pp. 125-140).

Kegan, R. (1994). *In over our heads: The mental demands of modern life.* Cambridge, MA: Harvard University Press.

King, P.M., & Baxter Magolda, M. (2005). A developmental model of intercultural maturity. *Journal of College Student Development, 46,* 571-592.

King, P. M., Brown, M. K., Lindsay, N. K., & VanHecke, J. R. (2007). Liberal arts student learning outcomes: An integrated approach. *About Campus, 12*(4), 2-10.

Kim, M. M., Rhoades, G., & Woodard, Jr., D. B. (2003). Sponsored research versus graduating students? Intervening variables and unanticipated findings in public research universities. *Research in Higher Education, 44*(1), 51-81.

Kuh, G. D. (2009). The National Survey of Student Engagement: Conceptual and empirical findings. *New Directions for Institutional Research, 141*, 5-20.

Kuh, G. D., Chen, D., & Nelson Laird, T. F. (2007). Why teacher-scholars matter: Some insights from FSSE and NSSE. *Liberal Education,* 40-45.

Kuh, G. D., Cruce, T. M., & Shoup, R. (2008). Unmasking the effects of student engagement on first-year college grades and persistence. *The Journal of Higher Education, 79*(5), 540-563.

Kuh, G. D., Kinzie, J., Cruce, T., Shoup, R., & Gonyea, R. M. (2007). Connecting the Dots: multi-faceted analyses of the relationships between student engagement results from the NSSE, and the institutional practices and conditions that foster student success. Report for Lumina Foundation for Education, Bloomington, IN.

Kuh, G. D., Nelson Laird, T. F., & Umbach, P. D. (2004). Aligning faculty activities and student behavior: Realizing the promise of greater expectations. *Liberal Education, 90*(4), 24-31.

Lambert, A. D., Garver, A. K., BrckaLorenz, A., & Haywood, A. (2009). *Time spent on research with undergraduate students" Gender differences among STEM faculty.* Paper presented at the meeting of the Association for Institutional Research, Atlanta, GA.

LaNasa, S. M., Cabrera, A. F., & Trangsrud, H. (2009). The construct validity of student engagement: A confirmatory factor analysis approach. *Research in Higher Education, 50*(4), 315-332.

Levin, S., Van Laar, C., & Foote, W. (2006). Ethnic segregation and perceived discrimination in college: Mutual influences and effects on social and academic life. *Journal of Applied Social Psychology 36*(6) 1471-1502.

Lundquist, C., Spalding, R. J., & Landrum, R. E. (2002/2003). College student's thoughts about leaving the university: The impact of faculty attitudes and behaviors. *Journal of College Student Retention, 4*9(2), 123-133.

Marsh, H. W., Overall, J. U., & Kesler, S. P. (1979). Validity of student evaluations of instructional effectiveness: A comparison of faculty self-evaluations and evaluations by their students. *Journal of Educational Psychology, 71*(2), 149-160.

Martinez Aleman, A. M. & Salkever, K. (2001). Multiculturalism and the mission of liberal education. *The Journal of General Education, 50*(2), 102-139.

Masland, A.T. (1985). Organizational Culture in the Study of Higher Education. In Brown M.C. (Eds), *Organization and Governance in Higher Education.* ASHE Reader Series. Person Custom Publishing: Boston, MA.

Mayhew, M. J. & Grunwald, H. E. (2006). Factors contributing to faculty incorporation of diversity-related course content. *The Journal of Higher Education, 77*(1), 148-168.

Mayhew, M. J., Grunwald, H. E. & Dey, E. L. (2005). Curriculum matters: Creating a positive climate for diversity from the student perspective. *Research in Higher Education 46*(4) 389-412.

McFalls, E. L. & Cobb-Roberts, D. (2001). Reducing resistance to diversity through cognitive dissonance instruction: Implications for teacher education. *Journal of Teacher Education, 52*(2), 164-172.

Middleton, R. T. (2008). Cities, Mayors, and race relations: Task forces as agents of race-based policy changes. Landham, MD: University Press of America.

