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May 22, 2014

Jean Clandinin and Mary Lynn Hamilton  
Co-editors  
*Journal of Teaching and Teacher Education*

Dear Jean Clandinin and Mary Lynn Hamilton,

Please consider our article, Where Cultural Competency Begins: Changes in Undergraduate Students' Intercultural Competency, for publication in the *Journal of Teaching and Teacher Education*. The text is approximately 8300 words, without tables and references.

We enjoyed working on this research and look forward to hearing your comments.

Sincerely,

Elizabeth J. Sandell, Ph.D.  
Associate Professor

Samantha Tupy, M. S.  
Graduate Assistant

Where Cultural Competency Begins:  
Changes in Undergraduate Students' Intercultural Competency

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## Where Cultural Competency Begins:

### Changes in Undergraduate Students' Intercultural Competency

#### Highlights

- Undergraduate students tend to rate their own orientation toward cultural differences and commonalities at a complex level and usually over-estimate their intercultural competency.
- Undergraduate students show a gap between their perceived orientations and their developmental orientations toward cultural differences and commonalities.
- Undergraduate students have not yet achieved cultural self-awareness as deeply as they believe they have.
- Undergraduate students are more likely to minimize cultural differences and emphasize human commonalities.

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Where Cultural Competency Begins:  
Changes in Undergraduate Students' Intercultural Competency

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### Abstract

Teacher preparation programs and accreditation organizations have acknowledged need for educators to demonstrate intercultural knowledge, skills, and abilities. Teacher educators are responding to emphasis in higher education to assure that graduates achieve intercultural competence (NCATE, 2008). This study compared the cultural competency of university students before and after participation in an intensive and intentional cross-cultural undergraduate course. Results indicated that undergraduate students tended to minimize cultural differences. After the intentional intervention, subjects showed statistically significant positive gains in their orientations to cultures different than their own.

*Keywords:* Teaching, Diversity, Cultural Competency, Cross-cultural, Pedagogy.

### Where Cultural Competency Begins:

#### Changes in Undergraduate Students' Intercultural Competency

The United States continues to welcome immigrants and refugees from many regions of the world. As a result, the United States population is increasingly diverse and includes wide variety of cultural, racial, ethnic, language, and religious groups, as well as diversity in socioeconomic levels, giftedness, disabilities, gender, and sexual orientation.

The U.S. Bureau of the Census (2001) reported that 20 percent of the school-age population came from homes where native languages other than English were spoken. The National Center for Education Statistics (NCES) reported that 48 percent of P-12 public school students were students of color (National Center for Education Statistics, 2012). In Arizona, California, the District of Columbia, Hawaii, Mississippi, New Mexico, New York, and Texas, students of color already represented more than 50% of primary and secondary school-age populations (Gollnick & Chinn, 2009). Given current trends in immigration and birth rates, these numbers will grow. NCES projects that, by 2021, the proportion of students of color will exceed 52 percent of enrollments.

Educators play one of the most important roles in teaching students to function well within domestic diversity and increasing globalization. The knowledge, behaviors, and attitudes shown by teachers toward students, especially students who are different from themselves, influence the teaching and learning environments (Sleeter, 2001a). However, the teacher population continues to be mostly white, female, middle-class, and monolingual. Gollnick and Chinn (2009) reported that 85% of the teachers in the United States are white and 75% are female. Teachers of color are only 17 percent of the teaching force (Boser, 2011).

This demographic difference creates a significant social and cultural gap between the student population and the teacher population. In fact, research suggests that teachers' beliefs about students lead to differential expectations and treatment. Some investigators (Solomon & Levine-Rasky, 2003; Arthur & Collins, 2010) suggested that, without intervention, pre-service teachers may inadvertently stereotype students and families and respond to them in oppressive ways. Teachers need an understanding of the invisible rules within different social and cultural structures so they may build productive relationships with students. Students from cultural and linguistic diverse backgrounds different than those of teachers often perform poorly in public education. Students are at risk for achievement gaps, overrepresentation in special education, high suspension and expulsion rates, and high drop-out rates (Jencks & Phillips, 1988; Losen & Orfield, 2002; Townsend, 2000).

The demographic differences between student populations and teacher populations mean that responsible teacher education programs (TEP) will prepare pre-service teachers for the social and cultural contexts in public schools (Bennett, 2004). In 2008, the National Council for Accreditation of Teacher Education (NCATE) included 12 elements of cultural identity in its standards for accrediting teacher preparation programs (e.g., ethnicity, race, socioeconomic status, gender, exceptionalities, language, religion, sexual orientation, and geographic region) (NCATE, 2008). In 2013, the Council for the Accreditation of Educator Preparation (CAEP) issued new standards embedded throughout with aspects of diversity. The new standards referred to learning disabilities, language learners, gifted students, and students from diverse racial, ethnic, and cultural backgrounds. CAEP Standard 1 and related Interstate Teacher and Support Consortium (InTASC, 2011) standards referred to cultural competence, individual differences, and working with families and communities. Standard 2 referred to diversity in field and

practicum experiences (CAEP, 2013). CAEP documents conclude that teacher education programs must embed diversity experience and cultural competence throughout all teacher preparation courses and experiences:

- Incorporation of multiple perspectives to the discussion of content, including attention to learners' personal, family, and community experiences and cultural norms.
- A commitment to deepening awareness and understanding the strengths and needs of diverse learners when planning and adjusting instruction that incorporates the histories, experiences and representations of students and families from diverse populations.
- Verbal and nonverbal communication skills that demonstrate respect for and responsiveness to the cultural backgrounds and differing perspectives learners and their families bring to the learning environment.
- Ability to interpret and share student assessment data with families to support student learning in all learning environments.
- An understanding of their own frames of reference (e.g., culture, gender, language, abilities, ways of knowing), the potential biases in these frames, the relationship of privilege and power in schools, and the impact of these frames on educators' expectations for and relationships with learners and their families (InTASC, 2011).

In brief, teachers at all levels (primary, secondary, and post-secondary) should exemplify intercultural competence (ICC). However, neither CAEP (accrediting the teacher education programs) nor teacher licensure agencies (licensing the teacher as an individual), decree the methods or the assessments that the teacher education programs should implement.

For this study, definitions were established and used for several key terms, including culture, empathy, intercultural experience, intercultural differences, worldview, and intercultural competence (ICC).

