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Intercultural development in global service-learning

Stephen W. Jones
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INTERCULTURAL DEVELOPMENT
IN GLOBAL SERVICE-LEARNING

by

Stephen W. Jones

A Thesis Submitted to the
Faculty of the Graduate School
In Partial Fulfillment of the
Requirements for the Degree of
MASTER OF ARTS

School of International Studies
Intercultural Relations

University of the Pacific
Stockton, California

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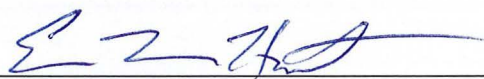
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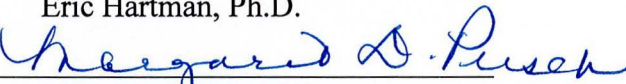
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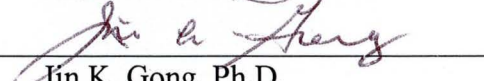
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Stephen W. Jones

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DEDICATION

This thesis is dedicated to Dr. Jared T. Burkholder in honor of his retirement after twenty years of teaching and administrating, and a lifetime of service, especially including the founding of the EDGE program.

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With gratitude to: Dr. Kent Warren, who has welcomed and guided me into the world of Intercultural Relations, especially in navigating the intersection of faith and culture. Dr. Eric Hartman introduced me to the rigorous academic pursuit of Global Service-Learning. Peggy Pusch initially introduced me to the field of Service-Learning itself, and has both guided and encouraged me at key points. Katrina Jaggears has gently navigated me through the difficulties of a limited residency program. I am particularly grateful to Mike Smith, who has mentored me in the realities of lived faith, who is a companion as we navigate Weltschmerz, and who first introduced me to this Master's program. Geraldine Stirtz introduced me to the practical side of Service-Learning and I know her trust and encouragement have guided me more than I realize. Robert Gall and Dr. Ron Shope have both encouraged and prodded me on, giving insight into the research process, while helping me move toward completion. My parents and sister have been a constant encouragement. Jennie Jones, my wife, has made it possible for me to undertake this project through her faithfulness and many sacrifices, large and small. Thank you all.

INTERCULTURAL DEVELOPMENT IN GLOBAL SERVICE-LEARNING

Abstract

by Stephen W. Jones
University of the Pacific
2011

This research project examined the effects of participation in a six-month global service-learning program in the intercultural development of a group of students. The students under consideration herein participated in the 2009 program year of the Grace University EDGE Program, which took place in Mali, West Africa.

The present research builds on and contributes to three primary areas of research: intercultural development, service-learning, and study abroad. As the literature in these areas revealed the lack of a consistent way to assess global service-learning, I tried a three-part method of assessment. First, the Intercultural Development Inventory formally measured growth in intercultural competence. Second, guided course-writing generated by the students was used to facilitate follow-up interviews of most participants, especially considering the intersections between IDI results and students' self-perceptions as reported in their papers. Third, the interviews were coded and explored for information related to the process of

intercultural development. The participants, overall, demonstrated positive intercultural competence gains while undergoing a complex process involving the impetus for and experience of development, ultimately resulting in changed patterns of thought.

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LIST OF ABBREVIATIONS

%AP	Percent of Achievable Progress
ACC	Acceptance
ADA	Adaptation
AP	Achievable Progress
AVO	Avoidance
BEH	Behavioral Frame Shifting
CD	Cultural Disengagement
COG	Cognitive Frame Shifting
DEF	Defense
DEN	Denial
DIS	Disinterest
DMIS	Developmental Model of Intercultural Sensitivity
DO	Developmental Orientation
EEPM	Eglise Evangelique Protestante du Mali
GSL	Global Service-Learning
IDC	Intercultural Development Continuum
IDI	Intercultural Development Inventory
MIN	Minimization
OG	Orientation Gap

PO	Perceived Orientation
REV	Reversal
SIM	Similarity
UNI	Universalism

CHAPTER I

INTRODUCTION

Statement of the Problem

My intent in conducting this research is to discover the ways in which the EDGE Program, a global service-learning program at Grace University, contributes to students' intercultural development. The EDGE program is a component of the University's Intercultural Studies Bachelor of Arts degree. The primary objective of this study is to assess the program's overall effectiveness as an intercultural teaching tool; however, there is a documented lack of consistent, appropriate, and effective methods for evaluating global service-learning programs. As a result, I have devised a mixed-method approach, based on the literature, to examine in what ways the students experienced growth in intercultural development. This research project focuses specifically on the Grace University EDGE students who studied and served in Mali, West Africa as participants in the 2009 program.

The Grace University EDGE Program

This research focuses on the Grace University EDGE Program. Grace University is accredited by both the North Central Association of the Higher Learning Commission and by the Commission on Accreditation of the Association for Biblical Higher Education (Grace University, 2009). As a result, all Grace students pursue a Bible degree and a degree in a professional area. Thus, Bible and Intercultural Studies is the standard

combination for Intercultural Studies majors. The EDGE Program is “a six-month, field-based, training experience” which “includes six months of practical cross-cultural experience and 18 hours of IS coursework” (Grace University, p. 54, 2009) and is required of all students seeking a bachelor’s degree in Bible and Intercultural Studies at Grace University. EDGE has traditionally been written in all capital letters at Grace University, and is not an acronym.

The EDGE was started in 1997 as an outgrowth of a summer intercultural ministry program that had been led by Dr. Jared Burkholder in 1991 and 1993 in Mali, West Africa (Burkholder, 2003). Founded out of a partnership with Gospel Missionary Union (GMU, now Avant), the first (1997) and second (1999) EDGE six-month teams were hosted in Mali under the auspices of GMU. The experience has since been hosted by North American or other Western mission agencies in Taiwan/Philippines/Japan in 2000, 2002, and 2004; Kenya in 2001 and 2003; Mexico in 2003 and 2005; France/Romania in 2004; and Portugal in 2006 (Smith, 2009; Jones, 2011). Domestic sites have been hosted in Seattle, Washington in 2007, 2010, and 2011 and Jackson, Mississippi in 2010 and 2011 (Jones, 2011).

In 2006, Dr. Burkholder and then-program-director Mike Smith decided to significantly alter the EDGE program by seeking to operate directly under the auspices of a national church organization rather than a Western missionary organization. I was also tangentially involved in this decision. The *Eglise Evangelique Protestante du Mali* (EPPM, Evangelical Protestant Church of Mali) agreed to host the program and serve as in-country leaders, mentors, and, as appropriate, instructors for the students. The EPPM has existed as a major national church organization since 1961 and serves several of the

western districts of Mali, including the capital city of Bamako (Coulibaly, 2011). The EEPM hosted their first EDGE team in 2007, and the second team arrived there in February, 2009. A third team returned in 2010, and a fourth was in Mali during the spring of 2011. Since 1997, 122 students have participated in the EDGE program in its various forms.

The EDGE program consists of six months of team-based study and service in the context of Mali, West Africa (Smith, 2009). Students complete 18 semester credit hours of study during the six months, including French, Cultural Anthropology, World's Living Religions, Context and Mission, Intercultural Ministry Field Experience, and Intercultural Relationships Two (Grace University, 2009). All courses other than the French/Bambara language course are taught in English by Grace University faculty or adjunct instructors (Smith). A Malian instructor teaches at least one (two to three is preferred) of the courses (such as World's Living Religions, French/Bambara, and/or Cultural Anthropology) as a Grace University adjunct. In the 2009 program, only World's Living Religions was taught by a Malian instructor.

The program is intended to be completed during the second semester of a student's sophomore or junior year. Students are encouraged to participate during their sophomore year to facilitate thorough reentry training and to allow the students to select a specialization in a concentration of interest following their return to Grace (Smith, 2009). Nearly all participating students are Intercultural Studies majors, and they typically complete a nine-month training process, including three off-campus overnight retreats and a semester-long course entitled Intercultural Relationships One prior to going abroad.

Following their return from Mali, the students are required to participate in a semester long Intercultural Transition Seminar debrief course (Grace University, 2009).

One distinctive characteristic of this program is the inclusion of a mentoring component, during which students are to be mentored by Malians for a ten-week period near the end of the experience (Smith, 2009). The mentors are selected by the EEPM, are English-speaking, and provide spiritual, practical, and cultural guidance for the students.

Among other goals, the EDGE program has a particular focus on aiding students in learning to follow the leadership of non-North Americans. This is part of a broader goal to help students consider how to engage in authentic partnerships. Intercultural competence is viewed as a lynchpin in the ability to engage in authentic partnerships. A detailed description of the EDGE program can be found in the Literature Review beginning on page 63.

Research Question

Specifically at issue is the question: Did the EDGE experience lead to changes in the development of intercultural competence, as indicated by the Intercultural Development Inventory (IDI), student reflection papers, and interviews? This research will aid in identifying the actual results (vs. anticipated outcomes) of this service-learning program. Additionally, it offers the opportunity to experiment with this specific model of assessment.

This project approaches research from the interpretive frame. Thus, the results are intended to be descriptive of this group's experience, rather than predictive of another group's experience at another time and/or with another program.

The EDGE program is discussed in more depth in the Methods section. Before proceeding with the research design itself, it is necessary to gain an understanding of the various pieces of literature that provide a context for this project. It is thus that we turn to the Literature Review.

CHAPTER II

REVIEW OF THE LITERATURE

In pursuing the original research question, I found two distinct areas of literature that inform my approach to the present project. The first was from the area of intercultural development, and the second is from the area of global service-learning. There was a third, emerging body of literature, which, like my own research, blends the insights of these two related, but largely distinct fields. I will therefore also review the emerging literature at the intersection of intercultural development and study abroad (on which there has already been much written), and on the intersection of intercultural development and global service-learning.

The literature review encompasses the following: (a) intercultural development, including the Developmental Model of Intercultural Sensitivity, the Intercultural Development Inventory, and the Intercultural Development Continuum; (b) global service-learning (GSL), including an overview of GSL and requirements of GSL experiences, goals of GSL, and the assessment of GSL; and (c) intercultural development in the intercultural learning context, including the study abroad and global service-learning contexts, and general theory related to learning in the intercultural context. Finally, the literature review concludes with a detailed presentation of the EDGE Program connecting the program to the existing the literature.

Intercultural Development

The field of intercultural communication emerged in the 1970s (Hart, 1999) from the interactions between such disparate and complementary fields as communication, cultural anthropology, linguistics, psychology, and organizational behavior, (Hart, 1999; Martin & Nakayama, 2007). Intercultural communication writ broadly seeks to understand the interactions between groups of people from different cultural backgrounds. As an area of interest within this field, intercultural development refers generally to the way in which an individual or organization approaches, understands, and relates to individuals or groups from different and similar cultural backgrounds.

Developmental Model of Intercultural Sensitivity

In considering intercultural development, a key perspective is found in Bennett's (1986, 1993, 1998, 2004) Developmental Model of Intercultural Sensitivity (DMIS). The DMIS was first introduced by Bennett in 1986 as a way to conceptualize a continuum from ethnocentrism to ethnorelativism.

Bennett's six stage model was founded on the *developmental* perspective credited to Erikson (Thompson & Bennett, 2005B). Two foundational principles are that "(1) humans move through various phases and stages in their lives, and (2) each stage is characterized by a particular question or issue that the person must resolve" (Thompson & Bennett, 2005A, p. 6). Thus people move through the DMIS as they move through stages in "cognition as described by Jean Piaget or ethicality as described by William G. Perry Jr." (Bennett, 1998, p. 25). Bennett explained that the DMIS is "based on 'meaning-making' models of cognitive psychology and radical constructivism" (p. 25)

and “links changes in cognitive structure to an evolution in attitudes and behavior toward cultural differences in general” (p. 25).

In considering the developmental nature of the model, Hammer (2008) further explained that when a developmental stage is in front of a person, it may be intentionally addressed, thus potentially resulting in “further progression along the continuum” (p. 247). However, it is also possible that an issue, although largely resolved, may still be holding back a person’s or group’s further development. Erikson (1963), in explaining his own developmental model, suggested the following underlying assumption: “that the human personality in principle develops according to steps predetermined in the growing person’s readiness to be driven toward, to be aware of, and to interact with, a widening social radius” (p. 270).

Furthermore, when considering the movement between stages, Erickson (1963) stated, “we do not consider all development a series of crises: we claim only that development proceeds by critical steps—‘critical’ being a characteristic of turning points, of decision between progress and regression, integration and retardation” (pp. 270-271). It is thus appropriate to understand that in a developmental model, a person may move either forward or backward, and that such movement may be brought about by points of crises. Also important is Erikson’s clarification that although a person must proceed through the stages in order, elements of each developmental stage are present to a small degree even before a person reaches later stages. Hammer (2008) explained that even though a person may demonstrate certain signs of a stage beyond their current status, unless they have resolved the crisis issue for their current stage, they are not yet in one of those leading stages.

Whereas Erikson's (1963) focus was psychosocial, Hammer and Bennett (2007) clarified that in the DMIS "the underlying assumption of the model is that as one's *experience of cultural difference* becomes more sophisticated, one's competence in intercultural relations potentially increases" (p. 12, italics in original).

According to Bennett (1993), the stages of the DMIS are broken into two major sections (see Figure 1). The first three stages, Denial, Defense/Defense Reversal, and Minimization, are considered ethnocentric stages. Bennett identifies the remaining sections as Acceptance, Adaptation, and Integration, which are considered ethnorelative stages.

According to Bennett (1998),

ethnocentric is defined as using one's own set of standards and customs to judge all people, often unconsciously. *Ethnorelative* means the opposite; it refers to being comfortable with many standards and customs and to having an ability to adapt behavior and judgments to a variety of interpersonal settings. (p. 26)

Medina-López-Portillo (2004) summarized the topic in this way:

Intercultural sensitivity represents and comes about through a process of individual understanding, constructing, and experiencing of difference. The development of intercultural sensitivity occurs as the constructs and experiences of cultural differences evolve toward an increased awareness and acceptance of those differences. (p. 180)

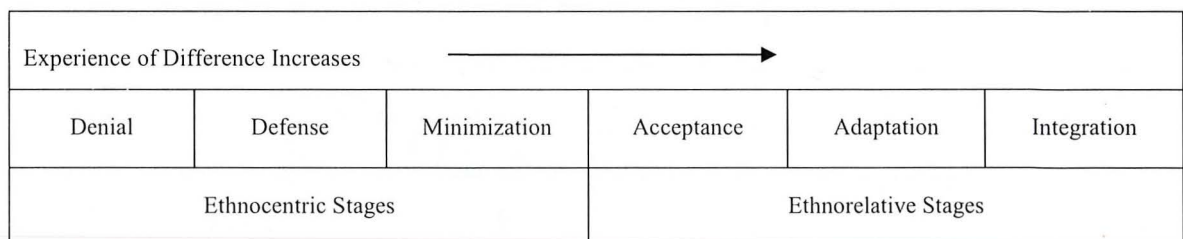


Figure 1. Stages in the Developmental Model of Intercultural Sensitivity

Acceptance of differences does not necessarily mean agreement with them. This issue will be discussed in further detail in the Intercultural Development Continuum section of the literature review.

The DMIS was well received in the intercultural field, and, according to Paige (2003), “a wealth of anecdotal evidence has emerged over the years about the value of the model, particularly with respect to training” (p. 383). Paige explained that by the “mid-1990s, there was a strong call for an instrument that could be used by trainers and researchers alike” (p. 383). According to Hammer, Bennett, and Wiseman (2003), there had been at least two attempts to develop “preliminary measures of DMIS concepts (Pederson, 1998; Tower, 1990), . . . [however] these instruments were not subjected to psychometric testing” (p. 426). The first instrument subjected to such testing was the Intercultural Development Inventory, to which we now turn.

Intercultural Development Inventory

Within the scope of this project, it is possible only to conduct an exemplary discussion of the Intercultural Development Inventory (IDI). Bennett and Hammer created the first version of the Intercultural Development Inventory (IDI) based on Bennett’s (1986, 1993) Developmental Model of Intercultural Sensitivity (DMIS). This version was subjected to testing by Paige, Jacobs-Cassuto, Yershova, and DeJaeghere (1999), who suggested refinements to the instrument. Following these refinements, Paige, Jacobs-Cassuto, Yershova, and DeJaeghere (2003) concluded that “Hammer and Bennett’s Intercultural Development Inventory is a sound instrument, a satisfactory way of measuring intercultural sensitivity as defined by Bennett (1993) in his developmental

model” (p. 485). These refinements resulted in the development of Version 2 of the IDI, the version used in the first part of the present study.

The process of the development of Version 1 and Version 2 of the IDI have been explicitly detailed in Hammer, Bennett, and Wiseman (2003). In that study, reliability, content validity, and construct validity were all shown to be satisfactory in the research associated with the IDI development.

The IDI has five scales which combine to measure movement along the DMIS stages. Figure 2 demonstrates the relationship between the DMIS stages and the IDI v.2 scales. It is important to note that within Defense, Denigration and Superiority are not interpreted separately from Defense. Additionally, Integration is not a measured stage, and Constructive Marginality is not measured. However, the EM scale does measure Encapsulated Marginality (Hammer & Bennett, 2001).


	Experience of Difference Increases 					
DMIS Stage	Denial	Defense	Minimization	Acceptance	Adaptation	Integration
	Ethnocentric Stages			Ethnorelative Stages		
IDI Scale	Denial/Defense (DD)		Minimization (M)	Acceptance/Adaptation (AA)		Encapsulated Marginality (EM)
		Reversal (RR)				

Figure 2. Relationship between the DMIS and the IDI v. 2

Since the present study began, the IDI has continued to be developed, researched, and modified. As a result, version two was used for the first iteration of the present research and version 3 for the second iteration. The most far-reaching shift was from the understanding that the IDI measures sensitivity to the assertion that it measures

competence. The ability to shift behavioral and cognitive frames of reference from one's own cultural pattern to that of a cultural other is viewed now as a measurable skill.

Hammer (2008) wrote “the IDI provides key insights on the capabilities of managers and employees for dealing with cultural differences” (p. 254). Hammer further explained that “the underlying intercultural development continuum that is assessed by the IDI posits that individuals (and groups) have a greater or lesser capability to perceive [culturally grounded] differences between themselves and others” (2008, p. 248). The changes are noted in Figure 3.

DMIS Stage	Denial	Defense	Minimization	Acceptance	Adaptation	Integration
DMIS & v.2 Stages	Ethnocentric Stages			Ethnorelative Stages		
V.2. IDI Scale	Denial/Defense (DD)		Minimization (M)	Acceptance/Adaptation (AA)		Encapsulated Marginality (EM)
		Reversal (RR)				
V.3 Intercultural Development Continuum Stages	Denial	Polarization	Minimization	Acceptance	Adaptation	Cultural Disengagement
		(Defense)				
		(Reversal)				
Intercultural Development Continuum	Monocultural Intercultural Mindset				Measured on a separate plane, not considered part of the continuum	

Figure 3. New directions in the IDI (Version 2 compared to Version 3)

The Intercultural Development Inventory and the validity thereof are discussed in greater detail in the Methods section.

Intercultural Development Continuum

Through continuing research and development of the IDI over the past decade, Hammer (2008) has released the Intercultural Development Continuum (IDC), a follow-up and corollary scale to Bennett's (1986, 1993, 1998) DMIS. As the analysis of IDI results will be conducted in reference to the IDC rather than the DMIS, the various stages of the IDC model will be considered in detail here, with reference to the DMIS as necessary for clarity.

In *Denial*, according to Bennett (2007), a person is "unable to experience differences in other than extremely simple ways" and has a worldview structure that has either "no categories or only broad categories for construing cultural difference." Furthermore "in some cases, people with this orientation may dehumanize others, assuming that different behavior is a deficiency in intelligence or personality" (p. 19). Disinterest in and avoidance of cultural difference, in Hammer's (2008) view, are featured as prominent mechanisms through which Denial plays out. The key issue to resolve in Denial, stated Bennett and Bennett (1997), is the ability to recognize the existence of culture as an explanatory principle and thus construe cultural difference.

Hammer (2008) suggested that the following stage, *Polarization*, is characterized by "a judgmental orientation grounded in a sense of 'us versus them,'" (p. 249). Bennett (2007) emphasized that in this stage it is common to have stereotyped understandings of other cultures. Polarization may either be demonstrated in Defense or Reversal. The two main variations of *Defense* are as follows: (a) Defense/Denigration, wherein any other culture (and its values and behaviors) are judged negatively; (b) Defense/Superiority, wherein positive elements of one's own culture are exaggerated (Bennett, 2007).

Bennett (2007) explained that in the other manifestation of Polarization, called Reversal, the “poles are reversed” and one views “another culture as superior while maligning one’s own” (p. 20). Hammer (2008) indicated that Reversal is distinguished from Defense, because “Reversal consists of generally positive evaluations toward other cultures” (p. 249). However, he clarified by noting that both of “these evaluations are . . . stereotypic and reflect little, deeper cultural understandings of the other cultural community” (p. 249). Hammer continued that a key feature of Reversal is the tendency to be overly critical of the cultural practices of one’s own group on the one hand, and uncritical of an often idealized other group on the other hand. According to Hammer, the key issue to resolve in Polarization (whether Defense or Reversal) is “to recognize the stereotypic nature of one’s perceptions and experiences of the other culture and to actively identify commonalities between one’s own views, needs, and goals and that of the other” (p. 249).

In Minimization attention to differences is diminished, while physical and transcendental similarities are emphasized. While Bennett (2007) conceded that this stage appears sensitive compared to the polarization of Defense, “the assumed commonality with others is typically defined in ethnocentric terms: since everyone is essentially like us, it is sufficient in cross-cultural situations to ‘just be yourself’” (p. 21). Hammer (2008) noted that difference is masked by commonality lenses, such as “an over-application of human similarity, as well as universal values and principles” (p. 249). Thus the primary issue for resolution in Minimization, for Hammer, is “to deepen understanding of one’s own culture (cultural self-awareness) and to increase

understanding of culture general and specific frameworks for making sense (and more fully attending to) cultural differences” (p. 249).

The first truly intercultural stage of the IDC is *Acceptance*. According to Bennett (2007), individuals in acceptance “perceive that all behaviors and values, including their own, exist in distinctive cultural contexts and that patterns of behaviors and values can be discerned within each context” (p. 22). Acceptance does not indicate a blind approval of any way of approaching the world, “but rather acceptance of the distinctive reality of the other culture’s worldview” (p. 22). Bennett and Bennett (1997) suggested that the primary issue for resolution in Acceptance is related to relativism that appears in two forms: behavioral and value. These forms of relativism can be experienced quite acutely and can lead to an ability to “‘talk the talk’ without ‘walking the walk’” (Bennett, 2007, p. 22). Hammer (2008) indicated that the primary task that has to be resolved for continued movement is to “reconcile the ‘relativistic’ stance that aids understanding of cultural differences without giving up one’s own cultural values and principles” (p. 251).