Milem, J.F. (1998). Attitude Change in College Students: Examining the Effects of College Peer Groups and Faculty Reference Groups. *Journal of Higher Education, 69* (2), 117-140.

Milem, J. F., Berger, J. B., & Dey, E. L. (2000). Faculty time allocation: A study of change over twenty years. *The Journal of Higher Education, 71*(4), 454-475.

Milem, J. F., Chang, M. J., & Antonio, A. L. (2005). Making diversity work on campus: A research-based perspective. Association of American Colleges and Universities.

Miller, M. H., Anderson, R., Cannon, J. G., Perez, E., & Moore, H. A. (1998). Campus racial climate policies: The view from the bottom up. *Race, Gender & Class, 5*(2), 139-157.

Miles, J. & Shevlin, M. (2006). Applying regression correlations: A guide for students and researchers. New Delhi: SAGE Publications.

Miville, M. L. et al., (1999). Appreciating similarities and valuing differences: The Miville-Guzman Universality-Diversity Scale. *Journal of Counseling Psychology, 46*(3), 291-307.

Morphew, C. C. & Hartley, M. (2006). Mission statements: A thematic analysis of rhetoric across institutional type. *Journal of Higher Education, 77*(3), 456-471.

Muthuswamy, N., Levine, T. R., & Gazel, J. (2006). Interaction-based diversity initiative outcomes: An evaluation of an initiative aimed at bridging the racial divide on a college campus. *Communication Education, 55*(1), 105-121

National Center for Education Statistics. *Integrated Post-secondary Education Data System.* Retrieved Feb. 15, 2011, from NCES.ed.gov/ipeds.

Nelson Laird, T. F. (2005). College students' experiences with diversity and their effects on academic self-confidence, social agency, and disposition toward critical thinking. *Research in Higher Education, 46*(4), 365-387.

Nelson Laird, T. F., Chen, D., & Kuh, G. D. (2008). Classroom practices at institutions with higher-than-expected persistence rates: What student engagement data tell us. *New Directions for Teaching and Learning, 115*, 85-99.

Nelson Laird, T. F. & Garver, A. K., (2010). The effect of teaching general education courses on deep approaches to learning: How disciplinary context matters. *Research in Higher Education, 51*(3), 248-265.

Nelson Laird, T. F., Garver, A. K., & Niskode, A. S., (2007). *Gender Gaps: Understanding Teaching Style Differences Between Men and Women.* Paper presented at the Annual Meeting of the Association for Institutional Research. Kansas City, MO.

Nora, A., & Cabrera, A. F. (1996). The role of perceptions of prejudice and discrimination on the adjustment of minority students to college. *Journal of Higher Education, 67*, 119-148.

National Survey of Student Engagement. Retrieved Oct. 21, 2010, from nsse.iub.edu.

Nussbaum, M. C. (1997) Citizens of the world. In L. Foster (Series Ed.), C. F. Conrad & J. Johnson (Eds.), *College and university curriculum: Placing learning at the epicenter of courses, programs and institutions.* (pp. 21-39). Boston: Pearson Custom Publishing.

Olivas, M. (2011). If your build it, they will assess it (or, an open letter to George Kuh, with love and respect). *The Review of Higher Education,35*(1). 1-15.

Pascarella, E. T., Cruce, T., Umbach, P. D., Wolniak, G. C., Kuh, G. D., Carini, R. M., Hayek, J. C., Gonyea, R. M., & Zhao, C., (2006). Institutional selectivity and good practices in undergraduate education: How strong is the link? *Journal of Higher Education, 77*(20), 251-285.

Pascarella, E. T., Edison, M., Nora, A., Hagedorn, L. S., & Terenzini, P. T. (1996). Influences on students' openness to diversity and challenge in the first year of college. *The Journal of Higher Education, 67*(2), 174-195.

Pascarella, E. T., Pierson, C. T., Woniak, G. C., & Terenzini, P. T., (2004). First-generation college students" Additional evidence on college experiences and outcomes. *The Journal of Higher Education, 75*(3), 249-284.