- a) Culture: “All knowledge and values shared by a group” (AACU, 2012, p. 15).
- b) Empathy: "Empathy is the imaginary participation in another person’s experience, including emotional and intellectual dimensions, by imagining his or her perspective (not by assuming the person’s position)" (J. Bennett, 1998).
- c) Intercultural Competency (ICC): The ability to accommodate cultural differences into one’s reality in ways that enable an individual to move easily into and out of diverse cultures and to adjust naturally to the situation at hand (M. J. Bennett, 1993). Hammer (2009b; 2011; and 2012) defines intercultural competence as the capability to shift cultural perspective and appropriately *adapt behavior* [emphasis added] to cultural differences and commonalities.
- d) Intercultural or cultural differences: “The differences in rules, behaviors, communication, and biases based on cultural knowledge or values that are different from one’s own” (AACU, 2012, p. 15).
- e) Intercultural experience: “The experience of an interaction with an individual or group of people whose culture is different from one’s own” (AACU, 2012, p. 15).
- f) Intercultural sensitivity: Sensitivity to the viewpoints of people in cultures other than one’s own (Bhawuk & Brislin, 1992) (may or may not involve subsequent behavior).
- g) Worldview: “The cognitive and affective lenses through which people understand and interpret their experiences and make sense of the world around them” (AACU, 2012, p. 15).

For teachers, the definition of intercultural competence is the “ability to effectively respond to students from different cultures and classes while valuing and preserving the dignity of cultural differences and similarities between individuals, families, and communities.”

## **1. Literature Review**

During the past 20 years, researchers have looked at the development of intercultural competence, its consequences, and its implications for individuals and groups. Other studies have examined the development of ICC for pre-service teachers. A review of relevant literature sheds light on the (1) beginning ICC orientations among pre-service teachers; (2) formative assessments of ICC among pre-service teachers; (3) impact of various teaching methodologies; and (4) summative assessments of ICC among teaching professionals

### **1.1 Beginning ICC Orientations among Pre-Service Teachers**

Sleeter (2001b) found that white pre-service teachers have little personal diversity experience, knowledge, or understanding. Without intervention, undergraduate university students begin and end their studies with worldviews consisting of stereotypical beliefs and little knowledge of racism, discrimination, and structural inequality.

Liang and Zhang (2009) identified several indicators that may be useful for evaluating cultural competence of pre-service teachers in teacher education institutions. The researchers discussed a multidimensional approach to explain and assess the cultural competence of pre-service teachers. Results indicated that cultural competency consists of four factors: (1) teachers' professional beliefs; (2) self-reflections; (3) teachers' expectations; and (4) actions to challenge and ameliorate prejudice and social injustice.

Guo, Arthur, & Lund (2009) examined the intercultural competency of pre-service teachers and discussed ways to prepare them for teaching diverse student populations. Data was

collected from responses by white female students to case studies, journal entries about critical incidents, focus group interviews, and written questionnaires. The investigators reported that the pre-service teachers' understanding was that diversity was all within the "other" and not about themselves as well as the "other." Diversity to these students involved cultural festivals, food, costumes, games, and celebrations. When students were challenged, they called for a formula about how to respond to diversity in their teaching practices. The researchers noted a disconnection between theories of multicultural education and the teachers' educational practice and suggested the importance of self-examination and self-reflection for the growth of cultural competency among pre-service teachers.

### **1.2 Formative Assessments of ICC among Pre-Service Teachers**

Ambrosio, Seguin, Hogan, & Miller (2001) created a rubric to generate data about student-generated multicultural/diversity classroom lesson plans. Results showed that only about 50% of pre-service teachers demonstrated at least minimal skills in designing an effective and meaningful multicultural/diversity lesson plan.

Carter-Merrill (2007) focused on the relationships between students' background characteristics, precollege experiences, college experiences, and their development of ICC, as measured by the IDI. Without any specific, intentional intervention (study abroad, coursework, service learning, etc.), the researcher concluded that these activities contributed to higher levels of ICC: study abroad, participation in discussions, relationships with people different from self, exposure to a diverse campus (especially international students), community engagement and involvement, and participation in a student media organization. Fraternity or sorority membership had a negative influence on the development of ICC. The investigator concluded that significant characteristics and experiences appeared to be related to student growth only

within ethnocentric stages. Few students shifted beyond the minimization orientation to cultural differences and similarities.

Riley (2007) addressed the connection between ICC (measured by the IDI) and university students' college experiences (measured by the Community College Survey of Student Engagement) (CCCSE, 2005). There was a strong correlation between IDI scores and CCSSE measures of active and collaborative learning, academic challenge, student-faculty interaction, and student effort. A weaker correlation was found between IDI scores and the CCSE measure of support for learners. There were few meaningful differences between any of the subgroups (gender, ethnicity, full-time status, first-generation status, and length of time in college) when related to the students' engagement and intercultural competence. Riley reported that student respondents valued group work contributions, international events, sharing of traditions, a diverse faculty and student body, and opportunities for study abroad.

Garmon (2004) concluded that self-reflection on one's own belief system is a key factor related to pre-service teachers' cultural competence. He suggested that self-reflection relates to being willing and able to think critically about one's own beliefs, values, and attitudes. Other factors listed were personal beliefs, professional beliefs, intercultural experiences, and educational experiences.

### **1.3 Impact of Various Teaching Methodologies**

Of course, teacher educators and the broader American culture do believe that training and experience can affect the development of any skill or disposition, including that of intercultural competency. Black and Mendenhall (1990), Bhawuk (1998), as well as Altshuler, Sussman, and Kachur (2003) have presented arguments to support this belief.

Several recent investigations have explored how teaching methodologies influence the cultural competency of undergraduate students. These mixed-methods studies have highlighted various activities which appear to contribute to cultural competency, including class discussions (Carter-Merrill, 2006) and relationships with people different than one's self (Paige, Jacobs-Cassuto, Yershova, & DeJaeghere, 2003; Carter-Merrill, 2006). These experiences have been embedded within several formats: study abroad, domestic intercultural field experiences, multicultural courses, and multicultural courses plus domestic intercultural field experiences.

### **1.3.1 Study Abroad Experiences**

One common avenue to foster cross-cultural competency is to give students the opportunity to study and/or to work abroad. Study abroad helps students to build relationships with people different than oneself and to learn a foreign language. Both of these aspects of study abroad has been shown to have an impact on cultural competency (Godkin & Savageau, 2001; Paige, Jacobs-Cassuto, Yershova, & DeJaeghere, 2003; Carter-Merrill, 2006).

The Institute of International Education (2013) has reported all-time high numbers of U.S. undergraduate students who study abroad. However, the *proportion* of students that study abroad is not increasing. Less than 10% of all U.S. undergraduate students (including community college students) will study abroad before they complete their degrees. In spite of the value of cross-cultural experiences, many pre-service teachers cannot take advantage of cross-cultural programs, such as study abroad or study away. And only about 4% of all U.S. undergraduates in education fields of study will travel abroad, a proportion that has remained constant since 2001/02 (Institute of International Education, 2013).

Teacher preparation program faculty members attribute the lack of studying abroad by pre-service teachers to the requirements to meet certification standards. Few education majors

are able to find room in their university program to leave their American campuses.