The second ethnorelative stage of the DMIS is *Adaptation*. Whereas Acceptance may be focused on cognitive processing of difference in context, with a limited ability to “walk the walk” (Bennett, 2007, p. 22), Adaptation emphasizes both cognitive frame-shifting and behavioral code-shifting. Bennett (1998) emphasized the role of empathy in Adaptation, which “describes a shift in perspective away from our own to an acknowledgement of the other person’s different experience” (p. 208). Bennett (2007) stated that “the ability to empathize with another worldview in turn allows modified behavior to flow naturally from that experience. It is this natural flow of behavior that keeps code-shifting from being fake or inauthentic” (p. 23). Hammer (2008) explained

that having resolved the ethical malaise of Acceptance, a person is able to deeply understand cultural difference while maintaining a strong sense of ethical commitment to other principles. It is thus that a person can accept difference without necessarily agreeing with it. The main developmental issue in Adaptation, according to Hammer, is how to “maintain an authentically competent intercultural experience—one in which substantial cognitive frame shifting and behavioral code shifting is occurring such that an individual is able to experience the world in ways that approximate the experience of the cultural ‘other’” (p. 250).

Although *Integration* was considered a stage in the DMIS, the IDC has eliminated it. What is now in view is *Cultural Disengagement*, an outgrowth of Encapsulated Marginality on the DMIS in Hammer’s (2008) terms, which “reflects a sense of being disconnected and not feeling fully a part of one’s cultural group” (p. 251). Cultural Disengagement, he noted, can happen at various points along the IDC, but is not itself an orientation—“Cultural Disengagement is independent . . . from the procession of core orientations that comprise the intercultural development continuum” (p. 251).

It may be useful here to list common statements or sentiments from each stage in order to further clarify the topic. The following statements are from Bennett and Bennett (1997, pp. 43-47)

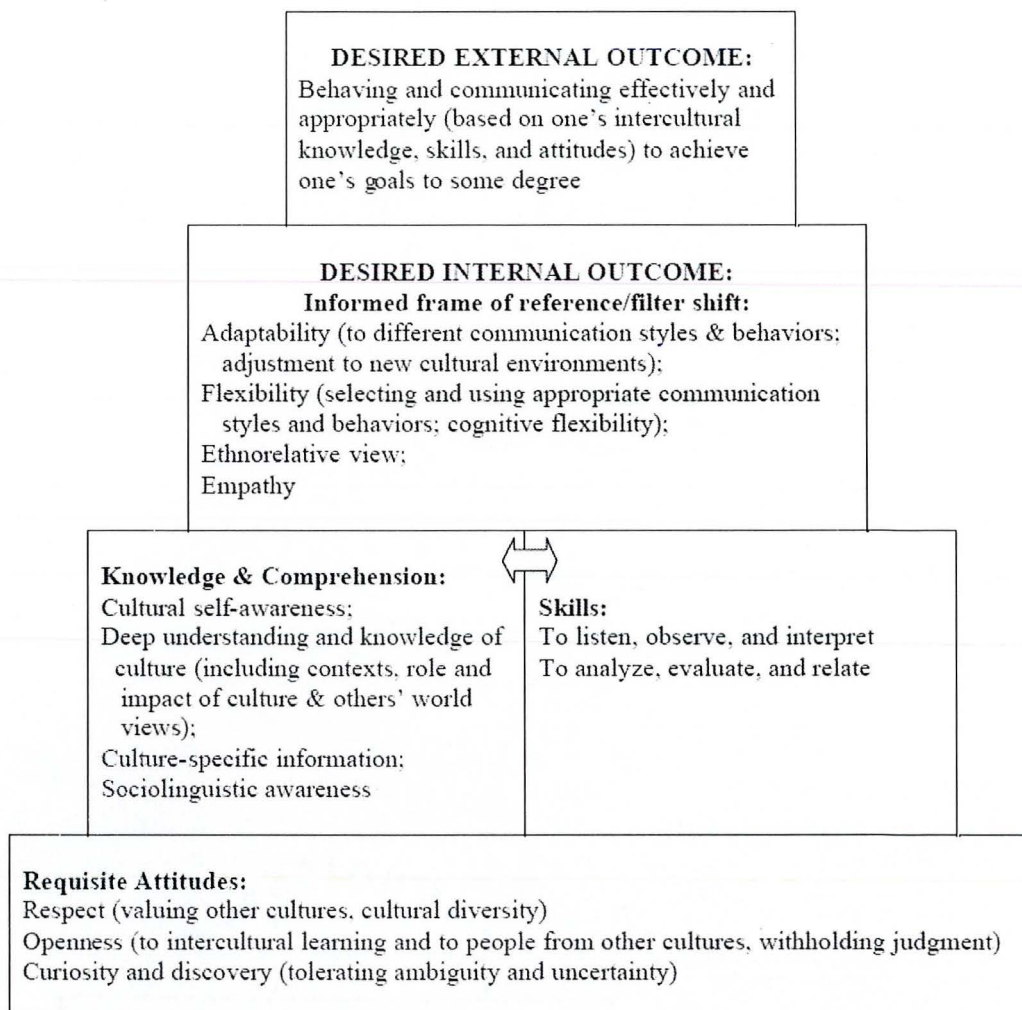
- Denial: “Live and let live, that’s what I say.” “All big cities are the same – lots of buildings, too many cars, McDonalds.” “What I really need to know about is art and music.” “As long as we all speak the same language, there’s no problem.” “The main concerns I have involve knowing how to get around and ordering in restaurants.” “With my experience, I can be successful in any culture without any special effort.” “I never experience culture shock.” “All I need to know about is politics and history—I can figure out the rest of it as I go along.”

- Defense and Reversal [Polarization]: “I wish these people would just talk the way we do.” “Even though I’m speaking their language, they’re still rude to me.” “When you go to other cultures, it makes you realize how much better the U.S. is.” “These people don’t value life the way we do.” “Boy, could we teach these people a lot of stuff.” “What a sexist society!” “These people are so urbane and sophisticated, not like the superficial people back home.” “I am embarrassed by my compatriots, so I spend all my time with the host country nationals.” “I wish I could give up my own cultural background and really be one of these people.”
- Minimization: “The key to getting along in any culture is just to be yourself—authentic and honest!” “Customs differ, of course, but when you really get to know them they’re pretty much like us.” “I have this intuitive sense of other people, no matter what their culture.” “Technology is bringing cultural uniformity to the developed world.” “While the context may be different, the basic need to communicate remains the same around the world.” “No matter what their culture, people are pretty much motivated by the same things.” “If people are really honest, they’ll recognize that some values are universal.” “It’s a small world, after all!”
- Acceptance: “The more difference the better—more difference equals more creative ideas!” “You certainly wouldn’t want to have all the same kind of people around—the ideas get stale, and besides, it’s boring.” “I always try to study about a new culture before I go there.” “The more cultures you know about, the better comparisons you can make.” “Sometimes it’s confusing, knowing that values are different in various cultures and wanting to be respectful, but still wanting to maintain my own core values.” “I know my homestay family and I have had very different life experiences, but we’re learning to work together.” “Where can I learn more about Mexican culture to be effective in my communication?”
- Adaptation “To solve this dispute, I’m going to have to change my approach.” “I know they’re really trying hard to adapt to my style, so it’s fair that I try to meet them halfway.” “I greet people from my culture and people from the host culture somewhat differently to account for cultural differences in the way respect is communicated.” “I can maintain my values and also behave in culturally appropriate ways.” “In a study abroad program, every student should be able to adapt to at least some cultural differences.” “To solve this dispute, I need to change my behavior to account for the difference in status between me and my counterpart from the other culture.” “I’m beginning to feel like a member of this culture.” “The more I understand this culture, the better I get at the language.”

Defining Intercultural Development

Despite the relative clarity provided by the Intercultural Development Continuum and the Intercultural Development Inventory, there is some confusion in the field regarding the relationships between intercultural competence, intercultural sensitivity, and intercultural development. In one of his earlier conceptualizations of intercultural development, Bennett (1993) described a process involving “a continuum of increasing sophistication in dealing with cultural difference moving from ethnocentrism through stages of greater recognition and acceptance of difference” (p. 22). Medina-López-Portillo (2004) distinguished between intercultural competence and intercultural sensitivity as follows: competence “refers to the external behaviors that individuals manifest when operating in a foreign cultural context” (p. 180). Sensitivity, she said, is primarily related to “the degree of an individual’s psychological ability to deal with cultural differences” (p. 180). Although this second item, intercultural sensitivity, is the primary target of the IDI, Hammer (2008) explained at length that the IDI measures intercultural competence in the Adaptation stage. “Adaptation is characterized by an increased repertoire of cultural frameworks and behaviors available to reconcile unity and diversity goals and a sense that one’s living in a multicultural world demands intercultural competence (performance in adaptation)” (p. 251). In a complimentary view, Rexeisen, Anderson, Lawton, and Hubbard (2008) contended that intercultural sensitivity precedes skill development.

Deardorff (2004) suggested that intercultural competence development involves a complex and additive process. Her model of intercultural competence is best summarized in Figure 4.



NOTES:

- Move from personal level (attitude) to interpersonal/interactive level (outcomes)
- Degree of intercultural competence depends on acquired degree of underlying elements

Figure 4. Deardorff's Pyramid Model of Intercultural Competence

Deardorff (2004) furthermore suggested that this may be understood in process form, as demonstrated in Figure 5, in which one begins with attitudes and proceeds from an individual level to an interactional level. As movement through the model is paired with developing attitude, knowledge/comprehension, and skills, the degree of intercultural competence is also increased.

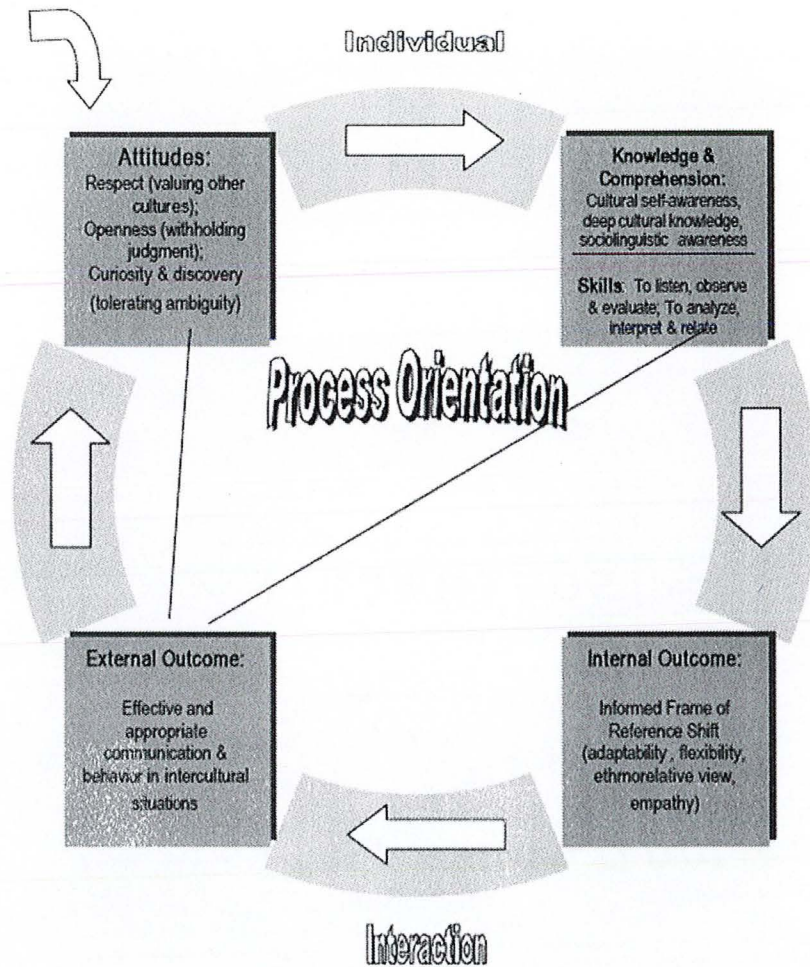


Figure 5. Deardorff's Process Model of Intercultural Competence

Providing a sense of the interworkings of psychological process and skill development, Bennett (1993) suggested a "tentative sequence" for considering the three major dimensions at play in intercultural development—cognitive, affective, and behavioral:

Initial development is cognitive—the generation of relevant categories for cultural difference. The reaction to this development is affective—a feeling of threat to the stability of one's worldview. The developmental treatment for a threat response is behavioral—joint activity toward a common goal—and the response to this treatment is cognitive—consolidation of differences into universal categories. Subsequent

appreciation of cultural difference is affective and is combined with increased cognitive knowledge of differences. This change is followed by behavioral applications involving the building of intercultural communication skills. (p. 26)

Savicki, Adams, Wilde, and Binder (2008) found that there may be several developmental processes at play in the cross-cultural adjustment experience, each of which would impact overall intercultural development. Considering this finding, and the complex interactions between affective, behavioral, and cognitive processes mentioned by Bennett (1993), Hammer (2008), Medina-López-Portillo (2004), and Rexeisen et al., (2008), it may thus be concluded that intercultural development is a comprehensive process, which involves both worldview development (intercultural sensitivity), and skill development (intercultural competence). Noting the “variety of perspectives” (p. 97) regarding intercultural competence, Bennett (2008) also takes a wide view, saying:

In examining this topic, there is an emerging consensus around what constitutes intercultural competence, which is most often viewed as a set of cognitive, affective, and behavioral skills and characteristics that support effective and appropriate interaction in a variety of cultural contexts. (p. 97)

In this section of the literature, I have attempted to conduct an exemplary review of the Developmental Model of Intercultural Sensitivity, the Intercultural Development Inventory, the Intercultural Development Continuum, and the difficulty of defining intercultural development. The following section of the literature contains a review of the major features of global service-learning.

Global Service-Learning

Overview: Modes and Requirements

The EDGE program studied in this research project is a particular kind of program that takes place in a particular kind of environment. In this case, the program is perhaps best identified as a global service-learning (GSL) experience. It is therefore useful not only to consider intercultural development as was done in the previous section of the literature review, but also to consider the general features of the context in which the participants may have experienced intercultural development.

According to Crabtree (2008), international service-learning involves combining “academic instruction and community-based service in an international context” (p. 18). Crabtree listed a variety of experiences associated with GSL: “faculty/staff led co-curricular ‘mission’ and service trips, academic courses with international immersion that include service experiences, study-abroad programs with service components, and international programs with formal service-learning curricula” (p. 18). The common bond, is a commitment to both student learning and community service (p. 18).

Silcox and Leek (1997), along with Berry and Chisholm (1999) and Chisholm (2005) made it abundantly clear that service-learning is not limited to practice originating from the United States of America. However, for the purposes of this study, service-learning initiated from the United States, and practiced across cultures (whether domestically or abroad) will provide the primary context for an exploration of service-learning, its goals and how it is assessed.

Given the similarities in concerns for cross-cultural service at home or abroad (Kraft 2002, Chisholm, 2003), I have elected, along with Hartman and Kiely (2008) to

use the term *global* as opposed to international or intercultural. Global service-learning, according to Jones (2008) is:

a method of applied education wherein learning takes place outside of the home institution's primary culture, in cooperation with a hosting organization or group that partners in facilitating learning, opportunities for meaningful service, and critical reflection within the host culture. (p. 1)

According to the National Service-Learning Clearinghouse website (2010), service-learning is “a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities” (¶ 3). According to the website of the University of Nebraska at Kearney Office for Service-Learning, a regionally recognized voice in the field, service-learning is “meeting community-identified needs through meaningful service, while achieving learning goals with and through critical reflection” (¶ 1).

Crabtree (2008) identified one of the most difficult paradoxes in global service-learning (GSL). He noted that GSL “is a multifaceted endeavor and should be informed by multiple disciplinary and interdisciplinary literatures, . . . [but that] because we are working across many disciplines, it can be difficult to find each other’s work” (p. 19). The present study represents an attempt to bring models from divergent fields together and especially to address the issue of assessment of GSL. However, the first element in the attempt to understand these programs is to consider how they are designed.

Program Design

For service-learning in general, Wade (1997) suggested six major components in the program design: (a) preparation, (b) collaboration, (c) service, (d) curriculum

integration, (e) reflection, and (f) celebration. The considerations in the design of global service-learning are related to these, although the practical outworking becomes perhaps more complicated.



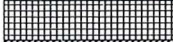

For example, in creating a GSL program, one practical concern relates to the order in which service and learning take place. Chisholm (2003) suggested that there are concurrent methods and a sandwich method, in which the studies and service alternate, with the coursework serving as preparation before the service, and as an integrating debrief session afterward. Berry and Chisholm (1999) conceptualize the options as (a) concurrent study and service, (b) sequenced learning and service, and (c) alternating learning and service.

Another consideration is whether students serve in a group or in isolation (or very small groups). There are benefits to both. In the group option, Chisholm (2003) said that there is potentially less setup, and in the individual method there is often the opportunity for students to get more personally involved. Service and learning accomplished in the group context, according to Burkholder (2003), may serve particularly to develop interpersonal relationships and team-oriented skills among co-nationals. Berry and Chisholm (1999) suggested that there are four options: (a) group study, group service; (b) group study, individual service; (c) individual study, group service; (d) individual study, individual service.

Berry and Chisholm (1999) suggested that service-learning programs might be focused around goals of career or discipline-specific development. Furthermore, they suggested that service-learning programs might be targeted to: (a) accomplish a particular course or module, (b) accomplish a portion of a larger cohesive curriculum, or (c) offer a

non-credited learning process. Other considerations for Berry and Chisholm included location, intensity of learning, and intensity of service. Eyler and Giles (1999) suggested that there were consistent correlations between certain program characteristics and outcomes. In Figure 6, these correlations are demonstrated by listing program characteristics along the top and the outcome measures they predicted along the side. It is interesting to note, for instance, that while community voice is a strong predictor of outcomes related to stereotyping and tolerance, it is actually a negative predictor of outcomes related to learning/understanding and application.

Characteristics	Placement Quality	Application	Reflection: Writing	Reflection: Discussion	Diversity	Community Voice
Stereotyping/Tolerance	Dark Grey	Medium Grey	Dark Grey	White	Dark Grey	Dark Grey
Personal development	Dark Grey	Medium Grey	Dark Grey	Medium Grey	Dark Grey	Medium Grey
Interpersonal development	Dark Grey	White	White	White	White	Medium Grey
Closeness to faculty	Dark Grey	Dark Grey	Dark Grey	Dark Grey	White	White
Citizenship	Medium Grey	Dark Grey	Grid	Medium Grey	Medium Grey	Medium Grey
Learning/understanding and application	Medium Grey	Dark Grey	Medium Grey	Dark Grey	Grid	Diagonal Lines
Problem solving/critical thinking	Medium Grey	Dark Grey	Dark Grey	Medium Grey	Dark Grey	Medium Grey
Perspective transformation	Medium Grey	Dark Grey	Dark Grey	Medium Grey	Dark Grey	Medium Grey

-  = program characteristic was a significant predictor of most measures of this outcome.
-  = program characteristic was a significant predictor of some measures of this outcome.
-  = characteristic was a mixed predictor of this outcome; some positive, some negative.
-  = program characteristic was a negative predictor of some measures of this outcome.

(Eyler & Giles, 1999, p. 168)

Figure 6. Program characteristics that are predictors of service-learning outcomes

The Integration of Service and Learning Through Reflection

When noting the various options for delivering content within global service-learning, there arises a need to bind together the different elements of the program. For instance, Kraft (2002) and Crabtree were among those suggesting that global service-learning can “break the barriers between . . . practical and formal intelligence” (Kraft, p. 298). In doing this, service-learning practitioners must decide on what to place the focus of the programs. Sigmon (1996) suggested that there were three emphases of service-learning programs:

- service-LEARNING: learning takes precedence over the service
- SERVICE-learning: service is primary, while learning is secondary
- service learning: service and learning are disconnected or separate
- SERVICE-LEARNING: service and learning goals are of equal importance and mutually informing.

In this fourth mode, viewed as preferential by Kraft (2002) and Eyler and Giles (1999), the hyphen was viewed as representing the “central role of reflection in the process of learning . . . [and] reflection [is] the vital link between service and learning” (Eyler and Giles, p. 4). Clayton (2008) suggested that critical reflection is a powerful tool in applied learning, and that it can be used for generating, deepening, and documenting learning.

Service as Authentic and Reciprocal Learning (Mutuality)

Global Service-Learning occurs in a context that necessarily involves relationships with people. Chisholm (2003) suggested that trust, mutuality of benefit, and open communication must be present for high quality, long term relationships. Camacho

(2004) echoed this sentiment saying that “reciprocity is the key to community service learning; this is what differentiates it from philanthropy and charity” (p. 31).

Mutuality was not, perhaps, as simple to achieve as might appear at first glance. Camacho (2004) explained that the “reciprocity involved . . . is asymmetrical” and risks perpetrating (potentially dehumanizing) power differentials (p. 31). Chisholm (2003), along another line, cautioned that “short-cycle service-learning programs or those requiring only four or five hours of service a week are not only of little help but may be disruptive to the schedule and work of an agency” (p. 278). According to Chisholm (2003), Kraft (2002), and Merrill (2005), one of the challenges is identifying not only appropriate modes of service, but also attempting to understand a deeper sense of what service means in a given society. Crabtree (2008) worried that GSL practitioners have not taken seriously the importance of the community, suggesting that the focus of the discussion and research was disparately focused on maximizing student learning, whereas “attention to community-level concerns is underwhelming at best” (p. 23).

Much like Crabtree (2008), Porter and Monard (2001) suggested that not only is reciprocity a component of international service-learning—but that it is, in fact, a prerequisite for effective service-learning. Reciprocal service learning should “reflect actual and expressed needs of local people” (p. 6). Porter and Monard identified eight criteria for high quality, reciprocal service-learning:

1. Service programs need a foundation of genuine need, as understood by the participants.
2. Clear and shared ownership for the project are necessary.
3. Service must be done by “real people,” and the service must be “real.” That is to say, financial contributions, while potentially helpful, are not the same as reciprocal service.

4. Service will often involve “strenuous physical engagement.”
5. An open heart and generous spirit must reign. Begrudging or “sour” dispositions have no place.
6. The mutually indebted relationship pictured in this kind of reciprocal service ideally extends beyond both generation and geography.
7. There is parity in the “giving” and “receiving” on both sides of the exchange.
8. Work exchanged or provided cannot and should not be quantified in monetary terms. (p. 8)

Porter and Monard (2001) suggested that the extant conceptualizations of service as a *hand-out* or even a *hand-up* pale when compared to the idea of a *hand to*. The EDGE program under consideration in this research uses the picture of walking down a road together or of serving “As a Younger Brother” (Smith and Jones, 2008).

An important realm for reciprocity is that of participating faculty. While it is often simpler to send a faculty member from the U.S. institution, Chisholm (2003) cautioned that “such a plan wrongly suggests to students, albeit unwittingly, that the country has no teachers capable of delivering a quality academic program” (p. 279). In rather strong language, Merrill (2005) supported the need for a complex view of the host society and reciprocal interaction with the hosts.

A program that does not understand what learning, service, and service-learning mean in the host society, that cannot meet real needs in the host society, and that cannot meet its own students’ needs without taking more from agency personnel than the agency receives in return, should not be operating a service-learning program abroad. (p. 191)

Goals

In considering global service-learning, it is not only the program design, the connection between service and learning, or the authenticity that matter. Behind each of

these are the overarching goals of GSL, which will be considered in this section. First, these will be considered generally, and then particularly in relation to *meaningful* service and to *transformational* learning.

