

EFFECTIVENESS OF STUDY ABROAD IN DEVELOPING GLOBAL COMPETENCE AND
GLOBAL CONSCIOUSNESS:
ESSENTIAL OUTCOMES FOR INTERNATIONALIZING THE CURRICULUM

By

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To my parents, Louis and Hilda Bayless, who opened my eyes to the world.

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Abstract of Dissertation Presented to the Graduate School
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By

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Globalization has intensified global interconnectedness, producing economic, political, social and cultural interactions that are affecting and altering the world at an unprecedented speed. This has created a new paradigm for higher education. University students across all disciplines must perform their professions successfully across cultures, and understand the impact of globalization on humanity. However, many reports indicate that American university students remain significantly unprepared for the global demands of the 21st century.

Institutions of higher education are responding in part by internationalizing higher education, including internationalizing the curriculum across disciplines. Study abroad is a frequently used model for internationalizing higher education and the curriculum. While the reported benefits of study abroad include an increase in cultural awareness, intercultural sensitivity, and cross-cultural and foreign language skills, there is limited agreement as to the learning outcomes that can and should be expected. Establishing a standard for global learning outcomes, with the capability of assessing these, can guide the efforts for internationalizing the curriculum, and provide evidence of student success in these areas.

This study introduces global competence and global consciousness as two constructs that jointly may be considered essential and comprehensive global learning outcomes for internationalizing higher education and the curriculum. A theoretical framework integrating globalization theories, culture theories, and cultural development theories is postulated to support the Herrera model for educating the next generation of global professionals. This new model posits the integration of professional excellence, global competence and global consciousness for internationalizing the curriculum across disciplines. The theoretical framework forms the foundation for two original instruments that were developed to measure global competence and global consciousness: The Global Competence Assessment Instrument (GCAI-1) and the Global Consciousness Assessment Instrument (GCAI-2). These instruments were administered as pre and posttests to semester-long study abroad students to assess the effectiveness of study abroad in developing these constructs.

The constructs, and identified factors of global competence and global consciousness, along with the means to measure these, fills an important gap in establishing a standard of outcomes and measures of accountability for internationalizing higher education, the curriculum across disciplines, and study abroad.

CHAPTER 1 INTRODUCTION

Research Problem

Globalization has intensified global interconnectedness producing economic, political, social and cultural interactions that are affecting and altering the entire world at unprecedented speed. American institutions of higher education, whose role is to prepare students to be successful professionals, are compelled to acknowledge that the professionals of the future will need to be highly skilled, educated, innovative, specialized, and adaptable to rapidly changing environments. The professionals of the future also must be intellectually collaborative and competitive in a global context. The new paradigm for globalization in the 21st century is the interconnectedness of the most talented human intellectual capacities through technology (Friedman, 2005).

Global competition increasingly comes from skilled, educated, and productive workforces in countries such as China and India, where governments are investing extensively and purposefully to educate their massive populations to become leaders in the information age (Friedman, 2005; Oblinger & Verville, 1998). American university students are no longer competing in the university classroom, they are competing internationally. To be successful in this new paradigm, students must acquire the skills to enable them to become globally competent. Universities are compelled to provide the curriculum and experiences that ensure the development of global competence and global consciousness (ACE, 1998; Gacel-Avila, 2005; Green & Shoenberg, 2006; Oblinger & Verville, 1998; Robertson, 1992).

A report from the National Leadership Council for Liberal Education and America's Promise, *College Learning for the New Global Century* (2007) stated that American college students are unprepared for the demands of the 21st century. As indicated in the report, less than

13% of college students master a second language, less than 34% have taken an international studies course, and less than 10% have participated in study abroad. Human resources professionals also claim that less than 25% of college graduates are prepared for the new global workforce demands (AAC&U, 2007). The report concludes that curriculum across disciplines must provide “global knowledge and competence, including an understanding of economic forces, other cultures, interdependence, and political dynamics, as well as second-language competence and direct experience with cultural traditions other than one’s own” (AAC&U, 2007).

The terrorist attacks perpetrated on the United States on September 11, 2001 created a sense of urgency. The attacks signaled a need to prepare a national workforce with international expertise in foreign languages and cultures, and an understanding of transnational issues, political systems, economic systems and social issues worldwide. This expertise has been deemed to be critical to the needs of national security. The American Council on Education’s report, *Beyond September 11: A Comprehensive National Policy on International Education* (2002) emphasized that “Our nation’s continued well-being and prosperity increasingly depends on how the United States and other nations work cooperatively to solve global problems” (p. 9). Furthermore, this report cited a study released in March of 2002 by the General Accounting Office that reported that the staff at more than 80 federal agencies and offices lack foreign language skills. This dearth of expertise has had a negative impact on the United States’ military, law enforcement, intelligence, counter-terrorism, and diplomatic efforts (ACE, 2002).

Internationalizing Higher Education

Internationalizing higher education has been defined as “any systematic effort aimed at making higher education [more] responsive to the requirements and challenges related to the

globalization of societies, economy and labour markets” (van der Wende, 1997b, as cited in de Wit, 2002, p. 115).

The definition of internationalizing higher education varies among institutions depending on their strategic goals and objectives. Some institutions emphasize increasing foreign language proficiency, area studies, study abroad, cross-cultural communication, adding international components to general education requirements, or infusing the curriculum and extracurriculum. Others might see their goals as adding international components to prepare a global workforce (Scott, 2001). Liberal arts colleges might view internationalization as a way of broadening students’ knowledge and perspectives, decreasing ethnocentrism, and becoming more cosmopolitan (Cornwell & Stoddard, 1999). Regardless of the focus, internationalizing higher education, has become a campus priority. This position is stated in strategic plans, mission statements, curriculum reforms, faculty development, and marketing plans (Ellingboe, 1999, p. 3).

Institutions of higher education have been compelled to provide the curriculum, experiences, and learning environments that will enable students across disciplines to make positive contributions within the new global paradigm.

On January 21, 2000, the Carnegie Corporation convened a meeting with representatives from a wide range of organizations, to address the following questions:

- Are schools, colleges, and universities preparing their students to function effectively in a global society in which time and space no longer insulate nations, people and markets of the world?
- Do U.S. citizens understand enough of the world beyond our national borders to evaluate information about international and global issues and make sound judgments about them?
- Is education in the United States preparing Americans for sustained involvement in an interdependent world? (Barker, 2000, p. 2)

Although the number of initiatives and strategies leading toward internationalizing higher education has increased, they differ in their degree of commitment, emphasis, and implementation.

Some internationalization initiatives across disciplines have been launched to meet the demands for a globally competent workforce. For example, professional standards are being rewritten to include global competencies. The ABET (Accreditation Board for Engineering and Technology) Engineering Criteria 2000, requires engineering programs to include six “professional skills” outcomes that include among others, “the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and societal context, the ability to function on multidisciplinary teams, and the ability to communicate effectively” (Shuman, Besterfield-Sacre, McGourty, 2005, p. 41). Similarly, the Association to Advance Collegiate Schools of Business (AACSB) 2003 standards cite that an accredited institution “must demonstrate diversity in its business programs” including teaching about diverse perspectives and enabling students to be able to practice their professions in a global context. Furthermore, although AACSB standards do not specify any required courses, they do state that undergraduate students must be provided with learning experiences that produce as outcomes knowledge and skills for “multicultural and diversity understanding” and in “domestic and global environments of organizations” (AACSB International, 2007, pp. 9, 15, 16).

Regardless of the approaches, the rationales and requirements, most professional education programs acknowledge that the new globalization paradigm dictates preparing students for work in an interconnected world and enabling them to contribute to the sustainability of humankind. (ACE, 2002; Bremer, 2006; Cant, 2004; Friedman, 2005; Gacel-Avila, 2005; Green, 2002; Hunter, 2004; Koehn & Rosenau, 2002; Lohmann et al, 2006). Global competence and

global consciousness are significant outcomes of higher education and an essential body of knowledge, skills and attitudes that professionals need to possess (ACE, 1998; Gacel-Avila, 2005; Green, Shoenberg, 2006; Oblinger & Verville, 1998; Robertson, 1992).

Internationalizing the Curriculum

Internationalizing the curriculum is an integral and perhaps the most essential component of internationalizing higher education. “Colleges and universities should focus their efforts on the curriculum to ensure that students gain international skills and knowledge” (Siaya, Hayward, 2003, p.x). The best practices for internationalizing the curriculum are the subject of ongoing discussion. Some of the models implemented include: Adding an international major or minor in the curriculum or within specific disciplines; foreign language or area studies; infusing courses with an international content; international service learning; international relations degree programs; international students, faculty and scholars; study abroad and international internships or research; and faculty involvement in international research teaching and consulting (Annette, 2002; Ellingboe, 1999; Mestenhauser, 1998; Tonkin, 2006).

Study Abroad

Study abroad is regarded as one of the most important approaches to internationalizing higher education. Increasing cultural awareness, intercultural sensitivity, cross-cultural and foreign language skills have been reported to be benefits of this experience.

There are many types of study abroad programs. Most are classified by duration such as long-term (semester or year-long programs) or short-term (less than one semester). Long-term study abroad programs are considered to be the most beneficial in terms of learning a foreign language, increasing cross-cultural skills, learning in depth about a new culture, and developing transformational skills such as those needed for global competence and global consciousness

(Anderson, Lawton, Rexeisen & Hubbard, 2006; Dwyer & Peters, 2004; Gorka & Niesenbaum, 2001; NAFSA, 2003, as cited in Lewis & Niesenbaum, 2005).

While short-term study abroad has generally not been considered as beneficial as long-term study abroad, recent studies have shown that short-term programs afford the opportunity for larger numbers of students to participate in study abroad, and that there are significant positive effects both academically and toward increased cultural sensitivity (Anderson, Lawton, Rexeisen & Hubbard, 2006; Lewis & Niesenbaum, 2005).

In a study at Indiana University conducted with business students, study abroad played a significant role in career choice. The findings showed that 96% of the students felt that this experience would change their career choice, while 94% reported an interest in working for an American company with an international presence. The authors concluded that the benefit for the students' careers would be "meaningful outcomes" and skills that could be articulated on a resume or as part of a job search (Orahood, Kruze, Pearson, 2004, p. 128).

The Commission on the Abraham Lincoln Study Abroad Fellowships (2005) reported that students who have participated in study abroad programs continue to use their newly acquired languages, develop an increased interest in their studies, acquire skills that carry over into the workplace, perceive the world differently, and have an increased ability to understand and communicate effectively with people from other cultures.

Recognizing the importance of study abroad for the future of the nation's ability to respond to global challenges, the Abraham Lincoln Study Abroad Act of 2006 (S.3744) was introduced by Senators Richard Durbin of Illinois and Norm Coleman of Minnesota in July 2006. The purpose of this legislation was to make study abroad accessible to all, and to have study abroad become the norm for undergraduate college students. The bill establishes the goal

of having one million students studying abroad every year by 2016-2017. This would represent approximately fifty percent of all undergraduate students (Commission on the Abraham Lincoln Study Abroad Fellowship Program, 2005; NAFSA, 2006). This aspiration is in sharp contrast to the 205,983 students that studied abroad in 2004-2005, in spite of the fact that these statistics represented a doubling of student participation in study abroad over an eight-year period (Opendoors 2006 Fast Facts). NAFSA, the Association of International Educators reported that in the 2005-2006 academic year, 223,534 students studied abroad, representing about 1% of students enrolled in higher education. Minority students are underrepresented in study abroad. The vast majority of study abroad students are Caucasian (83%), a factor that the Lincoln Fellowship Program hopes to address (Commission on the Abraham Lincoln Study Abroad Fellowship Program, 2005; NAFSA, 2007).

Outcomes for Internationalized Curriculum

As institutions of higher education seek for the optimal means for internationalizing the curriculum, it is essential to establish outcomes that can and should be expected from these reforms. The terms global competence, intercultural competence, intercultural sensitivity, cross-cultural competence, global citizenship, world citizenship, and global consciousness are some of the many that are used by several authors, and at various institutions to label the cluster of outcomes expected from internationalized curricula (Gacel-Avila, 2005; Green, Shoenberg, 2006; Olson, Green & Hill, 2006). (See Appendix B for sample global learning outcomes.)

Establishing learning outcomes and providing the means to assess these can help guide the efforts to improve the curriculum, and demonstrate that students are developing global competencies as a result of internationalization efforts (Olson, Green & Hill, 2006). Furthermore, as institutions of higher education respond to the professional skills required to succeed across all disciplines in a global paradigm, global competence and global consciousness become important

competencies to seek to attain from internationalized curricula (ACE, 1998; Gacel-Avila, 2005; Green, Shoenberg, 2006; Oblinger & Verville, 1998; Robertson, 1992).

Global Competence

Several studies have been conducted in an effort to define global competence and identify the knowledge, skills and attitudes that characterize global competence. Most of the literature on global competence reflects the nature of global competence as being primarily the functional requirements to operate successfully in a global environment (Bikson, Treverton, Moini, Lindstrom, 2003; Cant, 2004; Hunter, 2004; Jokinen, 2005; Koehn & Rosenau, 2002).

The new paradigm of an interconnected world through rapid globalization requires that the next generation of global citizens and global professionals develop the knowledge, skills and attitudes to perform successfully across cultures. These global competencies are increasingly becoming requirements for workers in most fields, across all nations. As a result, businesses must alter human resources and training and development strategies, and institutions of higher education need to evaluate and modify their curricula, programs and strategies to meet the needs of a global workforce.

In its 1998 report, *Educating for Global Competence*, The American Council on Education (ACE) stressed the importance of higher education's role in developing human resources for the new global paradigm. The report posited that American institutions of higher education must strive to develop global competence to ensure that the next generation of global professionals will possess the global expertise to influence national security issues, foreign policy, business, environmental issues, public health, population control, relief from poverty and famine, national disasters and population dislocations.

Madeleine F. Green (2002) addressed the compelling mandate for institutions of higher education to adequately educate for global competence:

In the age of globalization and post-September 11, U.S. colleges and universities face an urgent and perplexing set of questions about how to educate students for this new world. We cannot make the common claim to have the best system of higher education in the world unless our graduates can free themselves of ethnocentrism bred of ignorance and navigate the difficult terrain of cultural complexity (p. 1).

Additionally, universities need to become the primary venue for developing globally competent professionals that are intellectually capable of making a contribution to the new paradigm of social, economic and political global interdependence. These students should be prepared to live and work globally (Gacel-Avila, 2005).

Institutions of higher education define global competence educational outcomes differently. This increases the difficulty in determining the most effective curricular approaches for developing global competence and assessing their effectiveness. Recently, some institutions of higher education have focused on determining the knowledge, skills and attitudes that should be developed to produce students who are globally competent. These actions have led to specifying global competence as outcomes of internationalization (Olson, Green & Hill, 2005).

Global Consciousness

Global consciousness is firmly rooted in the notion that globalization profoundly impacts humanity worldwide in ways that are both positive and negative, and reflecting the accelerated global interconnectedness of the 21st century. Although not a new phenomenon, globalization today can be defined based on an interpretation of the impact of globalization on the world. The definitions reflect the conflicting nature of globalization, either as a positive economic force, or one that needs to be kept in close watch to keep in check the forces of Western hegemony, prevent the destruction of the environment and cultures, and respond to the historical, social, political, and humanistic impact of economic globalization.

In his book *The World is Flat*, Friedman (2005) states that globalization has, through recent technological advances, empowered individuals throughout the world to collaborate and

compete globally. He asserts that this is equally empowering individuals from all different locations of the world, many whom are from cultures that are “non-Western and non-white” (p. 10). Furthermore, Chua (2003) asserts that the economic gains of globalization have not trickled down from the market-dominant minorities to the impoverished majorities in many countries, leading to “powerful ethno-nationalist, anti-market pressures, confiscation, instability, authoritarian backlash and violence”(p. 16).

The inequities of globalization require a greater global consciousness that seeks to understand world history; the human condition, global environmental challenges, the development of skills to manage complex societies, the creation of different types of solutions, and the visualization of new ways of understanding our own society (Robertson, 2004). Most importantly, globalization requires a change of mindset that recognizes and understands profoundly the implications of a new interconnected world.

Cuddy-Keane (2003) emphasized that globalization from an economic perspective can be “predatory or productive” and “cultural globalization may be colonizing or cooperative,” and it is the role of humanists to create the global consciousness that will play a role in “sensitizing” globalization (pp. 541, 554).

The role of higher education, in light of the dichotomous nature of globalization, should be to prepare students to be able to function effectively in the global marketplace and to also be able to make a positive contribution to the sustainability of humankind. Those who graduate from institutions of higher education will be expected to understand “global systems, global issues, the dynamics of how things are interrelated and interconnected in the world, and how society can best address global issues” (Moffat, as cited in Bremer 2006, p. 40). Furthermore, these graduates have to understand that the issues that will need to be faced as a result of

globalization include “growing inequalities in economic development around the world, growing environmental hazards, issues of sustainability, justice and security” (Moffat, as cited in Bremer 2006, p. 40).

In 1998, the United Nations Educational, Scientific and Cultural Organization’s (UNESCO) *World Declaration on Higher Education for the Twenty-First Century*, stated that “higher education-and education in general-should serve a world order that enables the development of a more equitable, tolerant, and responsible society” (as cited in Gacel-Avila, 2005, p.122). Gacel-Avila (2005) posits that higher education should seek to develop within all disciplines the perspective of globalization and the global interconnectedness of the discipline. This necessitates a new way of thinking, conceptualizing the discipline in a global context, and recognizing that educational strategies should include understanding and preparation for global competition, and simultaneously promoting “intercultural understanding and sustainable human development” (p. 123).

Assessing the Outcomes of Internationalized Curricula

Developing global competence and global consciousness through internationalized curricula has become an essential responsibility of higher education. Of equal importance is being able to measure the effectiveness of curricular initiatives that purport to be able to engender global competence and global consciousness.

A study released in 2003 by the American Council on Education showed that “very little effort has been made to assess these efforts and their implementation, and data are lacking on how well higher education is doing in preparing undergraduates for the demands of the contemporary world” (p. xi). While the literature clearly addresses the desired outcomes of internationalizing higher education in general, and more specifically of internationalizing the

curriculum, few references exist on assessment methods and strategies for these initiatives (Deardorff, 2004).

As the number of study abroad programs increase, and are further propelled by factors such as the Lincoln Fellowships that are expected to eventually facilitate one million students studying abroad per year (by the 2016-2017 academic year), systematic evaluation methods will become increasingly important (Commission on the Abraham Lincoln Study Abroad Fellowship Program, 2005).

Also, as greater resources are funneled into study abroad programs, the demand for increased accountability has increased. Data that support the value of these programs to student learning outcomes are lacking (Anderson, Lawton, Rexeisen & Hubbard, 2006; Chieffo & Griffiths, 2004; Ingraham & Peterson, 2004; Sutton & Rubin, 2004).

Theoretical Framework

Global competence can be defined as the ability to function effectively, from an economic, political and social perspective, in an increasingly interconnected and interdependent world that is accelerated by technology. Global consciousness can be characterized as the ability to understand the impact of globalization on humanity, serving to temper the market forces of globalization. The assumptions are that global competence and global consciousness together are essential constructs that the next generation of global professionals must possess, and that these can be developed and measured. The theoretical framework that guides this study is an integrated theoretical model that includes globalization theories (Robertson, Roland, 1992; Robertson, Robbie, 2004); culture theories (Nieto, 2004; Hofstede, 2001); and cultural development theories (Bennett, 1998; Pedersen, 1998).

Globalization Theories

Roland Robertson (1992) posits that globalization theory is the foundation for an ongoing discussion on the human condition worldwide that includes a joint discussion and analysis of both the economic impact of globalization and the humanistic impact of globalization. His globalization model focuses on the increasing interconnectedness of societies, individuals, international relations, and humankind. The model analyzes the evolution of world order, how this occurs in a fluid, globalized world, and how this leads to an understanding of the global human condition.

Robertson (1992) believes that understanding globalization requires knowing that the global human condition, or “global field” is complex (p. 27). Therefore, to have a realistic view of the world today it is necessary to understand both the independence of the factors of societies, the individual, international relations, and humankind, as well as the complexity of the interactions of all. Second, he posits that his analysis of the cultural perspective of globalization is complementary to the understanding of the economic forces of globalization that have served as the impetus for increased interconnectedness. Third, he believes that there will be an increasing “relativization” of perspectives caused by interactions of globalization, and that these need to be addressed in the ways colleges and universities are internationalizing their curricula (p.29). Robertson posits that the discussion of globalization is an interdisciplinary discussion that requires the restructuring of the disciplines to include learning the discipline within a global context.

He adds that learning about globalization should involve understanding the complexity of the global impact on the local condition and the local impact on the global condition. The discussion of globalization has to be relevant to the “world in which we live” and has to have an understanding of the factors influencing the rapid and ongoing re-structuring and

interdependence of the world unique to 21st century globalization. In essence, this involves acquiring a new “sense of the world as a single place” (Robertson, 1992, p. 184).

Robbie Robertson (2004) describes 21st century globalization as historically, the third wave of globalization. This new wave carries with it challenges and threats to the stability of humankind and to the world.

The first challenge is expanding global democracy and global civil society. Robertson posits that the extent of “short-term profit-maximizing strategies and forms of monopoly control at the expense of investment in human capital and infrastructure” has the potential of backfiring on the industrialized world, in particular due to the extensive interconnectedness of today’s globalization (p. 12). The second challenge is the environmental impact of globalization and the need to temper the economic drivers by developing plans to employ technology, yet minimize the environmental impact. The third challenge is the interconnectedness and mobility of humanity. This is particularly important as formerly homogenous nations are becoming increasingly multicultural and heterogeneous. Robertson posits that the inability of nations to tolerate diversity will be the most destabilizing factor of globalization.

Robertson believes that for positive transformation to occur in light of the challenges of the third wave of globalization, the development of global consciousness is essential. Global consciousness will lead to the empowerment of individuals and societies and the ability to create global solutions that are “based on an inclusive rather than exclusive reading of human history” (p. 13).

Globalization theories provide the framework for learning about how to function effectively in an interdependent, interconnected, globalized world, and also how to become a positive force for the sustainability of humankind. The assumption is that understanding

globalization from a sociological perspective provides a broad-based understanding of the economic, political, social, cultural, and environmental factors being impacted by globalization. The ability to understand the complexity and consequences of globalization is an integral part of the constructs of global competence and global consciousness.

Culture Theories

Dynamic theory of culture

Sonia Nieto (2004) explores the notion of culture as dynamic and in a continuous state of transformation. She posits that understanding this notion of culture helps understand the differences among individuals within a context, such a school or a study abroad experience. She defines culture as

The values, traditions, social and political relationships, and worldview created, shared, and transformed by a group of people bound together by a common history, geographic location, language, social class, religion, or other shared identity (p. 146).

Nieto also posits that the notion of power is included in culture, noting that the cultural values of the dominant groups in societies are perceived as being “normal,” whereas the subordinate group values are viewed as being aberrant (p. 147). Being able to conceptualize culture as dynamic helps understand how culture affects learning, and helps prevent cultural assumptions and overgeneralizations that can result in stereotyping and biases toward groups. Additionally it is useful in understanding the complexity of identity as the world becomes increasingly interconnected.

Values-belief theory of culture

Hofstede (2001) defines culture as “the collective programming of the mind that distinguishes the members of one group or category of people from another.” He refers to the “mind” as the process in which attitudes, beliefs and skills are influenced by the way people think, feel and act. Therefore, this notion of culture includes values systems. Hofstede posits

that “systems of values are a core element of culture” (p. 10). He adds that values become visible through people’s symbols, heroes and rituals. The manifestation of these through behavior are easily understood by insiders, but often not understood by outsiders. In sum, culture is a series of characteristics that are shared by a group, and that influence how the group responds to its environment (p. 9-10).

Nieto’s theory of culture provides the ability to contextualize and understand individual differences within a culture-analysis framework that considers the impact of the increased interconnectedness, human mobility, empowerment, and rapid change fueled by globalization. Hofstede’s theory of culture contributes to understanding behaviors, symbols, heroes and rituals, contributing to a greater ability to communicate and work effectively across cultures. These factors are an integral part of the constructs of global competence and global consciousness.

Cultural Development Theories

Developmental model of intercultural sensitivity

The Developmental Model of Intercultural Sensitivity (DMIS) describes a person’s ability to gain intercultural sensitivity by navigating through a continuum of developmental stages that are intricately related to increased experiences with other cultures. The foundations for this model are the “meaning-making” models of cognitive psychology and constructivism (Bennett, 1998).