Consequently, teacher preparation programs continue to examine possibilities for designing domestic intercultural education.

### **1.3.2 Multicultural Courses**

Reyes and Bishop (2005) described the concept of partnership between a teacher preparation program and an urban after-school program. Their design included predominantly white undergraduate students in an experience working with children from culturally diverse backgrounds. Grounding our teaching in this belief acknowledges the importance of having pre-service teachers examine their identities and their values in relation to a new set of experiences or exposure to new ideas that they gain in their education program. The problem then becomes, how do we, the instructors, imbue our courses with a multicultural discourse that defines culture and identity in complex ways, critical of the tourist approach (Hoffman, 1996), and that de-centers the perspective of our mostly white students?

Since the mid-1970s, teacher licensure programs have required teacher candidates to complete orientation and training in multicultural education. Traditionally, such courses included opportunities to learn *about* persons in cultures differing from those of the pre-service teachers.

In the mid-1990s, researchers (Garmon, 1998; Zeichner et al., 1998) examined the consequences of multicultural education courses for pre-service teachers. They concluded that multicultural education courses had not had much effect on teacher practices. Even after completing the course, pre-service teachers had negative beliefs and low expectations of success for minority students in elementary and secondary schools. Garmon (1998) posed the idea that multicultural courses actually reinforce low expectations by reporting historic lack of success for

minority students. Zeichner et al. (1998) suggested that pre-service teachers need to experience instructional strategies that require higher order thinking, such as synthesis and application. Their results suggested that pre-service teachers should examine their own beliefs, reconsider their own assumptions, understand the values and lives of others, and increase their skills in cultural competency.

Even as recently as 2005, Lenski, Crumpler, Stallworth, & Crawford concluded that the outcomes of traditional multicultural education programs were unacceptable. The investigators examined *depth* of cultural experiences rather than *breadth* of coverage of the required curriculum topics. Instead of learning about concepts of race or ethnicity, the instructors trained pre-service teachers to use ethnographic tools to develop their cultural competency.

Faculty members who teach multicultural courses often incorporate personal narrative and reflection into the course experience. Schmidt (1998) suggested enhancing any course with the “ABCs Model of Cultural Understanding.” In this design, the instructor would include assignments that feature students writing: (a) autobiographies; (b) biography of a person different than the writer; (c) cross-cultural analysis of similarities and differences between (a) and (b); and (d) analysis of differences, along with an explanation of comforts and discomforts. In a home – school relations course, students were assigned to write a plan for communications between school and home, with special attention to communicating across culture, thus providing structure to discuss multicultural education.

Fuller and Pikes (2010) used a multicultural course to enhance the self-awareness of pre-service teachers about their own beliefs, culture, and biases. This “Cultural Self-Analysis Project” was embedded in a five-week course, Parent Involvement in Education. After analyzing the reflection papers and questionnaire responses, the investigators found that pre-service

teachers reported increased cultural self-awareness, awareness of their own biases and prejudices, awareness of the influences of their families of origin, and challenges about the need to respect and respond to values different than their own.

Dahlman, Hoffman, Cunningham, and Jesseman (2009) enhanced a course in human relations (required for their pre-service teachers) with opportunities for students to reflect on their own cultures, read narratives from other cultures, listen to “others” in panel presentations, develop their own communication skills, and participate in experiential learning with other students. The investigators analyzed the student reflection papers and found that the students increased in self-awareness and in empathy for others through this process.

Middleton (2002) explored the attitudes, beliefs, and commitments of a predominantly white population of pre-service teachers. The Beliefs about Diversity Scale (Pohan & Aguilar, 2001) was used as a pre- and post-test measure of self-reported attitudes and beliefs about diversity before and after participation in a diversity course. Many pre-service teachers claimed that they were willing to teach from a multicultural perspective, but at the same time, they misunderstood and misinterpreted multicultural education, diversity, and the attitudes and skills needed for successful cross-cultural teaching. Middleton made a case for providing structure for individuals and groups to explore and discuss experiences related to multicultural education. Middleton noted that the experience of cognitive dissonance and its accompanying discomfort fueled by the motivation to reduce dissonance encouraged aligning the self with certain values that determine how one ought to behave.

### **1.3.3 Multicultural Courses Plus Domestic Intercultural Field Experiences**

Vaughan (2005) studied the impact of a short-term cultural immersion experience on pre-service teachers who were enrolled in a cultural diversity class. According to the investigator, the students’ reflections and oral responses indicated that this experience helped them to be more

culturally aware. The experiences also influenced them to seriously reflect on their prejudices, misconceptions, and stereotypes about minority groups. Students reported that they were personally convicted to make positive changes toward cultural diversity if they were going to be culturally responsive in their daily lives and as teachers in their future classrooms.

Houser (2008) investigated an educational approach designed to promote critical consciousness and multicultural understanding among undergraduate and graduate students in teacher education. The cultural immersion approach, which the author referred to as a 'cultural plunge,' involved intense exposure to social and cultural settings in which the students' norms are clearly in the minority. Initial encounters were followed by personal reflection and subsequent small-group and whole-class analyses. The report suggested that the approach may provide opportunities for critical growth and multicultural development.

Keengwe (2010) examined the impact of multicultural immersion experiences with adult English language learners on the cultural competency of pre-service teachers. This field experience appeared to be a key factor in an otherwise common multicultural course that included activities such as reflective writings, cultural films, experiential learning activities, discussions, role play exercises, storytelling, case studies, research presentations, and quizzes. After only ten hours of cross-cultural interaction, the university students reported in logs, reflection papers, and class discussion that they understood better the importance of the cross-cultural experience in helping them become knowledgeable about other cultures, reduce bias, develop respectful skills, and become more accepting of the "others."

Other instructors have investigated the results of incorporating service learning into their teacher education programming. Connor (2004) and Li and Lal (2005) all found that student

attitudes about diverse communities became more positive after participating in course-related service projects.

#### **1.4 Summative Assessments**

Despite the importance of ICC, teachers may not be adequately prepared either through pre-service or in-service development to respond to the realities of culturally diverse students and communities.

Kea, Trent, and Davis (2002) hypothesized that teachers' limited knowledge about culturally and linguistically diverse students with or without disabilities may affect patterns of interaction and the use of effective practices with these students. Such situations may be true across and within racial-ethnic groups. Investigators studied 43 African American student teachers. Results indicated that 80% or more of the student teachers felt highly competent to teach culturally and linguistically diverse students. However, more participants believed they understood to the greatest extent the culture of students who were members of their own racial group, had more interactions with students who were members of their own racial group, felt most prepared to teach this group, and knew more about the contributions of this group. No student teachers believed that they were "very much prepared" (highest possible rating) by their TEP to teach any group that included culturally and linguistically diverse students with disabilities. They acknowledged a need for more content in the areas of human growth and development from a cross-cultural perspective, historical knowledge about various cultures, and accessing family and community resources.