As he reflected on GSL, Kraft (2002) identified the following potential outcomes:

personal efficacy, personal identity, spiritual growth, moral development, interpersonal development, the ability to work well with others, leadership and communication skills . . . changed world view, interest in reflective thought in the arts, literature and language, an increased interest in the welfare of others, increased self confidence, self-esteem, and independence . . . reduction in stereotypes, a facilitation of cultural and racial understanding, the development of social responsibility and citizenship skills, a commitment to service . . . global concern . . . cultural respect. (p. 304)

Monard-Weissman (2003) argued that GSL is a good vehicle for fostering a sense of justice in students, through three primary outcomes: (a) acquiring a deeper understanding of societal issues, (b) nurturing a sense of responsibility, and (c) planning for social actions.

Berry and Chisholm (1999) listed the following rationales for service-learning in the international context:

- Educated citizenry: There is a need for an educated citizenry with a broad appreciation of the world and its issues; who recognize that their own understanding, experience, mindset and beliefs are not universal; and who possess the skill to negotiate differences and work out equitable arrangements for the social order. (p. 10)
- Development of humane values: Many educators are stating unequivocally that foremost among the purposes is that of giving young adults the skills and breadth of knowledge to think deeply about the structures of their society and to appropriate values which must govern their personal and professional lives. (p. 12)
- Leadership: Closely related to the issue of developing humane values is that of developing leaders whose primary concern is for the welfare of others and for the common good. (p. 14)

- Citizenship: For many educators, nurturing citizens who will be full participants in the democratic process is a primary impetus for their commitment to service-learning. (p. 15)
- Cross-cultural communication: There is [in some places] an underlying fear that the chasms between people are growing and will one day be too large to bridge. . . . While traditional classroom-based study of cultures, languages, and social conditions remains a primary means by which universities educate about differences, there are those who believe that it is actual contact which deepens and extends the appreciation, empathy, and compassion they seek to engender. (pp. 16-17)
- Theory and Practice: Cross-cultural appreciation and skills are best learned by a combination of classroom-study and direct encounter with the people of another culture. (p. 18)
- Institutional mission: For many colleges and universities around the world, service to the wider community has been a part of the institutional mission and heritage since the time of their founding. First among these are institutions with religious foundations. (p. 19)
- Student interest and demand: Educators are responding through service-learning programs to their students' interest in human problems and their desire to be of use. (p. 21)

Eyler and Giles (1999) also suggested a list of service-learning themes and outcomes: (a) learning from experience; (b) holistic, connected learning; (c) social problem solving; (d) education for citizenship.

Meaningful Service (Affective)

One particular goal then is that of meaningful service. Meaningful service, said Berry and Chisholm (1999), may take multiple different forms, including teaching, healthcare, and community development. Yet as important as meaningful service appears to be, the attainment thereof is apparently more complicated. Burkholder (2003) discussed how, in a previous version of the Grace University EDGE program, more than half of the students expressed frustration at the “ongoing tension between studies and ministry/relationships” (p. 145). He further reported that students felt that, in particular,

the rigors of their coursework disrupted their abilities to serve and interact with host nationals.

Merrill and Pusch (2007) reported a similar finding: students' frustration "culminated in a lack of belief in the value of their contribution to the agency and any substantive impact on the clients they were serving" (p. 38). This was not, however, due to a lack of value placed on the service experience, as the students ultimately saw the service as a critical element of their overall learning. One element in determining the actual (vs. felt) impact of the service related to perspective. For instance, Merrill and Pusch related the comments of a community partner who gave attention "to the constant presence of students, year after year, doing small things that meant something to the people with whom they worked, that made a difference, if only by demonstrating that there was a group of people who care" (p. 38).

Transformational Learning

Related to the goal that service be meaningful is the desire that the learning be transformational. Crabtree (2008) and Kiely (2005) commented on the power for transformational learning in GSL. Crabtree explained (2008) "The nature of the cross-cultural encounter, awakening of global awareness, powerful cognitive dissonance that often results, and immense personal growth that becomes possible are each phenomena with enormous disruptive as well as transformative power" (p. 28). There are, however, consequences to this tremendous potential, and it would "be unethical for us to be unprepared to manage these changes in/for ourselves in addition to helping our students process them" (p. 28). In this, Crabtree strongly echoed Kiely (2004, 2005) who, while noting the transformative power of service-learning in Mezirow's (2000) terms, also

cautioned practitioners about the need for long-term commitment to students' change processes. Interestingly, there seemed to be a strong relation to Erikson's (1963) concept of crisis as a necessary element to developmental progress.

The potential, it seemed to Eyler and Giles (1999), comes from a learning process that occurs "through a cycle of action and reflection," rather than simply "being able to recount what has been learned through reading and lecture" (pp. 7-8). The transformational process is related to the linking of personal, interpersonal, academic, and cognitive development. "This linking of head and heart is a holistic approach involving values as well as ideas" (pp. 9-10).

Eyler and Giles (1999) suggested certain criteria under which learning happens in service-learning, such as when:

- learning begins with personal connections
- learning is useful
- learning develops critical thinking capacities
- learning is transforming
- learning undergirds citizenship (pp. 14-18)

Assessment

It has often been contended by researchers such as Berry (1990), Fitch (2004), Kiely (2004), Pusch (2005), and Crabtree, (2008) that service-learning can promote intercultural growth. At the same time, according to Tonkin and Quiroga (2004), evaluating international service-learning is no easy thing to do. Furthermore, empirical research has not backed the assumption that "intercultural contact would itself produce increased cross-cultural awareness and reduced ethnocentrism" (Crabtree, 2008, p. 21;

also see Pettigrew, 1998). On the other hand, “Pusch (2004) . . . found a relationship between ISL [International Service-Learning] experiences and increased self awareness, cross-cultural skills, and intercultural learning” (Crabtree, 2008, p. 21).

Several attempts have been made to assess global service learning and intercultural competence. Burkholder (2003) experimented with a longitudinal assessment of students participating in early versions of Grace University’s EDGE Program. Deardorff (2003) presented two models of intercultural competence and an assessment guide. Balas (2006) brought attention to the difficulty of understanding the many different variables at play in international service-learning, also noting the holistic nature of the learning. Balas (2006) also suggested a Character Education Model¹ for use in GSL. Merrill and Pusch (2007) offered “models for research on students doing intercultural service-learning” (p. 21). Kiely and Hartman (2011) presented a review of qualitative research methodology in GSL. Though not available when this research was being conducted, I would have liked to review Bringle, Hatcher, and Jones (2011), who promise to present perhaps the most comprehensive discussion of international service-learning and its assessment.

How, then, should practitioners approach the complicated arena of the development and measurement of intercultural competence within the GSL context? Certainly this endeavor, said Crabtree (2008), requires “a basic proficiency in cross-cultural psychology and communication” (p. 21).

There have been several proposals for methods to evaluate GSL, including post-experience interviews and focus groups. Tonkin and Quiroga (2004) conducted a

¹ For further attention to Balas’ (2006) model, see Components and Processes that Contribute to Intercultural Development in GSL within the Global and/or Intercultural Service-Learning section of the Literature Review.

longitudinal study using “document analysis, on-site participant observation, focus groups, and semistructured and unstructured interviews” (p. 8).

In discussing his Transformational Service-Learning Process Model², Kiely (2005) suggested that “instead of narrowly focusing service-learning research on more precise methods, disciplinary-based outcomes, and reflective techniques, researchers should also generate knowledge of and develop theories about, the contextual, visceral, emotive, and affective aspects that enhance transformational learning in service-learning” (p. 18).

Kiely (2004), had previously noted that “there is limited research on the impact of international service-learning programs on students’ learning and development” (p. 5). Kraft (2002) noted that compared with studies examining the impact of domestic service-learning, “research on the effects of international service-learning is limited and anecdotal in nature” (p. 303).

Empirical studies have demonstrated, according to Kiely (2004), that “participation in international service-learning increases students’ intercultural competence” (p. 5). However, only a few studies (Westrick, 2004; Fitch, 2004) have employed the psychometrically valid Intercultural Development Inventory (IDI) in this process of empirical demonstration.

Kiely and Hartman (in press) have expressed a need to understand the researcher as an instrument in GSL studies. They explain:

As the instrument, the qualitative researcher has the benefit of adjusting and responding more immediately to changes in the environment, unpredictable and evolving program conditions, participant needs, as well

²For further attention to Kiely’s (2005) Transformational Service-Learning Process Model, see Components and Processes that Contribute to Intercultural Development in GSL within the Global and/or Intercultural Service-Learning section of the Literature Review.

as the ability to document verbal and non-verbal human perceptions, meanings and relations through document analysis, observations and interviews. (p. 3)

The first section of the Literature Review focused on intercultural development.

Especially considered have been the Developmental Model of Intercultural Sensitivity, the Intercultural Development Inventory, the Intercultural Development Continuum, and the definition of intercultural development.

The present section has presented an extended treatment of Global Service-Learning. Especially considered were the modes and requirements of GSL, program design, the interrelation of service and learning, the need for authenticity and reciprocity in service, and the potential of GSL for both meaningful service and transformative learning. Finally, this section considered the assessment of global service-learning.

The following section presents a melding of these two themes through a consideration of intercultural development in the intercultural learning context. Since much of the research about this topic has been generated through research on study abroad, literature on this subject will be reviewed first. This is followed by literature on intercultural development in the GSL context and finally by a broader review of otherwise neglected items related to intercultural development in the GSL context such as the contact hypothesis, intensity factors, and cultural transitions.

Intercultural Development in the Intercultural Learning Context

Study Abroad

If intercultural development is, as discussed in the first section of the Literature Review, the holistic movement towards the ability to understand and work with cultural others (Bennett, 1993; Hammer 2008; Medina-López-Portillo, 2004; Rexeisen et al.,

2008), what role might study abroad play in that movement? Engle and Engle (2003) suggested that the “goal of overseas education could be summed up as movement as far as possible forward on [the] scale” of intercultural development (p. 7). In considering the means through which study abroad accomplishes that end, Engle and Engle (2004) suggested eight key components for study abroad programs, revised from their 2003 seven “defining components of overseas programs”:

1. Length of student sojourn
2. Entry target-language competence
3. Required language use (in class and out)
4. Faculty
5. Coursework
6. Mentoring, or guided cultural reflection
7. Experiential learning initiatives
8. Housing (p. 222)

Given the comprehensiveness of this list, it will serve as the basis for much of the discussion regarding intercultural development in the intercultural learning context.

There are several additional considerations (student characteristics, learner support and challenge, lasting effects) suggested by other study abroad authors that will be addressed in this section as well. A specific look at intercultural development in the global/intercultural service-learning area will follow this section, along with a brief reference to general intercultural development theory.

Component 1: Length of Student Sojourn

Regarding Engle and Engle’s (2004) first item, the length of student sojourn, there is near universal agreement that longer study abroad programs—up to a point—lead to increased intercultural development. Medina-López-Portillo (2004) found support in an IDI study “for the hypothesis that duration of study abroad programs plays a key role in

the development of intercultural sensitivity of U.S. university students abroad” (p. 191). This was further confirmed by Engle and Engle (2004) and Vande Berg, Connor-Linton, and Paige (2009). Vande Berg et al. found the strongest intercultural development in students who studied abroad for 13-18 weeks. They further found that students who studied abroad for more than 18 weeks “plateaued significantly” (p. 20), and recommended that specific interventions be used to reinvigorate learning for students studying beyond this timeframe. Interestingly, Engle and Engle (2004) showed IDI results suggesting that full year (two semester—approximately 32 weeks) students showed significantly more progress than others, with an increasing rate of progress during the second semester—one wonders if they had interventions such as those suggested by Vande Berg et al. (2009), in place.

Components 2 and 3: Language Competence and Use

Engle and Engle’s (2004) second and third considerations, related to language competence and use during study abroad, yielded less consensus than program duration. There was some agreement by Engle and Engle and Vande Berg et al., 2009 on the hypothesis that language skills obtained prior to the study abroad experience were key to intercultural success. Vande Berg et al., particularly noted that although prior language study did not increase the initial IDI scores, they actually increased the post experience IDI scores compared with students who did not have prior language study. It is possible that an increased initial language competence is related to Savicki et al.’s (2008) comment that “early successes in [intercultural] adjustment are necessary to move students toward later, overall success of study abroad placement” (p. 125). Jackson (2005) set a contrast to early linguistic competence here, noting that a lack of

conversation skills led to informal intercultural encounters that did not go well for her students. This tended to provoke a reaction in which students would “regard their interlocutor as prejudiced against their ethnic group” (p. 172). Medina-López-Portillo (2003) similarly predicted that “lack of language proficiency may result in avoidance of contact with the host culture, an avoidance that, in turn, will affect learning about the culture and developing meaningful connections with host-country nationals” (p. 193).

Vande Berg et al. (2009) were surprised to find that increased linguistic competence during study abroad did not correlate directly to increased intercultural development, while Engle and Engle (2004) did notice a “certain moderate level of coherence between individual rates of linguistic and cultural progress” (p. 233). Vande Berg et al. (2009), did find some evidence of an association (albeit indirect) between language and intercultural learning. These kinds of findings lead Engle and Engle (2004,) to bemoan the “decreasing level of pre-departure foreign language competence” (p. 220) they noticed in their incoming students.

Component 4: Faculty

Engle and Engle’s (2004) fourth component considers the role of faculty, particularly in the question of which faculty are utilized (home institution, local, etc.). The role of faculty in intercultural development, however, may be conceptualized more broadly. For instance, Goode (2005) specifically considered the role of study abroad faculty directors in the intercultural learning process. At the school studied by Goode, the faculty under consideration tended to significantly overestimate their own level of cultural competence (all were in transition within Minimization and/or Reversal according to the IDI), while also under-emphasizing their role in the student’s

intercultural development process. Interestingly, they primarily saw themselves in a dean of students' role, and focused much of their energy accordingly.

Yet it is clear that faculty have an impact on the intercultural success of their students (Rexeisen et al., 2008; Medina-López-Portillo 2003; Vande Berg et al., 2009). One variation of the role of faculty (beyond faculty as instructors) is that of faculty as mentors. The question of mentors is considered in this literature review under component 6. However, as Medina-López-Portillo (2003) stated, faculty themselves must recognize that “choices about the experience made by the study abroad office . . . including . . . the availability of an on-site study abroad faculty director” have an impact on intercultural learning outcomes (p. 192).

Component 5: Coursework

Engle and Engle (2003) distinguished between “culture-based international education” and “knowledge-transfer” study-abroad (p. 4). Medina-López-Portillo (2003) noted that choices about pre-departure programs, the content of study, and re-entry activities can each impact intercultural learning outcomes.

Interestingly, it may not only be the content studied, but the context in which it is studied that contributes to intercultural development. For instance, Vande Berg et al., (2009) found that enrolling in content courses taught in the target language “was positively associated with intercultural development. Students who took some or all of their content courses in the target language showed significantly greater IDI gains than students who took such courses in English” (p. 21). Another element of context included the composition of the class. Vande Berg et al. found that students “who took courses alongside other U.S. students, or in classes featuring a mixture of U.S., host culture, and

other international students, showed greater IDI gains than students who studied in courses made up entirely of host country students” (p. 21).

Component 6: Mentoring/Guided Cultural Reflection

Engle and Engle (2004) suggested that the role of mentoring and guided cultural reflection will impact the nature of a study abroad experience. There are multiple methods for guiding cultural reflection. For instance, Jackson (2005) found that diaries (journals) were “well-suited to promote my students’ awareness of and reflection on their intercultural learning during their sojourn” (p. 179). This finding was corroborated by Clayton (2009), who noted that critical reflection, which could be accomplished in part through journal reflection, might be used to generate, deepen, and document learning in applied learning situations, such as study abroad.

Vande Berg et al. (2009) noted that meetings with cultural mentors actually contributed to the students’ development. They claimed that the mentors could help provide perspective and reengage students with the intercultural learning process. The impact of cultural mentors abroad who met “very often” with students was so positive toward intercultural learning that Vande Berg et al. “strongly [suggested] that faculty and advisors should develop programs or encourage their students to enroll in programs that feature this form of intervention” (p. 25). Engle and Engle (2004) similarly considered skillful mentoring to be one of the top two conditions for successful intercultural development.

Component 7: Experiential Learning Initiatives

An important element of the study abroad experience, according to Engle and Engle (2004), might involve experiential learning initiatives. This idea fits with Bennett's (1993) explanation of the intercultural development process as not merely cognitive. Patterson (2006) reported that the process is not merely location-based either: "simply spending time in another culture, while studying abroad, does not necessarily guarantee understanding, acceptance of another culture, and a statistically significant development of intercultural sensitivity" (p. 92). Medina-López-Portillo (2003) suggested that choices about internships and service-learning opportunities will impact the intercultural development process. She also mentioned Pettigrew's (1998) restatement of the contact hypothesis, as a relevant theme, which is considered in more detail in the "General Intercultural Development Theory" section of the literature review.

Component 8: Housing/Interaction with Host Nationals

Engle and Engle (2004) were unequivocal about the importance of interaction with host nationals as one of the two factors (the other is mentoring) which "lead to the clear development of cross-cultural competence in the American student group" (p. 232). They continued, noting that the goal is "as much direct, authentic contact with the host culture as possible" (p. 232). Naturally, one of the main forums for interaction with host nationals is the choice of housing. However, in a counterintuitive finding, students who lived with other students from the U.S. or host-country students developed intercultural competence as measured on the IDI, while those living with international students or a host family did not appear to increase in intercultural development (Vande Berg et al.,

2009, p. 23). On the other hand, when U.S. students spent 76-100% of their free time with co-nationals, intercultural learning simply stopped (p. 24).

Additional Consideration 1: Student Characteristics

Medina-López-Portillo (2003) suggested that “student backgrounds, characteristics, and personal circumstances” (p. 192) impact the intercultural development process. In an interesting confirmation of this assertion, Vande Berg et al. (2009) found that “on average, females in this study made statistically significant gains in their intercultural development while abroad. Males did not” (p. 18).

Medina-López-Portillo (2003) also questioned the role of race and ethnicity, as well as power differentials in students’ intercultural development. Within the study abroad literature considered for this review, Medina-López-Portillo was the only one to problematize these areas, noting that a salient point “not commonly taken into consideration or discussed with students [is] the influence of race and ethnicity” (p. 196).

Another element of student characteristics noted by Medina-López-Portillo (2003) related to students’ ability to successfully navigate the intercultural development process. When students overestimate their preparedness for the experience they at times will “not take seriously the importance of preparing themselves in order to maximize their chances of meeting realistic learning objectives while abroad” (p. 196). And while students who had the furthest to go in terms of intercultural learning demonstrated the most profound development as shown by Vande Berg et al. (2009), the evidence proved to be contrary to the idea that “U.S. students normally learn abroad when left to their own devices” (p. 21)

Additional Consideration 2: Learner Support and Challenge

A theme in Engle and Engle (2003) and Vande Berg et al. (2009) is the need to balance learner support and challenge. Vande Berg et al. (2009) explained that “many of these students, when left to their own devices, failed to learn well even when ‘immersed’ in another culture” (p. 22). Thus, “being exposed to cultures different from their home cultures turned out to be a necessary, though not a sufficient, condition for their intercultural learning” (p. 25). It is necessary to involve a certain amount of challenge, or even discomfort, according to Engle and Engle (2003), to get students to experience the real challenges of intercultural relations. Yet if the situation is too painful or unsupported, Vande Berg et al. (2009) found that student learning also stops: “students learn most effectively in environments that provide a balance between challenge and support. . . . If confronted with too great a challenge, students retreat from learning. They become bored if they receive too much support while experiencing too little challenge” (p. 22).

Further connected to learner support and challenge is what Paige (1993) called *Intensity Factors* and *Risk Factors* (Table 1). Paige argued that intercultural education may be both psychologically and morally challenging. In light of this reality, combined with the observation that “intercultural education is inherently transformative” (p. 18), Paige called on intercultural educators to “recognize [the] risks, systematically assess learning activities in light of them, and sequence those activities accordingly” (p. 18). Continuing the theme of learner support and challenge, Paige suggested that competent educators will “know when the time is right to confront and challenge learners” (p. 18).

Paige’s Intensity Factors will be considered in more depth in the General Intercultural Development section later in the Literature Review.

Table 1. Paige’s Intensity and Risk Factors

Intensity Factors	Risk Factors
Cultural differences	Risk of personal disclosure
Ethnocentrism	Risk of failure
Language	Risk of embarrassment
Cultural immersion	Risk of threat to one’s cultural identity
Cultural isolation	Risk of becoming culturally marginal and culturally alienated
Prior intercultural experience	Risk of self-awareness
Expectations	
Visibility and invisibility	
Status	
Power and control	

Additional Consideration 3: Lasting Effects

There is, finally, some concern over the long-term effects of study abroad based development for students. First, it is important to recognize that not all students will increase in intercultural development simply as a result of participating in study abroad (Patterson, 2006; Engle & Engle, 2003; Vande Berg et al., 2009; Rexeisen et al., 2008). In fact, Engle and Engle (2004) saw 14% of their student population *decrease* in intercultural competence following the study abroad experience. This was consistent with Erikson’s (1963) observation that when confronted with a developmental crisis, some will grow while others will regress.

Among those who did show gains, it appears possible that intercultural gains will not be maintained following the experience. Although Rexeisen et al. (2008) found “strong support for the proposition that study abroad experiences have a positive

immediate impact on the intercultural development of students” (p. 8), they were concerned to see that there was a small (non-significant) reduction in student’s IDI gains in a follow-up study.

Rexeisen et al. (2008) commented that “the question arises as to the degree of students’ overall improvement in intercultural development when measured from pre-departure to the four month follow-up period” (p. 8). A comparison of pre-test scores with follow up scores revealed that there was no significant gain in the overall IDI profile for the group. “Therefore this study raises questions about the long-term benefits of study abroad on intercultural development” (p. 8).

In contrast, when Vande Berg et al. (2009) had a significant number of students take a follow up IDI five months after finishing their study abroad programs, overall they showed neither gains nor losses in intercultural learning. The students’ intercultural development “was sustained, at least during the first five months after their return” (p. 25). Having thus concluded the consideration of intercultural development within study abroad, we may now turn our attention to intercultural development within GSL.

Global and/or Intercultural Service-Learning

Although there are certain similarities between study abroad and intercultural service-learning, there is a largely separate body of literature for each of these themes. Certain authors, notably Merrill and Pusch (2007), Westrick (2004), and Fitch (2004), have sought to bring certain common themes to bear. However, these bodies of literature still remain rather disconnected. Under review in this section is the process of intercultural development in the intercultural service-learning context. This builds on the

treatment of global and/or intercultural service-learning undertaken in the section of the literature review entitled “Global Service-Learning” (GSL).