The model reflects a range of development from ethnocentric stages to ethnorelative stages. The ethnocentric stages are defined as those in which people’s worldviews are central to their reality, and these views form the basis for judging others. People who are in ethnorelative stages are characterized as being able to adapt their ways of behaving to multiple environments and being comfortable with many standards and customs. The development process includes six stages of development: “Denial, defense, minimization, acceptance, adaptation and integration”

(p. 26). To proceed through this developmental process requires having experience with differences (Bennett, 1998).

Pedersen's multicultural development model

Pedersen's (1998) model focuses on the development of awareness, knowledge and skill. The fundamental belief is that multicultural development can be taught and that as a result of this instruction, people will be able to gain new beliefs, knowledge and behaviors, and be able to apply these to multiple environments.

Awareness represents the affective domain and is characterized by cultural self-awareness, and understanding others through this lens. The learning outcomes include attitude shifts and understanding cultural assumptions. This stage focuses on building the affective domain.

Knowledge includes acquiring information about cultures and understanding various cultures and beliefs. This stage focuses on cognitive development.

Skill involves being able to translate this new knowledge into action that is appropriate and that allows people to function effectively in a new cultural environment. This stage focuses on behavioral development (Pedersen, 1988).

Cultural development theories form the foundation for positing that global competence and global consciousness are cultural constructs that can be learned. The internationalization of higher education and in particular, the internationalization of the curriculum is based on the premise that it is possible to learn the necessary knowledge, skills and attitudes to be effective in the global paradigm, and hence they can be taught.

The Bennett model states that intercultural sensitivity, or a shift from ethnocentrism to ethnorelativism is a learning process resulting from increased experience with different cultures. The notion of ethnorelativism is clearly illustrated in the factors that constitute global

competence and global consciousness. The Pedersen model posits that there are three areas that are part of multicultural development: Awareness, knowledge and skill. The learning outcomes for each of these areas as described by Pedersen constitute some of the factors of global competence and global consciousness.

Cultural development theories provide the framework for measuring study abroad to assess its impact on developing global competence and global consciousness. Study abroad is a curricular model that provides experience with different cultures, and may be an effective means to develop global awareness, knowledge and skills.

Herrera Model for Educating the Next Generation of Global Professionals

The Herrera model for educating the next generation of global professionals unites theories of globalization, culture theories, cultural development theories, and standards of professional excellence into a consolidated model. This model posits that professionals across all disciplines must possess professional excellence, global competence, and global consciousness, and that these skills and constructs can be learned and should be taught. This requisite triad is an integrated, balanced model for internationalized curricula across disciplines, providing a standard for learning outcomes for educating the next generation of global professionals.

Professional excellence is reflected in the standards of excellence required by individual professions. These standards of excellence form an integral part of existing curricula and are reflected in the learning outcomes for the profession. Global competition and the need for global collaboration demand that graduating professionals excel in their professions by meeting or exceeding the standards of the profession.

Global competence is the ability to function effectively and successfully in a global environment. Professionals who possess global competence have the knowledge, skills and attitudes to operate economically, politically and socially in different cultural environments.

This requires having a profound understanding of the dynamic nature of cultures and their value systems.

Global consciousness is the ability to understand the impact of globalization on humanity. Professionals who possess global consciousness have the knowledge, skills and attitudes to provide a balance between the economic drivers of globalization and the human impact. This requires understanding the complexity of human global interactions, the impact of the economic forces of globalization on the sustainability of humankind and the environment. Global consciousness posits the notion of an increasingly interconnected world in which the actions of one affect the lives of others. The Herrera model provides an integrated curricular model that could create a developmental shift in global mindset reflected in the practice of future professionals.

Purpose of the Study

There is a limited amount of research that defines global competence and global consciousness as outcomes for internationalizing higher education and internationalizing the curriculum. Furthermore, there are no existing assessment instruments that measure global competence and global consciousness. A frequently used model for internationalizing the curriculum is study abroad. The purpose of this study was to explore the effectiveness of study abroad in specifically developing global competence and global consciousness.

This study established the constructs of global competence and global consciousness as outcomes for internationalizing the curriculum. It was conducted using two assessment instruments developed by the researcher, based on the literature and stated theories, that measure the knowledge, skills and attitudes of global competence and global consciousness. These two complex constructs were measured independently of each other as they represent the distinct knowledge, skills and attitudes that have been identified as factors of global competence and

global consciousness. The definitions and classifications of the factors of global competence and global consciousness that are reflected in the literature can be placed within the framework of knowledge, skills and attitudes.

Research Questions

This study explored the idea that the constructs of global competence and global consciousness can be learned through the curriculum model of study abroad. This study also sought to measure the effectiveness of study abroad on developing global competence and global consciousness. The following important research questions served to guide this study:

- What are the effects of study abroad on global competence?
- What are the effects of study abroad on global consciousness?

Hypotheses

This study was designed and conducted to test the following hypotheses:

- **Null:** Study abroad will have no effect on global competence.
 - **Alternative:** Study abroad will produce an increase in global competence.
- **Null:** Study abroad will have no effect on global consciousness.
 - **Alternative:** Study abroad will produce an increase in global consciousness.

Definition of Terms

- **Globalization:** The global interconnectedness and interdependence of economic, political, social and cultural interactions that have been intensified by technology and are rapidly altering the world.
- **Global competence:** The ability to function effectively, from an economic, political and social perspective, in an increasingly interconnected and interdependent world that is accelerated by technology. Hunter (2004) adds that global competence means “having an open mind while actively seeking to understand cultural norms and expectations of others, leveraging this gained knowledge to interact, communicate and work effectively outside one’s own environment” (p. 101).
- **Global consciousness:** The ability to understand the impact of globalization on humanity serving to mitigate the market forces of globalization. It seeks to understand world history, the complexity of the human condition, global environmental challenges, the development of skills to manage complex and diverse societies, the creation of different types of solutions, and the visualization of new ways of understanding our own society (Robertson, 2004).

- **Internationalizing higher education:** Defined as “any systematic effort aimed at making higher education [more] responsive to the requirements and challenges related to the globalization of societies, economy and labour markets” (van der Wende, 1997b, as cited in de Wit, 2002, p. 115).
- **Internationalizing the curriculum:** An integral part of internationalizing higher education that can be defined as adding an international major or minor in the curriculum or within specific disciplines; infusing courses with international content; international service learning; foreign language or area studies; international relations degree programs; international students, faculty and scholars; study abroad and international internships or research; and faculty involvement in international research teaching and consulting (Annette, 2002; Ellingboe, 1999; Mestenhauser, 1998; Tonkin, 2006).
- **Study abroad:** Includes a variety of programs where students complete part of their degree program while studying outside of the United States. This includes activities such as classroom study, research, internships, service learning and others. Programs generally range in duration from one week to one academic year.

Significance of the Study

This study establishes the validity of global competence and global consciousness as integrated constructs that could become a standard for global learning outcomes to be used when internationalizing higher education, the curriculum, and specifically study abroad. The constructs of global competence and global consciousness and the accompanying assessment instruments developed as part of this study to measure these, offer a systematic framework for establishing and assessing outcomes of study abroad programs across all disciplines. This study will further the understanding of global learning outcomes for study abroad, and advance accountability for these programs by providing the means to measure them.

This study advances the exploration and development of models of internationalized curricula that develop global competence and global consciousness by providing the knowledge, skills and attitudes that need to be developed, and the accompanying assessments to measure the efficacy of these curricula. This comprehensive system of global learning outcomes coupled with corresponding assessment tools can be applied to different typologies of curricular initiatives used to internationalize higher education across disciplines.

Limitations

Purposive sampling was used. All of the students for the experimental and control groups were recruited from several units within a single institution. Participation in the study was voluntary. This limitation was compounded as the volunteers were asked to complete two pretests (global competence and global consciousness) and two posttests. The researcher piloted the instruments at only one institution presenting a threat to external validity. Selection may have been a threat to internal validity as those students who participated in study abroad may have chosen to do so because they already possessed a certain degree of global competence and/or global consciousness. The pre and posttest design could have posed a threat to internal validity as the assessments are the same.

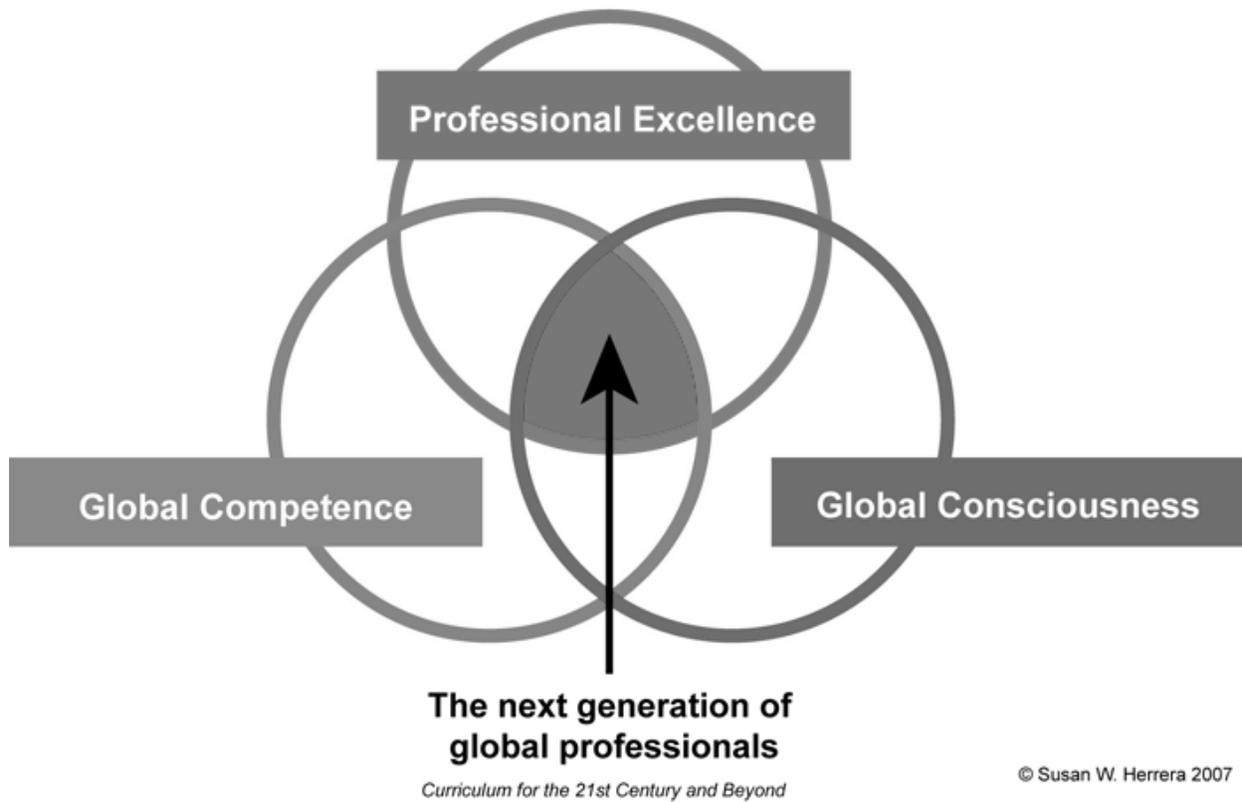


Figure 1-1. The Herrera model for educating the next generation of global professionals

CHAPTER 2 REVIEW OF THE LITERATURE

Introduction

This chapter will provide a comprehensive review of literature focusing on the importance of developing global competence and global consciousness as outcomes of internationalizing higher education curricula. An overview of 21st century globalization is provided to understand how the intensification of global interconnectedness impacts economic, political, cultural, environmental and social interactions. Internationalizing higher education strategies are explored, focusing primarily on outcomes for internationalization, and the role of internationalizing the curriculum within this framework.

The literature review highlights study abroad as a curriculum model for internationalizing higher education. The future of study abroad in the United States is discussed to understand the scope of these programs. The importance of establishing and assessing outcomes to increase the effectiveness of study abroad, and provide measures of accountability for this type of curriculum, is also addressed. This literature provides the rationale for establishing the constructs of global competence and global consciousness as necessary outcomes for internationalizing higher education. Furthermore, this literature review serves to determine the knowledge, skills, experiences and attitudes that constitute these constructs. Global competence and global consciousness are reviewed separately to ensure an understanding of their differentiation and to establish that their symbiotic relationship represents the totality of the global mindset required for the next generation of global professionals.

Last, the literature review looks at assessment instruments for measuring constructs that are similar in nature to global competence and global consciousness to clarify the differentiation between existing assessment instruments and the two instruments developed by the researcher.

Globalization

Defining Globalization

Globalization, although not a new phenomenon, has recently been defined based on an interpretation of the impact of globalization on the world. The definitions reflect the conflicting nature of globalization. This phenomenon has been viewed as a positive or negative economic force. A positive perspective sees globalization as spreading wealth, democracy and freedom worldwide. A negative perspective views globalization as a phenomenon that must be kept in close watch to keep in check the forces of Western hegemony, to prevent the destruction of the environment and cultures, and to respond to the historical, social, political, and humanistic impact of economic globalization. The conflicting impacts and complexity of globalization necessitate a reconceptualization of how higher education prepares professionals capable of navigating this new paradigm successfully.

Economic Perspective of Globalization.

From an economic perspective, globalization is often viewed as both a positive and progressive force. Fueled by technological innovations, many believe that it will bring economic security, political stability, wealth and well-being through the seamless flow of business, investment, trade, and human resources from one country to another.

A joint communiqué issued at the 1996 G-7 Summit asserted that globalization will allow developing countries to raise their standard of living by increasing skilled jobs (as cited in Steger, 2005). This is illustrated by the new trend toward outsourcing white-collar jobs to countries such as India and China, where there are increasing numbers of highly educated workers, whose wages are significantly lower than those expected here in the United States or in other western countries (Ahlawat, 2006). According to Friedman (2005), regardless of the profession, “anything that can be digitized can be outsourced to either the smartest or the

cheapest producer, or both” (p. 14). Even the most highly sensitive jobs, such as financial analysis are being outsourced. A financial analyst in Bangalore, India will make \$15,000 annually, in contrast with one in New York or London making \$80,000 (pp. 14, 19). Although the wages are significantly lower than in the Western world, the competition for these new jobs [in country] is strong. They represent a hope for a higher standard of living. Companies provide free “transportation, lunch, dinner, life insurance and medical insurance for the entire family” (p. 25).

Business Week claimed that globalization will inevitably lead to markets overtaking the importance of government (as cited in Steger, 2005). This notion was touted by Milton Friedman who advised countries emerging from socialism to “privatize, privatize, privatize,” yet publicly retracted his statement in 2001 when he claimed that the “rule of law was more important than privatization” (as cited in Fukuyama, 2004, p. 28). Fukuyama said the economic power of globalization will lead to expanded middle classes, possibly producing a spread of democracy worldwide (Fukuyama as cited in Steger, 2005). Chanda (2002) supports this assertion indicating that the number of governments holding multi-party elections have increased from less than thirty percent to over sixty percent since 1974.

In his book *The Lexus and the Olive Tree*, Friedman described globalization as a dynamic process that connects markets, nation-states and technologies at a lightning pace, driven by free-market capitalism. He asserted that nation-states that open their economies to the forces of the free market, will be the beneficiaries of the wealth generated by globalization. He described the United States as the hegemonic force of globalization, yet recognized that individuals and nation-states will also become empowered (Friedman, 1999). In contrast to his 1999 book, in *The World is Flat*, Friedman claimed that “Globalization 1.0 and 2.0 were driven primarily by

Europeans and American individuals and businesses . . . but Globalization 3.0 is going to be more and more driven not only by individuals but also by a much more diverse, non-Western, non-white-group of individuals,” illustrating the rapidly changing nature of globalization (Friedman, 2005, p. 11).

Economic globalization is often described as a negative, destabilizing force, an “economic imperialism” that is destroying the environment, societies and cultures. As Cuddy-Keane states:

The very messiness and uncertainty surrounding the issue [globalization] has led many either to reject globalization as an overused and now meaningless cliché or to identify it exclusively with economic imperialism, leaving, as the only alternative the oppositional stance of anti-globalization” (p. 541).

Broader Perspective of Globalization

A broader perspective of globalization seeks to understand the “complex connectivity” of a globalized world that includes, among others, the economic, political, social, cultural, and environmental implications of interdependence and interconnectedness (Tomlinson, 1999, p. 2). Cuddy-Keane (2003) asserts that a definition of globalization should include an “investigation of global currents of thought, tracing the complexities and thus the choices that animate the multidirectional experience of living in an interdependent, interactive world” (p. 541). Additionally, definitions of globalization may include the understanding that the impact of global interconnectedness has outcomes that can be unexpected and may not be positive (Allen & Ogilvie, 2004).

Falk (1998) described the conflicting nature of the definitions of globalization as “globalization-from-above and globalization-from-below.” Globalization-from-above describes the global market forces and globalization-from-below describes the opposing forces to globalization-from-above, challenging the effects of uncontrolled business, and promoting a

social agenda. These forces are not necessarily viewed as polarizing forces, rather globalization-from-below has the capacity to temper and control the negative effects of globalization-from-above (p. 6).

Roland Robertson's (1992) globalization model, referred to as the "global field," posits that globalization needs to be understood by recognizing the multidimensional complexity of the relative independence, as well as the interconnectedness of societies, individuals, international relations, and humankind. This perspective of globalization leads to a broader understanding that goes beyond the discussion of economic forces, to a greater understanding of the cultural impact of globalization and the relativization of perspectives (p. 28).

Friedman (2005) adds that globalization has, through recent technological advances, empowered individuals worldwide to collaborate and compete globally, and that this is equally empowering individuals from all different locations of the world, many who are from cultures that are "non-Western and non-white" (p. 10,11). Additionally, this level of empowerment has also reached those who are "angry, frustrated and humiliated," allowing terrorism to be globalized with the same equality (p. 8). Chua (2003) states that the economic gains of globalization have, in many countries, not trickled down from the market-dominant minorities to the impoverished majorities, leading to "powerful ethno-nationalist, anti-market pressures, confiscation, instability, authoritarian backlash and violence" (p. 16).

Industrialized nations have been the greatest beneficiaries of the economic gains of globalization, while those who were traditionally poor, in many cases have seen their levels of poverty increase. The increasing wealth of the already powerful and wealthy in the poorer countries, coupled with the increased interconnectedness provided by new technology, has led to greater knowledge of the disparities that exist on a global scale, fueling anger and resentment

from those who are not empowered. This anger is targeted at the Western nations that have led the economic forces of globalization (Chanda, 2002). Robertson (2004) concurs that unbridled profiteering and lack of empowerment coupled by increased interconnectedness, are some of the most significant challenges of globalization in the 21st century facing the industrialized world.

He adds that the issues of empowerment require the advancement of a global consciousness that strives toward understanding world history and the human condition, environmental challenges, the development of skills to manage complex and diverse societies, different types of solutions, and new ways of understanding our own society (Robertson, 2004). The challenges of globalization indicate a need for a change of mindset that recognizes and understands profoundly the implications of a new interconnected world, one that functions and evolves with a speed, scope and magnitude that has never been seen in previous waves of globalization.

Internationalizing Higher Education

Institutions of higher education are recognizing that education in the 21st century must meet the challenges of a rapidly globalizing world, in which economic, social, political, health, security, and environmental interests are interconnected and interdependent across cultures. This has led to adopting initiatives that are generally identified as internationalizing higher education. While internationalization may be included as part of the overall strategic plans, the approaches and implementation vary significantly across institutions. As more institutions of higher education proceed with internationalization plans that include internationalizing the curriculum as a significant component, the need for accountability has increased. This has generated an interest and effort to identify and measure the outcomes for global learning.

The American Council on Education (2002) stated, “our future success or failure in international endeavors will rely almost entirely on the global competence of our people” (p. 7).

To accomplish this goal, our educational system must: “Produce international experts and knowledge to address national strategic needs; strengthen U.S. ability to solve global problems; and develop globally competent citizenry and workforce” (pp. 9-10). The Association of American Colleges and Universities (2007) noted the urgency to educate students in this new paradigm stating, “American education calls for a far-reaching shift in the focus of schooling from accumulating course credits to building real-world capabilities” (p. 5).

Internationalizing higher education has different meanings for different institutions, based on their strategic goals and objectives. Some institutions have emphasized increased foreign language proficiency, area studies, study abroad, cross-cultural communication, added international components to general education requirements, or infused the curriculum and extracurriculum. Some institutions have added international components to prepare a global workforce (Scott, 2001). Other institutions such as liberal arts colleges might view internationalization as away of broadening students’ knowledge and perspectives, decreasing ethnocentrism, and becoming more cosmopolitan (Cornwell & Stoddard, 1999, p. 6).

Knight (2003) has defined internationalization of higher education in the following way, to serve as a means for comparing internationalization cross-nationally and across sectors and institutional levels as

the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education. (as cited in Knight, 2004, p. 11).

Internationalizing higher education, is now a priority on many campuses that is stated in strategic plans, mission statements, curriculum reforms, faculty development, and marketing plans (Ellingboe, 1999).

Internationalizing as a Strategic Approach

Participants in the internationalization process of higher education vary in their strategic approaches to internationalizing higher education. These approaches are often reflective of personal and institutional ideologies. While some may view international exchanges or study abroad experiences as primary vehicles for internationalization, others posit that internationalizing the curriculum is a more comprehensive and equitable means of internationalization.

Hans de Wit (2002) describes four approaches that serve to differentiate the goals of internationalizing higher education:

- The activity approach includes “academic and extracurricular activities; scholar, student and faculty exchange; area studies; technical assistance; intercultural training; international students; and joint research activities.” This approach is concerned with developing the content areas, with internationalizing the curriculum as the most significant component of this approach. (p. 116).
- The rationale approach identifies the purpose of the initiatives rather than strictly content development. Examples include education for global citizenship, education to promote world peace, or developing a culture that “values and supports intercultural/international perspectives and initiatives”(p. 117).
- The competency approach focuses on the development of “new knowledge, skills and attitudes in students, faculty, and staff.” The focus is on developing competencies. An example is global competence. The competency approach to internationalizing higher education is to prepare individuals, organizations, and communities to be able to function effectively and successfully in a global environment (p. 117).
- The process approach sees internationalization as a system-wide approach that “integrates an international dimension into the major functions of the institution,” to effectively infuse internationalization into academic activities, organizational policies and procedures, and overall strategies (p.118).

Knight (2004) concurs with these approaches and has added two additional approaches that include “at home” and “abroad (cross-border)” approaches. The “at home” approach posits that the goal of internationalization is to create an environment on campus that supports “international/intercultural understanding and focuses on campus-based activities.” The “abroad

(cross-border)” approach focuses on providing education to other countries through various educational means (p. 20). Knight also revises deWit’s Competency approach and renames it the Outcome approach to align with higher education’s increased demand for accountability.

The common threads that run throughout the reports and recommendations are the need for a strategic mission and vision that specifies the goals and objectives for internationalization along with an administrative commitment (including funding) to these goals; a centralized and integrated administration of international programs and initiatives; faculty development, involvement and reward; curricular transformation through revamping the core curriculum to include international infusion of existing courses; development of new courses with study abroad components; or adding courses with international content to existing programs (including area studies, transnational studies, etc.); international exchanges of students, faculty and technologies; and mastery of foreign languages.

Learning Outcomes for Internationalizing Higher Education

The American Council on Education describes an integrative approach model that provides a transformational roadmap for internationalizing higher education. This model includes establishing clear goals for internationalizing, and a strategy that integrates international components throughout the institution, including programs and activities that have a global focus “inputs,” and a system for determining outcomes and ways to measure student learning “outputs” (Olson, Green & Hill, 2005, p. iv).

The outcomes-based approach seeks to help institutions of higher education answer whether their international programs and curricula result in greater global learning. Using a four-step approach for assessment that “establishes learning goals; provides learning opportunities; assesses student learning; and uses the results.” Institutions of higher education can set clear global learning goals (outcomes), establish programs to achieve these goals, and

assess student learning to determine the effectiveness of the programs or initiatives (Olson, Green & Hill, 2005, p. iv). (See Appendix A for sample outcomes.)