Even after the passage of many years and the experience of many life situations, graduates of American teacher preparation programs may remain in a mono-cultural, ethno-centric orientation to cultural competency.

Mahon (2006) investigated understanding of cultural differences among teachers across grade levels in rural, suburban, and urban school districts. The result indicated that, in general, teachers minimized cultural differences: 61% showed a minimization orientation toward cultural differences; 28% denied cultural differences. Only 2.5% accepted cultural differences and saw differences from an ethno-relative viewpoint. This implies that their teacher preparation programs did not help them grow in their cultural competency before they started teaching. Variables such as age, ethnicity, and travel experiences appeared to have some impact on their ICC scores. However, variables such as gender, school type, or educational level had no impact on their ICC scores.

Bayles (2009) studied the intercultural sensitivity of elementary teachers in bilingual schools and the relationship to several demographic and background variables. The result indicated that, in general, teachers minimized cultural differences.. Variables such as gender, age, or educational level had no impact on their ICC scores. This implies that their teacher preparation programs did not help them grow in their cultural competency before they started teaching. The only statistically significant differences appeared to be related to teaching more than ten years in schools and to teaching ethnically diverse students for more than ten years.

Fretheim (2007) examined the intercultural sensitivity of teachers in an American international school in southern Africa. Teachers actually teaching abroad may be expected to be extraordinarily competent when interacting with persons from cultures different than their own. The investigators collected quantitative and qualitative data about teacher demographics, years living abroad, years working at international schools, age, gender, educational level, original region, languages, intercultural marriage, study abroad, Peace Corps participation, and intercultural training. According to the IDI, almost all the subjects (90%) had scores that

corresponded to an ethno-centric worldview... no different than that of subjects at the beginning of their teacher education programs. And there was no statistically significant relationship between any background variable and the teachers' cultural orientation. This implies that their teacher preparation programs did not help them grow in their cultural competency before they started teaching.

In 2008, DeJaegher and Zhang studied the cultural competency of suburban school teachers following intentional professional development meetings that were planned according to the teachers' developmental level of ICC. Professional development included values and identity activities, simulations, SEED, intercultural conflict studies, and culture-specific workshops. Teachers responded to a demographic survey, the IDI, and an 11-item scale to assess their perceived ICC in their classrooms. Notably, prior to professional development, most of the teachers were in an ethnocentric minimization orientation to cultural differences. This implies that their teacher preparation programs did not help them grow in their cultural competency before they started teaching. Investigators reported that years of teaching was not related to improved ICC, however, participation in professional development focused on enhancing teachers' ICC was related to improved ICC.

One may conclude that teacher preparation programs do not help pre-service teachers grow in their cultural competency before they started teaching. Brunswick's theory of perception implied that people pay attention to that which they perceive meets their needs (Brunswick, 1956). Therefore, pre-service teachers develop their values and beliefs about cultural competency in ways that support their own existence, adaptation, and survival. As undergraduate students, pre-service teachers have so many basic educational tasks that they may reduce their priority on understanding cultural differences.

Cross and others (1989) posited that effective cross-cultural teaching would include these elements:

- Self-awareness
- Knowledge of the culture of their students
- Awareness and acceptance of differences
- Understanding the dynamics of differences
- Ability to adapt teaching skills to meet student cultures

Results may be interpreted to indicate that Teacher Education Programs (TEPs) need to examine, revise, and evaluate their curriculum and instruction.

## **2. Purpose and Theoretical Framework**

### **2.1 Purpose**

The purpose of this study was to examine changes in cultural competence among undergraduate students who participated in intensive and intentional cross-cultural experiences. The hypothesis was that the intensive, intentional, and reflective cross-cultural experiences will have a positive impact on the cultural competency of students who complete a course, Human Relations in a Multicultural Society.

The investigators wished to understand the entering and concluding levels of cultural orientation for university students early in their pre-service teacher education programs. Faculty members will use the outcomes of this study for program design, outcome assessment, and course modification. The research questions were related to undergraduate students:

1. What are the cultural orientations of students who register for an undergraduate general education course in human relations in multi-cultural environments? Are the cultural

orientations (perceived and developmental) statistically the same for students at the beginning of each semester?

2. Was there any statistically significant difference between the means of pre-instruction and post-instruction scores in undergraduate students' cultural competency in an intentional, multicultural relations experience during Fall 2010 compared to Fall 2011?

## 2.2 Theoretical Framework

From the perspective of a process of developmental learning and in an effort to establish a basis for in-country intercultural education, this study focused on the entry-level cultural competence of university students. To further the understanding of the effectiveness of teacher preparation programs, this study sought to establish a statistical picture of intercultural competence for students at the beginning of their professional education studies.

The study reported herein was based on the Developmental Model of Intercultural Sensitivity (DMIS), originally described by M.J. Bennett (1986; 1993) (see Figure 1). With concepts from cognitive psychology and constructivism, Bennett described ICC as “the way a person understands, feels about, and responds to cultural differences.” The DMIS presented predictable stages through which people progress as their cultural competency increases. The DMIS includes two main categories: ethno-centrism and ethno-relativism.

### *Insert Figure 1 here*

Ethno-centrism is characterized by belief that one's culture or ethnic group is superior to all other groups. This category includes stages of *Denial*, *Polarization (Defense/Reversal)*, and the ethno-centric half of *Minimization*. Individuals in stage one, *Denial*, see their culture as the only real culture and (intentionally or not) limit their exposure to cultures different than his or her own. They may acknowledge more observable differences (such as food or costume), but

they are unmindful of more profound cultural differences (such as attitudes toward time).

Individuals in stage two, *Polarization (Defense/Reversal)* may take an uncritical view toward their own cultural values and practices or take an uncritical view toward the cultural values and practices of other persons. This stage is characterized by the sorting of people into “us and them.” Differences may be viewed as disruptive and intimidating. Individuals in the first half of the transitional stage called *Minimization* are still ethno-centric, but they see similarities to their own cultures as they learn about the “other” culture.

Ethno-relativism is characterized by belief that one’s culture is one of many different cultures and that one’s culture or ethnic group is not superior to the other. This category includes the ethno-relative half of *Minimization, Acceptance, Adaptation, and Integration*. Individuals in the second half of the *Minimization* are now ethno-relative, but they experience the “other” culture in a more interactive, intercultural way. Individuals in stage four, *Acceptance*, view their culture as just one of the many intriguing cultures in the world. They actually appreciate complex patterns of cultural differences. In stage five, *Adaptation*, individuals are able to take the perspective of the “other.” They can and do adapt their behaviors to be culturally appropriate and graceful. In the DMIS, Bennett included a stage six, *Integration*. He suggested that, in this last stage, individuals or groups can and do move easily between cultures and adjust naturally to the unique situations and expectations.