Pascarella, E. T. & Terenzini, P. T. (1991). *How college affects students: A third decade of research. Vol. 2.* San Francisco: Jossey-Bass.

Pascarella, E.T., & Terenzini, P.T. (2005). *How College Affects Students*, Volume 2. San Francisco, CA: Jossey-Bass.

Pettigrew, T. F. (1998). Intergroup contact theory. *Annual Review of Psychology, 49*(1), 65-85.

Pettigrew, T. F. & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90*(5), 751-783.

Pieski, M. K. F. (2011). Developing intercultural sensitivity through immersion experiences in unfamiliar cultural milieu: Implications for teacher education and professional development. Unpublished doctoral dissertation. Kent State University.

Pike, G. (2002). The differential effect of on- and off- campus living arrangements on students' openness to diversity. *NASPA Journal, 39*, 283-299.

Pike, G. R. (2011). Using college students' self-reported learning outcomes in scholarly research. *New Directions for Institutional Research, 150*, 41-58.

Pike, G. R. & Kuh, G. D. (2006). Relationships among structural diversity, informal peer interactions, and perceptions of the campus environment. *The Review of Higher Education, 29*(4), 425-450.

Powers, D. A. & Ellison, C. G. (1995). Interracial contact and Black racial attitudes: The contact hypothesis and selectivity bias. *Social Forces, 74*(1), 205-226.

Rankin, S. R. & Reason, R. D. (2005) How students of color and white students perceive campus climate for underrepresented groups. *Journal of College Student Development 46*(1), 43-61.

Raudenbush, S. W. & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Thousand Oaks, CA: SAGE Publications.

Rumberger, R. W. & Palardy, G. J (2004). Multilevel models for school effectiveness research. In D. W. Kaplan (Ed.), *The SAGE Handbook of Quantitative Methodology for the Social Sciences* (pp. 235-258). Los Angeles: SAGE Publications.

Salisbury, M. H. (2011). *The effect of student abroad on intercultural competence among undergraduate college students.* Unpublished doctoral dissertation. University of Iowa.

Schmitz, C. C. (1993). Assessing the validity of higher education indicators. *Journal of Higher Education, 64*(5), 503-521.

Schneider, M. E. & Ward, D. J. (2003). The role of ethnic identification and perceived social support in Latino's adjustment to college. *Hispanic Journal of Behavioral Science25*(4) 539-554.

Scott, M., Bailey, T., & Kienzl, G. (2006). Relative success? Determinants of college graduation rates in public and private colleges in the US. *Research in Higher Education, 47*(3), 249-279.

Singer, E. R. (1996). Espoused teaching paradigms of college faculty. *Research in Higher Education, 37*(6), 659-679.

Smith, D. G. (2009). *Diversity's promise for higher education: Making it work.* Baltimore, MD: Johns Hopkins.

Smith, D. G. (2004). The campus diversity initiative: Current status, anticipating the future. Association of American Colleges and Universities.

Suarez-Balcazar, Y., Orellana-Damacela, L., Portillo, N., & Andrews-Guillen, C. (2003). Experiences of differential treatment among college students of color. *The Journal of Higher Education 74*(4) 428-444.

Tabachnick B. G. & Fidell, L. S. (2001). *Using multivariate analysis*. 5th ed. Boston: Allyn and Bacon.

Terenzini, P. T., Cabrera, A. F., Colbeck, C. L., Bjorklund, S. A., & Parente, J. M. (2001). Racial and ethnic diversity in the classroom: Does it promote student learning? *The Journal of Higher Education, 72*(5), 509-531.

The Chronicle of Higher Education (n.d.). *The Almanac of Higher Education 2012.* Retrieved April 25, 2012, from http://www.chronicle.com.

Tinto, V. (1997). Classrooms as communities: Exploring the educational character of student persistence. *The Journal of Higher Education, 68*(6), 599-623.