Establishing the types of knowledge, skills and attitudes that are necessary for effective global learning is an essential step toward outcomes-based internationalization. The ACE report on global learning outcomes states that these should be established to serve the various levels of the institution and their needs for assessment. Global learning outcomes need to be established at the macro, institutional level first, cascading down to individual course objectives and activities, where the global learning outcomes may also include those relevant to the content of the course. The report indicates that some universities have chosen to group global learning outcomes within the “learning domains of knowledge, skills, and attitudes.” This provides a common framework to assess student learning in general, by allowing for a seamless integration of the global learning outcomes into existing outcomes structures (Olson, Green, Hill, 2006, p.30).

Many institutions of higher education have drafted global learning outcomes. While there is general consensus that this is an essential step toward internationalizing higher education, there is limited agreement as to what these should be across institutions.

Internationalizing the Curriculum

Internationalizing the curriculum is perhaps the most essential component of internationalizing higher education. “Colleges and universities should focus their efforts on the curriculum to ensure that students gain international skills and knowledge” (Siaya & Hayward, 2003, p.x). This process is complex, as indicated in a study of university presidents that revealed this to be one of the most difficult aspects of internationalizing higher education (Hanson and Meyerson as cited in Mestenhauser, 1998, p. 8).

The process is best achieved by creating an intentional and systemic curricular internationalization that is sophisticated, multidimensional, interdisciplinary, intercultural, and research oriented. However, most internationalization of the curriculum occurs at the faculty/course-specific level, or within disciplines or departments, in relative isolation from other faculty, disciplines, departments or programs. This tends to produce international specialties among the faculty or disciplines that do not change or modify the existing curriculum. As a result only some students acquire international skills (those who are enrolled in the specialty courses), whereas those who are enrolled only in the mainstream courses attain no international skills (Mestenhauser, 1998). The American Council on Education addressed the importance of a macro perspective of internationalizing the curriculum that is based on establishing institutional global learning outcomes and assessment measures (Olson, Green, Hill, 2006).

In addition to having a foundation of global learning outcomes, the design needs to be considered. According to Freedman (1998), important considerations are the “epistemological, informational, developmental, outcome and structural issues” (p. 43). From an epistemological perspective, an international curriculum should be based on the notion that: “Knowledge is socially constructed”; informational perspectives would include what students need to know to be able to evaluate global issues; developmental perspectives would assure that the curriculum increases awareness, sensitivity and the consciousness to understand the global paradigm; outcomes would address the objectives and the activities necessary to meet these objectives; and that structural perspectives would address the implementation of the curriculum including strategies that assure both depth and breadth of knowledge, higher-level learning, flexible types of instruction and interactive learning (pp. 43-44).

The best practices for internationalizing the curriculum generally include: Adding an international major or minor in the curriculum or within specific disciplines; foreign language or area studies; infusing courses with international content; international service learning; international relations degree programs; international students, faculty and scholars; study abroad and international internships or research; and faculty involvement in international research teaching and consulting (Ellingboe, 1999; Mestenhauser, 1998; Tonkin, 2006).

Study Abroad

Study abroad is a frequently used approach for internationalizing higher education and internationalizing the curriculum. Research studies reported by the Commission on the Abraham Lincoln Study Abroad Fellowships (2005) indicated that students who have participated in study abroad programs use their newly acquired languages, develop an increased interest in their studies, acquire skills that carry over into the workplace, and perceive the world differently. The Commission also reports that students show an increased ability to understand and communicate effectively with people from other cultures. As study abroad programs continue to grow, it has become imperative to establish outcomes and assessments to measure the effectiveness of study abroad.

There are many types of study abroad programs. Most are classified based on length of stay such as long-term (semester or year-long programs) or short-term (less than one semester). Long-term study abroad programs are considered to be the most beneficial in terms of learning a foreign language, increasing cross-cultural skills, learning in depth about a new culture, and developing transformational skills such as those needed for global competence and global consciousness (Anderson, Lawton, Rexeisen, & Hubbard, 2006; Dwyer & Peters, 2004; Gorka & Niesenbaum, 2001; NAFSA, 2003, as cited in Lewis & Niesenbaum, 2005).

Short-term study abroad is generally not considered to be as effective as long-term study abroad for developing language skills and intercultural sensitivity. Freinberg (2002) even argued that students can participate in short study abroad programs and not experience any significant learning, or worse, the experience could lead students to “confirm an inaccurate US-centric view of the world” (Freinberg, 2002, as cited in Sutton, Miller & Rubin, 2007, p. 25). However, recent studies have shown that short-term programs afford the opportunity for larger number of students to participate in study abroad, and result in significant positive effects both academically and toward increased cultural sensitivity (Anderson, Lawton, Rexeisen & Hubbard, 2006; Lewis & Niesenbaum, 2005).

Other classification systems have sought to more clearly identify the program structures and their impact on student learning outcomes, beyond length of stay. The classification system developed by Engle and Engle (2003) seeks to address the complexity of the elements of study abroad by defining the components of study abroad to include: “Length of sojourn; entry target-language competence; language used in coursework; context of academic work; types of student housing; provisions for guided/structured cultural interaction and experiential learning; and guided reflection on cultural experience” (p. 8). These components have then been placed into a 5-level structure reflecting a range of programs from lesser to greater exposure/experience with the new culture, based on the desired learning outcomes (Engle & Engle, 2003).

International service learning is a study abroad model that holds a greater classification complexity beyond simply the length of the program. This type of study abroad extends the concept of service learning, or community-based experiential learning into an international context. In general, the purpose of service learning in the United States has been to promote citizenship education and the principles of social justice through service to the community.

International service learning generally involves the collaboration of a study abroad office with fieldwork research in an international community. Usually this involves a professor-led team of students who participate in activities initiated by a non-governmental organization (NGO). The goals for service learning both nationally and internationally are similar, however, the citizenship goal for international service learning seeks to develop an understanding of global citizenship and an increasing level of global consciousness (Annette, 2002).

Humphrey Tonkin (2006), President Emeritus of Harvard University, espoused the study abroad model of international service learning as an experience that bridges the gap of cultural differences and class differences, showing students that globalization has many facets including dependency and poverty. This type of experiential learning enables students to realize the inequities that exist worldwide, encouraging new perspectives and new ways of thinking.

The Harvard model, along with others, is based upon the theory that through experiential learning knowledge is socially constructed as people participate, observe, reflect, and interpret their experiences (Lutterman-Aguilar, Gingerich, 2002).

Recognizing the importance of study abroad for the future of the nation's ability to respond to global challenges, the Abraham Lincoln Study Abroad Act of 2006 (S.3744) was introduced by Senators Richard Durbin of Illinois and Norm Coleman of Minnesota. The goal of this legislation was to make study abroad accessible to all, and to become the norm, rather than the exception, for undergraduate college students. It also sought to expand the destinations of study abroad students beyond the traditional European destinations. This bill established the goal of having one million students study abroad every year by 2016-2017 or approximately fifty percent of all undergraduate students (Commission on the Abraham Lincoln Study Abroad Fellowship Program, 2005).

Learning Outcomes for Study Abroad

As the United States gears up for the potential of one million students studying abroad by the year 2017 it has become increasingly important to assess the outcomes of study abroad to ascertain the effectiveness of the programs in increasing global learning. The complex nature of study abroad as a curriculum model that includes variety in duration, content, experience and other factors, makes the identification of curriculum standards for outcomes and assessment challenging. Traditional evaluation processes have often included measuring student satisfaction and number of students participating in study abroad, rather than program effectiveness for learning (Sutton, Miller & Rubin, 2007; Sutton & Rubin, 2004).

Learning outcomes often addressed are second language acquisition and intercultural competence, although these constructs have varying definitions and outcomes. The Institute for the International Education of Students established the IES Map for Study Abroad as a framework for assessing the effectiveness of study abroad across four dimensions: “Student learning environment; student learning and intercultural development; resources for academic and student support; and program administration and development (IES, 2007, pp. 8-9).” The purpose was to create standardized criteria that could be used to evaluate across the complexity of study abroad programs. However, this framework appears to address program structure and its impact on student learning, rather than specific learning outcomes. For example, an objective listed under “Cognitive Growth” specifies, “academic studies, support services, and integrative activities contribute to the students’ greater appreciation and respect for persons with differing cultural values (IES, 2007, p. 14).” While there is a later reference in the IES Map regarding assessment of cultural learning being used to enhance programming, there is no specific reference made to the types of learning outcomes measured or the method used for measuring these.

Meyer-Lee and Evans (2007) posit that the outcomes of study abroad can be divided into direct and indirect impacts. The direct impacts refer to how study abroad directly impacts student development in the short-term to include: “Language learning; intercultural competence; cognitive/knowledge; affective/attitudes; behavior skills; disciplinary knowledge; and social growth” (pp. 63-65). Direct impacts can also occur in the long-term and these include: “Language learning; intercultural competence; disciplinary knowledge; social development; career impact; academic progression; and institutional loyalty” (pp. 66-67).

These impacts, both short-term and long-term are typically of interest when developing outcomes and assessment measures for study abroad. While there is anecdotal evidence of the effectiveness of study abroad, there is a dearth of consensus about learning outcomes for study abroad and consequently a lack of empirical evidence of program effectiveness in achieving these outcomes (Paige, Cohen, Shively, 2004).

Global Competence

The impact of globalization highlights the importance of global competence as essential to functioning effectively and successfully in an increasingly interconnected and interdependent world. The knowledge, skills, experiences and attitudes necessary for global competence are described in many disciplines, such as business and engineering, as these have been impacted by, and have played a significant role in fueling twenty-first century globalization. The role of higher education in developing global competence is salient as institutions of higher education need to become the training centers for developing the next generation of global professionals.

Several studies have been conducted to define global competence and identify the knowledge, skills and attitudes that characterize global competence. A study conducted by Koehn and Rosenau (2002) resulted in a framework for defining the skill set required for transnational competence. The authors asserted that effective transnational skills are essential to

enable transnational interactions to be effective and meaningful in an era of intensive globalization. The four skill sets that need to be mastered to achieve transnational competence are: “Analytic, emotional, creative/imaginative, and behavioral” (p. 109; Appendix A).

Transnational analytic skills enable people to analyze culture-specific information such as the beliefs, values, practices, politics, as well as gender, ethnic and class issues to develop profound cultural understanding, and be able to correctly interpret what is occurring in a cross-cultural environment. The authors emphasized the importance of self-knowledge to understand how actions, based on personal values and goals can have a transnational impact. Additionally, transnational analytic skills consist of the ability to identify alternative ways of doing things, and making decisions based on the intercultural appropriateness of the situation. These skills are particularly important in understanding the complexities of globalization and being effective in transnational interactions (Koehn & Rosenau, 2002).

Transnational emotional skills encompass the willingness to be receptive to cultural situations that are unfamiliar and uncertain, and to have the impetus to face rather than shirk from obstacles. Those who possess these skills are generally enthusiastic to learn about different cultures, connect to new cultures emotionally, and are willing to be accepting of new ideas and values. Additionally, these skills call for the ability to use a variety of identities based on the situation, such as one’s ethnic, nation-state, religious, professional, or gender identity, and the ability to participate in, and adapt to various roles within cultural contexts, including the personal cultural context (Koehn & Rosenau, 2002).

Transnational creative/imaginative skills encompass the ability to imagine the possibilities in a transnational interaction, and be able to create the types of relationships and collaborative approaches to these challenges. People possessing these skills are able to devise

creative and innovative paths and solutions that will address the needs of the various cultures involved in multicultural interactions (Koehn & Rosenau, 2002).

Transnational behavioral skills serve as the foundation to perform effectively in a global environment. Included in these skills are “transnational communication competence and functional (i.e., project or task) adroitness” (Koehn & Rosenau, 2002, p. 114). The transnational communication competence skills include knowing the language of those with whom a person is interacting, or alternatively, being skilled in the use of interpreters. Additionally, these skills involve the ability to understand and interact non-verbally and to develop effective listening skills when faced with a non-native speaker. Functional adroitness skills include acting appropriately and functionally, in a way that is suitable for the culture, to complete a particular project or task. This includes the ability to develop positive interpersonal relationships in an intercultural environment. The ability to develop relationships across cultures is often cited as the most important global competence skill to develop. Brislin (1993) stated that “in intercultural encounters, overall goodwill, respect, and enthusiasm allows people to generate ‘credit’ and their credit allows mistakes to be ignored or forgiven” (as cited in Koehn & Rosenau, 2002, p. 115). Koehn and Rosenau (2002) describe transnational competence as ranging from “incapable to proficient” and “pre-competent to adequately competent” permitting people to possess any combination of these skills with varying degrees of competence (p. 116).

Hunter (2004) conducted a study aimed at defining global competence, and determining the knowledge, skills, experiences, and attitudes that are characteristic of a globally competent person. Using a Delphi study, he sought to define the term “global competence” and to determine if there were significant differences between the knowledge, skills, attitudes, and experiences that human resource managers of transnational corporations and international educators at

institutions of higher education believed were necessary for attaining global competence. The human resources managers represented Fortune 500 companies sending more than 500 employees on international assignments per year. The international educators represented universities that were successful in internationalizing their campuses (Hunter, 2004, pp. 14-15).

Hunter's findings showed an 82% agreement among the panel of experts and generated the following definition of global competence:

Having an open mind while actively seeking to understand cultural norms and expectations of others, leveraging this gained knowledge to interact, communicate and work effectively outside one's own environment (p. 101).

He noted that the tone of the definition reflects a "link between thought and deed," representing an American view that links education with productivity and achievement. The author further noted that open-mindedness held a very high level of concurrence indicating the importance of being able to assimilate new information at "face value," facilitating the process of making decisions based on the situational contexts rather than on pre-conceived ideas (pp. 106-107).

Hunter added the importance of replicating this study with panelists where the majority representation is not American to compare the definition of global competence that might arise.

Hunter's research revealed a high level of agreement between human resource managers and international educators on the knowledge, skills, attitudes and experiences necessary to become globally competent. However, there were significant differences of opinion on four aspects. The most significant difference observed was the importance of "being linguistically and culturally competent in at least one language and culture other than one's own." International educators rated the importance of this aspect higher than human resource managers. Other less significant differences noted were: "Celebrating diversity" was cited as more significant by human resource managers than international educators; "Speaking English and at least one other language" was more significant for international educators than for human resource managers;

“Knowledge of current events” was rated higher by international educators than by human resource managers (pp. 102-103).

The results of Hunter’s study led to the development of a checklist of the knowledge, skills/experiences, and attitudes that characterize someone who is globally competent. This checklist only incorporated those statements with the highest degree of correlation between international educators and human resource managers (Appendix A).

According to Hunter’s checklist, knowledge encompasses being able to understand cultural norms and expectations on two levels: Internally (self-awareness), and externally (in relation to others). This category also includes understanding globalization, knowledge of world history and current events. Skills and experiences encompass having participated in academic or professional projects with people from other cultures, and successful involvement in worldwide business and social environments. These skills also include the ability to live in another country; to understand the impact of cultural differences for successful competition on a global scale; to evaluate cross-cultural performance; and to collaborate effectively across cultures. Attitudes involve possessing a global mindset that understands that personal views of the world are not universal, and being able to react in non-judgmental way to cultural differences. This characteristic includes being willing to grow personally and learn more about other cultures; to be able to see and experience events from the other culture’s perspective; to be receptive to new experiences (even if these are emotional); to be able to cope with cultural differences; and to celebrate diversity (Hunter, 2004, p. 115).

Global Competence in Business and Business Education

Globalization is fueled primarily by accelerated technology and market/economic forces. As a result, developing globally competent workers, who are capable of functioning effectively

within interconnected and interdependent world markets has become an increasingly significant mandate for business education.

Among the most important skills recruited by American corporations are “knowledge of other cultures, cross-cultural communication, experience in international business, and fluency in a foreign language” (ACE, 2002, p. 11). The ability to solve problems, think critically, resolve conflict and communicate effectively with others are also needed to be successful in today’s business environment (Ahlawat, 2006). Cultural competencies such as “cultural self-awareness, cultural consciousness, the ability to lead multicultural teams and negotiate across cultures, and possessing a global mindset” are further requisites to compete globally (Cant, 2004, p. 177; Appendix A). In sum, business professionals are increasingly being required to possess the ability to work with people who have “fundamentally different values, assumptions, beliefs and traditions” (Cant, 2004, p. 177).

Cant (2004) stated that in spite of the clear need for global competence in the workplace, American university students are seriously lacking knowledge of other countries and cultures. He added that this demonstrates the importance of incorporating education for global competence into business education. Other studies cited by Cant indicate that American students tend to be monolingual and have limited appreciation for other cultures.

The Association to Advance Collegiate Schools of Business (AACSB) accreditation standards of 2003 specified that a college of business “must demonstrate diversity in its business programs” including teaching about diverse perspectives and enabling students to be able to practice their professions in a global context (p.9). AACSB added that business education programs should include an understanding that “diversity on a global basis is a complex, culturally embedded concept rooted within historical and cultural traditions, legislative and

regulatory concepts, economic conditions, ethnicity, gender and opinion” (AACSB International, 2007, p. 9).

A 2002 Cendant Mobility survey of 180 human resources managers worldwide supports the importance of educating for global competence as being a “critical component of an employee’s professional development” (as cited in Hunter, 2004, p. 9). A Rand Corporation study stated that while U.S. universities are graduating students with superior technical skills, many of these graduates are lacking in their ability to think and act in different cultural environments, and also lack global leadership skills. Furthermore, the study suggested that universities should encourage more students to study abroad, particularly in programs that combine professional experience overseas (Bikson, Treverton, Moini, Lindstrom, 2003).

The Rand study concluded that global employees must demonstrate, among the top five skills

General cognitive skills such as problem solving and analytical ability; interpersonal and relationship skills; ambiguity tolerance, adaptivity; and personality traits such as good character, self-reliance, dependability; cross-cultural competence (p.17).

This same study revealed that human resource managers see an increased need, after the terrorist attacks on the United States on September 11, 2001, to hire or train top managers who are able to function in “ambiguous and difficult situations” (Bikson, Treverton, Moini, Lindstrom, 2003, p. 25; Appendix A).

Global competency skills are important as multinational companies globalize their human resources by sending employees on expatriate assignments. In a survey conducted by PricewaterhouseCoopers, findings showed that 75% of the companies surveyed were expected to increase their expatriate assignments (as cited in Peppas, 2004). The success of expatriates is based in large part on having global competencies including the ability to communicate successfully in other cultures; to develop effective social relationships; to have open minds; to be

flexible; to be well-rounded; and to have good leadership, professional and conflict resolution skills (Black, Gregersen, Mendenhall & Stroh, 1999).

Additionally, the United States grants 65,000 visas per year for foreign workers, many in the technology fields, and it is expected that this number will increase (Kolbasuk McGee, McDougal, 2006). The likelihood of having worldwide exposure, as well as local/national exposure to diverse populations in any profession is high. Business education programs are increasingly addressing the need to develop a globally competent workforce.

Responding to the call from the business community, universities have begun developing programs for global workforce development (GWD) that are designed to develop global competencies. GWD also seeks to address multiple global issues that have become highlighted as the world becomes increasingly interconnected through technological advances (Bremer, 2006).

Ron Moffatt, director of the International Center at San Diego State University states that GWD is designed to create a “global-ready graduate” who understands “global systems, global issues, the dynamics of how things are interrelated and interconnected in the world, and how society can best address global issues” (as cited in Bremer, 2006, p. 40). Producing national workers with global competencies has become increasingly important as businesses recognize that because of globalization, the national workforce will be seeing an international impact, regardless of being physically positioned inside of the United States. The Association of International Education Administrators specify that GWD is designed to prepare people to work both nationally and internationally with people from other cultures (Bremer, 2006).

Global leadership skills are paramount in today’s business paradigm. The challenge, according to Harris, Moran & Moran (2004) is to develop new models of management that are

effective transnationally, and new managers that have the competencies required to perform globally. Moran and Riesenberger (2004) identified twelve global competencies for global leadership:

Possessing a global mindset; working as an equal with persons of diverse backgrounds; possessing a long-term orientation; facilitating organizational change; creating learning systems; ability to motivate employees to excellence; ability to negotiate and approach conflict in a collaborative mode; ability to skillfully manage the foreign deployment cycle; leading and participating effectively in multicultural teams; self-awareness of personal values and assumptions; and accurately profiling the organizational and national culture of others globally (Harris, Moran & Moran, 2004, p. 258; Appendix A).

Srinivas (2005) stated that a global mindset is key to conducting business internationally. He describes the characteristics that exemplify a global mindset as:

Curiosity and concern for context, accepting complexity and contradictions; sensitivity and consciousness of diversity; willingness to view surprises and uncertainties as opportunities; belief in the organizational process; focusing on continuous improvement; long-term perspective; and systems thinking” (as cited in Jokinen, 2005, p. 202).

Jokinen’s (2005) review of global leadership literature produced a three-level framework for global leadership competencies. The first level is the foundation for global leadership including “self-awareness, engagement in personal transformation, and inquisitiveness” (p. 204). These are the starting point from which other competencies can develop. Self-awareness implies an understanding of one’s emotions and reactions to others, as well as a personal insight that enables better relationships with people of other cultures. Engagement in personal transformation means a willingness to be entrepreneurial, to strive toward ongoing personal growth, and to be open to change. Inquisitiveness implies curiosity and desire to gain greater knowledge.

The second level includes the “mental characteristics” that global leaders should have: “Optimism, self-regulation, social judgment skills, empathy, motivation to work in international environments, cognitive skills, and acceptance of complexity and its contradictions” (p. 206).

Optimism can be defined as generally believing that everything will turn out well, and being able

to see the opportunity in an uncertain situation. Self-regulation includes the ability to control personal impulses, the ability to handle stress and to persevere and maintain balance in unfamiliar situations. Social judgment implies being able to gain a good perspective on a situation, and understanding that solutions occur in a social context. Empathy means being sensitive to and concerned with the needs of others. This skill is particularly effective in enabling people to be sensitive across cultures. Motivation to work in an international environment is an important characteristic for making the correct career choice, as some careers will lend themselves more than others to require global leadership skills. Cognitive skills imply people's ability to learn and the degree to which they are able to correctly interpret and experience their environment. Acceptance of complexity is the ability to see the intricacies and contradictions in an environment, a skill that enables a person to understand the various levels of cultural differences (Jokinen, 2005).

The third level includes the behaviors that global leaders should possess: "Social skills, networking skills, and knowledge" (p. 210). These are the global leadership competencies that are directly related to successfully perform a task on a transnational level. Social skills are necessary to relate well to others on a personal level. These involve leadership, conflict management, communication, negotiation, persuasive, collaborative, and motivational skills. Networking skills involve the ability to create and maintain relationships. Knowledge refers to the comprehensive ability to perform the tasks required for the job (Jokinen, 2005; Appendix A).

Global Competence in Government and National Security

The need for globally competent federal employees became evident after the terrorist attacks on the United States on September 11, 2001, when federal agencies realized they were lacking experts in the languages spoken by the terrorists. A study conducted by the American Council on Education after September 11, reported that there was an urgent need within the

United States federal government for personnel with foreign language proficiency, knowledge of other cultures, and international working experience. This study revealed that shortages of personnel with adequate global skills had “adversely affected agency operations and hindered U.S. military, law enforcement, intelligence, counterterrorism, and diplomatic efforts” (ACE, 2002, p.11).

The Committee for Economic Development (2006) stated that the lack of global competence in government has compromised American national security. Citing examples from the 9/11 Commission, it revealed that even in 2005, “thousands of hours of audiotapes remain un-translated or un-reviewed” due to a lack of translators and linguists, reducing the FBI’s capability to locate terrorists. Furthermore, the study cites a 2005 Department of Defense study “Defense Language Transformation Roadmap” stating “language skills and regional expertise are not valued as Defense core competencies yet they are as important as critical weapons systems” (p. 9).

Increasing the ability to respond to the challenges of world politics requires global competence skills within our government and among public policy makers. The ability to understand world politics can have an impact on the outcomes of global negotiations, treaties, as well as impacting the “dimension of global cooperation, competition, conflict and governance”(Koehn & Rosenau, 2002, p. 105).

Global Competence in Engineering and Engineering Education

As a result of globalization, engineers must respond quickly to the rapidly changing technological environment. Engineers are also impacted by the increasing demands to perform seamlessly and effectively in global work environments either in person or as part of global virtual teams.

Globalization is fueled by technology that is being created by engineers, many who originate from countries outside of the United States. Khosla, Dean of the College of engineering at Carnegie Mellon reported that the United States produces 73,000 engineers per year compared to India and China that graduate 750,000 per year (Khosla, 2006).