Capacity of GSL to Develop Intercultural Competence

As early as 1990, Berry argued that intercultural service-learning had high capacity “to further international and intercultural literacy, knowledge and sensitivity” (p. 311). He noted that service-learning works well with intercultural development as “basic pedagogy” (p. 311). Westrick (2004) connected three assumptions about intercultural development from M. Bennett (1993) to effective service learning. Both, it turns out, emphasized the “need to experience difference and then . . . process intentionally . . . to construct meaning” (Westrick, 2004, p. 282). Service-learning provides the “ongoing cycle of experience, processing meaning, and back to experience”—important process pieces for intercultural development. Finally, Westrick stated that “if students involved in service are to reduce their own ethnocentric beliefs and move along the developmental continuum, they need to work through ethical choices that often emerge within service situations” (p. 282).

Westrick (2004) found that involvement in service-learning “does have the potential to influence the development of intercultural sensitivity” (p. 296). However, she clarified that there was no evidence that “service-learning *per se* increases intercultural sensitivity—nor does merely increasing the duration of involvement in service programs” (p. 296). Westrick further commented that “some service models are associated with significantly lower scores of intercultural sensitivity, . . . [and thus] educators need to examine their service programs carefully . . . to ensure that they contribute to the enhancement of ethnorelative rather than ethnocentric worldviews” (p.

296). Kraft (2002) echoed this concern, saying that “international experience can often lead to reinforcing stereotypes” (p. 304).

Crabtree (2008) emphasized that although it was once believed that intercultural contact would produce intercultural development, researchers have found instead that group status, gender, the sojourner’s country of origin, individual predispositions and attitudes, and characteristics of the host country all impact individual outcomes. Further discussion of the role of intercultural contact may be found under the Contact Theory section of the General Intercultural Development portion of the Literature Review.

Fitch’s (2004) study found support for the idea that “intercultural contact through service-learning experiences might be an effective pedagogical tool to promote intellectual development” (p. 123). Furthermore, the type of course (formal education) was, in some cases, related to development. Specifically, “intercultural contact/service-learning integrated into courses that focus on cultural issues may better prepare students to develop intercultural sensitivity and may also promote intellectual development more than courses that have neither of these features” (p. 123). Fitch also offered the caution that “if not done well . . . service-learning experiences also have the potential to simply reinforce stereotypes and cultural superiority” (p. 124). Kiely (2004) furthermore cautioned that a GSL program can “trigger extremely powerful visceral, emotional, cognitive reactions from students” (p. 25) and that GSL educators who have “‘transformative intentions’ need to recognize the long-term struggle inherent in the nature of transformational learning” (p. 26).

Components and Processes that Contribute to Intercultural Development in GSL

Berry (1990) identified several key features for successful intercultural service-learning. First, “the key to successful intercultural learning is parity of esteem and mutuality on the part of all involved” (p. 312). Second, “The program design should reflect the active role of all parties in the learning process” (p. 312). Third, “The service and the learning should be closely integrated in an intentional manner” (p. 312). Fourth, “Academic and cultural pre-departure preparation is of great importance, as are ongoing support structures for students while in the other culture” (p. 312). Fifth, “The program should intentionally and systematically confront the fact that the students’ values may be different from those of the communities where they are placed” (p. 313). The final element of empowerment, Berry admitted, is controversial. He suggested that it can be understood in two ways: “empowerment of the students’ identity and worth through the experience of service, and empowerment of the community being served” (p. 313)

Burkholder (2003) explained that non-formal education (also understood as on-the-job, or experiential training) has the “greatest capacity for rapid change and is noted for its functionality” (p. 84). Non-formal education is especially useful for change “and transformation with respect to tasks and performance skills” (p. 84). Burkholder further noted that informal education is an important learning method in intercultural service-learning. Burkholder suggested that the intercultural learning process may be conceptualized as a holistic combination of the following: cognitive, skill-based (or behavioral), and affective goals, accomplished through formal, non-formal, and informal methods, in the tripartite contexts of the school, workplace, and community. Each of these elements may thus be intentionally designed and assessed.

Burkholder (2003) noted that as a student “lives, studies, and is stretched in another culture, [there is] potential for significant learning and life change” (p. 90). Furthermore, utilizing each of these learning goals, methods, and contexts will “service a variety of learning styles” (p. 90). Particularly important to Burkholder was the intentional use of the informal learning context, which provides “the superiority of field-based training since most of the competencies which characterize successful” (p. 159) cross-cultural workers are attitudinal. Burkholder further noted that there was a non-curricular benefit to having Malians serve as instructors—not only was there formal learning, but informal (and perhaps non-formal) in those encounters. He said:

Affirming Malians, empowering Malians, and submitting to the instruction of Malians did more to remove prejudice, eliminate stereotypes, neutralize feelings of superiority, and create mutual respect in the students than any course on that subject could ever hope to accomplish. (p. 159)

The emphasis on experiential learning, such as that suggested by Burkholder (2003) did not satisfy Kiely (2005), who is one of the foremost researchers in global service learning. Kiely expressed frustration that the literature in general has an excessive focus on experiential learning theory (such as Kolb’s 1984 theory). Recommending Mezirow’s (1997, 2000) transformational learning model as a more appropriate foundation for considering development in the service-learning context, Kiely (2005) proposed a “Transformational Service-Learning Process Model.”

In Kiely’s (2005) research, five categories arose that described how students experienced transformational learning in service learning: contextual border crossing, dissonance, personalizing, processing, and connecting. These elements are fully described in Figure 7.

Beyond Kieley's (2005) five themes, Balas (2006) proposed a Character Education Model with five more key facets of "coherent and successful" (p. 5) global service-learning. Balas explained that through emphasizing global inclusion, students should simultaneously maintain their own identity while also understanding their connection to the larger world. She also suggested that academic multi-disciplinarity leads to collaborative responses to challenging situations. Experiential compassion, Balas reflected, moves students beyond hypothetical altruistic intentions to a lived experience of these values in action. Balas further expected that engaged reflection should "aid students in drawing meaning from their individual and shared activities" (p. 7). Finally, Balas argued that the reciprocity of service should be emphasized, with students seeing themselves both as providing and receiving care.

Theme	Meaning & Characteristics
Contextual border crossing	There are personal (i.e., biography, personality, learning style, expectations, prior travel experience, and sense of efficacy), structural (i.e., race, class, gender, culture, ethnicity, nationality, sexual orientation, and physical ability), historical (i.e., the socioeconomic and political history of Nicaragua and US-Nicaragua relations within larger socioeconomic and political systems), and programmatic factors (i.e., intercultural immersion, direct service-work, and opportunities for critical reflection and dialogue with diverse perspectives, and curriculum that focuses on social justice issues such as poverty, economic disparities, unequal relations of power) which intersect to influence and frame the way students experience the process of transformational learning in service-learning.
Dissonance	Dissonance constitutes incongruence between participants' prior frame of reference and aspects of the contextual factors that shape the service-learning experience. There is a relationship between dissonance type, intensity, and duration and the nature of learning processes that result. Low to high intensity dissonance acts as triggers for learning. High-intensity dissonance catalyzes ongoing learning. Dissonance types are historical, environmental, social[,] physical, economic, political, cultural, spiritual, communicative, and technological.
Personalizing	Personalizing represents how participants individually respond to and learn from different types of dissonance. It is visceral and emotional, and compels students to assess internal strengths and weaknesses. Emotions and feelings include anger, happiness, sadness, helplessness, fear, anxiety, confusion, joy, nervousness, romanticizing, cynicism, sarcasm, selfishness, and embarrassment.
Processing	Processing is both an individual reflective learning process and a social, dialogic learning process. Processing is problematizing, questioning, analyzing, and searching for causes and solutions to problems and issues. It occurs through various reflective and discursive processes such as journaling, reflection groups, community dialogues, walking research, and observation.
Connecting	Connecting is learning to affectively understand and empathize through relationships with community members, peers and faculty. It is learning through nonreflective modes such as sensing, sharing, feeling, caring, participating, relating, listening, comforting, empathizing, intuiting, and doing. Examples include performing skits, singing, dancing, swimming, attending church, completing chores, playing games, home stays, sharing food, treating wounds, and sharing stories.

Figure 7. Kiely's Transformational Service-Learning Process Model

Balas (2006) then suggested assessing each of those five elements (global inclusion, experiential compassion, engaged reflection, reciprocity of service, and multidisciplinary preparation) using the following questions (p. 9):

1. Did this course increase knowledge of service community & social challenges facing its residents?

2. Did this course develop increased feelings of self-worth, self-efficacy, & self-awareness among student participants?
3. Did this course improve the communication skills of participating students?
4. Did this course encourage students to view the world through the perspectives of others?
5. Did this course aid students in understanding the impacts of their everyday practices on the global community?
6. Did this course help students develop habits of kindness, empathy, & respect in interactions with others?

These overlapping and interconnected processes suggested by Berry (1990), Balas (2006), Burkholder (2003), and Kiely (2005) comprise a small but representative sampling of the GSL field. Figure 8 represents a condensed list of these processes.

Key GSL Learning Feature		
Learning	Experience	Human Relationships
Academic multi-disciplinarity	Mutuality/Reciprocity in service	Mutuality/Reciprocity in service
Integrated service and learning	Integrated service and learning	Host community empowerment
Pre-departure support	Pre-departure support	Social (group) reflection
Ongoing learning support	Ongoing learning support	Development of global and local connection to others
Dissonance used to intentionally introduce challenge	Dissonance used to intentionally introduce challenge	Intentional in-formal (affective) education
Individual reflection	Intentional non-formal (behaviorial) education	
Intentional formal (cognitive) education	Intentional in-formal (affective) education	
Intentional non-formal (behaviorial) education		
Intentional in-formal (affective) education		

Figure 8. Key GSL learning features that contribute to intercultural development

GSL-Specific Learning Outcomes Related to Intercultural Development.

While the previous section focused primarily on the component aspects of GSL processes that facilitate intercultural development, the present section examines specific GSL learning goals and their connection to intercultural development. For instance, in a longitudinal study on an earlier version of the same Grace University GSL program being evaluated in the present study, Burkholder (2003) noted participant learning gains in the following areas: (a) broadened perspective, (b) self-awareness, (c) flexibility, (d) respect and acceptance, (e) confidence, (f) spiritual development, and (g) cultural appreciation.

Kiely (2004) undertook a similar kind of research project and noted three main themes in his student participants. The first was envisioning, in which students undergo an initial change in perspectives, through which they develop an “intention to act” (p. 9) especially as an ally to the poor. The second theme was that of transforming forms, as seen through dynamic shifts in the way the students see the world or themselves in at least one of six different arenas: “political, moral, intellectual, cultural, personal, and spiritual” (p. 10). Finally, Kiely discovered a phenomenon he referred to as the chameleon complex. The Chameleon complex, he said, involved the long term “challenges and struggles students experience in attempting to change their lifestyle” (p. 10) in accordance with their new perspectives and can result in re-integration or dis-integration.

Continuing the theme of learning outcomes in cognitive, affective, and behavioral areas, Balas (2006) identified eight areas of character development facilitated by GSL: (a) global awareness and self-reflexivity; (b) personal and collective responsibility, ethical behaviors; (c) agency, problem-solving, and leadership skills; (d) communication

skills; (e) self-awareness and community involvement; (f) personal voice and social conscience; (g) compassion; and (h) interpersonal connections.

There emerge, then, three primary arenas of intercultural development-related growth in GSL: (a) worldview, (b) self, (c) application. Moreover, while the items identified by Burkholder (2003) and Kiely (2004) are not themselves representative of intercultural sensitivity development per se, they do represent the holistic movement towards the ability to understand and work with cultural others sought in intercultural development. These combined learning outcomes are summarized in Figure 9.

GSL Learning Outcome Arena		
Worldview	Self	Application
Broadened perspective	Self-Awareness	Compassion
Political understanding	Self-Reflexivity	Changed lifestyle
Cultural identification	Confidence	Intention to act
Cultural appreciation/respect	Spiritual development	Developed agency
Moral development	Flexibility	Community involvement
Social conscience	Intellectual development	Leadership
Collective responsibility	Personal voice	Interpersonal connections
	Personal responsibility	Problem Solving
		Ethical Behaviors

Figure 9. GSL learning outcomes related to intercultural development

Bridging to Intercultural Theory

Conspicuous by its absence in the preceding discussion of intercultural development in the GSL context is reference to the field of intercultural relations itself. Merrill and Pusch (2007) noted that in the cross-cultural service-learning context, “it is necessary to be familiar with intercultural research and theory, and specifically with the research on acculturation and cultural competence, in addition to service-learning . . . and educational . . . categories” (p. 22).

In a relatively recent addition to the literature, Crabtree (2008) emphasized that “if we are to fully understand the educational potential of international education and design [GSL] programs optimizing the benefits of this experience, *we need a basic proficiency in cross-cultural psychology and communication*” (emphasis added, p. 21). It is thus that Merrill and Pusch (2007) suggested the following “essential theories” for “investigating student results in service-learning abroad” (p. 23):

- *Contact theory* (Allport, 1954) and the many analyses of the situations in which contact with “others” does and does not alleviate prejudice; [see also Pettigrew, 1998; and Pettigrew, Tropp, Wagner, and Christ, 2011]
- *Acculturation* (Ward, Bochner, & Furnham, 2001)—the affective, behavioral, and cognitive paradigms of adapting, more specifically described as stress, coping, and adjustment” (affective); “culture learning” (behavioral); and “social identification theories” (cognitive)
- *Developmental model of intercultural sensitivity* [discussed in detail above]
- *Intensity factors* (Paige, 1993)—the factors in the interaction between the individual and the environment that make the intercultural encounter more or less intense for specific individuals
- *Reentry theory and the factors that affect it in practice* (Martin & Harrell, 2004), including reentry styles (Pusch, 1998)

The theories Merrill and Pusch (2007) have highlighted are more appropriately considered in the next section entitled “General Intercultural Development Theory,” as there is little supporting literature within the GSL field.

General Intercultural Development Theory

Guided by the list provided by Merrill and Pusch (2007) above, this section of the literature review provides an overview to the features of Intercultural Development Theory not covered in depth in the preceding sections. The Developmental Model of Intercultural Sensitivity is not considered here, as a discussion about that model may be

found in the “Intercultural Development” section of the literature review. Considered here are contact theory, acculturation and culture shock, intensity factors, and reentry.

Contact Theory

Medina-López-Portillo (2003) and Merrill and Pusch (2007) pointed to the importance of the Intergroup Contact Hypothesis as a way to understand the development of intercultural competence in the intercultural learning context. Originally offered by Allport (1954), the theory “argues against the common belief that mere contact between people from different cultures will naturally lead to harmonious relations between them” (Medina-López-Portillo, p. 181).

Pettigrew (1998), and Tropp and Pettigrew (2005), brought the Intergroup Contact Hypothesis into a slightly updated form, resolving that there are five conditions for optimal contact between different (i.e., different racial or ethnic) groups. The fifth criterion has been added to Allport’s (1954) original four. According to Pettigrew (1998) these criteria are:

1. *Equal status*: the groups must have equal status “within the situation” (italics original, p. 66).
2. *Common goals*: “prejudice reduction through contact requires an active, goal-oriented effort” (p. 66).
3. *Intergroup cooperation*: “attainment of common goals must be an interdependent effort without intergroup competition” (emphasis added, p. 67)
4. *Support of authorities, law, or custom*: It is necessary to have the intergroup contact explicitly supported by relevant social authority (p. 67).
5. *Friendship potential*: a possibility must exist that members from the two groups may legitimately become friends (p. 80).

Pettigrew (1998) stressed that “the hypothesis does not address process” (p. 80).

That is to say, the hypothesis only states under which conditions positive interactions that

have the potential to reduce prejudice might take place—“not how and why” prejudice is reduced (p. 80). Tropp and Pettigrew (2005) also caution that there are “differences in how members of minority and majority status groups view relationships between their groups” (p. 956). This means that “the traditional focus on establishing optimal conditions within the contact situation may not be sufficient to promote positive intergroup relations among members of both minority and majority status groups” (p. 956). Nonetheless, others have found the Intergroup Contact Hypothesis to be a useful and reliable base for intergroup interactions (Nesdale & Todd, 2000; Odell, Corgen, & Wang, 2005).

In a 2011 meta-analysis, Pettigrew, Tropp, Wagner, and Christ confirmed support for Allport’s (1954) original four conditions. The meta-analysis offered special support of Pettigrew’s (1998) condition of friendship potential. Moreover, Pettigrew et al. determined that the decrease in prejudice from appropriate intergroup contact is both universal and generalizable—perhaps unsurprisingly, reduced prejudice toward one group can effect reduced prejudice toward both connected and unconnected groups. Importantly, Pettigrew et al. also discovered how intergroup contact can have positive effects. First, they suggest that although intergroup contact increases knowledge of the other group(s), this is only a minor mediator of reduced prejudice. Second, intergroup contact has the ability to decrease some of the sources of intergroup prejudices. This occurs primarily through a decrease in anxiety, which is connected to a decrease in “fear, anger, and particularly threat to the ingroup” (p. 277). Third, Pettigrew et al. also found that intergroup contact can increase “empathy for the outgroup and adoption of the

outgroup's perspective. One begins to sense how outgroup members feel and view the world. This increase in empathy and perspective taking diminishes prejudice" (p. 277).

Concluding the section on the contact hypothesis, it may be valuable to consider Nesdale and Todd's (2000) notion that "the effectiveness of intercultural contact is dependent upon the extent to which individuals' intercultural knowledge and openness is enhanced" (p. 357). This, in turn, is related to one's interaction with the cross-cultural setting.

Acculturation and Culture Shock: Coping, Learning, and Identity

Interestingly, and perhaps unfortunately, Kiely (2005) dismissed culture shock as a "vague and monolithic phenomena" (p. 15) identified with "learning to adjust to differences in daily rituals like cooking, language, and transportation" (2004, p. 21). Although these daily items certainly factor into culture shock, Paige, Cohen, Kappler, Chi, and Lassegard (2004) noted that there are three significant adjustments at play in culture shock: (a) *physical adjustment*, such as transportation, food, etc; (b) *social adjustment*, such as acknowledgement and acceptance of differences in deep values, beliefs, and modes of behaviors; and (c) *internal adjustment*, in which one wrestles through issues of identity and integration (pp. 91-92).

J. Bennett (1998) responded to critiques like Kiely's aptly, noting that "one of the difficulties in considering culture shock is the tendency to treat it as an exotic ailment" (p. 215). In reality, she argued, culture shock is very similar to other kinds of major life transitions. Moreover, Kohls (2001) indicated that culture shock is "virtually inevitable" for those who enter deeply into another culture (p. 101). Rather than being a "vague and

monolithic phenomena,” Kohls explained that culture shock can actually be a great teacher.

The literature seems clear that the process of making (extended) cross-cultural contact can be deeply unsettling. In their exploration of the psychology of culture shock, Ward, Bochner, and Furnham (2001) noted that “sojourners are powerless to change entire cultures, and in many cases they have limited resources for modifying the troublesome features of their new cultural milieu” (p. 79). Ward (2004) suggested that culture contact involves three processes

1. *Affect*: this process “highlights the significance of life changes during cross-cultural transitions, the appraisal of these changes, and the selection and implementation of coping strategies to deal with them” (p. 190). This process is influenced by both individual and societal factors.
2. *Behavior*: this process considers “salient encounters between newcomers and members of the receiving society . . . [concentrating] on the processes by which people acquire culturally relevant skills to survive and thrive in their new environments and to interact effectively across cultural lines” (pp. 188-189).
3. *Cognitive*: this process “emphasize[s] the significance of identify and its implications for intergroup perceptions and relations” (p. 195). Particularly under consideration are identity development, maintenance, and change.

Intensity Factors

Beyond culture shock and its related processes are the ongoing stresses associated with cross-cultural life and study. Paige (1993), for example, drew attention to “those factors which heighten the psychological intensity of intercultural experiences” (p. 4) through the development of a list of ten “intensity factors.” Crabtree (2008) affirmed the importance of understanding the impact of the intercultural learning environment, noting that “international immersion experiences involve intense psycho-emotional, ideological,

and physiological disruptions” (p. 21). Paige’s list of factors related to these disruptions is as follows, with explanations from Paige (1993) and Merrill and Pusch (2007):

- *Cultural difference*: This signifies “the degree of actual difference between two cultures and how negatively the students evaluate those differences; this influences their attitudes and ability to adapt” (Merrill & Pusch, 2007, p. 27)
- *Ethnocentrism*: “The more ethnocentric the sojourner, the more psychologically intense the experience will be” (Paige, 1993, p. 5). Moreover, “the more ethnocentric behavior the host culture exhibits, the more psychologically intense the experience will be” (p. 6).
- *Language*: “The less language ability the sojourner possesses, the greater will be the psychological intensity of the experience” (Paige, 1993, p. 7). This factor fluctuates depending on the degree to which knowledge of the host language is required for success in the host culture (p. 7).
- *Cultural immersion*: “The more the sojourner is immersed in the target culture, the higher the degree of psychological intensity” (Paige, 1993, p. 8). However, Paige qualifies this factor as follows: “Most research indicates that greater immersion in the culture, while more stressful, leads to a greater amount of learning in the long term” (p. 8).
- *Cultural isolation*: “The less access sojourners have to their own culture group, the greater will be the psychological intensity of the experience” (Paige, 1993, p. 9)
- *Prior intercultural experience*: “The less the amount of prior, in-depth intercultural experience, the greater will be the psychological intensity of the experience” (Paige, 1993, p. 9).
- *Expectations*: “The more unrealistic the sojourner’s expectations of the host culture, the greater will be the psychological intensity of the experience” (Paige, 1993, p. 10).
- *Visibility and invisibility*: “Being physically different from the host nationals and thus being very visible can make the intercultural experience more intense. Conversely, having to keep parts of one’s identity hidden . . . can also increase the intensity” (Merrill & Pusch, 2007, p. 27).
- *Status*: “Sojourners who do not feel they are getting the respect they deserve or, conversely, who feel they are receiving undeserved recognition will find the experience more psychologically intense” (Paige, 1993, p. 11).

- *Power and control*: “The less power and control one possesses in the intercultural situation, the greater the psychological intensity of the experience” (Paige, 1993, p. 12).

A possible corollary to the intensity factors is Pusch’s (2005) list of intercultural skills useful for negotiating cross-cultural situations. That is to say, on the one hand there are certain intensity factors, and on the other, there are certain ways that individuals approach intense environments. Pusch suggested key skills with direct bearing on a person’s movement away from ethnocentrism: (a) cognitive flexibility, (b) mindfulness, (c) tolerance for ambiguity, (d) tolerance for new conditions, (e) and behavioral flexibility.

In considering these items, which heighten the “psychological intensity” of the experiences, Paige (1993, p. 4) commented that it may be useful to consider whether there may be a connection to Erikson’s (1963) concept of critical moments. Erikson said that in a developmental process, there are “turning points, of decision between progress and regression, integration and retardation” (pp. 270-271).

Reentry

The final feature of intercultural development considered here is that of the reentry process—a process that often results in reentry or reverse culture shock. Kohls (2001) highlighted the importance of the topic when noting that “reverse culture shock may cause greater distress than the original culture shock” (p. 99).