Based on the DMIS, Hammer and Bennett (1998) created the Intercultural Development Inventory (IDI) (see Table 1). The IDI is a theory-based test demonstrated to be valid and reliable. Cross-cultural validity testing of the IDI has been extensively conducted with thousands of people throughout the world (Paige, Jacobs-Cassuto, Yershova, & Dejaeghere, 2003; Hammer, Bennett, & Wiseman, 2003; Hammer, 2011).

***Insert Table 1 here***

The studies referenced above reported that confirmatory factor analysis indicated the following:

- a) Bennett's basic orientations toward cultural differences reliably describe categories: Denial, Defense, Reversal, Minimization, Acceptance, and Adaptation;
- b) The IDI provides an overall Developmental Orientation (DO) scale and an overall Perceived Orientation (PO) scale;
- c) The IDI is appropriate for students age 15 or older or individuals with a grade ten reading level;
- d) The IDI has strong content and construct validity across culture groups; and
- e) The IDI has strong predictive validity toward achievement of diversity and inclusion goals.

### **3. Methods**

#### **3.1 Context**

The study was undertaken at UNIVERSITY, a mid-size public university in the Midwest. In the Fall 2011 term, there were 15,640 students enrolled in undergraduate and graduate programs, according to the UNIVERSITY's Office of Institutional Planning, Research, and Assessment (2012). These students included Caucasian (82.2%), African American (4.9%), Asian American (2.7%), Hispanic or Latino (1.5%), American Indian (0.4%), Native Hawaiian/Pacific Islander (0.1%), and international students (4.1%). There were 9.6% who reported membership in ethnic minority groups. Furthermore, 52% of the students at

UNIVERSITY were female and 48% were male (Office of Institutional Planning, Research, and Assessment, 2012).

In 2006, UNIVERSITY amended its graduation requirements to incorporate cultural diversity education and experiences into the general education curriculum. The diversity policy was a commitment to “create an understanding and appreciation of diverse peoples and diverse perspectives; a commitment to create an academic, cultural, and workplace environment and community that develops mutual respect for all and celebrates our differences” (UNIVERSITY, 2010).

The research reported herein occurred within the UNIVERSITY’s College of Education (COE), which includes undergraduate academic majors related to elementary education, secondary education, and special education. COE’s mission statement is: “to prepare principled professional practitioners who thrive and succeed in diverse environments, promote collaborative and generative communities, and engage in life-long learning” (College of Education, 2011). The COE continues to be committed to preparing its teacher candidates to be highly effective in culturally diverse primary and secondary classrooms. To that end, placements in diverse field experiences were required for all students majoring in education. Beginning in 2009, COE students had the opportunity to spend six weeks in a cross-cultural immersion field experience in Queensland, Australia. Beginning in 2012, COE students could participate in mentorship and study in Costa Rica or United Arab Emirates.

One of the more common anticipated outcomes for teacher preparation programs is enhanced intercultural sensitivity and competency among all graduates. Consequently, stakeholders at UNIVERSITY are designing domestic experiences that provide quality, affordable, concrete opportunities to build relationship with persons from cultures different than

their own. UNIVERSITY students in teacher preparation programs have been encouraged to participate in intensive and intentional cross-cultural experiences within 100 miles of the UNIVERSITY (e.g., service learning experiences, field experience placements, etc.).

Since 2010, faculty members in the UNIVERSITY's teacher education programs have been enhancing a course, Human Relations in a Multicultural Society, which is taught each semester. The course meets several graduation requirements, including qualifications for initial state teacher licensure. The faculty members intend to increase students' understandings of individual and group differences, emphasizing the dynamics of race, gender, sexual orientation, age, class, and disabilities in the history and culture of diverse groups in the United States.

### **3.2 Subjects**

The subjects included undergraduate students who registered for Human Relations in a Multicultural Society at the beginning of each of four semesters during the academic years 2010 – 2011 and 2011 – 2012. This course was required for students who majored in elementary education. The course could be substituted for required courses for students who majored in secondary education or special education. Students from other academic specializations also enroll in this course, because the course met several general education requirements.

Responses were coded according to students' academic classifications (freshman, sophomore, junior, senior, and graduate). Responses were also coded according to students' academic major subjects (education, other than education, and undeclared). Non-education majors included, for example, journalism, mass communications, pre-professional studies (e.g., mortuary science, veterinary medicine, therapy), social work, and sports management.

### **3.3 Instructional and Experiential Intervention**

The UNIVERSITY course implemented during this investigation was “Human Relations in a Multi-cultural Society,” also known as “Human Relations.” Teacher preparation goals for this course included:

- a) Increase understanding and appreciation of one’s own culture and background.
- b) Identify and reflect on personal characteristics, qualities, and experiences with diversity and culture.
- c) Reflect on personal pre-judgments about characteristics of other people.
- d) Learn to accurately perceive and understand cultures and backgrounds of other persons.
- e) Understand the value and principles of developmentally appropriate multi-cultural education and anti-bias education.
- f) Understand and reflect on the emotional impact of unfair practices.
- g) Practice positive and respectful communications.
- h) Create plans to stand up against discrimination.
- i) Improve academic writing skills.

This course was intended to provide intensive and intentional cross-cultural experiences within 100 miles of the UNIVERSITY. Students self-selected this course from among general education courses; however, this course was required for elementary education majors. Broad parameters for the Human Relations course outlined a 3-credit undergraduate course offered each semester, meeting face-to-face on-campus for 2.5 hours per week for 15 weeks. There was an off-campus component in which students participated in field experiences with service learning. In this writing-intensive course, students were assigned 20 pages of writing, with feedback and opportunity for revision. Within the institution’s requirements for general education courses and the accreditation requirements for the specific pre-service teacher education programs, individual

faculty members were allowed, even encouraged, to incorporate teaching and learning strategies that they believed would help students meet the intended goals.

For this study, the same professor taught all course sections included in the project. For the first semester (Fall 2010), the professor implemented the course according to the syllabus on file with the academic department. However, for the next semester included in this investigation (Fall 2011), the professor implemented curriculum revisions that were specifically designed to encourage the development of students' cultural competency.

### **3.4 Variables**

The dependent variables were the perceived and actual developmental orientations to cultural difference. The main independent variables in this study were the instructional strategies implemented during each semester of academic study.

### **3.5 Instrument**

For this study, the IDI version 3 (Hammer, 2009a) was used as a measure of cultural competency. The IDI generates individual and group profile reports. The scores of interest for this investigation included Perceived Orientation (PO) and Developmental Orientation (DO). According to Hammer (2009b; 2011), the PO is how the individual or group rates their own orientation toward other cultures. The DO indicates an individual's or group's primary orientation toward cultural differences and commonalities.