The National Science Foundation Science and Engineering Indicators (2006) reports that the number of foreign students in Science and Engineering (S & E) studying in the U.S. has declined, however these numbers have increased in Australia (6%), the United Kingdom (18%), Germany (15%), and France (12%) (2004 figures). The United States lags behind the rest of the world in awarding doctoral degrees in science and engineering. 78% of S&E doctorates are awarded outside of the United States, with large increases in doctoral degrees being awarded in China, South Korea and Japan. In 2003, in the U.S. workforce, over 25% of all college-educated workers in science and engineering were foreign born, 40% of doctorate degree holders in S&E were foreign born, and over 50% of all U.S. employed doctorate degree holders in computer science, electrical engineering, civil engineering, and mechanical engineering were foreign born (Science and Engineering Indicators, 2006).

The United States is challenged to produce a greater number of engineers, and develop engineers who are able to effectively work in the new paradigm of globalization. “It is no longer just whether engineers are being treated as commodities, but how engineers and other highly educated technical people shape and are shaped by the emerging realities of a truly global workforce” (Obert and Jones as cited in Shuman, Besterfield-Sacre & McGourty, 2006, p. 43).

The ABET (Accreditation Board for Engineering and Technology) Engineering Criteria 2000 addressed the need to develop “professional skills” in engineering students. These include global competencies such as “the broad education necessary to understand the impact of

engineering solutions in a global, economic, environmental, and societal context” (Shuman, Besterfield-Sacre, McGourty, 2005, p. 41). Engineers must also develop language and intercultural communication skills to be prepared to live and work in various countries and with people of diverse backgrounds (Malone et al. 2003, as cited in Lohmann, Rollins & Hoey, 2006).

Two studies are seeking to define global competence for engineers, to determine the types of curricula that would be most effective in producing a globally competent engineer, as well to assess the results of the intervention. The first study is being conducted at the Georgia Institute of Technology.

The researchers have proposed a conceptual model for achieving global competence, a curriculum model to develop it, and an assessment model to measure the success of the intervention. The key to this model is the definition of global competence, and the determinant of factors of global competence that can be measured. The study posits that

global competence is the product of both education and experience, and it is characterized by a graduate’s ability to (a) communicate in a second language via speaking, listening, reading, and writing (second language proficiency); (b) demonstrate substantively the major social-political-economic processes and systems (comparative global knowledge); (c) assimilate knowledgeably and with ease into foreign communities and work environments (intercultural assimilation); and (d) communicate with confidence and specificity the practice of his or her major in a global context (disciplinary practice in a global context) Georgia Institute of Technology International Plan 2005, as cited in Lohmann et al., 2006, p. 7).

The second study, a collaborative effort of researchers from Virginia Polytechnic Institute and State University, Colorado School of Mines, King’s College London, and the University of Virginia, proposes a new approach for conceptualizing global competency in engineers.

Recognizing that the new global paradigm of technology is requiring engineers from different nations to work together and also to work with non-engineers from various cultures, this approach proposes that the key global competencies that need to be developed for engineers are those that enable them to be able to work effectively across cultures with people who “define

problems differently.” This study emphasizes that engineering students educated in different cultures have learned to define and solve problems differently than in the U.S., and that being able to effectively navigate these differences will impact not only the success of working on multicultural projects, but also will give engineers the skills to be able to navigate the “human dimensions of engineering work” (Downey, Lucena, Moskal, Bigley, Lehr, Nicholas-Belo, et al., 2006, p. 110).

The criterion and learning outcomes for developing global competency in engineers, according to Downey and associates, are the following:

- Learning Criterion
 - Through course instruction and interactions, students will acquire the knowledge, ability, and predisposition to work effectively with people who define problems differently than they do.
- Learning Outcomes
 - Students will demonstrate substantial knowledge of the similarities and differences among engineers and non-engineers from different countries.
 - Students will demonstrate an ability to analyze how people’s lives and experiences in other countries may shape or affect what they consider to be at stake in engineering work.
 - Students will display a predisposition to treat co-workers from other countries as people who have both knowledge and value, may be likely to hold different perspectives than they do, and may be likely to bring these different perspectives to bear in processes of problem definition and problem solution (Downey, Lucena, Moskal, Bigley, Lehr, Nicholas-Belo, et al., 2006, p. 110)

The authors describe the first learning outcome as one based on gaining knowledge of the similarities and differences of engineers across cultures. The second learning outcome is based on developing ability. This process goes beyond simple awareness to being able to understand this new knowledge and use it in engineering situations. The third learning outcome refers to learned behavior patterns that can be observed. This is the culminating step of global

competence in engineering, where engineers are able to demonstrate that they can work effectively with people who define problems differently (Downey, Lucena, Moskal, Bigley, Lehr, Nicholas-Belo, et al, 2006).

Global Competence in Higher Education

Institutions of higher education are responding to the challenges of globalization by seeking ways of instituting internationalization initiatives to develop professionals who are globally competent. The first step of this process is to seek leadership that fosters the types of programs, global partnerships and the institutional mindset that recognizes the importance of globalization and the interconnectedness and interdependence that is shaping the next generation of global professionals (Kienle & Loyd, 2005) .

The Carnegie Corporation convened a meeting on January 21, 2000 with representatives from a wide range of organizations, to address the following questions:

- Are schools, colleges, and universities preparing their students to function effectively in a global society in which time and space no longer insulate nations, people and markets of the world?
- Do U.S. citizens understand enough of the world beyond our national borders to evaluate information about international and global issues and make sound judgments about them?
- Is education in the United States preparing Americans for sustained involvement in an interdependent world? (Barker, 2000, p. 2)

As institutions of higher education search for the optimal means to develop the global competence of students, it becomes important to establish the types of outcomes that can and should be expected from these reforms.

The American Council on Education (ACE) (1995) stressed the importance of higher education's role in developing human resources for the new global paradigm. ACE (2002) further stated that the new paradigm of globalization has created an unprecedented and urgent need for Americans to possess increased global competencies across all disciplines, and that

“producing citizenry with global competencies is the responsibility of our nation’s education system” (p. 12). These competencies include the ability to analyze information affecting national security, the ability to improve relationships with other countries, foreign language proficiency, being able to function within other cultures and within other value systems, an understanding of the world, cross-cultural skills, and an appreciation of diversity (ACE, 2002).

Madeleine F. Green (2002) addressed the compelling mandate for institutions of higher education to adequately educate for global competence:

In the age of globalization and post-September 11, U.S. colleges and universities face an urgent and perplexing set of questions about how to educate students for this new world. We cannot make the common claim to have the best system of higher education in the world unless our graduates can free themselves of ethnocentrism bred of ignorance and navigate the difficult terrain of cultural complexity (p. 1).

American universities will become the training centers for developing globally competent professionals. These professionals will be intellectually and cognitively capable of making a contribution to the new paradigm of worldwide social, economic and political interdependence. These students should be prepared to live and work in a global environment. They must also possess the critical skills and perspectives to become globally conscious citizens (Gacel-Avila, 2005).

Institutions of higher education vary in their determination of what global competence means as educational outcomes for higher education. This increases the difficulty in determining what curricular approaches are most effective for creating the types of skills the next generation of professionals will require. Most recently, institutions of higher education have focused on seeking this definition and determining what knowledge, skills and attitudes should be developed to produce students who are globally competent. This has led to specifying global competence skills as outcomes of internationalization (Olson, Green & Hill, 2005; Appendix B).

To be able to successfully develop the types of curricula and programs that will produce global competence as an educational outcome, it is necessary to have appropriately prepared faculty. The American Council of Education (2002) stated that one of the most significant challenges for internationalizing higher education is finding sufficient faculty within the disciplines who themselves are globally competent and who speak foreign languages. Badley (2000) defined the characteristics of global competence in university teaching to such characteristics as: Knowledge of the principles of adult education; academic specialization; interest in the lives and cultures of the students and the ways that education is conducted and understood in other parts of the world; and cultural self-awareness (Appendix B).

The American Council on International Intercultural Education (ACIIE) and The Stanley Foundation, jointly charged with creating and implementing the global education policy for community colleges developed the following definition of global competency:

Global competency exists when a learner is able to understand the interconnectedness of people and systems, to have a general knowledge of history and world events, to accept and cope with the existence of different cultural values and attitudes and, indeed, to celebrate the richness of this diversity. (ACIIE, 1996, p. 4)

Additionally, the participants identified 58 knowledge, skills and attitudes that represent the global competencies for the global learner (Appendix B).

Global Consciousness

Globalization can be viewed as a positive stabilizing force that will bring economic prosperity across the globe. To succeed, professionals will require global competence to function effectively and successfully in this environment. Globalization can also be seen in a broader context that seeks to understand the impact of the global interconnectedness and interdependence of economic, political, cultural, social and environmental factors on humanity. This broader conceptualization can serve to temper the market forces of globalization and serve

as the catalyst for improving the human condition worldwide. The knowledge, skills, experiences and attitudes necessary for global consciousness are explored in the literature of anthropology, social anthropology, sociology, history, and most recently in higher education, and professions such as business, engineering and medicine.

History of Globalization: An Emerging Global Consciousness

Robertson (2004) posits that globalization is not a new phenomenon; rather it has existed for hundreds of years, has exhibited different characteristics, and has occurred in three waves. The first wave was precipitated by the weakened Song dynasty in China. This created an opportunistic movement by European states when competitiveness among nation states led them to seek wealth in the Asian trade. The European inroads into this market enabled the accidental discovery of the Americas.

This first wave of globalization marked the first time that people operated on a global basis, moving humans, plants and animals from one part of the globe to another. These changes that occurred on a social, political and economic basis were highly destabilizing on a global scale. European societies attempted to create stability by “exclusions of class, religion, race, through empire or commercial monopoly, war and conquest” (Frank, 1998, p. 560, as cited in Robertson, 2004).

The second wave of globalization was characterized by industrialization and the supporting structures of modernity. The industrial revolution accelerated human interconnectedness, and transformed societies. However, the second wave increased the wealth of those who were able to benefit from the global reaches of the first wave of globalization. Societies that were unable to become industrialized were subsumed as colonies or de facto colonies by the industrialized societies. Societal, political and economic changes and inequalities generated by industrialization, fueled tension within industrialized countries who began seeking

exclusive nationalism and expansionism as a means of gaining security and maintaining the power of the elite (Robertson, 2004).

The 1850s to 1945, labeled as the “modern” period of globalization by political scientist David Held, gave rise to liberalism, Marxism and modern science, along with the technological discoveries that increased global communication, leading to the onset of modernity. The modernist literary movement that rose as a reaction to modernity gave rise to a nascent global consciousness that addressed the impact on cultures resulting from economic globalization (Cuddy-Keane, 2003).

The second wave ended with world war and depression, paving the way for the third wave of globalization. The third wave of globalization began after World War II, and is characterized by decolonization and American globalism. Robertson defines the term globalism as “a conscious process of globalization or a set of policies designed specifically to effect greater global rather than international interactions” (p. 4). He differentiates American globalism from the British globalization movements of the 19th century. British policies were never designed to “engender global relations,” whereas American globalism, post World War II, in spite of the hegemonic status of the United States, attempted to set up structures that were designed for global cooperation and for democratization (p.4). Global cooperation and democratization then became the preferred means for achieving security and well-being, replacing the first and second wave strategies of conquest and subjugation (Robertson, 2004).

The decolonization that occurred during the third wave of globalization has not always successfully increased democratization of the former colonies. Lacking the ability to operate in a globalized world, the independent former colonies became bound by the modernization requirements imposed upon them by nations funding development within these nascent

countries. This lead to the “segregation of economic sectors, denied social reform, and dependence on export production” often producing dictatorships, stunted development, and neocolonialism (p. 11). This reality, or as Robertson terms it, “the global divide” threatens the stability of the third wave, today’s globalization (p. 11).

Globalization and the Development of Global Consciousness

There are three challenges to positive globalization according to Robertson (2004): The first challenge is to extend the democratic scope on a global level and “enhancing the centrality of civil society”(p. 12). This has been prevented in part by short-term economic strategies and monopolies that have not invested in infrastructure and human resources. As a result there are greater disparities, war, debt, corruption, and exclusionary policies that are occurring at time when the global economic expectations are that everyone will prosper as a result of globalization. The second challenge is the ongoing threat to the environment, produced in part by the economic forces of globalization, yet remaining largely ungoverned on a global level. The third challenge is the increasing multicultural nature of human societies propelled by globalization and by human migration in pursuit of security and well-being. The resistance on the part of some societies to be inclusive of diversity is, according to Robertson, the most destabilizing force of the third wave of globalization as witnessed by accounts of genocide, ethnic cleansing and other tragic displacement of humans (Robertson, 2004).

The development of global consciousness, according to Robertson, requires a profound understanding of the “social and historical lessons of globalization,” which include an understanding that the failed previous waves of globalization failed because they neglected to foster empowerment and democracy, rather they fostered the increasing wealth and power of the elite and promoted nationalism, actions that do not strive to improve the human condition (Roberston, 2004, p.6). Understanding the importance of empowerment is key to developing the

global consciousness needed to create the mechanisms for finding “global solutions based on an inclusive rather than exclusive reading of human history” (p. 13). The importance of empowerment is described by Robertson in the following manner:

Empowerment transforms class structures. It reduces barriers and broadens the scope for wealth generations. It encourages equity and the devolution of authority. It creates skills to manage complex societies, and makes possible diverse solutions and new ways of understanding ourselves. But empowerment also involves consciousness of our global history, and understanding that our very basic human drives require equally basic material solutions. (Robertson, 2004, p. 13)

Each wave opened the doors for new forms of human interconnectedness that altered the world as we know it today. Robertson argues that it is the increasing interconnectedness of humanity that is the most salient characteristic of globalization. This is supported by Cuddy-Keane’s (2003) assertion that cultural globalization produces a global consciousness that is an emerging identity of living in a complex, changing world that is interconnected and interdependent. To gain this global consciousness requires an understanding of maintaining a balance between desires as consumers, with an awareness of the importance of maintaining ecological balance in the world, and understanding that cultural identity is no longer autonomous and geographically bound, but rather part of a global whole. This understanding, Cuddy-Keane asserts, will require some nations to recognize that they will need to replace dominance with mutual dependency.

Globalization describes a change in human consciousness in which humans are able to visualize themselves as part of a global community. Stepnisky (2005) describes this change in reference, arising as a result of the “transnational flow of capital, people and culture,” generating a global consciousness that leads to developing a new collective memory that is global rather than nationally or regionally affiliated (pp.1384-1385). This new reference, or global consciousness, posits the idea that the interconnectedness of globalization will enable people to

more easily identify themselves as part of humanity rather than of a specific nation-state. This notion of a global community is supported by Singer (2004) who believes that the term globalization implies a movement away from relationships between nation-states toward global relationships. This leads to the importance of improved systems of global governance, and a nascent global civil society, reflective of the new interconnected-world paradigm of the 21st century, that is able to provide solutions to global issues. Furthermore, Rifkin (2004) asserts that nation-states are simply not able to individually deal with the global risks and threats that have arisen as a result of rapid globalization and the “density of human exchange” (p. 268).

Globalization also allows for much greater contact with people with whom contact might not have occurred in previous eras. The need arises for new ways of communicating to develop positive relations and avoid conflict among various cultures. Additionally, institutions must be developed that could address the problems of globalization from a whole planet identity rather than from a nation-state identity (Stepnisky, 2005).

The increasing interconnectedness of humanity resulting from the three waves of globalization, have altered the nature of societies, impacting how humans seek ways of finding security and well-being. It is the understanding of the “forms and scope of human cooperation and empowerment” that will forge a “nascent global consciousness of the social import of globalization” (Robertson, 2004, p. 6). Global consciousness will guide the development of the strategies for positive globalization. Relying purely on technology to solve environmental, economic and social problems is simply not enough (Robertson, 2004). Cuddy-Keane (2003) emphasized that globalization from an economic perspective can be “predatory or productive” and “cultural globalization may be colonizing or cooperative,” and it is the role of humanists to create the global consciousness that will play a role in “sensitizing” globalization (pp. 541, 554).

Simply looking at globalization as an economic phenomenon is insufficient, according to Lessem and Palsule (2002). Globalization must be understood as a process in which there is awareness of the interconnectedness and interdependence that exists worldwide, along with an ability to take positive advantage of this reality. This process should include an understanding of the cultural parameters that influence human thought and create social institutions. Additionally, understanding globalization requires recognizing the ecological impact, the need for sustainability, the psychological needs of humanity, and the human ability to develop global consciousness. The process of becoming global is not seen by Lessem & Paule as the extension of modernity, but rather as a transformative process that leads to global integrity, requiring a new level of global consciousness.

Echoing the work of Lessem & Palsule, Michael Camdessus (2001), former managing director of the International Monetary Fund, discussed the importance of developing global strategies to assure that globalization does a better job of serving the needs of humanity. Camdessus describes this as the process of humanizing economic ideas and policies, asserting that positive economic growth takes into account “equity, poverty alleviation, and empowerment of the poor,” along with protecting the environment and respecting cultures (p. 364-365).

Multinational businesses have propelled and accelerated globalization, bringing positive changes to the world, including science and technology, however these same businesses have contributed to enhanced worldwide pollution, exclusion and marginalization, producing what Beck describes as a “world risk society” (Beck 2000 as cited in Stepnisky 2005; Collier & Wanderley, 2005). The risks lie in the “socio-economic exclusion and marginalization in the developed world, and in the contrasts between developed world affluence and the shocking

poverty, deprivation and human suffering which exist in developing countries” (Collier and Wanderley, 2005, p. 173).

Additionally, those who are excluded and marginalized have greater access to the tools of globalization, technology and modern weaponry, increasing the risk of global annihilation and terrorism. Chua (2003) claims that the “global spread of markets and democracy is a principal, aggravating cause of group hatred and ethnic violence throughout the non-Western world” (p. 9). Chua describes the importance of understanding the socio-political constructs of many developing countries where often minority ethnic groups control the power and wealth, and ultimately become the beneficiaries of the economic gains of globalization. These groups are most often unwilling to have the increased wealth stemming from global transactions trickle down to the masses, lest they lose power. The exclusion, economic contrasts, and marginalization of the majority masses resulting from globalization, fuels hatred and destabilizes positive globalization (Chua, 2003). In his book, *The European Dream*, Rifkin (2004) adds that historically, “the struggle between the possessed and the dispossessed over property rights has probably done more to divide our species than any other socially constructed phenomenon” (p. 269).

Collier and Wanderley (2005) describe world risk as an imperative that needs to be addressed by corporations through the development of intentional strategies for global social responsibility, becoming not just “economic agents,” but also “moral agents”(p. 176). This involves a nascent global consciousness that seeks a commitment on the part of globalizing businesses to “the future sustainability and prosperity of the global economy” as well as a commitment to the “respect for human rights” (p. 177). Turner adds that developing an understanding the notion of “human frailty” and “vulnerability,” and feeling sympathy toward

other humans are the only means of uniting humanity toward achieving universal human rights. (Turner as cited in Rifkin, 2004, p. 269). Many multinational businesses have developed new “global citizenship” policies reflecting an understanding, or consciousness of their worldwide social impact and their subsequent global responsibility. As an example, Coca-Cola published in 2004, its first Citizenship Report which addresses the company’s commitment to “be a responsible global citizen that makes a meaningful difference in the world” (p. 40). Highlighted in this report is the importance of the private global business sector, partnering with governments and civil society, to make a contribution to a more sustainable world. Coca-Cola further describes its commitment to the challenges of water, health and wellness worldwide, and HIV/AIDS in Africa.

Lillian Hill (2000) asserts that there is a nascent global consciousness in business indicating greater commitment to “environmental sustainability, citizen participation and social justice” (p.1). Additionally, Hill offers a substantive definition of global consciousness:

The ability to understand the connections between seemingly unregulated problems and issues, such as environmental degradation, the increasing poverty and displacement of people around the world, alongside increasing wealth for a few, backlash against immigration and minority rights, increasing fundamentalism. [Bearing the following characteristics] a more inclusive worldview and the formation of allegiances beyond the local; an awareness of the interdependence among humans and between humankind and the earth; an ability to cope comfortably with ambiguity; a valuing of complexity and diversity (p. 1).

Global Consciousness in Higher Education

Globalization requires recognizing that higher education should prepare the next generation of global professionals to have the knowledge, skills, experiences, and attitudes to be globally competitive and collaborative through curricula that develops global competence.

Globalization also suggests that higher education should prepare the next generation of global professionals to have the knowledge, skills, experiences, and attitudes to understand the impact

of the interdependence and interconnectedness of humanity, through curricula that develops global consciousness.

Those who graduate from institutions of higher education will be expected to understand “global systems, global issues, the dynamics of how things are interrelated and interconnected in the world, and how society can best address global issues”. These graduates also have to understand that the issues that will need to be faced as a result of globalization include “growing inequalities in economic development around the world, growing environmental hazards, issues of sustainability, justice and security” (Moffat, as cited in Bremer 2006, p. 40). Institutions of higher education are challenged to prepare graduates to compete in the global marketplace by developing global competence, and also global consciousness to be able to understand the nature and impact of globalization, recognizing that globalization may be “benign and natural or exploitative and oppressive” (Allen & Ogilvie, 2004, p. 78).

In 1998, the United Nations Educational, Scientific and Cultural Organization’s (UNESCO) World Declaration on Higher Education for the 21st century, stated that the role of higher education, is to develop “a more equitable, tolerant, and responsible society” (Gacel-Avila, 2005, p. 122). Higher education should seek to develop within all disciplines the perspective of globalization and the global interconnectedness of the discipline. This necessitates a new way of thinking, a new way of conceptualizing the discipline, and recognizing that educational strategies should include understanding and preparation for global competition, and simultaneously promoting “intercultural understanding and sustainable human development” (Gacel-Avila, 2005, p. 123).

Martha Nussbaum (1997) takes this one step further and posits that the role of educators is to prepare people to be citizens of the world. Citizens of the world will learn about their own

problems, history and cultures in depth, but will also understand the obligation of learning and understanding other nations and groups for the purpose of developing tolerance and friendship at a national and global level. This education must be provided in such a way as to “respect the dignity of humanity in each person and citizen” (p. 61, 67).

Global competence will allow university students to be successful in the new global intellectual and economic paradigm. However, global competence should be tempered with global consciousness, and it is the role of higher education to provide the learning that achieves this critical balance. Gacel-Avila (2005) says it best:

In this new global environment, one of the basic and fundamental functions of a university should then be the fostering of global consciousness among students, to make them understand the relation of interdependence between peoples and societies, to developing within students an understanding of their own and other cultures and respect for pluralism. All these aspects are the foundation of solidarity and peaceful coexistence among nations and of true global citizenship (p. 123).

An example of developing global consciousness in the disciplines is described by Allen & Ogilvie (2004) who discuss the importance of nurse educators preparing nurses to compete worldwide, but also to be able to critically identify the “local, national and international issues related to social justice, human rights, ecosystem sustainability and peace.” They equate excellence in nursing education with the development of nurses who are “culturally competent and good global citizens” (p. 79).

Another example is the importance of creating globally conscious counseling psychologists. Marsella (1998) state that this is particularly important as some psychological manifestations are directly related to the mental health impact of rapid globalization creating a changing social, political, economic and emotional landscape. Specific syndromes are associated with globalization including “future shock, culture shock, alienation/anomie, acculturation stress, meaninglessness, rootlessness, and identity confusion” (as cited in Marsella & Pedersen, 2004,

p. 414). Other psychological/social issues related to the impact of globalization include among others “cultural disintegration, cultural dislocation, ethnic cleansing” (p. 414). These manifestations indicate the importance of developing curricula that engenders global consciousness in the mental health professions. One of the greatest challenges in developing global consciousness in counseling psychology is the western ethnocentrism that characterizes the profession, which is rooted in the western origins of the field of psychology. However, the reality of our interdependent and interconnected world is that counseling psychologists will be required to address the syndromes and challenges associated with rapid globalization in the course of their everyday professional interactions (Marsella & Pedersen, 2004).

In the field of engineering there is general agreement that engineers must be able to function effectively in global environments. Ramon Wyss (2007) says that engineers must be prepared to “tackle worldwide problems related to food, water, climate, and sustainable global development” (as cited in Bremer, 2007, p. 33). Larry Shuman, professor of engineering at the University of Pittsburgh, adds “more needs to be done to provide graduating engineers with the ability to become world citizens, to better consider the long-term ramifications of their decisions, and to address global issues such as sustainability” (as cited in Bremer, 2007, p.35).