Tinto, V. (2006-2007). Research and practice of student retention: What next? *Journal of College Student Retention, 8*(1), 1-19.

Titus, M. A. (2004). An examination of the influence of institutional context on student persistence at four-year colleges and universities: A multilevel approach. *Research in Higher Education, 45*(7), 673-699.

Toutkoushian, R. K. & Smart, J. C. (2001). Do institutional characteristics affect student gains from college? *The Review of Higher Education, 25*(1), 39-61.

Umbach, P. D. & Kuh, G. D. (2006). Student experiences with diversity at liberal arts colleges: Another claim for distinctiveness. *The Journal of Higher Education, 77*(1), 169-192.

Umbach, P. D. & Wawrzynski, M. R. (2005). Faculty do matter: The role of college faculty in student learning and engagement. *Research in Higher Education, 46*(2), 153-184.

Velez, W. (1985). Finishing college: The effects of college type. *Sociology of Education, 58*(3), 191-200.

Wang, J., Gibson, A., Salinas, L., Solis, F., & Slate, J. (2007). Thematic differences in mission statements between four-year public institutions and two-year colleges in Texas, 11(1). *IEJLL: International Electronic Journal for Leadership in Learning, 11(1)*.

Whitt, E. J., Edison, M. I., Pascarella, E. T., Terenzini, P. T., & Nora, A. (2001). Influences on student's openness to diversity and challenge in the second and third years of college. *The Journal of Higher Education, 72*(2), 172-204.

Williams, D. A., Berger, J. B., & McClendon, S. A. (2005). Toward a model of inclusive excellence and change in postsecondary institutions. Association of American Colleges and Universities.

Zhao, C. & Kuh, G. D. (2004). Adding value: Learning communities and student engagement. *Research in Higher Education, 45*(2), 115-138.

Appendix A

Institutional Characteristics

Table A.1

Faculty of Color

Range	*n*
0-4%	6
5-9%	19
10-14%	15
15-19%	19
20-29%	11
30-49%	7
50-96%	7

Table A.2

Faculty Female

Range	*n*
15-29%	5
30-39%	9
40-49%	43
50-59%	20
60-74%	7

Table A.3

ACT/SAT Score Representing Selectivity

Range	*n*
No score reported (open admission)	14
18-20	7
21-22	7
23	7
24	11
25	8
26	10
27	5
28-29	8
30-32	7

Table A.4
Students of Color

Range	*n*
0-9%	5
10-19%	21
20-29%	19
30-39%	10
40-49%	6
50-59%	6
60-69%	6
70-89%	6
90-99%	5

Table A.5
Non-traditional Age

Range	*n*
0-9%	9
10-19%	6
20-29%	27
30-39%	20
40-49%	12
50-69%	10

Table A.6
Female Students

Range	*n*
20-49%	9
50-59%	30
60-69%	34
70-91%	11

Table A.7
Size

Range	*n*
555-1,499	12
1,500-2,999	13
3,000-4,999	20
5,000-7,499	10
7,500-9,999	8
10,000-14,999	8
15,000-24,999	8
25,000+	7

Table A.8

Institutional Characteristics

Characteristic	n	%
Size		
555-1,499	12	15.0
1,500-2,999	10	12.5
3,000-4,999	19	23.8
5,000-7,499	10	12.5
7,500-9,999	8	10.0
10,000-14,999	8	10.0
15,000-24,999	8	10.0
25,000+	5	6.3
Control		
Public	45	56.3
Private	35	43.8
Selectivity (Average ACT Score)		
<20	20	25.1
21-25	7	8.8
26-32	7	8.8
Mission Statement		
Diversity not included	31	38.8
Diversity included	49	61.2
Undergraduate Curriculum Includes Diversity		
1: Not at all Inclusive	0	.0
2	1	1.3
3	5	6.3
4: Moderately Inclusive	46	57.5
5	28	35.0
6	0	0
7: Totally Inclusive	0	0
Percent of Faculty who are Non-White		
0-9%	23	28.8
10-19%	32	40.0
20-29%	11	13.8
30-49%	7	8.8
50-99%	7	8.8