La Brack (1993) explained that when reentry shock occurs, there are two additional elements at play, beyond the standard experience of culture shock: (a) “an idealized view of ‘home’, and (b) a taken-for-granted familiarity with the home culture

which fosters the illusion that neither home nor the sojourner will have changed” (p. 253). Moreover, he stated that the process of leaving and then returning to one’s home culture could have profound challenges for students’ sense of identity.

Pusch (1998) suggested that there are three major dimensions at play in the reentry process. As summarized by Szkudlarek (2010), these involve (1) the main concerns individuals might have about returning home; (2) the underlying internal commitment of returnees towards their home-country readjustment; and (3) the role that returnees might desire to play or might be required to play upon reentry.

Importantly, Martin and Harrell (2004) suggest that the adaptation through reentry is most successful if the returnee participates in some kind of reentry training either before or after return to the home culture. Martin and Harrell further noted that “reentering with no reentry training often means that the intercultural sojourn becomes encapsulated, tucked away in the mind of the sojourner, and the opportunity is lost to integrate the personal growth and professional knowledge into the sojourner’s current life” (p. 311).

The connections to what Kiely (2004) called the Chameleon Complex are striking. Kiely explained that this is related to the “recursive and contested nature of the relationship between perspective transformation and action” (p. 21). He commented that the:

Chameleon complex depicts students’ ongoing struggle to translate their perspective transformation into meaningful action. Once they return to the U.S., students continue to confront dilemmas. There is often a disconnect between what students want to do and the actions they actually take. They struggle to act on their emerging global consciousness, which often means going against the opinions of friends, family, and co-workers. They also realize that their newly found global allegiances have very little support or conflict with perceived obligations as U.S. citizens. Sometimes they

choose the safety that blending in affords but they rarely feel comfortable with such conformity. . . . [This] suggests that a transformation in one's worldview is a necessary, but not a sufficient condition for changing lifestyles, challenging mainstream norms, and engaging in [transformative action].

Crabtree (2008) commented that, "serious thought must be given to the re-entry program. . . . Students perceive the re-entry from [a GSL] experience as the most difficult part" (p. 22). Kiely (2004) suggested that "a post-program course might allow for greater reflection on the various dimensions of students' emerging global consciousness" (p. 23).

This concludes the subsection on general intercultural development theory, and the section of the literature review concerning intercultural development in the intercultural learning context.

Description of the EDGE Program

In conducting the present research, it may be useful to classify the program under study (the EDGE Program) utilizing categories and types presented in the literature. Engle and Engle (2003), for instance, suggested that intelligent analysis of research regarding global service-learning (GSL) programs would benefit significantly from a standard method of classification.

Thus, beginning with Engle and Engle's (2003) conceptualization, the EDGE Program incorporated a combination of three broad cross-cultural program categories: contact, encounter, and immersion. Using Engle and Engle's language (p.11), the program has the following characteristics:

- *Duration*: Six months
- *Entry Target-Language Competence*: Elementary to intermediate French, and almost no Bambara (the most prominent language of Mali)

- *Language Used in Course Work*: English (primarily) and French in the French Course
- *Academic Work Context*: Home institution faculty. However, some of these faculty are Malians hired as adjunct instructors
- *Housing*: Collective, on a campus where Malian students (families and singles) and the Malian faculty members and their families also live
- *Provisions for Cultural Interaction and Experiential Learning*: Required regular participation in culturally integrated experiences, extensive direct cultural contact via service-learning
- *Guided Reflection on Cultural Experience*: Orientation program, mentoring, on-going orientation, and courses in cross-cultural perspectives and reflective writing

According to Sigmon's (1996) suggested emphases for service-learning programs described in the "Global Service-Learning" section of the Literature Review, the EDGE Program is intended to be SERVICE-LEARNING. That is to say, the EDGE attempts to provide a learning process in which service and learning goals are of equal importance and mutually informing.

Regarding service, the EDGE intentionally seeks to approximate service as understood in the local context, as recommended by Porter and Monard (2001). Merrill and Pusch (2007) expected that an approach of meaningful service in the community might mean that students do not always recognize their participation as service, which seems to be the case with Grace University students. Grace students have tended to expect an active approach to service such as building projects or vacation Bible schools. Instead, EDGE students have engaged in three primary forms of service as requested by the partner organization; the list follows in order of importance: (a) presence and visiting, particularly among Malian Christians and Pastors; (b) teaching English; (c) computer instruction.

Another way to understand the relationship between service and learning is through Berry and Chisholm's (1999) conceptualization of the options as (a) concurrent study and service, (b) sequenced learning and service, and (c) alternating learning and service. In this model, the EDGE program would be a mixture between (a) concurrent study and service and (b) alternating learning and service. Throughout the majority of their experience, students have daily opportunities to engage in service. However, face-to-face classes are sequenced in two-to-three week blocks, meaning that there are alternating times where either the learning or service component is given more intentional space.

Berry and Chisholm (1999) furthermore suggested that there are four options for group and individual interactions: (a) group study, group service; (b) group study, individual service; (c) individual study, group service; (d) individual study, individual service. For the most part, the EDGE program has been a group study, group service program. There have been, however, generally two to three weeks in the fifth or sixth month where students may pursue individual service.

Finally, Berry and Chisholm (1999) suggested that service-learning programs may be focused on development in the areas of career, discipline, a particular course or module. This may happen, they suggested, within a cohesive curriculum or, in some cases, a non-credited but expected learning process. In the case of the EDGE program, there have been three primary foci of development: intrapersonal, interpersonal, and intercultural (Grace University, 2011). The goal of the program has been to develop students into the kind of people who can serve vocationally across cultures whether domestically or abroad.

Conclusion

The literature review first considered the idea of intercultural development, including the Developmental Model of Intercultural Sensitivity, the Intercultural Development Inventory (IDI), the Intercultural Development Continuum, and the definition of intercultural development itself.

Next, the area of global service-learning (GSL) was considered, including an overview of the modes and requirements of (GSL), the goals of GSL, and the assessment of GSL. Importantly, the literature points to a lack of methodology for evaluating global service-learning experiences. This has led me to the desire to develop a method for evaluating GSL experiences that integrates the IDI and qualitative methods.

Third, the literature review explored intercultural development in the intercultural learning context. This was comprised of a consideration of study abroad, GSL, and general intercultural development theory. This section especially revealed that, particularly when pursuing intercultural development, GSL is a complex experience with a high level of intensity that should be carefully studied because of its profound effects on people.

Finally, a brief overview of the EDGE Program revealed connections between the literature and the GSL program under study in this research project. The following chapter will elucidate the methods by which the program will be studied.

CHAPTER III

METHOD

Background of the Experience

The goal of the present research was to find an answer to the following question: Did the immersion experience lead to changes in intercultural competence, as indicated by the Intercultural Development Inventory (IDI), student reflection papers, and interviews? Through conducting this research, I hoped to identify actual results (as opposed to the anticipated outcomes) of this service-learning program. Additionally, the research offered the opportunity to experiment with the specific model of assessment described in this chapter.

The research specifically focused on the Grace University EDGE Program. As noted in the introduction, the EDGE program is a six-month global service-learning component that is required of all students seeking a bachelor's degree in Intercultural Studies at Grace. For a thorough exploration of the major facets of the EDGE program, the reader is directed to the Description of the EDGE Program section at the end of the Literature Review.

Participants

The individuals included in this study constitute a purposive sample (Bailey, 1994). All student members of the 2009 EDGE team were invited to participate in the research. The team included eight students: 5 women and 3 men. Seven of these elected

to participate in the research. When the research was initiated, I had no official role with Grace University. However, I graduated from the same academic program being studied. I had also spent one month in Mali as an adjunct instructor for the 2007 EDGE team. As the study continued, my involvement with the program changed. First, I accompanied the 2009 team to Mali. I then served as an adjunct instructor for those students and visited them halfway through their stay. I then assumed the role of Program Director for the Intercultural Studies Program immediately after the students returned to the United States. The data collection phase extended approximately five months after the students returned.

The students were also accompanied in Mali by a white U. S. American female French instructor (to date, this is the only time an instructor has remained with the students for the duration of the experience). Six of the seven students self-identified as white North Americans. The seventh student was a Mexican citizen who had lived in the United States for about five years. While data on the socioeconomic status of the students was not available, they likely ranged from lower class to mid-to-upper middle class as is typical of the Grace University student body. The students had the opportunity to participate in the research by signing a letter of informed consent. Of the seven who chose to participate, all seven took the Intercultural Development Inventory before and after their experience in Mali, and six wrote the reflection papers and participated in the interviews.

Data Collection Tools

The Intercultural Development Inventory

One of the primary tools used in this research was the Intercultural Development Inventory (IDI). The IDI was used to gather scientific measurements on the students' levels of intercultural competence.

At the time of this research, Hammer (2008) had recently released Version 3, which had the same question items as Version 2, but had undergone considerably more testing in general and back-translation for non-English versions. He reported that he “administered the 50-item IDI to a significantly larger, cross-cultural sample of 4,673 individuals from 11 distinct, cross-cultural sample groups” (p. 252). These individuals were from diverse sectors, from colleges and universities to non-governmental organizations to businesses; these participants “completed the IDI in their native language using rigorously back-translated versions of the IDI unless English was the language of the organization” (p. 252). Hammer continued, “overall, these results from testing IDI v.3 persuasively demonstrate the generalizability of the IDI across cultural groups. Additional analysis of the data by distinct sample groups also clearly demonstrated the culture-specific applicability of the IDI v.3” (p. 252). This recent research seemed to override cross-cultural validity concerns raised by Greenholtz (2005), which appeared to be the only such concerns published about the IDI to date. Hammer (2008) concluded: “The Intercultural Development Inventory (v.3) . . . is the premier cross-culturally valid and reliable measure of intercultural competence” (p. 246).

Regarding the administration of the IDI, Medina-López-Portillo (2003) related the following:

Vande Berg recommends that students' development should be measured three times—at the beginning and end of the program, and several months after the students' return. He suggests that immediately following their return, students may not have internalized the intercultural learning that had begun during their sojourns, and that this learning may continue to occur during the months following their return home (personal communication, September 7, 2003). (p. 191)

Sufficiency/Triangulation

An interesting sub-theme that emerged in previous IDI studies was the insufficiency of either IDI or qualitative data alone. For instance, while analyzing data from two groups, Patterson (2006) found that although “the qualitative research revealed that the students perceived a change in themselves” in both groups, the “quantitative results showed no significant changes in either group” (p. 86). Medina-López-Portillo (2004) cautioned that “future research on the development of intercultural sensitivity should also rely on multiple methods of collecting data” (p. 192). She noted that studies using the IDI should supplement the quantitative data through “triangulating its results with the collection of qualitative data” (p. 193). In addition to providing for sufficient triangulation, she stated that “the data from these multiple sources provides a more complete understanding of thought processes and changes in perceptions about a student's own culture and target culture, even when students stay in the same DMIS stage” (p. 193).

Reflection Papers

Following their six-month immersion experience, the students participated in a course called “Intercultural Transitions Seminar.” In this course, which began a few weeks after their return to the United States, the students were required to write a guided reflection paper in which they discussed the changes they felt they had undergone. This guided reflection included student thoughts on (a) how they had changed; (b) how the changes occurred; and (c) how they felt about the changes (see Appendix A for the guided reflection questions). Changes to be discussed included the students’ perceptions of their own intercultural development. I developed the reflection questions primarily as an academic component of the Intercultural Transitions Seminar course and included them in the research as a point of data triangulation. The reflection questions did not undergo any pretesting, and they continue to be used in the course to facilitate student reflection and program evaluation. The results of these papers were analyzed especially in terms of the perceived development of intercultural competence and sensitivity.

Interviews for Clarification

Individual interviews were conducted with all students after the other data had been collected. The goal was originally to consider the interview data only if the data from the reflection papers and the data from the IDI results did not align. As the interview questions were developed in response to specific discrepancies noted between the papers and the IDI data, there was no standard set of questions. Instead, the questions developed in the context of a recorded conversation which generally followed this format:

1. I first reviewed the participant's pre-experience IDI results with the participant.
2. I then asked a question about how the results from the initial IDI profile had impacted the participant's experience in Mali, especially in relationship to the Malians.
3. I requested a brief clarification about how the participant was experiencing re-entry at the time the post-experience IDI was taken.
4. I then shared the results of the participant's post experience IDI.
5. I asked a question about how the participant saw the movement between the original stage and post experience stage.
6. I referred to various elements of the participant's paper and asked for clarification around the intersection between the paper and the IDI results.

The original goal of these interviews was to conduct meaning checking and search for possible explanations for any discrepancies. However, in actuality the interviews became a primary source for information on the participants' process of intercultural development and interaction with the pedagogical processes of the global service-learning experience.

Process

The research commenced with an initial administration of the IDI in November, 2008, which was followed by meetings with each of the students in February 2009 to review individual IDI results. The feedback sessions took place one to two weeks prior to departure for Mali in mid-February (the students returned from Mali at the beginning of August). The pedagogy, particularly of the Intercultural Ministry Field Experience course which I taught as an adjunct, was then adjusted to help students to grow in areas highlighted by the IDI, in a process called IDI Guided Development (Hammer, 2008).

The students wrote their reflection papers in the early part of the Fall 2009 semester. Following the papers, the final iteration of the IDI took place, still in the fall 2009 semester. The interviews (which were combined with the second IDI feedback sessions) took place after the other data had been collected, and the data collection was complete by December 2009.

One important feature of the way the IDI quantitative data has been analyzed was the use of the Achievable Progress method. In considering the interpretation of IDI data, Engle and Engel (2004) advocated using the Achievable Progress (AP) principle, explaining that AP “is particularly appropriate since the IDI concerns personal development as opposed to absolute knowledge” (p. 230). In using AP, the primary indicator was not a student’s relative standing on the IDI, although that is, of course, important. Rather, AP considered the “extent [to which] each student bridges the gap between his or her entry-level . . . competence and the goal” of intercultural competence (p. 225).

As I evaluated the papers in search of qualitative results, I discovered that they were data-poor in relation to the research question—especially as related to the participants’ developmental process. So, instead of using the papers as a primary data source as planned, I used them in conjunction with the IDI data to guide the interview process. I read through each paper and noted particular items of interest to follow up on, and combined that with the IDI results to guide the interviews, each of which was approximately one hour long.

The interviews were coded in NVivo qualitative research software using an iterative process to focus the coding. First, I coded two interviews which I expected

would have a significant amount of data. These two interviews yielded 28 codes which appeared at least twice. From those 28 codes I established three major themes, each with approximately six major codes. Using NVivo's tools such as word search and comparison coding queries, I further explored these themes. Next, I coded an interview which I expected would not have a significant amount of data to test the themes. I then coded the remaining three interviews, taking note of new codes that developed in them. After this, I reviewed the first two interviews to see if I had missed any data from the codes which had developed later in the process. Finally, I revised and condensed the nodes, in part using NVivo's query tools to evaluate overlap between codes.

Limitations

Several limitations present themselves within the current research. First, as the researcher, I have been very close to the research in various capacities (adjunct, interim director, program director). Moreover, because I now have responsibility for this program, I stand to benefit from positive results. This limitation is somewhat mitigated by the concept that Kiely and Hartman (in press) call the *researcher as instrument*, in which it is expected that the GSL researcher will be close to the topic at hand as a participant observer.

Second, the questions utilized in both the reflection papers and the interviews were not subjected to rigorous development and were never pretested. The original research goal of the interviews was only to provide clarity, rather than to serve as primary data source. The resultant lack of a consistent set of questions for the interviews may provide a further limitation, as the participants were each responding to somewhat different prompts. The positive side of this limitation is that the questions were specific

to the participants' individual experiences, and incorporated prior rich knowledge that the researcher had of each individual participant.

Finally, the sample size was small and was not intended to be a representative sample. All participants shared a similar belief structure, attended the same small college, and most were pursuing the same major (Intercultural Studies). Thus it is not possible to generalize from this sample about the effectiveness of this program's characteristics as related to other programs.

Conclusion

With this background on the ways in which the data were collected and analyzed, the next chapter (Results and Analysis) offers several elements of interpretation. First, individual quantitative data is presented, with special attention given to movement on the IDI. Second, the group quantitative data is presented, with a brief look at the group's changes in each of the major scales, as well as a consideration of the statistical significance of the groups' changes. Finally, the three major themes of the qualitative coding results are presented along with their major sub-themes.

CHAPTER IV

RESULTS

To assess whether the 2009 Grace University EDGE program impacted changes in levels of intercultural competence, this research project employed the Intercultural Development Inventory, student reflection papers, and interviews. The aim of this chapter is to present the findings and to examine what changes in intercultural development took place for individual participants and the group as a whole. This section also explores the ways in which these changes were experienced by participants.

The results focus primarily on understanding what happened with this group of students as revealed by the multiple data sources. Results will first be examined to determine whether the students demonstrated empirically measurable growth in intercultural sensitivity, as shown by the IDI. The data collected through the interviews will then be considered in an attempt to understand changes in intercultural sensitivity and corroborate details of these changes. The thematic codes developed from the interview data will finally be considered in an attempt to understand the process from the participants' perspective.

Individual Analyses

The individual analyses of the IDI data in this section present a pre/post perspective on the measurable intercultural competence stages of the participants. This data demonstrated actual changes as well as the participants' perception (the Perceived

Orientation, PO, scale) of their changes relative to their overall intercultural competence. The individual analyses of the IDI data presented in this section are listed in order from greatest percentage positive growth in Achievable Progress to greatest negative movement within Achievable Progress (AP). The Achievable Progress method was described in the Process subsection of the Methods chapter.

The words “resolution” and “resolve” appear somewhat frequently in this section. The reader may find it useful to revisit the section of the Literature Review entitled *Developmental Model of Intercultural Sensitivity*, in which the developmental nature of the underlying model was explained. In review, the DMIS and the corollary Intercultural Development Continuum suggest that to attain the leading stage (the stage “in front” of one’s present position) an individual must progress through critical steps. Erikson (1963) explained that *critical* is “a characteristic of turning points, of moments of decision between progress and regression, integration and retardation” (pp. 270-271). When an individual is said to have resolved a stage, this means that the main critical issue has been faced and overcome, thus allowing passage to the following stage. However, as indicated by Erikson, regression and retardation may also occur in the confrontation with these critical issues. It is therefore possible that when a person confronts a critical issue within a stage, his or her forward progress might slow, cease, or reverse, thus causing a person to stagnate or move “backward” to an earlier stage.

Prior to presenting the individual results, it is necessary to briefly explain the format of the tables through which the participants’ individual data will be displayed. In each of the following tables, the student’s perceived orientation (PO) is listed in the left column, with both the numerical scores and the stage names. The percentage change in

achievable progress in the perceived column demonstrates how much the student thought she had changed. The right hand column contains the student's actual developmental orientation (DO), with both the numerical scores and the stage names. The achievable progress in the developmental column demonstrates how much the student actually developed compared with the potential change available to her. The final column compares the percentage change in perceived to actual development, and thus demonstrates how much the participant over- or underestimated the change. This is distinct from the orientation gap, in that the measure presented here looks at the perception of change, rather than the actual gap between the PO and DO scores. This kind of table will be presented for each participant. Complete individual scores for all participants may be found in Appendix B. The following is a presentation of each individual student.

Ella

Ella developed (44.66 % AP) from Minimization with trailing issues in Reversal to Acceptance with no trailing issues. Ella experienced resolution in three areas: Reversal (50% AP), Minimization (69% AP), and Similarity (78% AP). She had no issues in Cultural Disengagement either before or after the experience, meaning that Ella identified as belonging to a culture both before and after participating in the experience. Table 2 demonstrates key elements of Ella's development.

Table 2. Ella: Perceived and Actual Growth in Achievable Progress

	PO - Perceived			DO - Developmental (Actual)			Perceived Δ in potential growth compared to actual
	Pre	Post	% Δ in achievable progress	Pre	Post	% Δ in achievable progress	
IDI Score	129.61	136.72	46.2%	106.87	123.9	44.7%	1.5% overestimated
IDC Stage	Acceptance	Adaptation		Minimization	Acceptance		

Fillip

Fillip developed (42.62% AP) from Minimization with trailing issues in Defense and Reversal to Acceptance with trailing issues in Minimization, including both Similarity and Universalism. He resolved the two sub-stages of Polarization: Defense (72% AP) and Reversal (61% AP). He had no issues in Cultural Disengagement either before or after the experience. Table 3 demonstrates key elements of Fillip's development.

Table 3. Fillip: Perceived and Actual Growth in Achievable Progress

	PO - Perceived			DO - Developmental (Actual)			Perceived Δ in potential growth compared to actual
	Pre	Post	% Δ in achievable progress	Pre	Post	% Δ in achievable progress	
IDI Score	124.52	132.17	37.4%	97.3	117.82	42.6%	5.3% underestimated
IDC Stage	Acceptance	Adaptation		Minimization	Acceptance		

Jean

Jean developed (37.36% AP) from Denial to Minimization with trailing issues in Denial: Avoidance and Polarization: Reversal. She resolved two developmental areas: Disinterest: Avoidance (63% AP) and Polarization: Defense (45% AP). Also, and importantly, Jean resolved Cultural Disengagement (63% AP). Table 4 demonstrates key elements of Jean’s development.

Table 4. Jean: Perceived and Actual Growth in Achievable Progress

	PO - Perceived			DO - Developmental (Actual)			Perceived Δ in potential growth compared to actual
	Pre	Post	% Δ in achievable progress	Pre	Post	% Δ in achievable progress	
IDI Score	108.47	124.43	43.7%	60.93	92.34	37.36%	6.3% overestimation
IDC Stage	Minimization	Acceptance		Denial	Minimization		

Valerie

Valerie developed (29.96% AP) from Polarization (both Defense and Reversal) to Minimization with trailing issues in Reversal. She resolved Polarization: Defense (50 % AP). She had no issues in Cultural Disengagement either before or after the experience. Table 5 demonstrates key elements of Valerie’s development.

Table 5. Valerie: Perceived and Actual Growth in Achievable Progress

PO - Perceived			DO - Developmental (Actual)			Perceived Δ in potential growth compared to actual	
Pre	Post	% Δ in achievable progress	Pre	Post	% Δ in achievable progress		
IDI Score	116.02	124.61	29.6%	79.91	99.41	29.96%	0.3% slight overestimation
IDC Stage	Acceptance	Acceptance		Polarization	Minimization		

Linda

Linda developed (13.56% AP) from Polarization to Minimization with trailing issues in Disinterest and Reversal. Interestingly, the trailing issue in Denial: Disinterest was new. Despite her resolution of the Polarization stage, Linda did not resolve any subscales. She had no issues in Cultural Disengagement either before or after the experience. Table 6 demonstrates key elements of Linda’s development.

Table 6. Linda: Perceived and Actual Growth in Achievable Progress

PO - Perceived			DO - Developmental (Actual)			Perceived Δ in potential growth compared to actual	
Pre	Post	% Δ in achievable progress	Pre	Post	% Δ in achievable progress		
IDI Score	116.43	122.45	21.1%	83.65	91.97	13.56%	7.5% overestimated
IDC Stage	Acceptance	Acceptance		Polarization	Minimization		

Geoff

Geoff developed (12.89% AP) from Polarization with trailing issues in Denial: Disinterest to Minimization with trailing issues in Polarization: Defense and Reversal. Geoff resolved Denial (56% AP) and Disinterest (33% AP). He had no issues in Cultural Disengagement either before or after the experience. Table 7 demonstrates key elements of Geoff’s development.