Global Citizenship and the Link to Global Consciousness

A closely related concept to global consciousness is the notion of global citizenship. Nussbaum (1997) describes the origin of global citizenship in ancient Greece, first being defined by the Greek philosopher Diogenes who uttered “I am a citizen of the world,” implying that he could define himself more than just a citizen of a nation-state or local affiliations (p. 52). This led to the Stoic concept of *Kosmopolites*, or world citizens, which espoused the notion of individuals living in both the local community as well as the human community, creating the ability to view all humans as “fellow citizens and local residents” (p. 52). The Stoics are

credited with developing the idea of cross-cultural study and education for developing global citizens as a key component of education, believing that the most important alliance should be that of humanity, rather than nationality. Therefore, all humans should be respected and treated with dignity regardless of their place of birth, status, or gender. The work of Cicero expands this notion adding that justice should prevail over politics, and that humans must understand that humans are part of the human community whose “ends are the moral ends of justice and human well-being” (p. 59).

The modern view of global citizenship is similar, and is tied to the impact of globalization. It carries with it the notions of recognizing the problems of the world including poverty, environmental pollution, sustainable development, social justice, values and perceptions, diversity, interdependence, international and intra-national conflict, and human rights (Scott-Baumann, 2003; Dower, 2000). An important characteristic of the modern view of global citizenship is not only the awareness and recognition of the problems of the modern and interconnected world, but the requirement to take responsibility for these problems and act toward solving them (Scott-Baumann, 2003). A global citizen is therefore one who “knows how the world works, is outraged by injustice and who is both willing and enabled to take action to meet this global challenge” (Richardson, 1997, as cited by Davies, 2006, p. 7). This notion of global citizenship requiring action is echoed by Hickman who believes that global citizenship is centered on Dewey’s pragmatist belief that “citizenship involves the doing of something that involves one’s relationship with others and therefore requires that choices be made (Hickman, 2004, p. 78).

The UK Oxfam Curriculum for Global Citizenship defines a global citizen as one who

- Is aware of the wider world and has a sense of their own role as a world citizen
- Respects and values diversity

- Has an understanding of how the world works economically, politically, socially, culturally, technologically and environmentally
- Is outraged by social injustice
- Participates in and contributes to the community at a range of levels from the local to the global
- Is willing to act to make the world a more equitable and sustainable place
- Takes responsibility for their actions (Oxfam, 2006)

Oxfam has also defined the knowledge, understanding, skills, values and attitudes that are required for responsible global citizenship (Appendix C).

Griffiths (1998) describes the global citizen as “not merely aware of her rights, but able and desirous to act upon them; of an autonomous and inquiring critical disposition; but her decisions and actions tempered by an ethical concern for social justice and the dignity of humankind” (as cited in Davies, 2006, p. 8). Global citizenship and global consciousness are intricately connected. Robertson (1992) posits that global consciousness is the capability of having the sense of “the world as a single place”, understanding and appreciating other cultures, and understanding world social, economic, and ecological concerns (p. 12). The mandate for responsibility and action to better humanity that accompanies the notion of global citizenship, differentiates this concept from global consciousness. Global consciousness implies that action may be taken due to increased consciousness of the impact of globalization, but does not specifically mandate personal responsibility for such an action as global citizenship does.

Another central concept involved in global citizenship is the idea that local actions impact the rest of the world. This is a concept akin to the popular “think locally, act globally” slogans. The UK West Midlands Commission on Global Citizenship (2002) describes this as “developing a disposition toward connecting with the wider world, as well as contributing to economic, social, environmental and political decision-making in our region which could have an impact elsewhere” (as cited in Davies, 2006, p. 9). Nussbaum cites the importance of

understanding local differences and problems, and being able to connect these to the rest of the world. This skill can lead to the ability to respect humanity on a global scale (Nussbaum, 1997). Similar to global consciousness, this concept emphasizes the interconnectedness of the 21st century world, but specifically notes the importance of an action on the local level having a global impact.

Assessment of Global Outcomes

As demands for greater accountability of internationalization efforts increase, including internationalizing the curriculum and study abroad, institutions of higher education are searching for valid and reliable ways to measure global outcomes. The perceptions of what constitutes global outcomes vary widely, and the selection of instruments will depend on the stated outcomes that the institution desires to measure. Measuring global outcomes may require several types of measurement strategies including qualitative and quantitative measures (Deardorff, 2006).

There are many instruments designed to measure various global outcomes such as cultural self-awareness, cultural adaptation, intercultural sensitivity, as well as dimensions of national cultures such as individualism and collectivism (Appendix D). Some of the most commonly used instruments are described in the following paragraphs.

The Intercultural Development Inventory (Hammer & Bennett, 1998) is based on the Developmental Model of Intercultural Sensitivity (DMIS), a theoretical framework developed by Milton Bennett. The DMIS shows the progression from ethnocentrism (one's culture is most important and the center of one's reality) to ethnorelativism (one is able to experience one's culture in relation to and within the context of other cultures). During this progression there is an evolution of attitudes and behaviors toward cultural differences that show increased sensitivity. The assumption is that the more complex one's experience of cultural difference becomes, the

greater one's ability to interact intercultural, and the greater the degree of intercultural sensitivity (Bennett, 1993).

The IDI was developed to determine intercultural competence by measuring the orientations toward cultural differences on a continuum that are described in the DMIS (Denial, Defense, Minimization, Acceptance, Adaptation, Integration). The IDI is a 50-item pencil and paper instrument, with 10 extra demographic items. Coefficient alpha on five scales range from .80 to .85. Complete validity and reliability data have been reported in a study by Hammer, Bennett & Wiseman (2003).

The Cross-Cultural Adaptability Inventory (CCAI) was developed by Kelley and Meyers. This instrument focuses on four skill areas that are important in adapting to other cultures: Emotional Resilience (ER); Flexibility/Openness (FO); Perceptual Acuity (PAC) and Personal Autonomy (PA). ER is the ability to bounce back, having emotional stability, positive attitude and being adventurous. FO is being nonjudgmental, flexible, enjoying people and diversity. PAC is being tuned into non-verbal communication, understanding the communication process, and having empathy. PA is a person's sense of identity, values, personal initiative and respect (Kelley, Meyers, 1992, pp. 3-6). The CCAI is used to enable understanding about the adaptation process, increase cross-cultural awareness, and serve as a training tool for those working with other cultures (Kelly, Meyers, 1992). Validity and reliability was established with a normative sample of $n = 653$. Internal consistency reliability coefficients from .68 to .82 were shown on the four scales. An expert panel and factor analysis was used to establish validity (Paige & Stallman, 2007).

The Global Awareness Profile (GAP) was developed by J. Nathan Corbitt in 1998. It is designed to be a self-assessment of global awareness and knowledge of geographic regions of the

world (geography); subject areas (environment, politics geography, religion, and others) and a broad-based knowledge of global issues. There are 120 questions dealing with geography and subject areas and 12 dealing with broad-based global issues. While there is generally little evidence on reliability and validity, test-retest reliability coefficient is shown to be .83 (Early & Ang, 2003; Paige & Stallman 2007, p. 150).

The Cross-Cultural World-Mindedness Scale was created by Der-Karabetian to measure “attitudes and values such as immigration, patriotism, world government, and global economic justice.” There is evidence of criterion validity and internal consistency reliability (Paige & Stallman, 2007, p. 149).

The Individual Global Competency Assessment was created by Moran and Reisenbeger to measure 12 cultural competencies for global managers/leaders (Appendix A). This Assessment was designed as a tool for awareness development for training purposes and no reliability or validity information appears to be available (Early & Ang, 2003).

The Cultural Orientations Indicator (COI) was developed by the Training Management Corporation for use in business training environments to measure differences in cultural values, beliefs and attitudes by measuring 10 cultural dimensions. These dimensions include environment, time, action, communication, space, power, individualism, competitiveness, structure and thinking. The cultural dimensions are based on constructs that stem from the work of significant researchers in the field of cultural anthropology and sociology such as Geert Hofstede, Alfons Trompenaars, Milton Bennett, Eretz and others. The authors state that the Phase III version of the COI meets the validity and reliability requirements of the Joint Committee on the Standards for Educational and Psychological Testing of the APA for similar

instruments. Validity and reliability data is available in their publication *Cultural Orientations Indicator Validity and Reliability Summary* (TMC, 2007).

Although the previously cited instruments and those listed in Appendix D measure some characteristics of global competence and global consciousness, a review of the literature reveals that there are no instruments that specifically measure global competence and/or global consciousness exclusively. The literature shows an increasing need for these instruments as institutions of higher education implement initiatives to develop globally competent and globally conscious professionals.

Summary

The impact of globalization in the 21st century has altered the landscape for higher education. As purveyors of the knowledge necessary to prepare future generations of professionals, institutions of higher education are tasked with understanding the impact of globalization and developing initiatives around learning outcomes that develop the knowledge, skills and attitudes necessary for navigating the new global paradigm. Professional accrediting organizations are increasingly requiring institutions of higher education to focus some of their learning around enabling students to perform their professions in a global context and to be able to make a contribution to the betterment of humankind.

In response to the new global requirements of the professions and the need to respond to the demands of globalization, institutions of higher education have begun initiatives to internationalize the curriculum. One of the most significant models for internationalizing the curriculum is study abroad. As students expand their participation in study abroad, there is a call for greater accountability for the learning outcomes of these programs. Increasingly efforts are being centered on establishing global learning outcomes and effective measurement of these. While there is a plethora of learning outcomes being generated as ideal global learning outcomes

for internationalizing higher education in general, and specifically for study abroad, there is no general consensus as to what these should be, and what measures should be used to assess the efficacy of the initiatives designed to achieve these outcomes.

Global competence and global consciousness are constructs that address both the functional and social-humanistic outcomes of initiatives to internationalize higher education in general and of study abroad specifically. The literature reveals an increasing mandate from the professional sectors to recruit employees that have both global competence and global consciousness, those who are able to function effectively and successfully in the new global paradigm, and who can contribute to the betterment of humankind. Institutions of higher education are therefore entrusted with developing the next generation of global professionals, those who possess global competence and global consciousness.

CHAPTER 3 METHODOLOGY

Introduction

The purpose of this study was to explore the effectiveness of study abroad in specifically developing global competence and global consciousness. The study was conducted using two assessment instruments: The Global Competence Assessment Instrument (GCAI-1) and The Global Consciousness Assessment Instrument (GCAI-2) developed by the researcher. Due to the complexity of these two constructs, they were measured independently of each other. Global competence and global consciousness represent two sets of distinct knowledge, skills, experiences and attitudes.

Research Questions

This study explored the idea that the constructs of global competence and global consciousness can be learned through the curriculum model of study abroad. This study also sought to measure the effectiveness of study abroad on developing global competence and global consciousness. The following important research questions served to guide this study:

- What are the effects of study abroad on global competence?
- What are the effects of study abroad on global consciousness?

Setting

The study was conducted at a large southeastern research university, with an approximate total student population of 50,000 graduate and undergraduate students.

Methodology

This study consisted of two parts: The first part was the development, piloting and validation of two assessment instruments: The Global Competence Assessment Instrument (GCAI-1) and The Global Consciousness Assessment Instrument (GCAI-2). The second part was a quasi-experimental between-group design, using these instruments to assess the gains in

global competence and global consciousness of study abroad students. This study used a survey pre and posttest design.

Developing GCAI-1 and GCAI-2

The purpose of using survey research for this study was to be able to measure growth in global competence and global consciousness over time, resulting from participating in a study abroad experience. The use of a longitudinal survey design, specifically a panel study, was appropriate as the same sample was studied twice, allowing the researcher to track changes in global competence and global consciousness (Creswell, 2008). Survey methodology is considered appropriate in “capturing attitudes (including knowledge, feeling and action), images, decisions, needs, behavior, lifestyle, affiliation and demographics,” making this type of methodology appropriate for measuring growth in global competence and global consciousness (Alreck & Settle, 1985, p. 13). To develop the Global Competence Assessment Instrument (GCAI-1) and the Global Consciousness Assessment Instrument (GCAI-2) several steps were taken to ensure validity and reliability.

Content Validity

Content validity was addressed using three procedures. First, a comprehensive literature review was conducted on the two constructs: Global competence and global consciousness. Factors for each of the constructs were identified and categorized as knowledge, skills/experiences, and attitudes necessary for global competence and global consciousness. The purpose of creating this taxonomy was to be able to use these factors as learning outcomes, and have the means to measure them. In a study on global learning frameworks for internationalizing higher education, Olson, Green & Hill (2006) reported the following:

Some institutions presented their global learning outcomes grouped under the broad learning domains of knowledge, attitudes and skills. This presentation highlights the fact that global learning involves different types of learning: conceptual or factual learning,

attitudes that predispose students to engage with global issues and people across cultures, and concrete skills that enable them to do so effectively. The advantage of this approach is that it aligns the learning outcomes with commonly used categories for assessment, thereby laying the groundwork for assessing student achievement of the outcomes and integrating the global learning work with other assessment efforts (p. 30).

Tables 3-1 and 3-2 show the knowledge, skills/experiences and attitudes for global competence and global consciousness identified from the literature review, and that provide an overall conceptual underpinning for the dissertation.

First drafts of both the GCAI-1 and the GCAI-2 were developed. The survey items were constructed based on the aforementioned factors of global competence and global consciousness grouped by knowledge, skills/experiences, and attitudes. Three questions were created for each factor measuring attitudes to include the three parts of attitude: knowledge (what a person knows or believes about the topic), feeling (how the person feels/values the topic), action (the likelihood that a person will take action based on attitudes). Knowledge was measured using questions addressing awareness and experience with a topic. Feelings were measured based on position and intensity, identifying if the student liked or disliked something and how much the student liked or disliked it. Actions were measured looking at past, present, and intended future behavior toward a topic. Behaviors were measured by asking what the respondents did or did not do, where the action took place, when the action took place (past, present), and how often (Alreck, Settle, 1985, pp. 13-29). Nearly all factors included three items on the survey.

A final demographics section was added that asked gender, age, marital status, number of children, country of birth, country of citizenship, number of years living in country of citizenship or other, travel experience (personal and family), education level and degree interest, parental educational levels, employment, parental occupation, languages, childhood schooling experience, religious affiliation, and self-identification of racial or ethnic background.

The second step in ensuring content validity was to send the first draft to a panel of experts for review. These included professor and chair of a Department of Educational Administration and Policy; assistant scholar of a Department of Educational Administration and Policy; assistant professor of Bilingual/ESOL Education; assistant professor of International Business; professor and chair of a Department of Chemical Engineering; and managing director of a management consulting firm in the UK. The experts recommended that the following steps be taken:

- Change the Global Consciousness Likert scale in Section One from “Strongly Agree to Strongly Disagree” to “Strongly Consistent with my Beliefs to Strongly Not Consistent with my Beliefs,” and adding a column labeled “I Never Thought About It.”
- Minor changes in semantics for item clarification.
- Self-reporting of racial or ethnic affiliation.
- Reducing the choices of religious affiliations to major religions and offering “other” as an open-ended question.
- Deleting social security number as an identifier (for pre and posttests) and replacing it with a code that was easy to remember (month, day and year of birth in a two-digit format, followed by first initial of first and last name).
- Reduction of items
- Elimination of duplicate items.

There was general agreement of content validity among the panel of experts. Versions 1.0 of both surveys were created incorporating the feedback from the panel of experts.

The third step was to pilot the instruments, Versions 1.0, with 16 students in a graduate-level class that included master’s and doctoral students in a college within the university. Participants were asked to give written feedback on the content, the overall experience of completing the surveys, the time it took to complete each survey, the form, and clarity of items.

Based on the feedback from the expert panel and the graduate class, the instruments were revised and Versions 1.1 were created.

Plans for assessing summer 2007 semester study abroad groups were put into place. Identical online versions of the instruments were created to reduce geographical constraints and maximize the number of participants. Four faculty members leading study abroad groups agreed to administer the instruments to their groups. A control group from a college within the university was established with students who did not participate in study abroad.

Both paper and online posttest versions of the GCAI-1 and the GCAI-2 were created for the study abroad group and the control group. An analysis of the items was conducted to determine suitability of the items in the past tense. The content of the instruments remained the same, but the demographics section was removed and new sections were added.

A new section for the experimental group was created reflective of the study abroad experience. This included questions as to the frequency of past experiences studying abroad, length of program, location, language skills, previous experience with the host country, living arrangements during study abroad, reasons influencing decision to study abroad, and a self-reflection on perceived growth in the knowledge, skills and attitudes being measured, as a result of the study abroad experience.

The control group posttests included a new section that asked the participants to identify if they had participated in activities that might have had an internationalizing influence such as study abroad, an internationalized course, a course with significant international content, travel to another country, or another type of international experience within the last 4 months. After the summer assessments, Versions 1.2 were created, eliminating a request for the participants name, and replacing it with an item asking for the name of the course(s) taken while studying

abroad, or in the case of the control group, the name of the course in which the survey was being administered. Study abroad students and control groups from the 2007 fall semester and 2008 spring semester were also assessed using pre- and posttests in both online and paper formats to complete the sampling.

Reliability Testing

Scales were created with items that represented each factor of global competence and global consciousness. Inter-item reliability or internal consistency was measured by the Cronbach's coefficient alpha calculated on the scales of the pretest scores. A result of .60 or greater was determined for stability of the scales. Scales that did not meet the criteria were reevaluated and recalculated. Items were removed if stability was compromised (Dooley, 2001). Some single item scales were created. Summed scales were created in some cases using the theory that in those specific instances, the scale reflected the sum of its items rather than the mean.

Assessing Global Competence and Global Consciousness in Study Abroad Participants

Participants in the experimental group included students participating in study abroad programs from several units from the same institution. Participants were selected using purposive sampling, as students in the experimental group were required to be participants in a study abroad program. Control groups were selected from the same institution and were expected to not participate in a study abroad program during the evaluation semester. The participants were recruited by establishing contact with faculty leading study abroad courses, and directors of study abroad programs to request permission to survey the students who were participating in study abroad programs in the 2007 summer and fall semesters and the 2008 spring semester.

Participant demographics were representative of undergraduate students from the university. Of all entering freshmen at the university in 2006, 91% were in the top quarter of their high school graduating class and the average age of undergraduate full and part-time students was 25 years. Nearly 36% of the undergraduate full-time students received some financial aid. White, non-Hispanic students represented over 66% of the total undergraduate student population, followed by 13% Hispanic, 9% Black, non-Hispanic, 7% Asian or Pacific Islander. There were 84 international students.

Data Collection

A letter inviting students to participate was written. The letter explained the purpose of the study, specifically stating that the students' participation was strictly voluntary and that their choice to participate or not to participate would not affect their grade, that their confidentiality would be protected, and that the time to take both surveys was not expected to exceed 30 minutes. Additionally, participants were told that the design of the study required the completion of both a pre and a posttest, and they were asked to commit to completing both if they chose to participate in the study (Appendix E).

Participants were required to sign an informed consent form that indicated the purpose of the study, what they would be asked to do in the study, the time required, compensation, confidentiality, voluntary participation, the right to withdraw from the study, and researcher contact information. Participants who took the online surveys were asked to read an informed consent page, and agree or disagree to participate. If they chose the option to disagree to participate in the study, they were blocked from continuing to take the survey (Appendix F).

Asking students to provide a code representing their month, day and year of birth and the first initials of their first and last names addressed confidentiality during the administration of the survey. Therefore, John Smith, born on June 2, 1985 would be 060285JS. This code could be

easily reconstructed by participants and served as a unique identifier to track pre- and posttest results. The participants' email address was asked to be able to contact those who took the pretest for the posttest administration.

The faculty and the study abroad directors sent the letter by email to the students who were scheduled to participate in study abroad programs for the following semester. Some groups were invited to participate in the online survey exclusively due to logistical reasons. Other groups were offered the opportunity to take the paper or the online surveys.

Control groups were recruited from two colleges within the university. The control groups from one college answered both the paper and online surveys. The control group from another college answered only the online survey.

Those students who were scheduled to answer the online surveys were provided in the emails, links to both assessment instruments and deadlines for completion. These deadlines were scheduled approximately 2 weeks from sending the email. This was important for the pretest as participants were expected to complete the surveys as close to the start of their study abroad experience as possible. The same procedure with new links was repeated for the posttests. The posttest deadlines became important to prevent attrition upon return from the study abroad program. Those participants who completed paper surveys were administered the surveys by the faculty members or study abroad directors at a date that was convenient for them early in the semester for the pretests, and late in the semester for the posttests. Control groups followed the same procedures as experimental groups.

Response and Response Rates

Response rates were addressed using several methods. A high response rate for the online tests were the most difficult to obtain as emails may be frequently lost, go into a "junk mail" cache, not read, or ignored at times. The pretest emails were designed to be attractive

using “global” graphics inviting students to read the emails (Appendix E). One or two additional emails spaced one week apart seeking to increase participation followed the first emails. After the third email, no further attempts were made as the semester had already begun, and students were immersed in their study abroad experience by that time, factors that could negatively affect the gains in the posttests. Students completing the paper versions of the surveys were invited to an ice-cream social/pretest-taking event, or the faculty administered the surveys in their classrooms. One group was offered the incentive of receiving the results of their pre and posttests with a personal analysis provided by the researcher if they chose. Two groups were offered extra credit by faculty if they completed both the pre and posttests.

The primary threat in a panel design is posttest fatigue or attrition (Dooley, 2001). This threat was addressed by sending three requests to online pretest participants asking them to complete the posttests, and describing the importance of the posttests to the study. The students from one unit were invited to participate in a gathering to meet fellow study abroad students, share their experiences and take the posttests. Electronic testing was an option for all participants. In some cases, telephone calls were made to participants to assure that they had received the emails and inviting them to complete the surveys.

Questionnaire length may also affect response bias. The GCAI-1 and GCAI-2 are long and taking both requires approximately 30 minutes, affecting the willingness of participants to complete the pretests or the posttests. Having a choice whether to complete the assessments online or in a paper format served the purpose of helping control this bias.

Response Rate

Of the 726 requests to participate in the survey, 193 completed the GCAI-1 pretest and 154 completed the GCAI-2 pretest. The GCAI-1 pretest response rate was 27%. The GCAI-2 pretest response rate was 21%.

Posttest requests were distributed to the 193 pretest respondents for the GCAI-1, and to the 154 pretest respondents for the GCAI-2. A total of 123 students completed the GCAI-1 posttest, and 123 completed the GCAI-2 posttest. The posttest response rate for the GCAI-1 was 64%. The posttest response rate for the GCAI-2 was 80%.

Data Analysis

Hypotheses

This study was designed and conducted to test the following hypotheses:

- Null: Study abroad will have no effect on global competence.
 - Alternative: Study abroad will produce an increase in global competence.
- Null: Study abroad will have no effect on global consciousness.
 - Alternative: Study abroad will produce an increase in global consciousness.

Pretest and Posttest Analysis

Descriptive statistics were reported on experimental and control group pretests (GCAI-1 and GCAI-2) followed by one-tailed Independent T-tests on each scale (GCAI-1 and GCAI-2) for both groups (Experimental and Control). The purpose was to test for equivalency of means on each scale for the experimental and control groups.