Table Continued on Next Page

Table A.8 Continued

Characteristic	n	%
Percent of Students who are Non-White		
0-9%	5	6.3
10-19%	18	22.5
20-29%	18	22.5
30-49%	16	20.0
50-99%	23	28.8
Percent of Faculty Women		
0-39%	13	16.3
40-49%	41	51.3
50-59%	20	25.0
60-74%	6	7.5
Percent of Students Women		
20-49%	9	11.3
50-59%	30	37.5
60-69%	31	38.8
70-91%	10	12.5
Percent of Students Non-traditional Aged		
0-29%	40	50.1
30-39%	19	23.8
40-49%	11	13.8
50-69%	10	12.5

Correlations between the Dependent and Independent Variables for Research Question 1

	Intercultural Maturity (DV)	Understanding themselves (DV)	Understanding diverse others (DV)	Working effectively with others (DV)	Mission includes diversity	Curriculum includes diversity	Student contact with diverse others	Course includes diversity	Faculty of Color	Female faculty	Soft-discipline	Tenure Status	Full-time status	Service Learning
Intercultural Maturity (DV)	1													
Understanding themselves (DV)	.833**	1												
Understanding diverse others (DV)	.822**	.606**	1											
Working effectively with others (DV)	.672**	.332**	.272**	1										
Mission includes diversity	.049	.039	.052	.021	1									
Curriculum includes diversity	.145**	.081**	.090**	.169**	.110**	1								
Student contact with diverse others	.204**	.157**	.128**	.196**	.069*	.361**	1							
Course includes diversity	.675**	.515**	.714**	.314**	.068*	.359**	.202**	1						
Faculty of color	.105**	.058*	.081**	.104**	.092**	.015	.063*	.163**	1					
Female faculty	.255**	.157**	.238**	.195**	.086**	-.029	.033	.165**	-.049	1				
Course taught is in a soft-discipline	.339**	.322**	.420**	.030	.002	-.077**	-.024	.298**	-.008	.115**	1			
Tenure status	-.190**	-.133**	-.154**	-.155**	-.055*	-.130**	-.162**	-.126**	.062*	-.212**	-.102**	1		
Full-time status	-.108**	-.075**	-.089**	-.086**	-.012	-.110**	-.096**	-.088**	.103**	-.086**	-.087**	.541**	1	
Service Learning	.406**	.307**	.291**	.351**	-.010	.079**	.122**	.303**	.127**	.064*	.100**	-.051	-.015	1

** p<.01. * p<.05.

Appendix C

Correlations between Institutional Emphasis on Diversity and Other Institutional Characteristics

	Mission statement includes diversity	Curriculum includes diversity	Class includes reflective learning	% Faculty non-white	% Faculty women	% Students non-white	% Students women	% Students non-traditional age	Control	Selectivity	Size
Mission statement includes diversity	1										
Curriculum includes diversity	.049	1									
Class includes reflective learning	.005	.124	1								
Percent faculty non-white	.162	.376**	-.081	1							
Percent faculty women	.171	.176	.266*	-.191	1						
Percent students non-white	.118	.596**	.048	.756**	.053	1					
Percent students women	.128	.220*	.220	.039	.703**	.236*	1				
Percent students non-trad. age	.004	.425**	.006	.243*	.211	.444**	.356**	1			
Control	-.182	-.125	.054	-.243*	-.003	-.054	-.011	-.070	1		
Selectivity	.030	-.231*	-.072	-.104	-.284*	-301**	-298**	-385**	.083	1	
Size	.268*	.224*	-.224*	.418**	-.144	.226*	-.169	.219	-595**	.103	1

*p<.05. **p<.01.