This study incorporated use of the IDI because of its validity and reliability testing (Hammer, 2011), as well as its suitability for a university classroom-based setting and its ease of use. The IDI consists of fifty Likert-type items composed of statements explaining situational and cross-cultural diversity. The inventory can be completed in a 20- to 30-minute session, either on paper or online. (See Table 1 for sample items from the IDI.)

Correlations with the Scale to Measure World-minded Attitudes (Sampson & Smith, 1957) and the Intercultural Anxiety scale, a modified version of the Social Anxiety scale (Gao & Gudykunst, 1990), supported the IDI's construct validity (Hammer, 2011). In addition, the IDI has demonstrated predictive validity in both organizational and educational settings (Hammer, 2011). Based on the psychometric properties associated with this instrument, its authors have suggested that it is useful for purposes of assessing training needs, identifying interventions aimed at increasing intercultural competence, assisting with the selection of personnel, and program evaluation. After intervention, the IDI can be used to re-assess the same individual or group to assess effectiveness of interventions. The IDI results in several scores that describe how the individual or group is oriented toward other cultures.

### **3.6 Data Collection and Analysis**

The administration of the inventory was supervised by the course instructor, who is a "Qualified Administrator" trained and authorized to use the IDI. All data was collected after approval from the UNIVERSITY Institutional Review Board for research with human subjects.

Respondents completed the IDI online during the third week and during the fifteenth week of each semester (Fall 2010 and Fall 2011). During Fall 2010, students could request a one-on-one meeting to receive and to discuss their own results with the IDI administrator. During Fall 2011, this information was routinely shared in a personal meeting for each student who completed the IDI as a pre-instruction assessment. The individual information was not available otherwise.

The quantitative data were analyzed by the investigator using the established IDI protocols and IBM ® SPSS ® Statistics Version 12.0 statistical analysis software (SPSS, 2005). This study examined the IDI individual and group profiles to determine whether group

characteristics were statistically significant. The alpha level for the analysis was set at  $\alpha = .05$ . Differences were determined to be significant if they were at the  $p < .05$  levels.

## **4. Results**

### **4.1 Sample**

Some students dropped the course after week 3; some students were absent from one or both class meetings where respondents completed the IDI; some data was incomplete or not identified; and some students did not complete both pre-instruction and post-instruction assessments. For Fall 2010, data was collected from 77 respondents during week 3 and from 56 respondents during week 15; 50 respondents completed both the pre-instruction and the post-instruction assessments in Fall 2010. For Fall 2011, data was collected from 86 respondents during week 3 and from 71 during week 15; 70 respondents completed both the pre-instruction and the post-instruction assessments in Fall 2011.

*Insert Table 2 here*

#### **4.1.1 Sample Characteristics**

Table 3 describes the demographic characteristics according to data collected at the beginning of each semester. Of the total 163 who completed the survey at week 3, 76% were female and 23% were male. Furthermore, 140 (86%) were between 18 and 21 years old; 19 (12%) were between 22 and 30 years old; and 2 (1%) were age 31 years or older.

*Insert Table 3 here*

Of the students who responded to the question about membership in an ethnic minority group, 6 (3%) considered themselves to be ethnic minorities in their home country. Of the students who answered the question about citizenship, 152 (93%) were citizens of the USA. Of

the students who reported where they spent their formative years (between birth and age 18 years), 138 (85%) said they grew up in North America.

Table 4 presents the academic classification and academic majors of 162 of the students at the beginning of the semester. At the beginning of the two semesters, 2.5% of the respondents were classified (according to the number of credits completed) as freshmen; 36.5% were classified as sophomores; 44.4% were classified as juniors; and 12.9% were classified as seniors.

At the beginning of the two semesters, 47.5% were education majors and 22.2% were undeclared. The remaining 30.3% represented students in a variety of non-education majors, for example, journalism, mass communications, pre-professional studies (e.g., mortuary science, veterinary medicine, therapy), social work, and sports management.

*Insert Table 4 here*

#### **4.2 Beginning Orientation of Undergraduate Students toward Cultural Differences**

The first research question was: What are the cultural orientations of students who register for an undergraduate general education course in human relations in multi-cultural environments? Are the cultural orientations (perceived and developmental) statistically the same for students at the beginning of each semester?

According to the baseline IDI assessments taken at week 3 of both semesters, the perceived orientation score indicated that the group members rated themselves as able recognize and appreciate patterns of cultural difference in values, perceptions, and behaviors (the IDI orientation called *Acceptance*). In contrast to the students' perceptions, the developmental orientation score indicated that both groups were characterized by a primary orientation toward cultural differences that was actually within a low *Minimization* category. This indicated that the

students tended to highlight commonalities across cultures that can mask important cultural differences in values, perceptions, and behaviors.

In examining the developmental orientation scores more closely (see Table 5), it was evident that more than 95% of the students were actually in ethno-centric orientations toward cultural differences and similarities. More than half (56%) of the respondents were in *Minimization* orientation. Another 39% of the respondents were in either *Denial* or *Polarization* orientation.

*Insert Table 5 here*

Table 6 presents the descriptive statistics for each of the groups that were being compared (students' perceived and developmental cultural orientation scores at the beginning of the Fall 2010 and Fall 2011 semesters).

*Insert Table 6 here*

Students at the beginning of the Fall semester 2010 had a mean PO score of 119.02 and a mean DO score of 88.19, with standard deviations of 5.11 and 14.34, respectively. Students at the beginning of the Fall semester 2011 had a mean PO score of 118.69 and a mean DO score of 87.34, with standard deviations of 5.41 and 15.02, respectively.

To compare the cultural orientation means for students at the beginning of Fall semester 2010 and Fall semester 2011, an independent samples t-test was run (See Table 7). First, to determine which t-test should be used, Levene's Test for Equality of Variances was run. Both PO and DO scores had *p*-values greater than .05 for Levene's Test for Equality of Variances. Thus, equal variances assumed models were used. According to the data in Table 6, mean PO and DO scores were *not* significantly different for either semester, Fall 2010 or Fall 2011. The hypothesis of equal means was accepted: there were no statistically significant differences in perceived or developmental orientations at the beginning of the semesters.

***Insert Table 7 here***

*Note:* PO stands for Perceived Orientation and DO stands for Development Orientation.

**4.3 Changes in Undergraduate Students' Orientations toward Cultural Differences**

The second research question was: Was there any statistically significant difference between the means of pre-instruction and post-instruction scores in undergraduate students' cultural competency in an intentional, multicultural relations experience during Fall 2010 compared to Fall 2011?

Table 8 presents the descriptive statistics for students in the Fall 2010: students' pre- and post-instruction mean scores for perceived and developmental cultural orientation.

***Insert Table 8 here***

Students in Fall 2010 had a mean pre-instruction PO score of 118.58 and a mean post-instruction PO score of 118.55, with standard deviations of 5.13 and 14.47, respectively.