Descriptive statistics were reported on experimental and control group posttests (GCAI-1 and GCAI-2) followed by one-tailed Independent T-tests on each scale (GCAI-1 and GCAI-2) for both groups (Experimental and Control). The purpose was to test for gains of means on each scale for the experimental group. The T-tests were conducted applying a P statistic-adjustment gain formula to adjust for ceiling effect (Hagedorn, Siadat, Nora, & Pascarella, 1997). Student gain scores can be problematic if there are significant differences between students who score significantly high or low in the pretests. Those who scored significantly high in the pretests have little room to show gain in the posttest even if their gain is significant. For example in the GCAI-1 and GCAI-2, 5-point Likert scales are used. In this case, students who scored a 1 in the

Likert scale have a maximum measurable improvement of 4 points in the posttest. However, students who scored the maximum of 5 on the pretest, although they may have gained from the study abroad experience, are unable to show any measurable gain beyond a 5 in the posttest. This is an example of a ceiling effect. The P statistic-adjustment gain formula addresses the nonlinear nature of gains by “expressing pretest to posttest gains relative to the to the student’s maximum attainable gain (P)” (Hagedorn, Siadat, Nora, & Pascarella, 1997, p. 193). The Hagedorn and colleagues’ formula for relative gain is the following:

$$P = (\text{Post-Pre})/(\text{Max-Pre})$$

Where:

Post = posttest score

Pre = pretest score

Max = theoretical maximum gain (i.e. 5-posttest score)

$$0 \leq P \leq 1$$

The function is defined and described as follows:

G as $G=P/(1-P)$. This function is an “odds” function in the probabilistic sense. When P is small, the function G approximately equals P. In other words, G exhibits complete linear behavior for all values of P near zero. However, as P approaches one, G approaches extremely large values (i.e. G becomes totally nonlinear in the neighborhood of 1). It is easy to see that $0 \leq G \leq \infty$, for $0 \leq P \leq 1$. Applying the natural logarithm to G will thus slow down the growth of the gain near 1, and would linearize it in this interval. This transformation will also expand the range to all real numbers, i.e., whereas G is restricted to take on only non-negative numbers, natural logarithm of G can take all negative as well as positive numbers. The logit P is defined as the natural logarithm of G: $\text{logit}P = \ln G = \ln(P/1-P)$. Whereas the domain of the logit function is between 0 and 1, i.e., $0 \leq P \leq 1$, its range sweeps all real numbers, i.e., $-\infty \leq \text{logit}P \leq \infty$. The logit P is perfectly symmetrical at $P=1/2$ and has zero value at this point (Hagedorn, Siadat, Nora, & Pascarella, 1997, p. 193).

All statistical analyses were conducted using SPSS.

Table 3-1. List of global competence knowledge, skills/experiences, attitudes and corresponding references

Global competence	References
Knowledge	
1. Cultural self-awareness	Hunter, 2004; Cant, 2004; Harris, Moran, Moran, 2004; Jokinen, 2005; Kalamazoo College (2004); Michigan State University, 2004; Badley, 2000; ACIIE, 1996; Siaya, 2001
2. Awareness of the culture of others	Hunter, 2004; Cant, 2004; Harris, Moran, Moran, 2004; Koehn & Rosenau, 2002; Kalamazoo College, 2004; Palo Alto College, 2004, Georgia Institute of Technology, 2006; Michigan State University, 2004; ACIIE, 1996; Siaya, 2001
3. Understanding globalization	Cant, 2004; Harris, Moran, Moran, 2004; Kalamazoo College, 2004; Koehn & Rosenau, 2002; Palo Alto College, 2004; Georgia Institute of Technology, 2006; University of Pittsburgh, 2003; ACIIE, 1996; Siaya, 2001
4. Knowledge of current world events	Bikson, Treverton, Moini, Lindstrom, 2003; Hunter, 2004; Kalamazoo College, 2004; University of Pittsburgh, 2003; ACIIE, 1996; Siaya, 2001; Georgia Institute of Technology, 2006
5. Knowledge of world history and geography	Hunter, 2004; ACIIE, 1996; Bikson, Treverton, Moini, Lindstrom, 2003; Siaya, 2001
6. Professional knowledge	Bikson, Treverton, Moini, Lindstrom, 2003; Jokinen, 2005; Michigan State University, 2004; ACIIE, 1996; University of Pittsburgh, 2003
Skills/experiences	
7. Effective use of professional skills in other cultural environments	Palo Alto College, 2004; Michigan State University, 2004; Hunter, 2004; Harris, Moran, Moran, 2004; Koehn & Rosenau, 2002; Georgia Institute of Technology, 2006; ACIIE, 1996; Bikson, Treverton, Moini, Lindstrom, 2003; Siaya, 2001.
8. Collaboration and teamwork across cultures	Hunter, 2004; Cant, 2004; Harris, Moran, Moran, 2004; Koehn & Rosenau, 2002; Georgia Institute of Technology, 2006; ACIIE, 1996; Jokinen, 2005; Bikson, Treverton, Moini, Lindstrom, 2003
9. Effective use of cross-cultural skills and strategies	Hunter, 2004; Harris, Moran, Moran, 2004; Koehn & Rosenau, 2002; Georgia Institute of Technology, 2006; ACIIE, 1996; Jokinen, 2005; Bikson, Treverton, Moini, Lindstrom, 2003; Michigan State University, 2004; Cant, 2004
10. Effective assessment of cross-cultural situations	Hunter, 2004; Harris, Moran, Moran, 2004; Koehn & Rosenau, 2002; Bikson, Treverton, Moini, Lindstrom, 2003; Michigan State University, 2004; Cant, 2004; Georgia Institute of Technology, 2006; ACIIE, 1996;

Table 3-1. Continued

Global competence	References
11. Successfully living in a culture different from one's own	Hunter, 2004; Harris, Moran, Moran, 2004; Georgia Institute of Technology, 2006; ACIIE, 1996
12. Willingness and/or ability to speak a foreign language	Koehn & Rosenau, 2002; Georgia Institute of Technology, 2006; ACIIE, 1996; Jokinen, 2005; Bikson, Treverton, Moini, Lindstrom, 2003; Michigan State University, 2004; Palo Alto College, 2004; University of Pittsburgh, 2003; Siaya, 2001
Attitudes	
13. Recognition of/and interest in multiple worldviews	Hunter, 2004; Koehn & Rosenau, 2002; Georgia Institute of Technology, 2006; ACIIE, 1996; Jokinen, 2005; Bikson, Treverton, Moini, Lindstrom, 2003; Michigan State University, 2004; Siaya, 2001
14. Willingness to step outside of own cultural comfort zone	Hunter, 2004; Koehn & Rosenau, 2002; ACIIE, 1996; Jokinen, 2005; Bikson, Treverton, Moini, Lindstrom, 2003; Michigan State University, 2004; Cant, 2004; Georgia Institute of Technology, 2006; Siaya, 2001
15. Acceptance of and/or sensitivity toward cultural differences	Hunter, 2004; Koehn & Rosenau, 2002; ACIIE, 1996; Jokinen, 2005; Bikson, Treverton, Moini, Lindstrom, 2003; Michigan State University, 2004; Cant, 2004; Georgia Institute of Technology, 2006; Siaya, 2001
16. Openness to new experiences	Hunter, 2004; Koehn & Rosenau, 2002; ACIIE, 1996; Jokinen, 2005; Cant, 2004; Bikson, Treverton, Moini, Lindstrom, 2003; Georgia Institute of Technology, 2006
17. Willingness to take risks to learn more about other cultures	Hunter, 2004; Bikson, Treverton, Moini, Lindstrom, 2003; Cant, 2004; Michigan State University, 2004; ACIIE, 1996; Siaya, 2001
18. Possessing a long-term orientation	Cant, 2004; Harris, Moran, Moran, 2004; ACIIE, 1996; Koehn & Rosenau, 2002

Table 3-2. List of global consciousness knowledge, skills/experiences, attitudes and corresponding references

Global consciousness	References
Knowledge	
1. Understanding of globalization's impact on the world	Cuddy-Keane, 2003; Tomlinson, 1999; Allen & Ogilvie, 2004; Falk, 1998; Chua, 2003; Chanda, 2002; Hill, 2000; Allen & Ogilvie, 2004; Gacel-Avila, 2005; Marsella & Pedersen, 2004; Moffat as cited in Bremer, 2006; Robertson, 1992
2. Understanding world history and politics	Robertson, 2004; Chua, 2003; Hunter, 2004; ACIIE, 1996; Bikson, Treverton, Moini, Lindstrom, 2003; Siaya, 2001
3. Understanding of the human condition	Robertson, 2004; Lessem & Palsule, 2002; Camdessus, 2001; Stepnisky, 2005; Collier & Wanderly, 2005; Scott-Bauman, 2003; Dower, 2000; Oxfam, 2006; Davies, 2006; Robertson, 1992; ACIIE, 1996;
4. Understanding the concept of empowerment	Robertson, 2004; Camdessus, 2001; Chua, 2003
5. Understanding global environmental challenges	Robertson, 2004; Cuddy-Keane, 2003; Lessem & Palsule, 2002; Camdessus, 2001; Allen & Ogilvie, 2004; Moffat as cited in Bremer, 2006; Beck, 2000; Stepnisky, 2005; Collier & Wanderly, 2005; Scott-Bauman, 2003; Dower, 2000; Wyss & Shuman as cited in Bremer, 2007; Palo Alto College, 2004
6. Societal/historic self-awareness	Robertson, 2004; Nussbaum, 1997; Gacel-Avila, 2005; Kalamazoo College, 2004; Siaya, 2001;
7. Understanding the nature of multicultural societies	Robertson, 2004; Lessem & Palsule, 2002; Cuddy-Keane, 2003; Camdessus, 2001; Scott-Bauman, 2003; Dower, 2000; Nieto, 2004; Banks, 2008
Skills/experiences	
8. Ability to communicate effectively across cultures	Stepnisky, 2005; Koehn & Rosenau, 2002; University of Pittsburgh, 2003; ACIIE, 1996; Siaya, 2001; Koehn & Rosenau, 2002
9. Ability to cope with ambiguity	Hill, 2000; ACIIE, 1996; Siaya, 2001;
10. Ability to understand and manage complex problems and issues	Hill, 2000; Robertson, 2004; Siaya, 2001; Georgia Institute of Technology, 2006; Koehn & Rosenau, 2002;
11. Ability to transcend nation-state thinking to global thinking	Singer, 2004; Rifkin, 2004; Stepnisky, 2005; Oxfam, 2006; Nussbaum, 1997

Table 3-2. Continued

Global consciousness	References
Attitudes	
12. Respect for human rights	Collier & Wanderley, 2005; Turner as cited in Rifkin, 2004; Stepnisky, 2005; Camdessus, 2001; Nussbaum, 1997; Scott-Baumann, 2003; Dower, 2000; ACIIE, 1996; Allen & Ogilvie, 2004
13. Desire/willingness to be a global citizen	Robertson, 2004; Hill; Nussbaum, 1997; Richardson, 1997 as cited by Davies, 2006; Oxfam, 2006; Banks, 2008
14. Desire/willingness to improve the human condition	Coca-Cola 2004 World Citizenship Report; Oxfam, 2006; Banks, 2008
15. Valuing diversity	Hill, 2000; Gacel-Avila, 2005; Oxfam, 2006; Banks, 2008

CHAPTER 4 RESULTS

The purpose of this study was to explore the effectiveness of study abroad in developing global competence and global consciousness. As stated in Chapter 1, as institutions of higher education increase their efforts to internationalize the curriculum, in particular through the use of study abroad, it becomes necessary to specify learning outcomes and measure the effectiveness of these programs. This study establishes the constructs of global competence and global consciousness to jointly serve as outcomes for internationalizing the curriculum and establishes the means to measure the effectiveness of study abroad in developing these constructs.

The study was guided by two hypotheses:

- Null: Study abroad will have no effect on global competence.
 - Alternative: Study abroad will produce an increase in global competence.
- Null: Study abroad will have no effect on global consciousness.
 - Alternative: Study abroad will produce an increase in global consciousness.

Two instruments were developed for the purposes of assessing the constructs of global competence and global consciousness: The Global Competence Assessment Instrument (GCAI-1) and the Global Consciousness Assessment Instrument (GCAI-2). These instruments were used to assess study abroad students.

This chapter was divided into two sections. The first section details the development and validation of the GCAI-1 and GCAI-2, and the second part reports the results of assessing study abroad students with these instruments, using a survey panel pre- and posttest design.

Developing GCAI-1 and GCAI-2

The development of the GCAI-1 and GCAI-2 consisted of the following steps: A comprehensive literature review was conducted on the constructs of global competence and global consciousness. This step identified the factors for each of the constructs, which were categorized as knowledge, skills/experiences, and attitudes.

First drafts of the instruments were developed (the pretests). These drafts included a demographics section that was incorporated as the final section of the instruments. The drafts were sent to a panel of experts for review and first versions were created incorporating their recommendations. The instruments were piloted with graduate students who provided feedback on the content and the experience taking the tests. Second versions were created incorporating the feedback from the panel of experts and the pilot group. Scales were created based on the factors that were identified and the corresponding items on the instruments.

A first round of assessments was conducted with summer 2007 semester study abroad students and a control group. An online version was created of both instruments creating identical versions as the paper versions. Posttest versions were created for both instruments in both the paper and online formats. The posttests for the study abroad students included an additional section that was designed to capture elements of their study abroad experience. The posttests for the control group included an additional section that was designed to capture possible confounding variables (recent international experiences) that could influence their results. A second and third round of pre- and posttest assessments were conducted with fall 2007 and spring 2008 semester study abroad students and control groups using both paper and online formats.

Inter-item reliability was measured by the Cronbach's coefficient alpha calculated on the scales of the pretest scores for both the GCAI-1 and the GCAI-2. The criterion for stability of the scales or internal consistency was set at .60 due to the small sample, and thus the lowered power of statistical testing. Scales were carefully monitored and honed for the best reliability possible. In some cases the scale was summed on the theory that the scale construct was in essence the sum of its parts. The GCAI-1 factor analysis indicated that the scale: knowledge of world

history and geography represented two separate constructs and hence should be divided into two separate scales: (a) knowledge of world history and (b) knowledge of world geography. The scales and items indicated in tables 4-1 and 4-2 formed the basis for the analysis on the gains in global competence and global consciousness.

Assessing Global Competence and Global Consciousness

Sample

Participants who completed the assessments were students from one university who were participating in study abroad programs during the 2007 summer and fall semesters, and the 2008 spring semester. Study abroad destinations were in Europe except for one group that went to South America. Control groups were selected from the same university and were not participating in study abroad programs during those same semesters. The demographics were representative of the university population. Some demographic information relevant to the study, reflective of international experiences and/or influences was also collected as seen in Tables 4-3 and 4-4. The demographics in both the GCAI-1 and the GCAI-2 revealed some differences between the experimental and control groups with a larger number of students in the experimental groups revealing that they spoke a second language, had a passport, and had parents who possessed a passport while they were growing up.

In addition to the demographics reported in Tables 4-3 and 4-4, participants were asked to self-report on racial and/or ethnic background creating a wide range of responses that could be clustered together. The largest cluster was “white, Caucasian and European-American,” which accounted for 44% of the responses. For the GCAI-1 and the GCAI-2 over 50% of both the experimental and control groups self-reported belonging to the Christian religion, followed by no religion, with Jewish religion being the third most popular reported category.

Posttest experimental groups were asked to report demographics on their study abroad experience to provide data that might affect responses. Some of the data that is significant to this study is reported in Table 4-5.

Posttest control groups were asked to report if they had any international-type experiences during the previous semester that might be a confounding variable influencing their posttest scores. They were asked if they had participated in study abroad, taken an internationalized course, taken a course with significant international content, traveled to another country, or participated in another type of international experience. Over 85% of the control group reported that they had not participated in any of these experiences.

Response Rate

Requests to complete both the GCAI-1 and the GCAI-2 pretest surveys in either paper or online formats were sent to 726 students via directors of study abroad or faculty. Letters with the corresponding links for the pretest online surveys were sent to the directors of study abroad who in turn distributed them to their list of study abroad students. This process was repeated for the posttests. Paper copies of the pretest surveys were distributed to three faculty conducting study abroad programs. The faculty distributed and collected the surveys in their classes prior to starting the study abroad. This process was repeated for the posttests. Control groups completed both paper and online pre- and posttests following the same process as the study abroad students.

Of the 726 requests to participate in the survey, 193 completed the GCAI-1 pretest and 154 completed the GCAI-2 pretest. The GCAI-1 pretest response rate was 27%. The GCAI-2 pretest response rate was 21%, considered about average for this target population using web-based surveys (Kaplowitz, Hadlock, & Levine, 2004).

Posttest requests were distributed to the 193 pretest respondents for the GCAI-1, and to the 154 pretest respondents for the GCAI-2. A total of 123 students completed the GCAI-1

posttest, and 123 completed the GCAI-2 posttest. The posttest response rate for the GCAI- 1 was 64%. The posttest response rate for the GCAI-2 was 80%. A high posttest response was obtained by offering incentives, such as an ice-cream social for study abroad participants to meet each other and complete the posttests, an offer to provide the individual results of the survey to participants who requested that information, and extra credit offers by faculty for students who participated in both the pre- and posttests.

Data Analysis

One-tailed independent samples t-tests were conducted on pretest data for experimental and control groups for both the GCAI-1 and GCAI-2 to test for equality of means between the groups. This analysis tests for equivalency of each scale for the experimental and control groups. Results are reported in Tables 4-6 and 4-7.

Pretest Results

Results for GCAI-1 (global competence) pretest showed significant differences with the experimental group scoring higher on

- Successfully living in a culture different from one's own
- Ability to speak a foreign language
- Recognition of/interest in multiple worldviews
- Willingness to step outside of own cultural comfort zone
- Openness to new experiences
- Willingness to take risks to learn more about other cultures.

Due to the self-selection of study abroad students, it may be expected that they would initially score higher on these factors. There were no other significant differences in the experimental group scoring higher than the control group on other scales in the GCAI-1 pretest.

Results for GCAI-2 (global consciousness) pretest showed no significant differences in the experimental group scoring higher than the control group.

Posttest Results

One-tailed independent samples t-tests were conducted on posttest data for experimental and control groups for both the GCAI-1 and GCAI-2 to test for gains on scale means of the experimental and control groups. The t-tests were conducted using a P-statistic adjustment gain formula to adjust for ceiling effect (Hagedorn, Siadat, Nora, & Pascarella, 1997). When analyzing student gain scores, problems arise when there are significant differences between high and low scoring students “with respect to their relative improvements even when their absolute improvements may be equal.” The P-statistic adjustment gain formula addresses the nonlinear nature of gains as students who score lower in the pretest may show a greater improvement in the posttest than those who scored higher in the pretest (Hagedorn, Siadat, Nora, & Pascarella, 1997, p. 193; See Chapter 3 for formula).

For example, as noted in the pretest for the GCAI-1, the experimental group scored higher than the control group in several scales. Therefore, on a Likert scale of 1-5 (strongly disagree to strongly agree), some students may have scored a 5 on the pretest (maximum score), allowing no room for improvement resulting from their study abroad experience on the posttest (ceiling effect). Therefore, the scores for the students who hit the ceiling of the item may not be accurate. Their actual score could be slightly or much higher, but it would be impossible to know. As students self-select to participate in study abroad programs, higher scores than the control group in the pretest on global competence and global consciousness are possible, as shown in the pretest, and could indicate the possibility of a ceiling effect occurring in the posttest. The P-statistic adjustment gain formula adjusts for this effect in the posttest. Significance for posttest gains was determined to be $p < .10$ due to the small posttest sample size that results in low power in the statistical test.

Results for the GCAI-1 (global competence) posttest, as seen in Table 4-8, showed that the gains were statistically and positively significant for: Awareness of the culture of others; effective use of professional skills in other cultural environment; successfully living in a culture different from one's own; and ability to speak a foreign language. There were no other significant differences in the experimental group gains on other scales in the GCAI-1 posttest.

Results for the GCAI-2 (global consciousness) posttest, as seen in Table 4-9, showed that the gains were statistically and positively significant for: Desire/willingness to improve the human condition. There were no other significant differences in the experimental group gains on other scales in the GCAI-2 posttest.

Generalizability of Results

The results of this study may be generalizable to study abroad students with similar demographic characteristics, participating in similar types of programs and geographic areas, originating from similar types of institutions of higher education.

Conclusions

Developing GCAI-1 and GCAI-2

Two assessment instruments were developed to measure global competence and global consciousness. The GCAI-1 (global competence) and GCAI-2 (global consciousness) were validated and tested for interitem reliability and internal consistency (Cronbach's $\alpha = .60$). Many of the scales indicated a moderate reliability using a threshold alpha coefficient of .60, however when reliability was not as expected, a single item was used to operationalize the construct of interest. Some of the scales were calculated as sums of total parts where the theory that the sum of parts is more significant than the mean held true. The complexity of the constructs being measured is reflected in the complexity of the scales of the instrument. While both instruments are long and the scales are complex, the creation of these instruments is a

significant step toward measuring global competence and global consciousness as outcomes of study abroad and other internationalized curricula.

Assessing Global Competence and Global Consciousness in Study Abroad Students

The purpose of this study was to investigate whether the experience of studying abroad would have an effect on the development of global competence and global consciousness. While the sample size was small, the results for global competence showed significant gains in four out of nineteen scales and the results for global consciousness showed significant gains in one out of fifteen scales. These gains are fewer than might have been anticipated in spite of using the P-statistic adjustment formula to adjust for ceiling effect. The findings are sufficient to reject the null hypotheses. A more detailed summary and discussion of the findings are presented in the next chapter.

Table 4-1. Scales (GCAI-1) with Cronbach Alpha reliability/single item/summed scale

Scale	Cronbach Alpha	Items
Knowledge		
Cultural self-awareness	Single item	<ul style="list-style-type: none"> I think about the values and beliefs of my own culture.
Awareness of the culture of others	.633	<ul style="list-style-type: none"> When interacting with people from other cultures, I try to remember that people's values and beliefs are different in other cultures. It is important to learn about the values, beliefs, and attitudes of other cultures. I try to understand the expectations that people from other cultures have of me.
Understanding of globalization	.610	<ul style="list-style-type: none"> What I do in my country most likely will affect people in other countries. Because it doesn't affect me, I don't pay attention to what is happening in the world.¹
Knowledge of current world events	.649	<ul style="list-style-type: none"> I keep up with international news in the newspaper, on the Internet, on TV or radio. Because it doesn't affect me, I don't pay attention to what is happening in the rest of the world.¹
Knowledge of world history	Summed scale	<ul style="list-style-type: none"> I have taken at least one college-level world history course. My education has included learning about the history of the world.
Knowledge of world geography	Single item	<ul style="list-style-type: none"> I have taken at least one college-level world geography course.
Professional knowledge	.618	<ul style="list-style-type: none"> I am comfortable using the Internet and related technology. I have good computer skills.
Skills/Experiences		
Effective use of professional skills in other cultural environment	.667	<ul style="list-style-type: none"> I have conducted business internationally with people from other cultures. I have practiced my profession in another country.
Collaboration and teamwork across cultures	Single item	<ul style="list-style-type: none"> I work or study in groups that include people from cultures different than mine.

Table 4-1. Continued

Scale	Cronbach Alpha	Items
Effective use of cross-cultural skills and strategies	.609	<ul style="list-style-type: none"> • I am good at knowing how I am supposed to behave with people from other cultures. • I am usually successful at preventing or solving misunderstandings with people from other cultures.
Effective assessment of cross-cultural situation	Single item	<ul style="list-style-type: none"> • When working or studying with people from other cultures, I try to think of different ways to approach problems.
Successfully living in a culture different from one's own	Summed scale	<ul style="list-style-type: none"> • I have lived in a country other than my native country for one year or longer. • I have studied abroad at least one time. • I have lived in a foreign country as a business expatriate.
Ability to speak a foreign language	.744	<ul style="list-style-type: none"> • I use a second language in my work or at school. • I am as proficient in a second language as I am in my native language.
Attitudes		
Recognition of/interest in multiple worldviews	.612	<ul style="list-style-type: none"> • When events are happening in a different part of the world, I try to learn more about them. • I try to respect people's beliefs even if I don't agree with them. • I would like to learn more about how people in other countries live. • My culture's way of life should be a model for the rest of the world.^{1,2} • I would like to experience attending different types of religious services. • I believe that there is a right way and wrong way to do things.¹ • I like to listen to music from other countries. • It is important to respect people's religious beliefs.

Table 4-1. Continued

Scale	Cronbach Alpha	Items
Willingness to step outside of own cultural comfort zone	.628	<ul style="list-style-type: none"> • I would like to learn another language. • I attend foreign films, festivals or events. • I am willing to eat the foods that are typically eaten in other countries. • I don't mind traveling to a country where I don't speak the language. • When I come in contact with people from a different culture, I find I can change my behavior to adapt to theirs. • Whenever I make travel plans, I like to go to places I haven't been to before. • I like to come up with new ways of doing things that have not been done before.
Acceptance of and/or sensitivity toward cultural differences	.674	<ul style="list-style-type: none"> • I try to understand how people in other cultures feel. • I believe that all cultures have something worthwhile to offer. • I care about how people feel even if I don't agree with them. • I try to understand people's thoughts or feelings when I talk to them.³ • I might not always understand all aspects of interactions with people from other cultures. • It is important to be sensitive to other cultures.
Willingness to take risks to learn more about cultures	.676	<ul style="list-style-type: none"> • I am sometimes willing to take risks to learn about other cultures. • I am enthusiastic about trying something new. • I am not afraid to try something challenging as long as I am learning something new.
Possessing a long-term orientation	Single item	<ul style="list-style-type: none"> • I enjoy building long-term relationships with business or social contacts.