Correlations between Dependent and Independent Variables for Research Question 2

	Intercultural maturity (DV)	Understanding yourself (DV)	Understanding others (DV)	Working with others (DV)	Student of Color	Female student	Major is in a soft discipline	Non-traditional age
Intercultural Maturity (DV)	1							
Understanding yourself (DV)	.852**	1						
Understanding others (DV)	.845**	.602**	1					
Working with others (DV)	.749**	.454**	.438**	1				
Student of Color	.055**	.052**	.081**	-.005	1			
Female student	.087**	.065**	.084**	.061**	.002	1		
Major is in a soft discipline	.035*	.024	.051**	.009	.027	.025	1	
Non-traditional age	-.035*	-.063**	.000	-.021	.128**	.000	.044**	1
Mission includes diversity	.040**	.011	.057**	.030*	.047**	.063**	.105**	.040**
Curriculum includes diversity	.055**	.010	.115**	.004	.259**	.093**	.013	.189**
Student contact w/ diverse others	.494**	.330**	.507**	.369**	.035*	.054**	.014	.003
Reflective learning in courses	.066**	.070**	.078**	.009	.060**	.105**	.104**	.080**
People of color	.042**	.007	.105**	-.017	.455**	.026	-.018	.150**
Females	.105**	.076**	.113**	.065**	.046**	.187**	.072**	.110**
Diverse perspectives in courses	.330**	.236**	.354**	.212**	.042**	.111**	.125**	.070**
Reflective learning (student)	.371**	.340**	.331**	.230**	.031*	.033*	.058**	.034*
Had serious conversations with diverse others	.268**	.165**	.300**	.190**	.110**	-.004	-.015	.017
Learning community	.184**	.158**	.140**	.153**	-.007	.086**	-.073**	-.098**
Worked in group during class	.214**	.126**	.148**	.263**	.011	-.018	.040**	.034*

*p<.05. **p<.01.

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Table Continued

	Mission includes diversity	Curriculum includes diversity	Student contact w/ diverse others	Courses include reflective learning	Representation: people of color	Representation: females	Course included diverse perspectives	Reflective Learning Had serious conversations with diverse others	Learning community	Worked in group during class
Mission includes diversity	1									
Curriculum includes diversity	.072**	1								
Student contact w/ diverse others	.024	.090**	1							
Reflective learning in courses	.119**	.192**	.030*	1						
People of color	.100**	.533**	.094**	.011	1					
Females	.184**	.297**	.094**	.359**	.014	1				
Diverse perspectives in courses	.050**	.058**	.271**	.100**	.026	.144**	1			
Reflective learning (student)	-.009	.007	.255**	.051**	.000	.062**	.349**	1		
Had serious conversations with diverse others	-.027	.133**	.277**	.026	.134**	.020	.307**	.374**	1	
Learning community	.035*	-.071**	.114**	.055**	-.018	.074**	.124**	.153**	.107**	1
Worked in group during class	.021	.011	.179**	.006	.003	.077**	.202**	.108**	.111**	.091**

*p<.05. **p<.01.

Appendix E

Parameter Estimates for Nested Models Predicting Student Gains in Intercultural Maturity