Students had a mean pre-instruction DO score of 86.90 and a mean post-instruction DO score of 86.43, with standard deviations of 14.47 and 14.45, respectively.

To compare students' cultural orientation pre-instruction and post-instruction mean scores for the Fall semester 2010, a paired samples t-test was run. The hypothesis of equal means was accepted because the *p*-value was greater than .05. According to the Fall 2010 data in Table 9, mean pre- and post-instruction scores were not significantly different for both PO and DO.

***Insert Table 9 here***

Table 10 presents the descriptive statistics for students in the Fall 2011: students' pre- and post-instruction mean scores for perceived and developmental cultural orientation.

***Insert Table 10 here***

Students in Fall 2011 had a mean pre-instruction PO score of 118.67 and a mean post-instruction PO score of 122.97, with standard deviations of 5.12 and 6.59, respectively. Students

had a mean pre-instruction DO score of 87.82 and a mean post-instruction DO score of 98.50, with standard deviations of 14.92 and 17.56, respectively.

To compare students' cultural orientation pre-instruction and post-instruction mean scores for the Fall semester 2010, a paired samples t-test was run. The hypothesis of equal means was rejected because the  $p$ -value is less than .05. According to the data presented in Table 11, mean pre- and post-instruction scores were significantly different for both PO and DO. In particular, students had statistically significantly higher mean post-instruction scores than they did pre-instruction for both PO and DO.

*Insert Table 11 here*

## 5. Discussion

The purpose of this study was to examine changes in cultural competency among undergraduate students who participated in intensive and intentional cross-cultural experiences. The hypothesis was that the intensive, intentional, and reflective cross-cultural experiences will have a positive impact on the cultural competency of each student who completes a course, Human Relations in a Multicultural Society. Two types of cultural orientations were examined for this study: perceived orientation and development orientation.

Results indicate that undergraduate students tend to rate their own orientation toward cultural differences and commonalities at a complex level. They are likely to agree that "I can look at the world through the eyes of a person from another culture" or "It is appropriate that people from other cultures do not necessarily have the same values and goals as people from my culture" (Hammer, 2009a). However, there is a gap between the university students' perceived orientations and their developmental orientations. This suggests that undergraduate students perceive that they have achieved a more highly developed level than they have actually reached. The gap between perceived orientation and actual developmental orientation suggests that the

students have not yet achieved cultural self-awareness as deeply as they believe. Statistical analysis showed that students at the beginning of their pre-service teacher education usually over-estimate their intercultural competency.

The results of the study reported here suggest that, as a group, these students are more likely to minimize cultural differences and emphasize human commonalities. Students in this stage are likely to overly apply universal values (often as they understand and apply the values to themselves) and principles, such as, for example, “each person should be treated equally” or “we just speak different languages.” The students may miss opportunities to treat others according to the others’ cultural norms and to understand their own cultural privileges. There is room for a lot of learning as students come to understand their own culture and experiences, knowledge, and reflection for such undergraduate students. These findings suggest that pre-service teacher education programs may need to be tailored for such a population of students.

In the United States, undergraduate students value the American principle of respecting and “accepting” persons of all cultures and backgrounds. However, the students’ actual knowledge, understanding, and reflections are not based on life experiences that enable them to actually, deeply understand and accept the other culture and its complexities. University students are in a life-stage in which coming together around commonalities is important for tasks such as succeeding at a career or achieving a university degree. This makes sense because undergraduate students are exploring ways to understand the world, to find their future career paths, and to “fit in” to their future work.

## **6. Recommendations for Future Research**

In order to nurture teachers who are culturally competent, teacher educators need to begin at the level of the students’ cultural orientations and challenge their subsequent growth. This

baseline data will be used by the College of Education to plan interventions and to evaluate effectiveness of teacher preparation programs. Results will be used by the local university to facilitate strategic initiatives to educate undergraduate students in multicultural diversity. Researchers expect that students at UNIVERSITY, will show positive gains in overall intercultural competence. The research will provide students and faculty members at UNIVERSITY with a collaborative, critical reflection about culture and education in diverse environments.

The investigator intends that the results will provide valuable data about change among students, thereby paving the way for cross-institutional comparisons and enhancing the ability of university staff to design courses and experiences for students that match their current levels of intercultural orientation. Faculty members can use Minimization as a starting point to conceptualize the content and methodology of TEP. Then faculty members themselves should practice self-understanding and self-reflection on their own cultures. Mentoring provided by the faculty members should lead TEP graduates to enhanced cultural competency, combined with affective commitment so that classroom teachers become increasingly effective in the classrooms, cafeteria, and other school settings. Faculty members may use data from the IDI to develop goals, adopt assessments, document progress, create self-reflection, and design mentor feedback. Cultural immersion experiences may encourage new educators to not only learn about others, but also learn from and with others.

Future data analysis should collect and analyze data to:

1. Explore the interaction effects for academic classification and academic major.
2. Analyze qualitative data from students' reflection papers.

3. Analyze quantitative data in IDI subscales, e.g., denial, disinterest, avoidance, defense, reversal, adaptation, and cultural disengagement.
4. Explore the interaction effects for instructional activities and changes in cultural competency.

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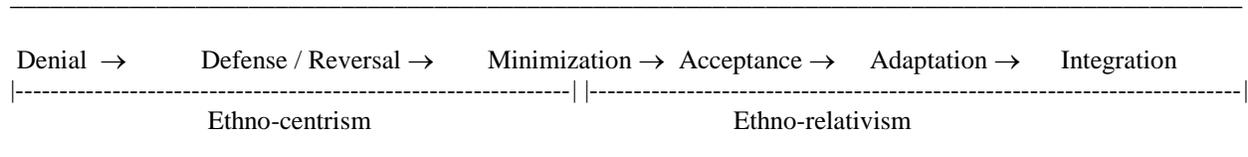
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*Figure 1: Developmental Model of Intercultural Sensitivity. (Hammer, Bennett, & Wiseman, 2003, p. 424)*

*Table 1: Sample Items from the Intercultural Development Inventory*

Orientation toward Cultures	Sample Item
1 Denial	Society would be better off if culturally different groups kept to themselves.
2 Defense/Reversal	People from other cultures are not as open-minded as people from my own culture.
3 Minimization	People are the same despite outward differences in appearance.
4 Acceptance	It is appropriate that people from other cultures do not necessarily have the same values and goals as people from my culture.
5 Adaptation	When I come in contact with people from a different culture, I find I change my behavior to adapt to theirs.