¹ These items were reverse coded

² (Hammer, Bennett, 1998)

³ (Kelley, Meyers, 1992)

Table 4-2. Scales (GCAI-2) with Cronbach Alpha reliability/single item/summed scale

Scale	Cronbach Alpha	Items
Knowledge		
Understanding of globalization's impact on the world	Single item	<ul style="list-style-type: none"> • Globalization means what I do in my country impact people in other countries.
Understanding world history and politics	Single item	<ul style="list-style-type: none"> • It is important for me to know about events in developing countries.
Understanding of the human condition	.707	<ul style="list-style-type: none"> • In some parts of the world, the poor have almost no chance of getting out of poverty. • Social injustice is always wrong regardless of where it is happening. • It is wrong that people continue to suffer in many countries while in other countries people are getting richer. • Businesses should help improve the lives of those who are suffering worldwide. • Multinational businesses have been responsible for rapid globalization that includes the spread of science and technology worldwide. • Worldwide economic development has not benefited everyone equally • In many countries globalization only makes a few people rich and the rest remain poor.
Understanding the concept of empowerment	Single item	<ul style="list-style-type: none"> • Globalization should help those who have traditionally been oppressed to gain social and economic power.
Understanding global environmental challenges	.626	<ul style="list-style-type: none"> • Economic growth should always take into account the environmental impact both locally and globally. • How we treat the environment in our own country affects the ecological balance of the entire world. • Every time I drive my gasoline-powered car I am contributing to worldwide pollution.
Societal/historical self-awareness	Summed scale	<ul style="list-style-type: none"> • It is important to learn about the problems affecting my society. • It is important to know and understand the history of my native country.

Table 4-2. Continued

Scale	Cronbach Alpha	Items
Understanding the nature of multicultural societies	.647	<ul style="list-style-type: none"> • I am a citizen of the world. • I am affected by the murder or displacement of ethnic groups that happen outside of my country. • Some people force other people to leave their homes because of their race, ethnicity, or their political or religious beliefs. • People often move from one country to another in search of a better life. • In some countries large groups of people have been murdered because of their ethnicity or race.
Skills/experiences		
Ability to communicate effectively across cultures	Single item	<ul style="list-style-type: none"> • When I communicate with people from other cultures, I should try to find ways to make them feel comfortable with me.
Ability to cope with ambiguity	Single item	<ul style="list-style-type: none"> • I can be comfortable in situations despite not being sure of what is going on.
Ability to understand and manage complex problems and issues	Single item	<ul style="list-style-type: none"> • In order to devise different types of solutions to world problems, it is important to deeply understand different cultures and ways of living.
Ability to transcend nation-state thinking to global thinking	Single item	<ul style="list-style-type: none"> • Countries need to work together to solve world problems.
Attitudes		
Respect for human rights	.684	<ul style="list-style-type: none"> • All humans should be treated with dignity. • People from all cultures should be treated with respect.
Desire/willingness to be a global citizen	.626	<ul style="list-style-type: none"> • My actions in my home country impact the rest of the world. • I see myself as a member of the global community. • In order to improve relationships with people in my country and others, I must learn about other countries, and other people. • It is very important for me to know about world politics, economics, societies, cultures, environments and technologies. • I want to do something to increase justice for all people in the world.

Table 4-2. Continued

Scale	Cronbach Alpha	Items
Desire/willingness to improve the human condition	Single item	<ul style="list-style-type: none"> • My actions will make a difference in creating a more equitable and sustainable world.
Valuing diversity	Single item	<ul style="list-style-type: none"> • Differences in people make the world a better place.

Table 4-3. Experimental/control group demographics (GCAI-1)

Demographic		Valid percent experimental	Valid percent control
Gender	Male	37	48
	Female	63	52
Country of birth	USA	83	87
	Other	17	13
Total number of countries lived in lifetime (including USA)	Only one	66	76
	More than one	34	24
Currently has a passport	Yes	100	84
	No	0	16
At least one parent had a passport when they were growing up	Yes	78	67
	No	16	28
	Don't know	6	5
Travel outside of native country	Yes	91	96
	No	9	4
Number of languages spoken other than native language	None	35	69
	One or more	65	31

Table 4-4. Experimental/control group demographics (GCAI-2)

Demographic		Valid percent experimental	Valid percent control
Gender	Male	29	58
	Female	71	42
Country of birth	USA	55	63
	Other	45	37
Total number of countries lived in lifetime (including USA)	Only one	76	79
	More than one	24	21
Currently has a passport	Yes	100	84
	No	0	16
At least one parent had a passport when they were growing up	Yes	82	72
	No	15	21
	Don't know	3	7
Travel outside of native country	Yes	90	95
	No	10	5
Number of languages spoken other than native language	None	31	44
	One or more	69	56

Table 4-5. Demographics reflecting the study abroad experience (posttest experimental)

GCAI-1		Valid percent	GCAI-2		Valid percent
First experience studying abroad	Yes	82	First experience studying abroad	Yes	91
	No	18		No	9
Length of study abroad program	Semester	79	Length of study abroad program	Semester	97
	Other	21		Other	3
Living arrangements during study abroad	Host family	12	Living arrangements during study abroad	Host family	13
	Univ. dorm with local students	2		Univ. dorm with local students	3
	Univ. dorm with international Students	8		Univ. dorm with international Students	13
	Hotel/Apartment	71		Hotel/Apartment	68
	Other	7		Other	3

Table 4-6. Pretest: T-test (GCAI-1) for baseline comparison of experimental and control groups

Scales	Control experimental	Mean	Standard deviation	t	df
Cultural self-awareness	Ctr. Exp.	4.0000 4.2000	.77703 .63246	1.836	187
Awareness of culture of others	Ctr. Exp	4.2716 4.3333	.47173 .44831	.844	189
Understanding of globalization	Ctr. Exp	3.7870 3.7336	.70445 .68345	.483	189
Knowledge of current world events	Ctr. Exp	2.6111 2.6314	.54657 .43837	.268	189
Knowledge of world history	Ctr. Exp	1.3333 1.2993	.80094 .75113	.277	189
Knowledge of world geography	Ctr. Exp	.4074 .2847	.46641 .33203	2.113	75
Professional knowledge	Ctr. Exp	4.4352 4.5949	.60693 .48330	1.908	189
Effective use of professional skills in other cultural environment	Ctr. Exp	1.5000 1.4599	.69364 .75259	.339	189
Collaboration and teamwork across cultures	Ctr. Exp	4.0000 4.2000	.77703 .63246	1.836	187
Effective use of cross-cultural skills and strategies	Ctr. Exp	3.4259 3.5438	.85455 .62566	1.052	189
Effective assessment of cross-cultural situation	Ctr. Exp	3.7037 3.8750	.83845 .76437	1.355	188
Successfully living in a culture different from one's own	Ctr. Exp	.33330 .56200	.64428 .68451	2.170*	103
Ability to speak a foreign language	Ctr. Exp	1.6389 2.3248	.93877 1.23460	4.140*	127

Table 4-6. Continued

Scales	Control experimental	Mean	Standard deviation	t	df
Recognition of/interest in multiple worldviews	Ctr. Exp	3.5966 3.7435	.46641 .33203	2.441*	189
Willingness to step outside of own cultural comfort zone	Ctr. Exp	3.8501 4.0572	.55788 .43777	2.447*	80
Acceptance and/or sensitivity toward cultural differences	Ctr. Exp	4.2636 4.3645	.42195 .37343	1.620	189
Openness to new experiences	Ctr. Exp	3.3056 3.7828	.54441 .41487	5.812*	78
Willingness to take risks to learn more about other cultures	Ctr. Exp	4.1883 4.4453	.61091 .48385	2.768*	81
Possessing a long-term orientation	Ctr. Exp	4.0000 4.2555	.95166 .69694	2.047	189

*Experimental group was significantly higher $p < .05$

Table 4-7. Pretest: T-test (GCAI-2) for baseline comparison of experimental and control groups

Scales	Control experimental	Mean	Standard deviation	t	df
Understanding of globalization's impact on the world	Ctr.	3.7797	1.06783	.536	149
	Exp.	3.6957			
Understanding world history and politics	Ctr.	4.2373	.85780	.149	150
	Exp	4.2151	.91900		
Understanding of the human condition	Ctr.	4.1743	.61706	.106	151
	Exp	4.1839	.48980		
Understanding the concept of empowerment	Ctr.	3.8814	1.17568	.573	149
	Exp	3.7609	1.31241		
Understanding global environmental challenges	Ctr.	4.2768	.71157	1.247	150
	Exp	4.4140	.62632		
Societal/historical self- awareness	Ctr.	9.5763	.67475	2.012	138
	Exp	9.3333	.79855		
Understanding the nature of multicultural societies	Ctr.	4.3525	.49318	.069	150
	Exp	4.3468	.50356		
Ability to communicate effectively across cultures	Ctr.	4.6379	.48480	.037	149
	Exp	4.6344	.60406		
Ability to cope with ambiguity	Ctr.	3.6102	.87132	.746	149
	Exp	3.7174	.85583		
Ability to understand and manage complex problems and issues	Ctr.	4.5593	.95179	.707	150
	Exp	4.6452	.54464		
Ability to transcend nation-state thinking to global thinking	Ctr.	4.8103	.39545	.373	149
	Exp	4.7849	.41309		
Respect for human rights	Ctr.	4.8644	.33258	.125	150
	Exp	4.8710	.30309		
Desire/willingness to be a global citizen	Ctr.	4.3390	.61617	.331	150
	Exp	4.3699	.52415		

Table 4-7. Continued

Scales	Control experimental	Mean	Standard deviation	t	df
Desire/willingness to improve the human condition	Ctr.	4.2034	1.11076	.167	149
	Exp	4.1739	1.02291		
Valuing diversity	Ctr.	4.5593	.74905	.954	150
	Exp	4.6559	.49988		

Table 4-8. Posttest (GCAI-1): T-test with P-statistic adjustment gain scores for experimental and control groups

Scales	Control experimental	Mean	Standard deviation	t	df
Cultural self-awareness	Ctr. Exp.	.2532 .1398	.37154 .25128	1.323	43
Awareness of culture of others	Ctr. Exp	.1061 .2218	.25876 .31570	1.745*	73
Understanding of globalization	Ctr. Exp	.3250 .2198	.35273 .29937	1.364	70
Knowledge of current world events	Ctr. Exp	.1102 .0623	.25315 .13449	1.117	81
Knowledge of world history	Ctr. Exp	.3056 .3626	.42492 .42039	.446	45
Knowledge of world geography	Ctr. Exp	.0000 ₁ .0000	.00000 ¹ .00000		
Professional knowledge	Ctr. Exp	.3732 .3667	.47532 .43833	.049	46
Effective use of professional skills in other cultural environment	Ctr. Exp	.0644 .1800	.12718 .19741	3.221*	80
Collaboration and teamwork across cultures	Ctr. Exp	.2404 .1452	.39039 .34625	.976	55
Effective use of cross-cultural skills and strategies	Ctr. Exp	.1836 .1248	.25268 .18727	1.179	76
Effective assessment of cross-cultural situation	Ctr. Exp	.2011 .2171	.30982 .34027	.202	70
Successfully living in a culture different from one's own	Ctr. Exp	.0343 .2687	.11444 .18263	7.180*	80

Table 4-8. Continued

Scales	Control experimental	Mean	Standard deviation	t	df
Ability to speak a foreign language	Ctr.	.0559	.17633	2.457*	74
	Exp.	.1749	.24800		
Recognition of/interest in multiple worldviews	Ctr.	.0507	.06182	.130	81
	Exp	.0527	.07012		
Willingness to step outside of own cultural comfort zone	Ctr.	.0919	.16784	1.458	79
	Exp	.1551	.20640		
Acceptance and/or sensitivity toward cultural differences	Ctr.	.1445	.24026	.225	79
	Exp	.1317	.25574		
Openness to new experiences	Ctr.	.0480	.12674	1.953	36
	Exp	.0046	.03208		
Willingness to take risks to learn more about cultures	Ctr.	.1622	.32536	.886	68
	Exp	.2363	.36036		
Possessing a long-term orientation	Ctr.	.2667	.33942	.990	43
	Exp	.1600	.37417		

¹ t could not be computed because SD of both groups is 0

*Experimental group was significantly higher $p < .10$

Table 4-9. Posttest (GCAI-2): T-test with P-statistic adjustment gain scores for experimental and control groups

Scale	Control experimental	Mean	Standard deviation	t	df
Understanding of globalization's impact on the world	Ctr.	.3472	.41679	1.393	53
	Exp.	.2097	.31613		
Understanding world history and politics	Ctr.	.3289	.45684	.097	40
	Exp	.3152	.45363		
Understanding of the human condition	Ctr.	.2466	.35637	1.797	41
	Exp	.1178	.18973		
Understanding the concept of empowerment	Ctr.	.3750	.45480	.873	44
	Exp	.2743	.32085		
Understanding global environmental challenges	Ctr.	.3268	.39532	1.245	49
	Exp	.2030	.31538		
Societal/historical self-awareness	Ctr.	.6250	.51755	1.382	25
	Exp	.3421	.47295		
Understanding the nature of multicultural societies	Ctr.	.2112	.33643	1.235	60
	Exp	.3189	.34601		
Ability to communicate effectively across cultures	Ctr.	.2500	.45227	.571	24
	Exp	.3571	.49725		
Ability to cope with ambiguity	Ctr.	.3580	.38315	1.595	61
	Exp	.2060	.36758		
Ability to understand and manage complex problems and issues	Ctr.	.2750	.44799	.632	23
	Exp	.4000	.50709		
Ability to transcend nation-state thinking to global thinking	Ctr.	.5714	.53452	.475	14
	Exp	.4444	.52705		
Respect for human rights	Ctr.	.3333	.51640	.000	13
	Exp	.3333	.50000		

Table 4-9. Continued

Scale	Control experimental	Mean	Standard deviation	t	df
Desire/willingness to be a global citizen	Ctr.	.3115	.37950	.005	59
	Exp	.3120	.37938		
Desire/willingness to improve the human condition	Ctr.	.0714	.26726	2.485*	38
	Exp.	.3654	.48078		
Valuing diversity	Ctr.	.3214	.46439	.196	26
	Exp	.3571	.49725		

*Experimental group was significantly higher $p < .10$

CHAPTER 5 SUMMARY AND DISCUSSION

Introduction

This chapter will begin with a review of the research problem and the methodology used to conduct the study and will proceed to a discussion of the study's findings. This chapter will also discuss the special significance of the study and implications for practice and future research.

Problem and Purpose of the Study

Globalization has impacted the entire world through an intensification of global interconnectedness and interdependence that has produced new economic, environmental, political, social and cultural paradigms. These new global paradigms have created an unprecedented need to re-conceptualize how higher education prepares the next generation of global professionals. Professionals today have to compete and collaborate intellectually on a local, national and global scale. The result is an increased requirement for excellence across professions and the need for a new set of knowledge, skills, and attitudes to navigate, and succeed in a global environment. In addition to functional skills, professionals must understand the impact of globalization on humanity, and be able to make positive contributions to the sustainability of humankind within the new global paradigm. Institutions of higher education are compelled to provide the curriculum and learning experiences that can substantively achieve these results.

The current study sought first to establish global competence and global consciousness as two distinct, and complementary constructs that together constitute a framework for global learning. These outcomes could be used by institutions of higher education to internationalize higher education and specifically, to internationalize the curriculum across disciplines. To

effectively use global competence and global consciousness as learning outcomes, it was necessary to develop the means for assessing these outcomes. A review of the literature revealed a limited amount of research defining global competence and global consciousness, and no assessment instruments that specifically measured global competence and global consciousness. Two assessment instruments were developed as part of this study that serve to measure these constructs.

Last, this researcher explored the effectiveness of study abroad in developing global competence and global consciousness. Study abroad is a commonly used curriculum model for internationalizing higher education. This model is receiving increased attention, as well as calls for accountability as many colleges and universities are seeking to increase the number of students studying abroad. The Abraham Lincoln Study Abroad Act of 2006, with the goal of having one million students studying abroad every year by 2016-2017, will contribute to this increase by making study abroad more accessible to a wider diversity of students.

Review of Methodology

The purpose of the study was to explore the effectiveness of study abroad in developing global competence and global consciousness. Two assessment instruments developed by the researcher were used to conduct the study: The Global Competence Assessment Instrument (GCAI-1) and the Global Consciousness Assessment Instrument (GCAI-2).

The study consisted of two parts: First, the instruments were developed, validated and piloted, and reliability was analyzed. Second, a quasi-experimental between-group design study was established, using these instruments as pre and posttests to assess gains in global competence and global consciousness in study abroad students.

The following hypotheses guided the study:

- Null: Study abroad will have no effect on global competence.
 - Alternative: Study abroad will produce an increase in global competence.
- Null: Study abroad will have no effect on global consciousness.
 - Alternative: Study abroad will produce an increase in global consciousness.

Part I: Developing GCAI-1 and GCAI-2

To develop the Global Competence Assessment Instrument (GCAI-1) and the Global Consciousness Assessment Instrument (GCAI-2) several steps were taken that included establishing content validity, piloting, and conducting reliability testing. Content validity was established via three procedures: A comprehensive literature review was conducted on the global competence and global consciousness constructs. This literature review generated factors for each of the constructs that were categorized as knowledge, skills/experiences, and attitudes as seen in Tables 5-1 and 5-2. This taxonomy was created to serve as a framework for learning outcomes and for the scales that would constitute the units of measurement for the factors. A first draft of both the GCAI-1 and GCAI-2 was developed. This draft was presented to a panel of experts for review, and their suggestions and recommendations were implemented. Versions 1.0 of both instruments were created and piloted with students in a graduate-level class that included both masters and doctoral students. Based on their feedback and the experts' feedback, Versions 1.1 were created. These versions asked students to create an identifying code with their month, day and year of birth in a two-digit format, followed by the first initial of their first and last name. This served as a unique identifier for matching pre and posttests.

A first group of summer (2007) study abroad students, along with a control group, were recruited via faculty and directors of study abroad programs to conduct the first assessments. An online versions of both instruments (identical to the paper versions) were created to accommodate geographical constraints, and to maximize student responses. Both online and

paper posttests were also created at this time. These contained additional sections that for the experimental group were reflective of their study abroad experience. The control group version asked questions related to the respondents' participation during the last four months in any international experience that might have a confounding effect on their responses. After the summer assessments, Versions 1.2 were created eliminating a request for participants' name and adding a request for the name of the course(s) taken while studying abroad, or for the control groups, in which course the assessments were administered.

Scales were created to include each item that represented a proposed factor. A Cronbach's coefficient alpha was calculated on the scales of the pretest scores. Scales not meeting the appropriate psychometric qualities were reevaluated and recalculated, removing items if stability was compromised. In some cases single items and summed scales were determined to be the most appropriate for the factor being assessed.

Part II: Assessing Global Competence and Global Consciousness in Study Abroad Students

Participants for this study were selected from several units in one institution between the summer semester of 2007 and the spring semester of 2008. Experimental groups included students who would be participating in a study abroad program during the following semester. Control groups included students who were not going to study abroad. Participants were recruited through faculty leading a study abroad course or directors of study abroad programs.

Email letters inviting the students to participate and including details about confidentiality, the pre and posttest nature of the study, and links to access the surveys online were sent to faculty and the directors of study abroad, who distributed them to their students. Other faculty members distributed the surveys in their classes, offering extra-credit incentives for completing the surveys. In one case an ice-cream social was set up as an incentive for students

to complete the surveys. All students were required to sign an informed consent form before agreeing to participate in the study. The pre and posttest data collection processes were the same except that posttest participants were recruited exclusively from those who had completed the pretests.

Requests to participate in the surveys were sent to 726 students. The pretest response rates for the GCAI-1 and the GCAI- 2 were 27% and 21% respectively, considered about average for this target population using web-based surveys (Kaplowitz, Hadlock, Levine, 2004). The posttest response rates for the GCAI-1 the GCAI-2 were better than average at 64% and 80% respectively. In spite of the substantial posttest response rates, some data was lost when participants failed to enter their identifying code in either the pre or posttests or entered different codes that would not match.

Descriptive statistics were reported on experimental and control group pretests (GCAI-1 and GCAI-2) followed by one-tailed Independent T-tests on each scale (GCAI-1 and GCAI-2) for both groups (Experimental and Control) to test for equivalency of means on each scale for the experimental and control groups. Descriptive statistics were reported on experimental and control group posttests (GCAI-1 and GCAI-2) followed by one-tailed Independent T-tests on each scale (GCAI-1 and GCAI-2) for both groups (Experimental and Control) to test for gains on each scale for the experimental group. The T-tests were conducted applying a P statistic-adjustment gain formula to adjust for ceiling effect (Hagedorn, Siadat, Nora, & Pascarella, 1997).

Summary of Findings

Developing the GCAI-1 and GCAI-2

Establishing global competence and global consciousness as global learning outcomes

This study contributed to establishing the validity of global competence and global consciousness as integrated constructs that can constitute a standard for global learning outcomes for internationalizing higher education and internationalizing the curriculum. These constructs and their corresponding factors became the foundation for the items and the scales of the Global Competence Assessment Instrument (GCAI-1) and the Global Consciousness Assessment Instrument (GCAI-2).

A comprehensive literature review revealed that globalization has impacted virtually all aspects of the world producing an unprecedented interconnectedness and interdependence of economic, environmental, political, social and cultural factors. Falk (1998) described the impact of globalization as a dichotomous and conflicting phenomenon with “globalization-from-above” representing the market forces and “globalization-from-below” representing the opposing forces serving to temper the negative effects of globalization-from-above (p. 6). This phenomenon has presently, and will continue to alter the nature of the knowledge, skills and attitudes that professionals must have.

The next generation of professionals, faced with increasing global competition and demands for global collaboration, must be able to perform their professions with excellence on a local, national and global scale. Extending beyond performance, to addressing the needs of an interconnected and interdependent world, are the requirements for another set of attributes, those that seek to understand the impact of globalization and the willingness and commitment to contribute to the total sustainability of humankind. Encapsulated in these new global professional requirements are the two constructs of global competence and global consciousness. The professionals of today and tomorrow must possess both global competence and global consciousness.

Global competence can be defined as the ability to function effectively, from an economic, political and social perspective, in an increasingly interconnected and interdependent world that is accelerated by technology. Hunter (2004) adds that global competence means “having an open mind while actively seeking to understand cultural norms and expectations of others, leveraging this gained knowledge to interact, communicate and work effectively outside of one’s own environment” (p.101). This definition distinctly positions global competence as a functional construct that professionals must attain to perform effectively in a global environment. Loosely tied to Falk’s notion of globalization-from-above, global competence is a requirement to succeed in the economic and market environments fueled by globalization.

Global consciousness can be defined as the ability to understand the impact of globalization on humanity serving to mitigate the market forces of globalization. It seeks to understand world history, the human condition, global environmental challenges, the development of skills to manage complex and diverse societies, the creation of different types of solutions, and the visualization of new ways of understanding our own society (Robertson, 2004). Global consciousness is a construct that can be associated with understanding the complexity of the forces of globalization and a commitment to act to promote the sustainability of humanity as a whole. Looking at the work of professionals in a global context, it becomes imperative for example, for engineers to understand the impact on the environment and societies of building a bridge across a river in a remote area of the world; for doctors to understand the culture and social history of the patients they are treating; and for teachers to instill the desire to be a global citizen and to improve the human condition in the children they teach. As global competence can be loosely tied to Falk’s globalization-from-above, global consciousness can be

tied to globalization-from-below, those forces that can serve to mitigate the impact of the market forces of globalization.

Measuring global competence and global consciousness

A factor analysis from the literature, followed by a review from an expert panel and a pilot study, along with a confirmatory factor analysis revealed the global competence and global consciousness factors, as seen in tables 5-1 and 5-2, that became the foundation for the scales of the Global Competence Assessment Instrument (GCAI-1) and the Global Consciousness Assessment Instrument (GCAI-2).