	Unconditional Model (*1*)	Means-as-Outcomes Model (2)	One-Way ANCOVA Model 1 (*3*)	One-way ANCOVA Model 2 (*4*)	Random -Coefficient Model (*5*)	Intercepts-and-Slopes-as-Outcomes Model 1 (*6*)	Intercepts-and-Slopes-as-Outcomes Model 2 (*7*)	Intercepts-and-Slopes-as-Outcomes Model 3 (*8*)
Fixed effects								
Model for inst. mean Intercultural Maturity (β_0)								
INTERCEPT (γ_{00})	2.87***	2.83***	2.87***	2.87***	2.87***	2.88***	2.88***	2.88***
NON-WHITE REPRESENTATION (γ_{01})		0.01				0.01	0.01	0.01
FEMALE REPRESENT. (γ_{02})		0.04*				0.04**	0.04**	0.03**
PRIVATE CONTROL (γ_{03})		0.17***				0.11**	0.10**	0.08*
DIVERSITY IN MISSION (γ_{04})		0.02				0.04	0.03	0.01
DIVERSITY IN CURRIC. (γ_{05})		-0.04				0.02	0.03	0.02
REFLECTIVE LEARNING – GEN ED COURSES (γ_{06})		0.06*				0.03	0.03	0.04
Model for Intercultural Maturity slope (β_1)								
STUDENT OF COLOR (γ_{10})			0.04	0.03	0.03	0.04	0.03	0.03
FEMALE (γ_{20})			0.10***	0.06*	0.05*	0.10***	0.06*	0.05*
MAJOR: SOFT DISC. (γ_{30})			0.04	-0.01	-0.02	0.04	-0.01	-0.02
NON-TRAD AGE (γ_{40})			-0.09**	-0.08**	-0.08**	-0.09**	-0.08**	-0.08**
INST PROMOTES CONTACT W/ DIVERSE OTHERS (γ_{50})				0.29***	0.29***		0.29***	0.28***
DIVERSE PERSPECTIVES IN CLASS (γ_{70})				0.10***	0.10***		0.10***	0.10***
REFELCTIVE LEARNING – STUDENT (γ_{60})				0.07***	0.07***		0.07***	0.07***
SERIOUS CONVERSATIONS W/ DIVERSE OTHERS (γ_{80})				0.03**	0.03**		-0.03**	-0.03*
LEARN. COMMUNITY (γ_{90})				0.14***	0.13***		0.14***	0.13***
CLASS GROUP WORK (γ_{100})				0.08***	0.08***		0.08***	0.08***

*p<.05. **p<.01. ***p<.001

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Table Continued – Intracultural Maturity

	Unconditional Model (*1*)	Means-as-Outcomes Model (*2*)	One-Way ANCOVA Model 1 (*3*)	One-way ANCOVA Model 2 (*4*)	Random -Coefficient Model (*5*)	Intercepts-and-Slopes-as-Outcomes Model 1 (*6*)	Intercepts-and-Slopes-as-Outcomes Model 2 (*7*)	Intercepts-and-Slopes-as-Outcomes Model 3 (*8*)
Variance components								
Within institution (Level 1) (σ^2)	0.58	0.96	0.57	0.39	0.37	0.58	0.39	0.37
Between institution (Level 2) institution means (τ_{00})	0.02***	0.01***	0.02***	0.02***	0.02***	0.01***	0.01***	0.01***
Student of Color slope (τ_{11})					0.02*			0.02*
Female slope (τ_{12})					0.01			0.01
Major Soft Disc. slope (τ_{13})					0.01			0.01
Non-traditional Age slope (τ_{14})					0.02			0.02
Contact with Diverse Others slope (τ_{15})					0.00			0.00
Diverse Perspct. in Class (τ_{16})					0.00			0.00
Reflective Learning – Student slope (τ_{17})					0.00			0.00
Serious Conversations with Diverse Others slope (τ_{18})					0.00			0.00
Learning Community slope (τ_{19})					0.00			0.00
Class Group Work slope (τ_{110})					0.00			0.00

*p<.05. **p<.01. ***p<.001

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Table Continued – Intracultural Maturity

	Unconditional Model (*1*)	Means-as-Outcomes Model (*2*)	One-Way ANCOVA Model 1 (*3*)	One-way ANCOVA Model 2 (*4*)	Random -Coefficient Model (*5*)	Intercepts-and-Slopes-as-Outcomes Model 1 (*6*)	Intercepts-and-Slopes-as-Outcomes Model 2 (*7*)	Intercepts-and-Slopes-as-Outcomes Model 3 (*8*)
Proportion explained								
Institution means	0.030	0.262	0.006	0.332	0.362	0.524	0.403	0.369
Student of Color slope								0.071
Female slope								-0.053
Soft Discipline slope								-0.043
Non-traditional Age Slope								-0.021
Contact w/ Div Others slope								-0.019
Div. Perspect. in Class slope								-0.069
Reflect Learn–Student slope								-0.032
Conv. w/ Div. Others slope								-0.053
Learning Comm. slope								0.047
Class Group Work slope								0.053

*p<.05. **p<.01. ***p<.001