Table 7. Geoff: Perceived and Actual Growth in Achievable Progress

PO - Perceived			DO - Developmental (Actual)			Perceived Δ in potential growth compared to actual
Pre	Post	% Δ in achievable progress	Pre	Post	% Δ in achievable progress	
IDI Score	117.33	123.19	21.2%	82.45	90.51	12.89%
IDC Stage	Acceptance	Acceptance		Polarization	Minimization	8.3% overestimated

Catherine

Catherine regressed (-18.61% AP) from Minimization with trailing issues in Polarization: Reversal to Polarization with trailing issues in Disinterest. The resolution of her subscales remained steady, with the exception of Disinterest, which went from resolved to unresolved. Catherine had no change in Cultural Disengagement, which was unresolved both before and after the experience. Catherine’s development is further discussed in the Coding Results and the Discussion sections. Table 8 demonstrates key elements of Catherine’s development.

Table 8. Catherine: Perceived and Actual Growth in Achievable Progress

	PO - Perceived			DO - Developmental (Actual)			Perceived Δ in potential growth compared to actual
	Pre	Post	% Δ in achievable progress	Pre	Post	% Δ in achievable progress	
IDI Score	116.71	115.95	-2.7	86.05	75.08	-18.61%	15.9% overestimated
IDC Stage	Acceptance	Acceptance		Minimization	Polarization		

Group Analysis

Two main modes of analysis were used in understanding the group IDI data: (a) the Wilcoxon Signed Rank Test, and (b) the Percent Achievable Progress method described in the Process subsection of the Methods section. As the group size was very small, I used the non-parametric Wilcoxon Signed Rank Test to determine whether there was any statistically significant difference between the “before” and “after” group results. Naturally, with such a small sample, the findings are not predictive. Rather, the results of the Wilcoxon Analysis (Table 9) indicated that there was a statistically significant

Table 9. Wilcoxon Signed Ranks Results Demonstrating Significance

Item	Variable1	Variable2	<i>z</i>	<i>p</i> Value	<i>r</i> effect size
Perceived Orientation	Pre	Post	2.197401	0.027992	0.58
Developmental Orientation	Pre	Post	1.859339	0.062979	0.50
Orientation Gap	Pre	Post	-1.69031	0.090969	0-.45
Minimization	Pre	Post	2.197401	0.027992	.59
Universalism	Pre	Post	2.031856	0.042168	.54
Acceptance	Pre	Post	2.366432	0.01796	.63
Adaptation	Pre	Post	2.205291	0.027434	.59
Cognitive Frame Shifting	Pre	Post	2.213594	0.026857	.59

All listed items are significant. Items with an especially significant *p* value (less than .05) are bolded.

difference from the pre-group to the post-group on several scales. The z scores referred to the magnitude of movement from the pretest to the posttest, where anything greater than 1.96 or less than -1.96 was outside of the distribution of 95% of the group from the first test (Field, 2009). The p values demonstrated probability. Inverted as percentages, the p values demonstrated the level of confidence that the change was real. For instance, a p value of .027 indicated 97.3% confidence that the difference between the pre- and posttest was not just due to random chance (Field). The effect size was calculated as $r = \frac{z}{\sqrt{14}}$, as there were seven participants tested twice, yielding 14 observations for each item (Field, p. 558). It is interesting to note that nearly all of the listed elements had a large effect size, where effects of 0.3 are medium and 0.50 are large (Field). For elements with a 0.50 effect size, for instance, “the effect accounts for 25% of the variance” (Field, p. 57).

Perceived and Developmental Orientation and the Orientation Gap

As a group, there was a significant increase ($z = 2.197, p = 0.0279, r = 0.58$) in the students’ perception of their intercultural competency (PO). The movement along the PO scale accomplished 27% of achievable progress. There was also a significant, though smaller, and less significant increase ($z = 1.859, p = 0.062, r = 0.50$) in the group’s overall actual intercultural competence (DO), though the DO did demonstrate a large effect size. This increase represented accomplishment of 22.4% of achievable progress on the DO scale. Interestingly and encouragingly, the Orientation Gap between PO and DO showed a significant decrease with a medium effect size ($z = -1.690, p = 0.091, r = -0.45$). The movement of achievable progress of the Orientation Gap (measured to 7,

rather than 0) was 23.6% towards non-significance. Movement toward non-significance within the Orientation Gap indicated movement toward a more accurate self-perception. Thus, although the significance of the group's growth in Perceived Orientation was greater than the significance of the growth in Developmental Orientation, the overall change was a statistically significant decrease in the distance between PO and DO.

Table 10 shows an overview of the number of students placing within each development stage along the DO scale in the pre and post test. Additionally, Table 10 shows the average pre and post DO scores for the group overall.

Table 10. IDI Group Overall Profile (DO) Scores:

IDC Stage	Denial	Polarization	Minimization	Acceptance	Adaptation	Unresolved Cultural Disengagement
IDC Range	55-69.99	70-84.99	85-114.99	115-129.99	130-145	
# of Students in pretest	1	3	3	0	0	2 / 7
Pretest average	85.36					
# of Students in posttest	0	1	4	2	0	1 / 7
Posttest average	98.72					

Group Movement in Denial (Denial, Disinterest, and Avoidance)

As a major scale, Denial demonstrated no change at the group level, with 0% change in achievable progress and no statistically significant change. There were 4 students who demonstrated positive movement and 3 who demonstrated negative movement on the Denial scale. The net effect was 0% change for the group.

The Disinterest subscale demonstrated a negative change in achievable progress (-22%), and no statistically significant change. The Avoidance subscale demonstrated a positive change in achievable progress (28%), but no statistically significant change.

Group Movement in Polarization (Defense and Reversal)

Polarization is comprised of two subscales: Defense and Reversal. Defense demonstrated strong change toward resolution. With three students resolving this scale, 36% of achievable progress was realized. The change on the defense scale was not, however statistically significant.

The Reversal scale demonstrated some positive change (11%) regarding achievable progress. Two students resolved reversal (none had resolved it in the pre-assessment), and two students regressed. Overall the changes along this scale were not statistically significant.

Group Movement in Minimization (Minimization, Similarity, and Universalism)

Minimization, as a major scale, showed both visible (29% achievable progress) and significant ($Z=2.197$, $p=.027$) movement in the direction of resolution. Although Minimization's subscale Similarity demonstrated noticeable increase (28% of achievable progress), that progress was not statistically significant. Minimization's other subscale, Universalism, demonstrated a noticeable (31% of achievable progress) and statistically significant increase ($Z=2.031$, $p=.027$).

Group Movement in Acceptance

Acceptance showed the most positive change in achievable progress (58%), with all students moving toward resolution. The change along this scale was very significant

statistically ($Z=2.366$, $p=.017$). Although only two students actually ended in acceptance, all seven saw positive movement in this stage. This was consistent with Erikson's (1963) observation that each developmental "item exists in some form before its critical time normally arrives" (p. 271). Thus, although only two students actually were experiencing current growth related to resolving acceptance, the others were experiencing some kind of pre-work in that stage. Movement within Acceptance was not an indication that the others were in acceptance, because, as Erikson (1963) stated, developmental processes depend "on the proper development in the proper sequence of each item" (p. 271).

Group Movement in Adaptation (Adaptation, Cognitive, and Behavioral)

As a major scale, Adaptation showed visible (28% increase in achievable progress) and statistically significant ($Z=2.205$, $p=.027$) progress. Adaptation also has two subscales. The first of these, cognitive frame shifting, demonstrated a 38% increase in achievable progress—this change was statistically significant ($Z=2.213$, $p=.026$). Behavioral frame shifting, the second subscale, did not demonstrate statistically significant movement, although there was an 18% increase in achievable progress.

The comments under Acceptance related to pre-work in a stage were applicable for Adaptation as well. Once a person actually entered the stage, having done the proper development to get to the stage of Adaptation, the developmental tasks of that stage still remained to be accomplished. Thus, although six participants experienced forward movement in Adaptation, none were actually engaged in resolving Adaptation itself.

Group Movement in Cultural Disengagement

Cultural Disengagement saw an increase in Achievable Progress (46%). However, the total change was only from 4.37 to 4.66, and this change was not statistically significant. In the beginning, five students had resolved Cultural Disengagement. In the post-assessment, one additional student had resolved this scale.

Figure 10 summarizes participants' individual and group movements on all of the IDI sub-scales. In this section, I examined the IDI data for both individuals and the group in general. In the following section, I will turn to a consideration of the qualitative interview data.

	Denial	Disinterest	Avoidance	Defense	Reversal	Minimization	Similarity	Universalism	Acceptance	Adaptation	Cognitive	Behavioral	Cultural Disengagement
<i>n</i> Resolved Pre; N=7	5	5	6	3	0	0	0	1	2	1	1	2	5
<i>n</i> Resolved Post; N=7	5	5	6	6	2	1	1	3	6	0	1	2	6
Direction of Individual movements	+4 -3 n.c. 0	+3 -3 n.c. 1	+3 -1 n.c. 3	+5 -2 n.c. 0	+5 -2 n.c. 0	+6 -1 n.c. 0	+5 -2 n.c. 0	+5 -0 n.c. 2	+7 -0 n.c. 0	+6 -1 n.c. 1	+6 -0 n.c. 1	+5 -2 n.c. 0	+3 -1 n.c. 3
Group % Δ in Achievable Progress	0	(22%)	28%	36%	11%	29%	28%	31%	58%	28%	38%	18%	46%

Figure 10. Movements along IDI sub-scales

Coding Results

As described in the Methods Chapter, the interviews became a primary source of data for understanding participants' process of intercultural development. As also mentioned in the Methods Chapter, the interviews were individualized, but generally

followed the pattern of: (a) review of pre-experience IDI results; (b) questions about how these initial results may have played out during the participant's experience in Mali; (c) brief clarification on the participant's re-entry at the time of taking the second IDI; (d) feedback on the post IDI results; (e) questions about how these results played out in Mali, reentry, and in the participant's current thinking; and (f) clarification around the intersection between the paper and the IDI results. Themes and sub-themes were then generated from the six interviews (Fillip did not participate in an interview), with a few references from student reflection papers and memos generated during the coding process.

The papers themselves were not subjected to the thorough coding process. Instead the papers provided a view into the participants' perceptions of their growth and a few salient anecdotes that helped to prompt the follow-up questions during the interview. Before the interviews, I read through each paper and marked items related to particular intercultural development stages. I also marked items that needed clarification or seemed to resonate with their actual IDI results to follow up on. This helped to generate much of the discussion during the interviews.

Through an iterative coding process, the codes went through four rounds of revisions. My initial codes are listed in Table 11:

Table 11. Original Codes

Code	Sources	References
Absence (avoidance)	2	6
Ambivalence	2	2
Application of a Frame	4	12
Apprehension	1	2
Attachment to Homeland	1	1
Being Misunderstood	1	1
Cognitive dissonance	2	4
Complexification	4	18
co-nationals	2	5
conflict	1	6
connected to relationships	2	6
Coursework or Instructor	2	8
Cultural Identity	2	7
Culture Shock	1	3
Curiosity	1	2
Difference	2	5
economics	2	2
Emotional Stress	1	1
Ethical Ambiguity	3	11
Faith and Culture	2	10
friendship	1	1
Host relationships	3	9
I always think back to	1	1
I came to respect	1	1
I felt really angry	1	1
Impetus for Growth	2	2
Intensity	1	1
it was kind of making me uncomfortable	1	1
it's really frustrating	1	1
Lack of Understanding	3	8
Moment of Tension	2	13
Non-Integration	1	1
Origin of behavior and beliefs	2	5
Oversimplification	2	7
Positive Evaluation	1	1
Reentry	2	7
Reintegration	2	7
Rules	1	1
Self Doubt	2	5
Sense Making	1	1
Service	1	1
task orientation	1	2
that makes me sad	1	1
this isn't the whole picture	1	1
Unbalanced view of host-home culture	2	3

These codes were subjected to several revisions, eventually resulting in the final list of themes and sub-themes (Table 12). The process of coding and revisions mentioned briefly in the Methods Chapter was as follows:

1. I coded two data dense interviews first and identified 28 codes that appeared more than once in these two interviews.
2. From these 28 codes, I found three major themes: cognitive development, impetus for change, and experience of change (process/effects). Each theme had approximately six major codes or sub-themes.
3. I used the NVivo software's word search feature to explore these themes and replaced cognitive development with Linda's in vivo code "I think differently now."
4. Looking at both the sub-themes and the references within each subthemes, I identified common ideas between nodes. This allowed me to revise and condense the major themes and nodes. I then coded a data-light interview to confirm the major themes. Following this, I coded the other three interviews.
5. After again revising and condensing the nodes, I looked over the first two interviews again to see if there were any new codes or themes (from the later four interviews) which I had missed. I also removed codes for items which did not seem to pertain to the project at hand. For instance, one participant discussed a previous experience of culture shock in France. While interesting, this was not pertinent to the present research.

Although I received advice on the coding process, the themes themselves were not verified or audited by another researcher. In this process, three final themes emerged in that process: (a) I think Differently Now (result), (b) Impetus for Change (reason), and (c) Experience of Change (process/effects). In the following table (Table 12) the numbers of sources and references are presented for the major themes (I think differently now, Impetus for change, and Experience of change) as well as the sub-themes.

Table 12. Major Themes and Sub-themes

Name	Sources	References
I think differently now	11	181
Application of a Frame	8	22
Economics	7	13
Family	7	13
Friendship	3	8
Complexification	8	39
Origin of behavior and beliefs	2	5
This isn't the whole picture	3	5
Difference Described	6	22
New Awareness	1	1
I didn't really know anything	3	5
Oh my gosh what did we do	3	3
Oh that's why this happened	4	6
Oversimplification	6	21
Unbalanced view of host-home culture	5	12
Similarity Described	1	3
Impetus for Change	8	267
Cognitive Shift	0	0
Cognitive dissonance	3	10
Curiosity	3	6
Lack of Understanding	6	18
Coursework or Instructor	5	23
Expectations	3	8
Living Environment	5	17
Moment of Tension	6	35
Ambivalence	4	4
Apprehension	1	2
Guilty or demeaning	2	8
I felt really angry	2	5
It was confusing	2	2
Relationships	0	0
Co-nationals	6	33
Conflict	4	23
Connected to relationships	4	14
Host relationships	7	57
Experience of Change	7	194
Absence (avoidance)	6	18
Cultural Identity	6	31
Discomfort	0	0
Feeling Alone	3	8
Inescapable	1	3
Overwhelmed	2	3
Visibility	2	3
Vulnerable	2	6
Doubt and Confidence	0	0
Increased confidence	2	5
Self Doubt and Regret	5	24
Guiding Principles	0	0
Ethical Ambiguity	5	15
Faith and Culture	4	23
Reentry	6	19
Reintegration	6	32
Non-Integration	4	4

I Think Differently Now (Result)

The first major theme to emerge in the interview data was “I Think Differently Now” (see Table 13 for definitions), which can be conceptualized as the participants’ perceived result of the GSL experience. For example, as Geoff said, “Intellectually, I am a different person than the guy who started this EDGE experience.” Linda simply said “I think differently now” in reference to her intellectual changes. This sentiment was borne out in the interview analysis across the various participants. This section explores students’ experiences of cognitive change. They mentioned and demonstrated several major ways in which these kinds of changes had occurred. Ella expressed her intellectual change this way: “it was just like all of a sudden everything made more sense, and you were just like ‘wow.’”

Table 13. Definitions of Sub-themes, Alphabetically, in Theme “I Think Differently Now”

Theme and Sub-themes	Definition
I Think Differently Now	A cognitive shift in the way participants interacted with one or more salient topics or thought processes. In some cases, participants were aware of this shift and could articulate the intellectual change. In other cases, the changes were demonstrated but not articulated.
Application of a Frame	When a participant either deliberately or unintentionally relied on a learned framework (such as an intercultural framework like direct/indirect communication) to explain an event, interaction, or idea.
Complexification	A process wherein participants demonstrated the ability to analyze an event, interaction, relationship, or idea at multiple levels. This often involved an intentional pause or backtracking, wherein a participant would clarify a statement by adding additional layers of analysis or introducing uncertainty to reinforce the idea of a multifaceted context.
Differences described	A specific awareness and articulation of differences (especially cultural differences) demonstrated by the participant.
New Awareness	Specific statements about or demonstrations of a participant’s realization of something she previously had not realized (often a “lightbulb” moment).
Oversimplification	An articulated awareness that at sometime during the experience, the participant had not realized the full complexity of an issue, value, or event.
Similarity Described	A specific awareness and articulation of sameness (such as universal principles or biological similarities) demonstrated by the participant.

Application of a Frame

The first sub-theme within the “I Think Differently Now” theme was “Application of a Frame.” In her reintegration paper, Valerie expressed that “The framework that I had before that time for thinking about culture was weak at best.” In the interviews, there were plenty of examples where the students were applying frames. Ella expressed this perhaps most completely as follows:

learning all those things—high/low context, doing/being, polychronic /monochronic—it seemed like for so many things Malian culture and American culture were like complete opposites. So it was like learning [that] Malian culture is like this . . . learning [that] American culture is like opposite of that, and so it was so much easier. . . . Once we learned all that we could look back at the beginning of our time and be like “oh so that’s why this happened” and “that’s why this happened,” and “that’s why that lady cut [in front of me in line at] the grocery line just because there’s like an inch gap between me and the person in front of me.” It was just like all of a sudden everything made more sense, and you were just like “wow,” so yeah I could understand a lot more.

Three frames that were consistently applied in the interviews were related to Economics (24%), Family (24%), and Friendship (14%). The application of frames was generally in reaction to a critical moment or theme. Whereas much of the participants’ energy was expended in areas related to Economics, Family, and Friendship, it appears that this was also where they sought frames for explanation.

Complexification

Second in the “I Think Differently Now” theme, there seemed to be a process of complexification, demonstrated by five of the six students, though not by the student who regressed. This was a strong theme with nearly 50 specific references from the students. Some participants recognized the origin of a behavior and/or belief that was previously unknown. Participants seemed to demonstrate an awareness that they held a limited

perspective; for example, as mentioned by Valerie when she said of the missionaries in Mali, "I kept thinking to myself, I hope this isn't really what's going on or I hope this isn't the whole picture." Although her initial assessment was negative, Valerie demonstrated a desire to suspend evaluation due to her limited perspective—a sign of complexification.

Differences Described

Third in the "I Think Differently Now" theme was that participants demonstrated an awareness of differences and an ability to specifically discuss them. For instance, in relating the new experience of being a visible minority, Jean (who started in Denial) explained, "I guess it did help me to see that I am different. That there is difference." The ability to describe difference was also related to the ability to describe similarity. In either case, these abilities represent potential (though not necessary) movement in terms of intercultural competence. Linda demonstrated this in her assertion: "No, we [Americans] do care. But we just express it differently." In this statement, she was identifying both similarity (Americans and Malians care) and difference (we express the care differently).

A student starting in Polarization who was then able to describe specific cross-cultural similarities might be demonstrating movement into Minimization, as seemed to be the case with Geoff. A student who started in Minimization and was able to identify differences, such as Ella, might be moving into Acceptance or late minimization (like Valerie). Expression of either could, however, also represent a trailing issue or regressive movement, and thus must be considered in context.

New Awareness

The fourth sub-theme of “I Think Differently Now” was when students demonstrated and spoke about new awareness. This was most often in very specific, sensory memory kinds of terms. These led to specific statements such as: "I didn't really know anything," "oh my gosh what did we do?" and "Oh! That's why this happened!" In each case, the student referred to a specific new awareness based around a particular memory. Valerie expressed a “lightbulb moment” this way: “I think I realized for the first time maybe that [the Malians] were viewing us in a different way than we were [viewing ourselves].” Sometimes the areas of new awareness were deeply significant.

Geoff discussed his interaction with one of the Malian young men:

At one point, one of the [Malian] guys said “I would accept Christianity if I knew my family would not disown me. But I know that if I do this I would give up everything I have and I can’t do that.”

Geoff demonstrated a significant new awareness as he reflected further on this interaction:

At the beginning [of the trip I] would have been like . . . “Oh come on it’s not that bad.” But after getting to know the Malians and their families, I realized this is all they have, and that they bank everything they own and everything that they are on their families and on their friends.

Oversimplification

Reflecting an important way that they thought differently now, students demonstrated reflection on their previous uses of oversimplification in dealing with difference and similarity. This was often the awareness that, at some point during their journey or since their return, they had held an unbalanced or overly simple view of either their own or another culture. For instance, referring to how she used to think, Valerie

expressed “yeah, I remember thinking ‘Europeans, they’re just like us but they speak a different language.’” Geoff reflected on his approach to culture when he took the IDI pre-assessment:

I was so clueless, no idea. And . . . I know that’s one of the reasons why Valerie and I would always laugh. I mean we would laugh so hard up there before we left, we both answered the IDI America rocks, America rocks.

Similarity Described

In the final sub-theme demonstrating “I Think Differently Now,” similarity described was generated especially by Geoff, who identified the common humanity between himself and his Malian hosts. As a clear demonstration of Universalism within Minimization, he suggested that neither Malian culture nor American culture was better than the other by comparing both to a universal principle.

Impetus for Change (Reason)

After reviewing the first main theme, regarding the ways in which students thought differently at the end, it seemed appropriate to consider what caused them to change. The second main theme of *Impetus for Change* (see Table 14 for definitions) came from Ella's discussion of resolving Similarity in Minimization. Considering what had caused her change, she said:

honestly I think it was when we first went over the IDI and you said that I had [Minimization]. For some reason when you said that and you talked about the hierarchy of needs, I never forgot about it and I was always thinking about it. Because when you first told me I just didn’t really understand—why wouldn’t that be the same—and so I think that’s why [I changed], because I thought about it a lot.

The goal, then, of this theme is to explore what moves a student toward change as demonstrated in the previous section (I think differently now).

Table 14. Definitions of Sub-themes, Alphabetically, in Theme “Impetus for Change”

Theme and Sub-themes	Definition
Impetus for Change	A thing, person, event, condition, etc., which generated a perceived or demonstrated response (e.g., intercultural development).
Cognitive Shift	A moment when a previously used frame of reference was no longer sufficient to explain phenomena experienced by a participant.
Coursework or Instructor	Interaction with a specific programmatic element in the form of an assignment or instructor in formal, non-formal, or informal settings.
Expectations	An attribute of interpersonal interactions which arose when there was an awareness that a participant had a different view of what was to happen than a host national or a friend or relative at home.
Living Environment	The effect of unfamiliar and often uncomfortable elements of the geographical (i.e., far from home in the African Sahel and Serengeti), biological (i.e., disease agents, animals, insects), medical (i.e., availability, familiarity, and quality of care), climate (e.g., heat, rain), physical (e.g., housing), and social (e.g., church, market, and home), spaces occupied by the participants. Sometimes understood positively as a learning tool and other times perceived as threatening.
Moment of Tension	A critical moment brought about by self- or other- awareness often producing ambivalence, apprehension, guilt, a sense of being demeaned, anger, confusion, or self- or other- criticism, or frustration.
Relationships	A statement of a sustained, new, or desired interaction with another person or people as salient in generating change. The three main forms of relationships were: with host-nationals, with co-nationals, and relationships in conflict.