*Table 2: Number of Subjects, Fall 2010 and Fall 2011*

Semester	Pre-instruction (week 3)	Post-instruction (week 15)	Pre-instruction and Post-instruction
Fall 2010	77	56	50
Fall 2011	86	71	70
Total	163	127	120

Table 3: *Demographic Characteristics of Research Subjects at Beginning of Fall 2010 and Fall 2011*

	Fall 2010		Fall 2011		Total	
	N	Percent	N	Percent	N	Percent
Responses	77	100	86	100	163	100
Female	59	77	65	76	124	76
Male	17	23	20	24	37	23
18 – 21 years old	67	88	73	85	140	86
22 – 30 years old	9	12	10	12	19	12
31 years old or more	0	0	2	3	2	1
Never lived in another country	70	91	68	80	138	85
Lived in Central/South America	1	2	0	0	1	< 1
Lived in Africa	1	2	1	1	2	1
Lived in Asia – Pacific	0	0	1	2	1	< 1
Lived in Middle East	1	2	1	1	2	1
Lived in Europe	0	0	1	2	1	< 1
Identified as an ethnic minority	0	0	6	8	6	3
Citizenship: USA	73	95	79	92	152	93

Table 4: *Academic Classification and Academic Major of Students at the Beginning of Each Semester*

	Fall 2010		Fall 2011		Total	
	N	Percent	N	Percent	N	Percent
Total	77	100.0	85	100	162	100
Freshman	2	2.6	2	2.4	4	2.5
Sophomore	37	48.0	22	25.9	59	36.5
Junior	28	36.5	44	51.8	72	44.4
Senior	10	12.9	11	12.8	21	12.9
Other	0	0.0	6	7.1	6	3.7
Education	35	45.4	42	49.4	77	47.5
Non-edu.	19	24.7	30	35.3	49	30.3
Undeclared	23	29.9	13	15.3	36	22.2

Table 5: *Developmental Orientations among Undergraduate Students at the Beginning of the Semesters*

Cultural Orientation	Fall 2010		Fall 2011	
	Number	Percent	Number	Percent
Total	77	100.0	86	100.0
Denial	9	12.3	12	14.0
Polarization	21	27.7	27	31.4
Minimization	43	56.9	44	51.3
Acceptance	2	3.1	3	3.5
Adaptation	0	0.0	0	0.0

Table 6: *Perceived and Developmental Orientation Scores for Undergraduate Students at the Beginning of Two Semesters*

	Semester	N	Mean	Std. Deviation	Std. Error Mean
Perceived Orientation	Fall '10	65	119.02	5.11	.63
	Fall '11	86	118.69	5.41	.58
Developmental Orientation	Fall '10	65	88.19	14.34	1.78
	Fall '11	86	87.34	15.02	1.62

Table 7: *Independent Samples Test*

		Levene's Test		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
PO	Equal variances assumed	.42	.52	.37	149	.71	.32	.87	-1.39	2.04
	Equal variances not assumed			.37	142	.71	.32	.86	-1.38	2.03
DO	Equal variances assumed	.41	.53	.35	149	.73	.85	2.42	-3.94	5.63
	Equal variances not assumed			.35	141	.73	.85	2.40	-3.91	5.60

Table 8: *Pre-instruction and Post-instruction Orientation Scores for Undergraduate Students, Fall 2010*

		N	Mean	Std. Deviation	Std. Error Mean
PO	Pre-Instruction	50	118.58	5.13	.73
	Post-Instruction	50	118.55	5.54	.78
DO	Pre-Instruction	50	86.90	14.47	2.05
	Post-Instruction	50	86.43	14.45	2.04

Table 9: *Paired Samples Test*

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	SD	Std. Error Mean	95% Confidence Interval of the Difference				
						Lower	Upper		
PO	Pre-Instruction vs Post-Instruction	.04	5.43	.77	-1.51	1.58	.05	49	.96
DO	Pre-Instruction vs Post-Instruction	.47	13.82	1.95	-3.46	4.40	.24	49	.81

Table 10: *Pre-instruction and Post-instruction Orientation Scores for Undergraduate Students, Fall 2011*

		N	Mean	Std. Deviation	Std. Error Mean
PO	Pre-Instruction	68	118.67	5.12	.62
	Post-Instruction	68	122.97	6.59	.80
DO	Pre-Instruction	68	87.82	14.92	1.81
	Post-Instruction	68	98.50	17.56	2.13

Table 11: *Paired Samples Test*

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	SD	Std. Error Mean	95% Confidence Interval of the Difference				
						Lower	Upper		
PO	Pre-Instruction vs Post-Instruction	-4.30	6.85	.83	-5.96	-2.64	-5.18	67	.00
DO	Pre-Instruction vs Post-Instruction	-10.67	17.85	2.16	-14.99	-6.35	-4.93	67	.00

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**Acknowledgements**

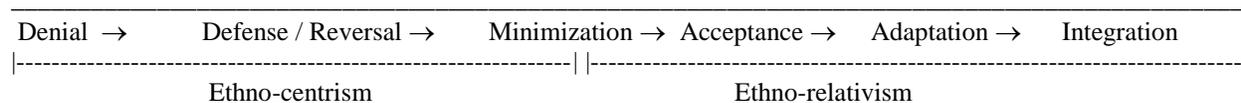
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Running head: WHERE CULTURAL COMPETENCY BEGINS

Where Cultural Competency Begins:

Changes in Undergraduate Students' Intercultural Competency

Figures and Tables



*Figure 1: Developmental Model of Intercultural Sensitivity.* (Hammer, Bennett, & Wiseman, 2003, p. 424)

*Table 1: Sample Items from the Intercultural Development Inventory*

Orientation toward Cultures	Sample Item
1 Denial	Society would be better off if culturally different groups kept to themselves.
2 Defense/Reversal	People from other cultures are not as open-minded as people from my own culture.
3 Minimization	People are the same despite outward differences in appearance.
4 Acceptance	It is appropriate that people from other cultures do not necessarily have the same values and goals as people from my culture.
5 Adaptation	When I come in contact with people from a different culture, I find I change my behavior to adapt to theirs.

*Table 2: Number of Subjects, Fall 2010 and Fall 2011*

Semester	Pre-instruction (week 3)	Post-instruction (week 15)	Pre-instruction and Post-instruction
Fall 2010	77	56	50
Fall 2011	86	71	70
Total	163	127	120

Table 3: *Demographic Characteristics of Research Subjects at Beginning of Fall 2010 and Fall 2011*

	Fall 2010		Fall 2011		Total	
	N	Percent	N	Percent	N	Percent
Responses	77	100	86	100	163	100
Female	59	77	65	76	124	76
Male	17	23	20	24	37	23
18 – 21 years old	67	88	73	85	140	86
22 – 30 years old	9	12	10	12	19	12
31 years old or more	0	0	2	3	2	1
Never lived in another country	70	91	68	80	138	85
Lived in Central/South America	1	2	0	0	1	< 1
Lived in Africa	1	2	1	1	2	1
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