Moments of Tension

The clearest examples of the Impetus for Change came from critical moments the students shared, which often came to light as Moments of Tension. While there were numerous forms taken by these Moments of Tension, there were certain themes that emerged as the students processed their experiences. These included ambivalence, apprehension, guilt, feeling demeaned, anger, and confusion.

Linda expressed one of these moments from when she was sick:

I felt like I had kind of a justified reason for why I was not eating: because it wouldn't do any good. I felt like if I ate anything and threw it up, it would be more offensive than just not eating it. But they may have thought it would have been better for you to eat it and then gotten sick. Whereas I was thinking if I don't eat it it's not their fault that I got sick. So I don't know, I did feel like they were offended because I didn't eat, but I didn't know what else to do.

Geoff reflected on a moment of tension after the team indulged in some rest and relaxation in Bamako. Particularly interesting in Geoff's reflection was that the tension was experienced in several directions, first, in relation to what the team did, second in how it impacted Malians, and third in how it effected his own self-criticism based around his complicity and participation in something he disagreed with:

After the first time I went swimming I remember thinking "I don't ever want to come back [to the pool]" when I'm in Mali, . . . or to a nice restaurant. Part of it was guilt but also [I was thinking that this Malian] guy has probably never even seen that. He's probably never imagined that something like this exists. . . . And I'm totally taking advantage of it and spending a lot of money on something that is just so fleeting and pointless. I mean it's nice to relax and I mean sure we need to relax. . . . But, I mean it happened, and I still did it, and I really wasn't brave enough to really speak my mind.

Relationships

Closely related to the Moment of Tension within the Impetus for Change was the idea of Relationships. Although relationships sometimes involved conflict (about 20% of the codes in Relationships were conflict related), there were critical moments (both positive and negative) in which relationships were particularly salient in the change process. Relationship salience took several forms, including relationships with hosts, relationships with co-nationals, conflict, and general relationships (including those from back home).

Out of 267 references in the Impetus for Change section, Relationships comprised 127 (47.5 %) of them, and 57 (49 %) of these were identified as being connected to Host Relationships. Thus, the sub-theme of Relationships actually had more references than any other, with 19.8 % of total references. Interestingly, this is consistent with Burkholder's (2003) analysis of the same program, in which Relationships were "the most frequently mentioned theme in the data (17.9% of the responses)" (p. 127). Of Burkholder's four themes, there were two directly related themes: "Malian Friendships," which connected to Host Relationships, and "Conflict Resolution," which connected to Conflict. "Unity among Missionaries" and "Grace Team Relationships" from Burkholder's research resonated with the Co-Nationals theme from the current research.

The sub-theme, Relationships with Malians (called Host Relationships), was the single most frequent theme to arise out of the data. Ella talked about the intersection between her relationship with Malians and with her team:

I was with Malians more than my team because I, I guess maybe I didn't like the fact that they just wanted to sit in the house and do homework all the time and I didn't. And I think a part of it was avoiding conflict too, just being away from [the team]. . . . Not that they were Americans, it was just like I didn't want to be, I didn't like . . . maybe the reversal came from the fact that they just seemed so American because they were so task oriented and they just like wanted to do their homework and stay at the house.

Instructors and Coursework

Participants' relationships with instructors and interaction with coursework also generated an Impetus for Change. Naturally there was some overlap between this and the previous item (Relationships). In relation to coursework, Linda especially reflected on

the different modes of learning: “formal in a classroom, non-formal outside a classroom setting, and informal with instructors outside a classroom setting.”

Valerie captured this when describing a specific moment of the angst she felt after being challenged in class:

It was all in the air, and I hated it and I felt really angry. I felt really angry at [one of the instructors] for bringing it up even. I remember we were sitting in class under the mango tree, we were outside in a circle and there was a story about people in [Thailand].

Interestingly, a number of these references were related to informal and non-formal settings in addition to the classroom setting. This would be an interesting area for follow-up research.

Living Environment

A somewhat surprising theme was Living Environment. Related to the non-formal and informal elements of the experience, students viewed the learning environment at times as helpful and other times as threatening. Interestingly, there did appear to be some connection between Living Environment and the Discomfort sub-theme within the Experience of Change theme.

Catherine demonstrated the salience of this element in the following exchange:

STEPHEN: What did you feel like your culture shock experience was like going to Mali? (Pause) Or transition shock? . . .

CATHERINE: (Pause) Lizards in the house. . . . Mice in the house, and the only way to kill it was to catch it.

STEPHEN: Does that kind of freak you out a little bit?

CATHERINE: Just a little, kind of got used to that after a while. I have a hole chewed in my Grace hoodie [sweatshirt].

STEPHEN: Is that right? From one of the mice?

CATHERINE: Because they got in my suitcase

And in this exchange, she especially highlighted the impact of the living environment on her interaction with Malian culture:

CATHERINE: I think part of it too was at first I wasn't really familiar with the market and stuff like that.

STEPHEN: A lot of unknown

CATHERINE: Yeah

STEPHEN: and then it became more familiar, at least enough that you could function. When you came back . . . on the compound did you feel like your safety was ok?

CATHERINE: At first I wouldn't even go across the street to the bread guy by myself.

Expectations

A further source in the Impetus for Change arose from Expectations. These Expectations seemed to connect most closely to relational interactions—particularly when either the participant or a member of the host culture had an expectation that was not shared mutually. There was one instance where the expectation of a family member was also mentioned as being salient. In that case, the family member questioned the value of a debrief activity that was perceived as “fun,” raising the question of the intersection between fun and service-learning.

Cognitive Shift

The final sub-theme for consideration under "Impetus for Change" was that of the cognitive shift. Essentially, this was where students described a moment where their previous frame was no longer sufficient. This could be a moment of cognitive dissonance (30.3%), a lack of understanding (51.5%), or simply a moment of curiosity (18.2%). Jean demonstrated this kind of curiosity here:

I didn't understand what [the Malians] thought about me because whatever they thought about me, I didn't really have to identify with because I've

only really interacted with Americans. I had to figure out if what they were saying about me was true, because I had never seen that as different from anybody else.

Ella demonstrated both a lack of understanding and cognitive dissonance in this way:

I understood, but I didn't really understand, . . . it's like for some reason I didn't want to think that Malian culture could be bad. And so then it's like really, you know, I really just don't think that that's good.

Experience of Change (Process/Effects)

The first major theme from the interview data was I Think Differently Now, in which the participants focused on the result of the EDGE experience. The second major theme was Impetus for Change, in which the participants described the reasons for the change they experienced. In this third and final theme, Experience of Change (see Table 15 for definitions), participants described both the process and effects of this change. This section particularly looked to explore the students' *experience* of change. The participants mentioned several kinds of experiences, including how they felt about or responded to the change (Absence, Discomfort); what was called into question for them (Cultural Identity, Guiding Principles); and how they saw themselves moving forward (Doubt and Confidence, Reentry, Reintegration).

Table 15. Definitions of Sub-themes, Alphabetically, in Theme “Experience of Change”

Theme and Subthemes	Definition
Experience of Change	The process and effects of the changes undergone by participants while part of the experience, or in the several months following the experience.
Absence	A coping mechanism in which a participant avoids contact with cultural difference or similarity, especially during a time of uncertainty or stress.
Cultural Identity	Refers to a participant’s struggle to identify the extent to which they felt like they were a part of their culture and their emotional response to this affiliation.
Discomfort	A participant’s vague or acute sense of being ill-at-ease, especially because of feeling alone, unable to escape, overwhelmed, visible, or vulnerable.
Doubt and Confidence	Connected to reintegration, participants’ experience of assurance (or lack thereof) regarding changed perspectives and the ability to live consistently with salient values or to implement desired changes in their personal life.
Guiding Principles	Used in reference to a felt disturbance to a deeply held belief or value that orients or grounds the participant in the world; especially related to faith, culture, and ethics.
Reentry	A relatively shorter term (approximately six month) process participants went through of readapting to their homeland after returning from the experience.
Reintegration	Related to reentry, but a longer term process (with no definite ending) in which participants attempt to evaluate and select between new and old values and new and old frames of reference, and to negotiate the outworking of these changes, especially in social relationships.

Discomfort

A notable theme in the Experience of Change was that of Discomfort. Linda captured this well in her paper: “I was scared and tired and cranky.” Feeling alone, the inescapability of their circumstances, a sense of being overwhelmed, and the realities of visibility and vulnerability all played into a malaise experienced differently by each student (See Table 16).

Table 16. Experiences of Discomfort

	Alone	Inescapable	Overwhelmed	Visibility	Vulnerability
Jean	2		1	2	2
Linda	5		2	1	4
Catherine	1				
Geoff		3			

It is interesting, though perhaps not significant, that the two students who had the highest overall Developmental Orientation scores on the IDI post assessment did not mention any form of discomfort. The visibility spoken of by Linda and Jean was especially captured in this interchange:

LINDA'S PAPER: I had a responsibility to these people because I was white. I despised that at times because I just wanted to blend in. I even wished at times that I was black so I could blend in with the crowd.

STEPHEN: Sometimes you just wanted to be black so you could blend in.

LINDA: Yeah.

STEPHEN: So not for the sake of blackness but for the sake of not being visible.

LINDA: Yeah.

Absence and Avoidance

Another major sub-theme within the Experience of Change was Absence and Avoidance. This coping mechanism involved avoiding cultural difference (or at times, cultural similarity) and was employed by each student (although differently for each one). There was a general sense that sometimes absence was the safest option for students looking to make it through this experience. Geoff explained the avoidance this way: "At first I just put up walls. And then I realized I have to face it and I need to get over it. And I had to move whether or not they [the Malians] were going to or not." Valerie realized, after the fact, that she had employed absence: "I was looking at pictures today and I realized a lot of times I didn't go [to be with Malians]. Like I see pictures of these people taking tea and I was like 'oh I wasn't there.' I know I didn't go a lot." Catherine mentioned "there were a couple of times where I isolated myself and spent the entire day reading," which seemed to be at least as much of a reaction to her peers as to the cultural difference she encountered. Since Catherine was the only one to regress on the IDI, it

may be significant that she was very uncomfortable with her peers, as well as the host nationals.

Guiding Principles

As they experienced change, the participants demonstrated profound disturbance in two major areas of guiding principles in their lives. These involved Faith and Culture on the one hand, and Ethical Ambiguity on the other (0.5 Pearson coefficient for similarity in coding between these two). Ella expressed the connection between these two areas of change in this way:

I feel like at this point it's kind of like . . . it's like I need to read the Bible and take my culture out of it all together. That's what I feel like. Because it's like I know that probably a lot of what I think is not the Bible—it's American. So then I can't go to Mali and be like American disguised as Christian. And so I feel like the only thing I can say for even female genital mutilation, it's so cultural, I feel like the only thing I can say is to be like its not biblical and I can't just be like we don't do that in America so. . . .

This particular area of change seemed important enough to dig into the subthemes a little bit more, first by investigating Faith and Culture, and then Ethical Ambiguity.

Faith and Culture

With four sources and 23 references, the intersection of Faith and Culture was an important theme for several of the participants. For Jean, (who started in denial), the main area of focus was on her interaction with the American Christian community— noting how she felt safe and accepted there and was unsure about her ability to interact with Americans who were not part of that community. Yet, at the same time, she expressed certain reversal sentiments about the American version of her Christian faith.

Geoff, on the other hand, revealed that he was struggling with the universal elements of Faith and Culture:

There are all these specific [ideas about culture] but it's a whole other dimension when you add the gospel. . . . So that's why their culture . . . isn't any better than ours because neither of them really look to Christ. . . . Living there you see a lot of similarities between their . . . Christian culture and our Christian culture because . . . that's the amazing thing about the gospel. An African body of believers can fellowship with and have a lot in common with us because of Christ. And that was really neat to see. That was fun to experience really.

Geoff expressed that this wrestling with Faith and Culture had disrupted his relationships with American Christianity as well:

I think because I'm at Grace right now, I'm thinking "oh my word Christians have it so wrong." But when I think about culture . . . the problem is that . . . American Christians have adopted this American culture. This has kind of distorted us, so most of the time I'm really thinking about America.

Interacting with other Christians has been a huge difficulty for me at times. It is funny that the people I have the most problems [with] are those individuals who remind me of how I used to be. One would think I would understand them, empathize with them, and reach out to them most. But the truth is that I really cannot stand them. I do not think this is healthy or the correct response.

Valerie discussed the difference between Biblical and cultural morals, and how one determined which was which:

from the Bible's perspective . . . I could recognize . . . what [Malian church leaders] were saying, but at the same time it's hard for me to believe that there aren't things that even they would say 'now that's wrong.' . . . Maybe that's cultural. But then I started thinking maybe it *is* wrong for [the Malians] to do because of their conscience or because you know whatever.

I remember we even talked about how do we look at the Bible and take what it says without our culture affecting it. How do we take our culture out of [the Bible] and see what it really says?

As with her quote in the beginning of the *Guiding Principles* section, Ella reflected further on her experience of attempting to understand the Biblical and Cultural backgrounds for the form of Christianity she had experienced:

I learned in Mali that our view of the Bible and what it is saying is culturally informed and that can make even the gospel message different here than in Mali. However when I am looking at it from the perspective that Americans are individualistic there are things about that that I had never even considered . . . [such as] the idea of individual holiness. . . . We have such an emphasis on our personal relationship with Christ with almost no emphasis on relationships with those around us and how we are all related to Christ.

Along those lines I have also been thinking about the way that we come to Christ and I feel like my views have changed about whether it would be legitimate for a whole family to come to [faith in] Christ all together. Before I probably would have said absolutely not, but now I feel in a culture like Mali where everything is so collective that that can be a reality for them.

As demonstrated in these extended quotes, most of the students engaged in a fairly deep struggle to understand their faith in a broadened context. It was also interesting that none of them questioned the faith itself, but rather the understanding and practice of it through culturally limited forms.

Ethical Ambiguity

The next sub-theme within Experience of Change is Ethical Ambiguity. It was no surprise that when a fundamental element of people's worldview, such as their faith system, undergoes rethinking, that other areas might also come into question. Valerie started down the path of attempting to understand the universality of ethical principles in this way: "it would seem . . . to Americans we would be like now that is wrong, but to us it was almost like that's not wrong, but is it?" She continued to explain her ethical malaise as follows:

We were kind of touching on ethical issues and . . . moral standards, and I remember kind of going into a state of “I don’t know what to think about anything with Mali or America” . . . and I felt frustrated because of that. Like I don’t feel like either is wrong or right and . . . there was some stuff like I know murder is wrong, but even then. I guess specifically I can’t think of instances where murder would be ok, I don’t know if murder is ever ok, but maybe the situation around it and other things around it would definitely be perceived differently . . . for adultery definitely the same. . . . What we might consider adultery other cultures would be like “no that’s not adultery.”

Jean seemed to sum up the ethical section well: “There’s a lot we have to grapple with too, just ethics too, when it comes to this kind of thing too. What’s ethically correct?”

Cultural Identity

While some students were exploring their ethical principles, all were attempting to come to terms with their cultural identity. For some participants, this was specifically a coping with cultural disengagement, but not for all. Importantly, this happened for some as they returned to the U.S., as well as while they were abroad.

Jean, who started in Denial and with unresolved Cultural Disengagement explained her process of attempting to find her Cultural Identity in this way:

JEAN: I guess I learned my culture but I guess I kind of felt [like I didn’t have a culture] when we were taking Cultural Anthropology and we were talking about ethnicity. And we were talking about . . . how so many people understand their ethnicity. But white Americans are ya know, since they’re dominant, nobody ever talks about that. I don’t know how to explain it. It was confusing. . . . I remember that it was hard for me . . . feeling like I don’t belong to something. I think I just kind of resolved that I do have an ethnicity, but I kind of have to think about it.

JEAN: I think what I did with it was, and this is what I would answer, Mid-Western. I feel like I’m a part of the Mid-western culture, ya know. I haven’t really traveled to many other areas of the country but I think that’s how I resolved it a little bit. I do have Mid-western American

culture. As far as ethnicity, I don't know, European American, I don't identify with Europe.

STEPHEN: but you identify as American whose ancestors were European.

JEAN: Yeah, Mid-Western American.

In considering whether she felt connected to American culture, Linda answered "I think it's more defined what specifically is American and seeing that in myself is easier."

However, she also expressed a specific desire to integrate some things from Mali into her life back home. She said, "I have some things that . . . I've seen in Mali that I kind of want to use and implement somehow in America." Catherine expressed consideration of the intersection between her American and American Christian cultures. Interestingly, her regression into Reversal seemed evident at the end:

STEPHEN: How much do you feel like you are part of the American Christian culture? Do you feel like you are really a part of it or do you feel a bit outside of it?

CATHERINE: I feel a little more a part of that than the American culture.

STEPHEN: Ok, so maybe a part of the American Christian subculture and less a part of the American culture in general.

CATHERINE: yeah

STEPHEN: Do you . . . How do you feel about the American culture in general?

CATHERINE: (Pause) There's a lot of stupid out there.

As with deep issues of Guiding Principles, changes in Cultural Identity appeared to have certain implications—particularly for the reintegration process. Reflecting the connection between Cultural Identity and efforts to reenter and reintegrate, Ella comments: "It is easy to be American, I am American but it's hard because more and more I'm realizing [American] people don't understand what I'm saying."

Reentry, Reintegration, and Doubt and Confidence

Given strong relationships between Reentry, Reintegration, and Doubt and Confidence, I have decided to combine these discussions. The interviews were

conducted approximately 18 weeks after the students returned from Mali (their return trip also contained a three-day debrief in Paris). Although the students reported that they had “started coming out of it” (Jean), there was a sense that they were still within the reentry process, as noted by Linda who said “Um . . . I think I’m coming out of that swirling vortex of confusion.” Thus, although *reentry* represents the shorter term process of readapting to one’s homeland, and *reintegration* represents the longer term process of sorting through values and new points of reference, it is somewhat difficult to distinguish the two at a point in time so close to the students’ return. Moreover, the primary arena where doubt and confidence were shown was in reintegration, as was noticeable in the students’ comments that follow.

The return process itself was very impactful for all of the students. Reentry was described by the various student participants in words like: stress, confusion, hard time, struggling, swirling vortex of confusion, crazy, long, intense, I was probably never actually really doing that great, really bad, really emotional, depressed, I kind of shut down, didn’t do anything, felt the need to have a break, pressure, for a little while it was ok, but then all of a sudden it was not ok, horrible, depressed.

Closely connected to this was the process of reintegration with one’s own culture, friends, families, ideas, etc. Ella expressed concern with the movement from reentry to reintegration as follows:

It was just like all horrible, it felt like I was depressed. And then I think around November even like maybe October I was coming out of that and I remember thinking it was weird how I felt like I was American again. And it was weird because in my head it was like all of a sudden it was easy to be here. And so it was kind of like ‘why is it so easy . . . did I not take anything from Mali? Like why would it be this easy, but . . . ?’

Especially noticeable in Ella's comments was the fear of what La Brack (2003) calls shoeboxing. He described shoeboxing as the temptation "to mentally compartmentalize the experience as a . . . separate part of your college experience. . . . You don't really know how to integrate the experience into your ongoing life" (§2.5.1, ¶4).

Jean similarly described the process of transition culminating in a hesitant sense of reintegrating certain elements of who she was now.

I'm beginning to see how I have changed in a lasting way I guess. I guess I feel settled . . . but I do see that I'm different. But I'm not stressing over the differences. I guess I'm able to separate more how I was different because of the stress and confusion and the lasting changes.

Jean also appeared to vacillate between doubt and confidence as she considered the future application of what she learned on the trip.

I remember we were talking when we were in Mali, [about] if we would still be interested in living and working overseas. I felt like then 'I don't think I could do it.' Before I [went to Mali], I was like oh yeah I totally want to do it, but I didn't really know anything. Now I have a better understanding of the challenges, but while I was there I think it was so heavy for me I was just like 'I'm not sure I would be able to function under some of the challenges.'

Now I feel like I would have the tools too. . . . I do feel more of a resolve on who I am here and where I fit here, especially now that I am coming out of the transitioning time. I feel like I can function here.

Linda discussed her desire to move forward with culture learning, despite the sense of being overwhelmed:

I think I was just burned out on how many different things there were in one other culture that I wasn't . . . very interested in worrying about another one right away. . . . Just a month later I am more ready to even think about other cultures and how they're different. . . . I've made a running list of cultures I want to explore.

Linda also shared that she had a desire for her friends to understand and apply a part of Malian culture. However, she recognized that this was an unreasonable expectation because her friends lack the context to understand what she desired to share with them.

Valerie talked about the pain of reintegration, and how it continued on, even past reentry. Especially noticeable in her quote was her struggle with the increased complexity she was newly capable of recognizing:

I really feel like I want to believe what I used to believe because it's comfortable and it's black and white and everyone I know believes that kind of stuff, like my family. I don't want to be at odds with them anymore, because I have been. So I don't know, maybe that's what it is . . . I hope I never actually make that decision . . . to just go back. I don't think I'll be able to do that but it's very attractive to do that sometimes.

And despite her desire to not “go back” to her old way of thinking, when she was confronted by a peer who had the attitude of “I don't care what anyone thinks, this is what I believe and I don't care what they say,” she experienced an ambivalent reaction. On the one hand, Valerie desired to regain the self-assuredness of her peer. On the other hand, she reflected that “I used to believe [that I didn't have to care what anyone thinks] but I can't anymore.” Yet the lack of clarity was frustrating for Valerie and she shared that “it made me really want that. I just want to be really sure.”

Thus, both the process of reentry and its cousin, reintegration, seemed to be emotionally and mentally taxing on the participants. As they sought to reintegrate their understandings of how the world works, students expressed a mix of doubt and confidence. Reflecting on his IDI feedback, Geoff summed it up this way:

Well, [I'm not] as frustrated as I thought I would be. Just because I think I'm finally understanding that life in general, I mean, cultural maturity,

spiritual maturity, is just going to take yieldedness and time. So that's all I can do.

Conclusion

The quantitative elements of the Results included a review of the Individual and Group results on the Intercultural Development Inventory. In that section, it was determined that six of the seven participants experienced forward movement on the IDI, and that one experienced regression. It was furthermore determined that the group as a whole experienced statistically significant change in the desired direction.

The qualitative elements of the Data Analysis explored three main themes related to the participants' intercultural development in the *edge* program. These included "I Think Differently Now," "Impetus for Change," and "Experience of Change." As with the Literature Review, it may be concluded from this chapter that when pursuing intercultural development, GSL is a complex experience with a high level of intensity that should be carefully studied because of its profound effects on people. The following chapter contains the discussion and conclusions from this project.

CHAPTER V

DISCUSSION AND CONCLUSIONS

The results of this study demonstrate that the immersion experience offered by the EDGE program led to changes in the levels of intercultural competence for each participating student. The Intercultural Development Inventory (IDI), student reflection papers, and interviews, all reveal changes for these participants. For most students this is positive change, in the direction anticipated by the EDGE program facilitators. However, for one student the change is best characterized as regression.

The qualitative and quantitative data furthermore point to the complexity and non-linearity of change experienced by the students. Most students experienced both positive and negative movements in the subscales of the IDI. At the same time, the overall patterns of movement are consistent with the developmental nature of the Intercultural Development Continuum. In the interviews, participants report both positive and negative evaluations of the process and effects of change.

Many of the themes and sub-themes drawn out in the Results section echo the existing literature. This research contributes to a growing body of literature that seeks to integrate the insights of the areas of intercultural development, study abroad, and global service-learning. There are several results in particular that deserve future research. These are discussed in the Salient Results section. This is followed by the Limitations

section, which identifies a few problem issues concerning the present study. Finally, I present a brief evaluation of this method of assessment.

Salient Results

Global Service-Learning is unquestionably a complicated undertaking. Within this research project, several important items emerged that warrant additional attention and research. These include (a) the reality that not all students who participate in GSL will experience intercultural development; (b) the effects of the living environment on the student experience; (c) the effects of relationships on student development; (d) the ethical ramifications of profound challenges to participants' guiding principles; (e) students' experience of reentry and reintegration; (f) the interaction between formal, non-formal, and informal modes of learning; and (g) the intersection between fun and service-learning.

Nature of Developmental Progress

An important finding is that even in a program where most students experience increased intercultural development, increased intercultural competence is not inevitable. This is consistent with the (a) the Contact Hypothesis (Allport, 1954; Pettigrew, 1998; Pettigrew et al., 2011), (b) Medina-López-Portillo's (2004) assertion that student characteristics impact intercultural development, (c) the need to balance learner support and learner challenge (Engle and Engle, 2003; Vande Berg, et al, 2009), and (d) Erikson's (1963) notion that in developmental processes, crisis events can move a person forward or toward regression.

Practitioners of GSL who have intentions of developing intercultural competence must be deliberate about creating a program environment that in fact supports this goal. Continuing research could focus on how to maximize intercultural development gains as well as the maintenance of those gains. One example which may be useful in this regard is Ellenwood, Mandell, and Snyder (2008), who saw all of their participants resolve Denial and Polarization, in part through the intentional development of relationships between the sojourning students and host students through social media.

Living Environment

Particularly related to learner support and learner challenge is the idea of the Living Environment. While surprising me to a degree, it also seems obvious that living environment might be an issue. One of our 2010 Mali adjunct instructors Beth Yoder, (personal communication, July 2010) has suggested it is an item for special consideration. Yoder has wondered if perhaps the students risk reacting more to the living environment than to the culture. Although not directly identified by Paige (1993) as an intensity or risk factor, certainly the living environment can be a source of increased psychological intensity. Kiely (2005) suggests that dissonance can be generated through environmental, social, and physical realities present in the field. Paige, Cohen, Kappler, Chi, and Lassegard (2004) also include physical adjustment among the most significant adjustments at play in culture shock.

One result of this finding is an attempt to better prepare students for the demanding physical living environment before leaving for Mali. Specifically, the 2011 team participated in three weeks with limited electricity and internet, without running water, and with daily agricultural chores along with classes immediately prior to their

GSL experience. The students completed the three weeks through a partnership with the Hunger Education And Resource Training (H.E.A.R.T.) Institute in Lake Wales, Florida. Initial indications are that additional preparation has allowed students to focus more on the culture and be less distracted by their levels of physical comfort than previous groups.

Relationships

Relationships, and particularly relationships with members of the host culture, are a major theme that emerged in the research. This is especially important when considering that rising costs and limited budgets may call into question the usefulness of expensive GSL programs. Along with other elements (living environment, intensity factors such as visibility, etc.) that are not easily replicated in an on-campus setting, relationships with cultural others in their own setting are impossible to replicate at home. To develop real relationships, students will need to be in continued proximity with cultural others, whether in a domestic or international GSL setting.

Another striking finding is that interactions with co-nationals appear to have both positive and negative implications for intercultural development. The experience of Catherine in particular may be a strong indication of a need for follow-up research. Vande Berg, et al.'s (2009) study does point to the presence of co-nationals as an important factor in intercultural development. A question suggested by the present research is to what extent the health of co-national relationships affects a person's ability to experience intercultural development. I especially wonder about the effects of the intersections of the following elements on intercultural development:

- culture shock, where symptoms range from depression and withdrawal to unusual verbal and physical aggressiveness (Kohls, 2001)

- a situation in which, as again confirmed in this research, cultural identity is threatened, which in turn impacts in- and out-group distinctions
- that there is likely to be some amount of dysfunction present in teams of GSL college students
- the need for support in challenging learning environments
- the potential for unhealthy emotional dependency either between team members or between team members and host nationals

It seems that the nexus of these points (surely there are more) may require special attention in the team environment when teams are used. At the same time, the positive nature in which the team environment was understood by most participants indicates that this may be a really constructive element of the learning environment. In either case, this seems to me to be an important area for continued study.

Ethical Issues Connected to Guiding Principles

The students in the present study experienced profound challenges to two core areas of their guiding principles: their ethics and their faith. It can be expected that as students begin to approach Acceptance these struggles will intensify (Hammer, 2008). Berry (1990), Berry and Chisholm (1999), Fitch (2004), Westrick (2004), Kiely (2004, 2005), Balas (2006), Merrill and Pusch (2007), and others report that GSL experiences are transformative not only in terms of students' skill development, but also in terms of their larger orientation to and interaction with the world. Discussing the psychological and moral challenges experienced in intercultural education, Paige (1993) predicts that "intercultural education is inherently transformative" (p. 18). GSL practitioners would do well, then, to heed his advice to "recognize [the] risks, systematically assess learning activities in light of them, and sequence those activities accordingly" (p. 18).

If GSL practitioners desire to provoke change at deep levels, which seems to be a major reason for utilizing the GSL methods, then these changes should not be undertaken lightly. Nor should the GSL practitioners expect that the return home indicates the end of the practitioners' responsibility in these changes. The students in this study demonstrated profound disturbances as they attempted to realign their lives to match their (still changing) values after returning home. Merrill and Pusch (2007) find that the biggest problem for students who have returned (some more than a decade earlier) is "finding a way to process what they had learned on a continuing basis" (p. 38).

Perhaps one of the greatest student-development strengths of GSL is that it has the potential to generate these deep-level disturbances. One of the most important contributions of GSL is that it can effect changes related to citizenship (Berry and Chisholm, 1999; Hartman, 2011) and deeply humane values (Berry and Chisholm; Balas, 2006). Yet even these do not come easily. Valerie demonstrated this when bemoaning the loss of her autonomy as she realized that even *what she thought* had the potential to impact other people.

This transformative potential is one that must be exercised responsibly. GSL practitioners must honestly face the ethical ramifications of the changes they seek to work in their students. That the intended changes may be good does not validate a destructive and unsupported process. As one of our Malian host partners said "If the way is wrong, the good is bad" (S. J. Camara, personal communication, February 1, 2009).

Reentry and Reintegration

Closely linked to the nature of deep changes in students' value systems is the process of reentry and reintegration. When comparing the Reentry section of the

literature review with the Reentry and Reintegration section of the Results, there is a striking similarity. The discomfort that participants described regarding the reentry process is not surprising given the literature. Yet especially salient is the way in which some feared that they were instead experiencing non-integration, which seems tightly connected to Kiely's (2004) Chameleon Complex (p. 21):

Chameleon complex depicts students' ongoing struggle to translate their perspective transformation into meaningful action. Once they return to the U.S., students continue to confront dilemmas. There is often a disconnect between what students want to do and the actions they actually take. . . . [This] suggests that a transformation in one's worldview is a necessary, but not a sufficient condition for changing lifestyles, challenging mainstream norms, and engaging in [transformative action].

La Brack (2003), Crabtree (2008), and Kiely (2004) suggest that some kind of a post-program course or reentry training is necessary. In fact, the present program does involve a mandatory one-semester reentry course, though there is a need for additional research at the end of that course. Another area for continued research is how to best aid student sojourners in achieving a cohesive identity upon reintegration. This also again confirms that GSL programs should not be undertaken lightly, as these programs have the ability to effect profound changes in participants. The ongoing challenges of this reintegration process are captured by Merrill and Pusch (2007) who explain that for returned students (some of whom had returned up to 10 years prior), "Reentry remained an immediate memory because it tended to be a very unique and life-long experience" (p. 318).

Along with the need to facilitate reentry training is the developmental caution that a failure to do so could encourage regression to or emboldening of Reversal. This theme is not well substantiated by the present research, and needs to be further researched.

There are, however, several comments by students such as Valerie, Geoff, and Catherine that point to this possibility. As a case in point, when Catherine was asked how she felt about American culture, she replied “There’s a lot of stupid out there.”

Formal, Non-Formal, and Informal Learning

The research tentatively examined several areas related to intercultural development, including formal (coursework, cognitive), non-formal (skill building, behavioral), and informal (lifestyle, affective) elements of the GSL experience. All three areas have been identified by the students, directly or indirectly, as being salient in the development process. Of these, it appears that informal education may have had some of the most profound impact on the students. This finding mirrors Burkholder’s (2003) assessment of the EDGE Program, in which he says that the learning through informal education “powerfully supports the superiority of field based training” (p. 158). As with relationships, this finding argues in favor of intentional engagement with the holistic learning environment offered by global service-learning, at least as far as the development of student participants is concerned.

Fun and Service-Learning

A small, but important theme concerning fun and service-learning arose in the research. In one case, a family member questioned the value of a debrief activity because it seemed too fun. In another case, a student experienced guilt after choosing to participate in a student-initiated and relatively expensive day of recreation. Future research examining the role of fun in service-learning would be useful. I have not found any academic literature related to this issue, but it is an important area for setting

expectations. Questions that could be considered include (a) What is the connection between fun and GSL learner support? (b) Is it appropriate to have co-national-only fun events as part of an extended GSL sojourn? (c) How do cultural differences in perception of fun and recreation impact psychological intensity?

Limitations

Focus on the Student Participants

One of the most consistent limitations of studies related to global service-learning is an overwhelming focus on the student participants. Camacho (2004) warns that there is a danger of perpetuating power imbalances in service-learning. This is especially noticeable when looking at the limited student-focused research. Crabtree (2008) echoes this concern saying “the discussion focuses overwhelmingly on maximizing student learning; attention to community-level concerns is underwhelming at best” (p. 23).

Bearing in mind Camacho’s and Crabtree’s warnings, areas that require thorough future research include (a) the effect of the GSL program on the program hosts, (b) the meaningfulness of the *service* rendered in the receiving context, (c) the affects of the GSL program on the sending institution and/or faculty members, (d) the potential disruptions in economic and other systems in the receiving context, (e) the effectiveness of the curriculum itself, and (f) potential misunderstandings at home or in the host location perpetuated by participants and/or the program itself.

Coding

A further limitation involves the coding itself. I did the coding on my own, and without corroboration from other intercultural researchers. Future research will benefit

from collaborative research and an early adoption of (and commitment to) a qualitative research software program, such as NVivo. I am not confident that my process has been consistent enough to rely on data related specifically to the quantity of references in any given code. However, an early commitment to NVivo (or another qualitative research software program), along with the inter-rater reliability features of these programs would greatly improve the quality of future studies.

Timing of the IDI

An additional concern is related to the timing of when the second IDI should be administered. It is likely that some or all of the students were still in the reentry process when they took the posttest IDI, which they did about three months after their return from Mali. Jean expressed that it may have been too soon:

I remember when we took it I was like I don't want to take it now. I don't feel like I've come out. I hadn't felt like I've really come out of it, maybe I was starting to. But I remember feeling like I don't want to take it now cause I don't know if it will be accurate.

This may also have been the case for Catherine (who regressed on the IDI), who reported that upon returning to the U.S., "I think I kind of shut down for a while. . . . Like I didn't do anything. . . . I think [I was] a little numb." In the IDI Group Profile Report the following consideration is given to this kind of situation:

Have members had or are they currently experiencing a significant professional or personal transitional experience (e.g., moving to another country, traumatic event)?

If so, in some cases, their individual responses to the IDI may reflect their struggle with this transitional situation rather than their more stable orientation toward cultural differences. If this is the case, you may consider having these members re-take the IDI at a later date. (Hammer, p. 2, 2009)

It is likely that the IDI results reflect at least some of the students' orientation to the reentry process. At this point, the only way to really find out would be to do a re-test. However, with college students, there is a series of salient transitional experiences (e.g., graduation, marriage, their parents' transitions, entering a career), which makes it essentially impossible to find a time when the whole group is relatively stable. As Geoff mentioned "there are just so many things going on. It just seems like all these transitions that I'm having to look forward to in the next month"

At the time of the interview, Valerie reported, "I feel like it's pretty normal now. I feel very normal." However, reflecting on the point at which she took the IDI, Valerie said she was "probably not so stable . . . but stabler than I was. It was very, I mean really bad at first and it did like steadily get better . . . I remember . . . at first [I] was really emotional and . . . depressed."

Administering the IDI at three months after return is likely better than administering it earlier. However, from the way the students talk, administering the IDI at four months or later may have yielded a more stable result.

Evaluation of the Method

One of the goals of this project was to experiment with a three-part method of global service-learning assessment that included the IDI, student guided-reflection papers, and interviews. Giving heed to the limitations listed previously, overall this method of evaluation was very effective for this small group. It would likely be financially expensive and time intensive to conduct a large-scale program evaluation using this method. However, for smaller GSL programs and groups, this method is very feasible. Ideally, there would be two longitudinal features to continued research with this

method. First, former participants would be reevaluated again using the IDI and interviews (though perhaps not papers) after several years. Second, the program should be evaluated using this method on a regular basis to provide longitudinal data and to look for longer-term themes.

Summarily, I recommend the use of the IDI v.3 as a pretest to develop or adjust GSL curriculum into an IDI Guided Development process. I further recommend the use of guided student reflection papers and an IDI posttest approximately four months after return. Finally, I recommend that student reflection papers and IDI data be used to prompt interviews for rich data collection.

Conclusion

This research project has confirmed that the 2009 Grace University EDGE Program in Mali impacted the intercultural development of its student participants. Furthermore, the impact was largely positive, was significant statistically, and was shown to be effective in qualitative analysis. These results suggest that the program provides an important avenue for intercultural training and should be continued. As the program continues, the findings of this research draw attention to several important areas for ongoing research regarding the effects of this and similar programs. Special findings of this research include the following:

- GSL can be an excellent venue for significant intercultural development,
- Not all GSL participants will experience significant or positive intercultural development,
- GSL living environments can have profound effects on the student experience,
- Relationships with both host- and co-nationals can effect participant's intercultural development, both positively and negatively,

- GSL experiences can introduce profound challenges to participants' guiding principles, which does have certain ethical ramifications,
- Reentry and reintegration, can be deeply disturbing processes and require special attention for GSL practitioners and their students,
- GSL can access formal, non-formal, and informal modes of learning,
- The intersection between fun and GSL needs definition,
- GSL can be systematically researched in a way which reflects the contributing areas of intercultural development, study abroad, and service-learning
- More research is needed to determine the effects of GSL on and in the host community

Thus concludes this research project of Intercultural Development in Global Service-Learning. It remains to be seen what the impact of this study may be, but certainly it does advance the state of the literature in GSL. Continued scholarly research will be imperative for the ongoing growth and development of this important and effective mode of engaging the world's pressing issues through facilitating high-quality intercultural learning.

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APPENDIX A: REFLECTION PAPER INSTRUCTIONS

Guided Reflection Paper:

In 7-10 pages (double spaced, 11pt font, Arial Narrow), respond to the questions and prompts below. Respond to the questions as honestly as you can.

How have you changed? What kinds of changes have you noticed about yourself since your participation in the EDGE program? These can be changes that happened as you were preparing to go, as you were participating, or after you returned. Be sure to address changes in at least the following categories:

1. Intellectual:

What did you learn? What changes have you noticed in your knowledge?

- a. How did the learning occur?
- b. How do you feel about the learning?

2. Spiritual:

Do you feel that your understanding of Christianity has changed? Has your relationship with Christ or with other Christians changed?

- a. How did the changes occur?
- b. How do you feel about the changes?

3. Cultural:

Do you interact with and think about people from other cultures differently now?

In what ways? Do you sense that you have become more open, less open, or no change with regards to cultural difference?

- a. How did the changes occur?
- b. How do you feel about the changes?

4. Identity:

Do you think you have a better sense of who you are now? Why or why not?

Has your sense of who you are changed since you started the program? Have different elements of your identity changed in importance to you?

- a. How did the changes occur?
- b. How do you feel about the changes?

5. Physical:

Have you noticed any physical changes since you started the program? Do you feel like these have any impact on the changes you reported in the other areas?

- a. How did the changes occur?
- b. How do you feel about the changes?

APPENDIX B: INDIVIDUAL PARTICIPANT PRE- AND POSTTEST IDI SCORES
WITH CHANGE, AVERAGE, MEDIAN, AND MODE AS APPLICABLE

Student	PO1	PO2	POΔ	DO1	DO2	DOΔ	OG1	OG2	OGΔ
Valerie	116.02	124.61	8.59	79.91	99.41	19.5	36.11	25.2	-10.91
Ella	129.61	136.72	7.11	106.87	123.9	17.03	22.74	12.82	-9.92
Geoff	117.33	123.19	5.86	82.45	90.51	8.06	34.88	32.68	-2.2
Linda	116.46	122.45	6.02	83.65	91.97	8.32	32.78	30.48	-2.3
Catherine	116.71	115.95	-0.76	86.05	75.08	-10.97	30.66	40.87	10.21
Fillip	124.52	132.17	7.65	97.63	117.82	20.19	26.89	14.35	-12.54
Jean	108.47	124.43	15.96	60.93	92.34	31.41	47.54	32.09	-15.45
Average	118.44	125.65	7.20	85.36	98.72	13.36	33.09	26.93	-6.16
Median	116.71	124.43	7.72	83.65	92.34	8.69	32.78	30.48	-2.30
Mode									
Student	CD1	CD2	CDA	DEN1	DEN2	DENA	DIS1	DIS2	DISA
Valerie	5.0	5.0	0.0	4.71	4.86	0.15	4.75	5.0	0.25
Ella	4.4	5.0	0.6	4.86	4.71	-0.15	5.0	4.75	-0.25
Geoff	4.2	5.0	0.8	3.71	4.43	0.72	3.5	4.0	0.5
Linda	4.8	4.4	-0.4	4.29	3.71	-0.58	4.5	3.5	-1.0
Catherine	3.8	3.8	0.0	4.86	4.0	-0.86	5.0	3.25	-1.75
Fillip	5.0	5.0	0.0	4.71	4.86	0.15	4.75	4.75	0.0
Jean	3.4	4.4	1.0	3.29	3.86	0.57	3.0	4.25	1.25
Average	4.37	4.66	0.29	4.35	4.35	0.00	4.36	4.21	-0.14
Median	4.40	5.00	0.60	4.71	4.43	-0.28	4.75	4.25	-0.50
Mode	5.00	5.00	0.00	4.71	4.86	0.15	4.75	4.75	0.00
Student	AVO1	AVO2	AVOΔ	DEF1	DEF2	DEFΔ	REV1	REV2	REVΔ
Valerie	4.67	4.67	0.0	3.67	4.33	0.66	2.89	3.33	0.44
Ella	4.67	4.67	0.0	4.83	4.5	-0.33	3.22	4.11	0.89
Geoff	4.0	5.0	1.0	2.5	3.67	1.17	3.67	2.89	-0.78
Linda	4.0	4.0	0.0	4.17	4.33	0.16	3.0	3.22	0.22
Catherine	4.67	5.0	0.33	5.0	4.5	-0.5	2.67	2.22	-0.45
Fillip	4.67	5.0	0.33	3.83	4.67	0.84	3.56	4.44	0.88
Jean	3.67	3.33	-0.34	3.17	4.0	0.83	2.56	2.89	0.33
Average	4.34	4.52	0.19	3.88	4.29	0.40	3.08	3.30	0.22
Median	4.67	4.67	0.00	3.83	4.33	0.50	3.00	3.22	0.22
Mode	4.67	5.00	0.33		4.33			2.89	

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Student	MIN1	MIN2	MIN Δ	SIM1	SIM2	SIM Δ	UNI1	UNI2	UNI Δ
Valerie	2.33	3.22	0.89	2.20	3.40	1.20	2.50	3.00	0.50
Ella	3.56	4.56	1.00	3.20	4.60	1.40	4.00	4.50	0.50
Geoff	3.22	3.44	0.22	3.60	3.00	-0.60	2.75	4.00	1.25
Linda	2.89	3.44	0.55	3.00	3.40	0.40	2.75	3.50	0.75
Catherine	2.67	2.56	-0.11	2.20	2.00	-0.20	3.25	3.25	0.00
Fillip	3.00	3.22	0.22	2.40	2.80	0.40	3.75	3.75	0.00
Jean	2.33	3.89	1.56	1.80	3.80	2.00	3.00	4.00	1.00
Average	2.86	3.48	0.62	2.63	3.29	0.66	3.14	3.71	0.57
Median	2.89	3.44	0.55	2.40	3.40	1.00	3.00	3.75	0.75
Mode	2.33	3.22	0.89	2.20	3.40	1.20	2.75	4.00	1.25
Student	ACC1	ACC2	ACC Δ	ADA1	ADA2	ADA Δ	COG1	COG2	COG Δ
Valerie	3.60	4.20	0.60	3.11	3.22	0.11	2.75	3.25	0.50
Ella	4.80	5.00	0.20	4.00	3.89	-0.11	4.00	4.25	0.25
Geoff	3.80	4.80	1.00	2.56	3.56	1.00	2.00	3.75	1.75
Linda	2.60	4.20	1.60	2.78	3.22	0.44	2.75	3.25	0.50
Catherine	3.00	3.80	0.80	2.44	3.67	1.23	2.00	3.75	1.75
Fillip	4.00	4.40	0.40	3.78	3.89	0.11	3.50	3.5	0.00
Jean	2.80	4.20	1.40	2.89	3.89	1.00	2.00	3.25	1.25
Average	3.51	4.37	0.86	3.08	3.62	0.54	2.71	3.57	0.86
Median	3.60	4.20	0.60	2.89	3.67	0.78	2.75	3.50	0.75
Mode		4.20			3.89		2.00	3.25	1.25
Student	BEH1	BEH2	BEH Δ						
Valerie	3.40	3.20	-0.20						
Ella	4.00	3.60	-0.40						
Geoff	3.00	3.40	0.40						
Linda	2.80	3.20	0.40						
Catherine	2.80	3.60	0.80						
Fillip	4.00	4.20	0.20						
Jean	3.60	4.40	0.80						
Average	3.37	3.66	0.29						
Median	3.40	3.60	0.20						
Mode	4.00	3.20	-0.80						