The significant result of this part of the study was to establish that the constructs of global competence and global consciousness together represent a comprehensive, complementary and holistic set of specifically delineated knowledge, skills/experiences and attitudes that can serve as global learning outcomes for higher education, and specifically as outcomes that can serve to internationalize the curriculum across disciplines. Global competence and global consciousness are separate constructs, but the totality of the factors of both represent the comprehensive global mindset required for functioning effectively in the new global paradigm, as well as contributing to the sustainability of humankind.

Global competence knowledge, skills/experiences and attitudes are essential for professionals across all disciplines to function effectively in global environments. One of most significant knowledge factors required is a profound self-awareness that serves as the foundation for developing a global mindset. This involves understanding how personal values, beliefs and attitudes influence the way in which relationships are built across cultures, and how transactions are conducted across cultures. From this platform of self-awareness, professionals can gain greater awareness of the culture of others. Understanding globalization is another significant factor of global competence as this provides the framework for strategic analysis of the

interconnected global field and understanding its impact on professional effectiveness. An integral part of understanding globalization is knowledge of current world events, world history and world geography. This contributes to a greater sense of belonging to an integrated and interconnected world in which the actions of one affect the actions of others. As professionals increase their sense of belonging to an interconnected world, their ability to conceptualize the notion of working in a world without boundaries grows, increasing their global functional effectiveness and adroitness.

Global competence skills and experiences focus on the ability to effectively utilize global and professional knowledge when working and living in new cultural environments.

Professionals can be marketable global professionals when they are able to use their skills in other cultural environments; collaborate and work in teams across cultures; use cross-cultural skills and strategies; and effectively assess cross-cultural situations. Additionally, the ability to work in global environments is augmented when professionals are willing and able to live in another culture and have the ability to speak the language of the host nationals.

Professional skills on a global scale will falter if lacking the attitudes for global competence. These attitudes represent the personal attributes that contribute to global success beyond the pragmatic. These are the relational skills that ultimately can mean success or failure in building global relationships. Included in these are recognizing and being interested in multiple worldviews and being accepting or sensitive of cultural differences. Furthermore, the ability to step outside of one's comfort zone and being open and willing to take some risks to learn about other cultures are key attributes that can reduce the stress of adapting to global situations and can ease global transitions.

Global consciousness knowledge, skills/experiences and attitudes are significantly different from global competence in that they seek to mitigate the impact of globalization and create a profound awareness of the consequences of global competence. The foundational factor for global consciousness is understanding the impact of globalization. This is a broad-spectrum understanding that includes knowledge and awareness of the existing and the potential economic, cultural, political, social and environmental consequences of globalization on humanity. To fully grasp the scope of the impact of globalization, a second fundamental factor of global consciousness is required: Societal/historic self-awareness. Similar to the personal self-awareness needed for global competence, this places the person within a cultural context. This context forms part of the value system that the person has developed, and is the filter through which other societies and events are judged. True understanding of the impact of globalization on the world requires the sum of societal/cultural self-awareness as well as understanding world history and politics; the human condition; the concept of empowerment; global environmental challenges; and the nature of multicultural societies. It is this depth of understanding that will serve to temper and guide the practices fueled by global competence.

The functional factors of global consciousness are the skills and experiences that are needed to navigate the complexities of globalization such as: The ability to communicate effectively across cultures; cope with ambiguity; understand and manage complex problems and issues; and transcend nation-state thinking to global thinking. The combined skills and experiences for global competence and global consciousness have the potential of creating a genuine depth and breadth of skills and experiences that can contribute to professional effectiveness and its positive impact worldwide.

The attitude factors of global consciousness are the most salient in serving to mitigate the market forces of globalization. These are respect for human rights; desire/willingness to be a global citizen; desire/willingness to improve the human condition; and valuing diversity. These attitudes are closely related to the most complex developmental phase, ethnorelativism, described by Bennett (1998). In this phase people begin to see themselves as members of a human community and as such may act as cultural mediators and exhibit a desire to do what is ethical and right within this framework.

Global consciousness can serve as a guiding framework for making the decisions that those who are globally competent will make. This framework provides the ethical roadmap and the humanistic barometer to assess the consequences of professional actions worldwide. Global competence and global consciousness form a holistic, balanced, and complementary set of global learning outcomes that can significantly and positively impact the development of the next generation of global professionals.

Included as a direct result of this study, two instruments designed to specifically measure the constructs of global competence and global consciousness were created. The Global Competence Assessment Instrument GCAI-1 was designed to measure the construct of global competence and the individual factors that represent the construct. The Global Consciousness Assessment Instrument GCAI-2 was designed to measure the construct of global consciousness and the individual factors that represent the construct. It is significant that this researcher chose to develop two assessment instruments. Both constructs are clearly different, but together they represent the totality of learning outcomes needed to develop a global mindset.

The benefit of developing two separate instruments allowed the researcher to create longer instruments that specifically focused on measuring each construct. This is important

when considering the complexity of each construct necessitating multiple questions per factor to assure proper measurement. This also allows faculty who are developing curriculum to target the learning outcomes and experiences more specifically. For example, an international management course might concentrate on developing global competence, whereas an international business ethics course might choose to emphasize global consciousness. Significantly, this allows a means of evaluating institutional curricula or curricula within disciplines to determine if the entire spectrum of global competence and global consciousness is reflected in the totality of the learning outcomes of the courses being offered throughout an undergraduate degree program. This is particularly important as study abroad programs increasingly form part of the required undergraduate curriculum, and their role in developing these constructs as part of a comprehensive curriculum can be assessed.

The GCAI-1 and GCAI-2 provide a means for faculty development as they can be used to measure the global competence and global consciousness of faculty, allowing them to self-assess need for development in these areas. This could allow faculty the opportunity to seek out developmental opportunities that could ultimately translate into improvements in their ability to develop internationalized curricula within their own disciplines. These instruments can also help faculty assess the effectiveness of their own courses in developing these constructs, providing a vehicle for continuous curricular improvement.

The process of internationalizing higher education includes both the curriculum and the extracurriculum. These instruments can also be used to measure the effectiveness of extracurricular activities in developing global competence and global consciousness. These can include a wide spectrum of events, leadership programs, service learning, speakers series, and other activities that are generally grouped under student affairs divisions.

Being able to measure the constructs independently of each other, as well as having the opportunity to measure both has resulted in the creation of a full-spectrum, system-wide approach to measure the effectiveness of internationalization initiatives on campuses as well as internationalized curricula including study abroad.

Implications for internationalizing the curriculum and higher education

Internationalizing higher education can be defined as “any systematic effort aimed at making higher education [more] responsive to the requirements and challenges related to the globalization of societies, economy and labour markets” (van der Wende, 1997b, as cited in de Wit, 2002, p. 115). Internationalizing the curriculum is a substantive component of internationalizing higher education that generally includes adding an international major or minor in the curriculum or within specific disciplines; foreign language or area studies; infusing courses with an international content; international service learning; international relations degree programs; international students, faculty and scholars; study abroad and international internships or research; and faculty involvement in international research, teaching and consulting (Annette, 2002; Ellingboe, 1999; Mestenhauser, 1998; Tonkin, 2006).

The totality of these initiatives to internationalize the curriculum can be viewed as a system-wide approach to developing the next generation of global professionals, those who perform their professions with excellence and who possess global competence and global consciousness. If global competence and global consciousness are established, articulated and supported on an institutional level as global learning outcomes, the curriculum across all disciplines can be structured to reflect the learning experiences needed to achieve these outcomes. General education requirements along with each course within a discipline can reflect some of the factors of the constructs, whereby the sum of the learning experiences throughout the

degree process can serve to develop the range of knowledge, skills and attitudes that constitute global competence and global consciousness.

While there may be resistance on the part of faculty in disciplines that do not appear to be “global” in nature to consider internationalizing their curricula, there is increasing evidence that professional standards are, and will be requiring global learning outcomes across professions such as in engineering and business (Green & Schoenberg, 2006; Shuman, Besterfield-Sacre, & McGourty, 2005; AACSB International, 2007). As global learning outcomes (global competence and global consciousness) become part of the accreditation process, the ability to measure the effectiveness of learning experiences in achieving these, can provide an incentive and a framework for faculty to internationalize their curricula.

For example, while courses in engineering may be of a highly technical nature and appear to not lend themselves to global learning outcomes, if the technology being learned is applied to a global context, this classroom experience may enable students to develop factors of global competence. An application of this would be to use technology to simulate working on virtual teams. Increasingly engineers (and other professionals) are being required to work on global virtual teams. Virtual teams are distributed geographically, across time zones, and continuously change and evolve based on the immediate needs. The members of the team are connected electronically and may report to different managers, located in different parts of the world, based on the project. The challenges of collaborating and having to operate seamlessly and effectively in this environment can be addressed and practiced experientially in an internationalized engineering course. (Leinone, Järvelä, & Häkkinen, (2005); Jarvenpaa & Leidner, 1999). This is an example of a global competence skill (understanding collaboration and teamwork across cultures) that can be measured using the GCAI-1.

Service learning, which is a popular inclusion in teacher education programs can also include the development of global learning outcomes. In some states such as Florida, teacher education programs require a course that is specifically designed to enable future teachers to teach diverse populations. These courses have a service-learning component that requires students to volunteer with diverse populations. Applying the principles of Kolb's (1984) model of experiential learning that posits that learners must experience, reflect, conceptualize, comprehend, and use the concepts to be able to transform the learning into knowledge, it is clear that service learning experiences with multicultural or minority populations could develop global learning outcomes (as cited in Lutterman-Aguilar & Gingerich, 2002, p. 45). Some of the global consciousness factors that can be developed using this service learning model, and that can be measured using the GCAI-2 are: Understanding the nature of multicultural societies, desire/willingness to improve the human condition, valuing diversity or understanding the concept of empowerment.

Study abroad has been touted as one of the most effective models for internationalizing the curriculum. NAFSA (Association of International Educators) posited that study abroad should be incorporated as an integral component of the curriculum across disciplines (NAFSA, 2008). As a general statement, this is laudable; however, a greater understanding of the typologies of study abroad programs is needed to be able to understand the value of each type of program in producing global learning outcomes. Types of study abroad programs range from one-week vacation-type experiences to semester or year-long academic programs, to international service learning programs that are significantly experiential in nature. Clearly there will be a difference in the learning outcomes between these models.

In spite of the wide range of study abroad models, there is an overall support of study abroad in general. NAFSA states that

more than ninety percent of Americans believe it is important to prepare future generations for a global society and that more than three quarters of Americans believe that students should study abroad during college to gain valuable international knowledge. (NAFSA, 2007)

American institutions of higher education and policy makers are listening to the beliefs of Americans and to the demands of the global workplace, by increasing their support for study abroad programs. As support increases, so does the need for accountability. The question to be asked is: Are study abroad programs succeeding in developing the knowledge, skills, and attitudes that will prepare students for a global society?

The preponderance of accountability measures for study abroad seek to obtain results of student satisfaction with the program, the residential facilities, the faculty, self-perception of learning, safety, and other non-academic measures (Sutton, Miller & Rubin, 2007). These types of assessments may be insufficient to be able to determine the effectiveness of study abroad in developing global learning outcomes. This study provides evidence that for study abroad to be considered a viable model for internationalizing the curriculum, the experience must be tied to learning outcomes that can and should be measured. In the absence of this level of accountability, study abroad could be perceived as simply a vacation-type experience, or an anecdotally global learning experience, but not one that offers empirical evidence of substantive development of the global learning outcomes needed to educate the next generation of global professionals.

Global competence and global consciousness can serve as comprehensive and holistic constructs that study abroad should develop. The GCAI-1 and the GCAI-2 can serve as

assessment tools to evaluate the effectiveness of different types of study abroad programs in developing these constructs.

The GCAI-1 and GCAI-2 could be also be used as a predeparture tool to enable students to establish personal learning goals during their study abroad programs. There is supporting evidence that when students establish goals for their study abroad programs there will be a significantly greater degree of growth in those skills than for those who did not similarly prepare (Kitsantas, 2004). Lutterman-Aguilar and Gingerich (2002) have posited that incorporating principles of experiential learning into study abroad will lead to greater gains in outcomes such as global citizenship. Experiential learning is based on the principle that learning occurs when the learner is directly involved in making decisions about the learning process, participates in the experience, reflects, analyzes, and then uses this knowledge to act. Learning about the knowledge, skills and attitudes necessary for global competence and global consciousness can become the basis for selecting learning goals for study abroad and determining the experiences needed to achieve these. Students taking the GCAI-1 and GCAI-2 could self-assess and select areas of development for their study abroad experience. Faculty could guide them in selecting the types of experiences, provide guidelines for reflection and analysis, and assist in creating action plans that could result in growth in these areas. The instruments applied upon return as a posttest, could help students assess gains in their self-prescribed areas of growth.

Limitations and Recommendations

A small pretest sample size used as the basis for reliability testing on the scales of the GCAI-1 and GCAI-2 (193 and 154) respectively prompted the decision to use .60 Cronbach's coefficient alpha threshold for inter-item reliability, which is lower than the preferred .70. This researcher recommends increasing the sample size to reevaluate the reliability of the scales.

Both instruments were lengthy and completing both took approximately 30 minutes. Reducing the length and /or combining the instruments into one may mitigate this problem. Additionally, further investigation as to the perceived differences in experience and variances in responses between the online and paper versions may be warranted.

Assessing the Effectiveness of Study Abroad in Developing Global Competence and Global Consciousness

Global competence gains

Results for global competence showed that the gains on the posttest were statistically and positively significant ($p < .10$) for awareness of the culture of others; effective use of professional skills in other cultural environment; successfully living in a culture different from one's own; and ability to speak a foreign language. There were no other statistically significant experimental group gains on other scales in the GCAI-1.

An increased awareness of the culture of others has frequently been claimed to be a positive result of the study abroad experience and the gains shown in this area support these claims (Dwyer & Peters, 2004; Gorka & Niesenbaum, 2001; NAFSA, 2003, as cited in Lewis & Niesenbaum, 2005; Anderson, Lawton, Rexeisen, & Hubbard, 2006). Bennett's Developmental Model of Intercultural Sensitivity (1998) describes the developmental pathway from ethnocentrism to ethnorelativism that results from increased experiences with other cultures. One of the early stages of ethnorelativism (the acceptance stage) is an increased awareness of the cultures of others (p. 28). The gain in this scale seems to show that students participating in study abroad programs will become more ethnorelative as a result of this experience.

A gain in the effective use of professional skills in other cultural environments is significant as this is a global competence that is increasingly required of professionals across all disciplines as a result of the demands of globalization. Although this study did not go in depth as

to the typology of the study abroad programs, some of the students were participating in business and engineering programs that were designed to provide learning in the discipline. It is interesting to note that a study by Ingraham and Peterson (2004) revealed that long-term study abroad programs produced a greater gain in awareness of participants' profession and how it is practiced in other cultural environment than short-term programs. The present study seems to reveal that this gain could also be achieved in short-term program. This could lend support to pedagogically structuring study abroad to achieve the goal of using professional skills in other cultural environments, using models such as experiential learning.

Being able to practice one's profession in different cultural environments is a requirement stated in many accreditation policies such as in ABET (accreditation body for engineering) and AACSB (Association to Advance Collegiate Schools of Business) (AACSB International, 2007; Shuman, Besterfield-Sacre, McGourty, 2005). Furthermore, numerous studies have found that being able to perform one's profession in a global environment will be the premier requirement of the next generation of global professionals (Koehn & Rosenau, 2002; Hunter, 2004; Cant, 2004). Study abroad in this study revealed that students can learn to use their professional skills in other cultures and lends justification for the use of study abroad as an integral part of the curriculum to develop professional skills in other cultures.

This study indicated that one benefit of study abroad is to be able to successfully live in a culture different from one's own. The success of living in another culture was measured in this study by virtue of having lived or not having lived in another culture. Therefore it would be interesting to probe into the meaning of success in this case. For example, did success mean simply doing the activity, did it mean having a pleasurable experience, or did it mean staying for the duration of the program in spite of not being happy. This study sampled predominantly short-

term study abroad participants, in which the majority of students (70%) lived in a hotel or apartment. This would not provide the same type of experience as a long-term study abroad program in a home-stay environment in which the students lived with a host-family. Being able to successfully live in another culture based on these factors might produce different results with influences such as culture shock, adaptation, degree of difference of experience among others playing a role in the definition of success.

Successfully living in a culture different from one's own becomes significant because this skill is required for many professions. International, multinational and transnational companies are increasingly expecting employees to be globally mobile, expecting them to expatriate, on a short or long-term basis as part of their work. In an increasingly "flat" world, the seamless transnational flow of personnel has become a reality, and in some cases an assumed expectation for upward career mobility. There is general agreement in business that one of the key means of developing global leaders, and being successful in a global environment is by developing global employees through international assignments. However, a significant number of expatriates (10 to 45 percent) fail in their assignments due to their inability to successfully live in a new cultural environment. This is compounded if the assignment is in an "underdeveloped or developing country" (Black, Gregersen, Mendenhall, Stroh, 1999). Study abroad can play a significant role in preparing the new globally-mobile workforce.

The ability to speak a foreign language has often been touted as a result of studying abroad, and this study supports this assertion. However, the degree of effectiveness appears to be influenced by gender and language background (Ginsberg, 1992; Rivers, 1998; Stronkhorst, 2005, as cited in Sutton, Miller, Rubin, 2007). One frequently cited study reported that gender positively influenced a gain in foreign language proficiency for males as a result of study abroad.

This same study revealed that foreign language gain was greater if students had other language experiences (Brecht, et al, 1993). The present study does not appear to support the gender assertion, as 63% of the participants were female and a significant gain was reported. However, previous experience with another language is supported as 65% of the participants spoke another language prior to their study abroad experience. The impact of study abroad on being able to speak a foreign language becomes even more significant in light of recent studies such as *College Learning for the New Global Century*, which reported that less than 13% of college students master a second language (AAC&U, 2007).

The ability to speak other languages became salient after the terrorist attacks on the United States on September 11, 2001, when it became evident that the federal government was lacking experts who spoke the languages of the terrorists. A study conducted by the American Council on Education (2002) revealed that shortages of personnel who speak foreign languages have negatively affected national security. The ACE study also indicated that fluency in a foreign language is a skill that is recruited by American corporations. Although English is a commonly spoken language in business and diplomatic circles, being able to communicate in the language of a business or a diplomatic counterpart is important for developing the relationships and networking that facilitate global success.

Global consciousness gains

Results for global consciousness showed that the gains on the posttest were statistically and positively significant ($p < .10$) for: Desire/willingness to improve the human condition. There were no other statistically significant experimental group gains on other scales in the GCAI-2.

This factor is considered an attitude outcome and was measured by asking participants if they believed that their actions will make a difference in creating a more equitable and sustainable world. Studies have reported that attitude gains from the study abroad experience

may have several explanations including individual differences, typology, and host culture (Sutton, Miller, & Rubin, 2007). Students self-select to participate in study abroad programs, and may be predisposed to an increased sensitivity to the issues of the world. Hence, they may have a greater degree of confidence that their personal contribution to the world will have a positive impact.

Unexpected Results

Of importance to note are the lack of significant gains in global competence and global consciousness ($p < .10$) that were revealed in this study, in spite of some raw gains. For global competence factors, in the knowledge category, there were no statistically significant gains in: Cultural self-awareness; understanding of globalization; knowledge of current world events; knowledge of world history; knowledge of world geography and professional knowledge. For skills and experiences, there were no significant gains in collaboration and teamwork across cultures, effective use of cross-cultural skills and strategies, and effective assessment of cross-cultural situation. For attitudes, there were no significant gains in recognition of/interest in multiple worldviews, willingness to step outside of own cultural comfort zone, acceptance of and /or sensitivity toward cultural differences, openness to new experiences, willingness to take risks to learn more about cultures, and possessing a long-term orientation.

Participants were asked in the items for cultural self-awareness to respond to whether they [actively] think about the values and beliefs of their own culture. The lack of significant gains might suggest that some students had not learned prior to their experience to be self-reflective regarding their own cultures from a values and beliefs perspective, and consequently the experience abroad might not produce an increased awareness. There is evidence in the cross-cultural communications training literature and in cultural development theories that cultural self-awareness training is the foundation for developing the ability to genuinely understand other

cultures and to have effective cross-cultural communication skills (Kohls, 2001; Ferraro, 1998; Pedersen, 1998). If predeparture cross-cultural training that included the development of cultural self-awareness did not occur, this could lead to a possible explanation for the lack of gain in cultural self-awareness, and also in effective use of cross-cultural skills and strategies, effective assessment of cross-cultural situation, acceptance of and /or sensitivity toward cultural differences. Increased cultural self-awareness is often felt after reentry, sometimes with heightened negativity toward one's culture in a phenomenon known as reverse culture shock or reentry shock, or at other times simply a reflection of being able to view the home culture through the lens of the host culture (Storti, 2003). Structuring study abroad with a predeparture component that is designed to develop self-awareness prior to the sojourn, followed by a reentry program that allows for reflection on changes in cultural self-awareness, may be significant in producing growth in the factors that rely on cultural self-awareness. This may also contribute to the long-term retention of this growth.

The items for knowledge of world history, knowledge of geography and professional knowledge asked about educational experiences learning about these subjects. Therefore, unless the study abroad program was specifically designed to teach this subject, a significant gain most likely would not be reflected in the posttest. A reassessment of the items for these factors might be beneficial for improved application as both learning outcomes and assessment measures.

A lack of gain in willingness to step outside of own cultural comfort zone; openness to new experiences; and willingness to take risks to learn more about other cultures may be explained by the fact that study abroad students scored statistically significantly higher on these factors in the pretest, contributing to a ceiling effect in the posttest. Another influencing factor in the lack of gains may be that those who self-select to study abroad may already intrinsically

possess these attributes and hence, the study abroad experience would not contribute to a gain in these factors.

There is evidence that long-term study abroad programs produce increased affective outcomes (Dwyer, 2004a; Lancaster, 2006; Medina-Lopez-Portillo, 2004; Zorn, 1996, as cited in Sutton, Miller, & Rubin, 2007). The participants in this study were primarily in short-term study abroad programs, and did not show attitude gains in any of the factors of global competence. These results could be attributed to the short duration of the study abroad programs that were studied. Additionally, studies have shown that attitude gains are developmental, require experience with difference, and can be taught (Bennett, 1998; Pedersen, 1998). This would lend credence to the notion that a longer-term study abroad program, along with targeted learning experiences could produce the optimal learning environment for global competence and global consciousness attitude gains to occur.

The most surprising lack of gains was in the factors for global consciousness. Only one factor, desire/willingness to improve the human condition, showed statistically significant gains ($p < .10$). All other factors showed some gains in the raw scores, but none was statistically significant. Understanding the impact of globalization is the foundation for developing most of the other factors of global consciousness such as the following:

- Understanding of the human condition
- Understanding the concept of empowerment
- Understanding global environmental challenges
- Understanding the nature of multicultural societies
- Ability to understand and manage complex problems and issues
- Ability to transcend nation-state thinking to global thinking
- Desire/willingness to be a global citizen.

Robertson (1992) posited that understanding globalization and its impact is an interdisciplinary discussion and requires reframing the disciplines to include learning how they fit into the global

context. He further added that this discussion has to be relevant to our world [local] context in relation to the global context. Additionally, Robertson (2004) stated that understanding the impact of globalization requires recognizing the environmental impact of globalization and the interconnectedness of humanity. This researcher believes that the impact of globalization must be taught. The factors of global consciousness, to be effective learning outcomes for study abroad have to be carefully and deliberately integrated into the study abroad experience. International service learning is a model that could help develop this construct. This model has a higher degree of complexity in the typologies of study abroad in that it is a true experiential curricular model that requires fieldwork in an international community. Tonkin (2006) posited that international service learning bridges the gap of culture differences and class differences, showing students that globalization has many facets, including dependency and poverty. This type of experiential, study abroad program could help students understand the human condition, the concept of empowerment, respect for human rights, and the nature of multicultural societies. It could also contribute to understanding global environmental challenges. Most importantly, properly designed to ensure in-depth reflection and critical analysis of the experience, this type of programming could influence the shift from nation-state thinking to global thinking, and create a desire to be a global citizen.

While the only significant gain in global consciousness was the factor desire/willingness to improve the human condition, this growth is important as it reflects wanting to make a difference in the lives of humans [as a whole], an attitude that marks a significant step in developing global consciousness.

Some other factors may have played a role in the lack of significant gains in specific areas of global competence and global consciousness. The impact of culture shock should be

considered in semester-long study abroad programs posttest evaluation of gains. The culture shock cycle (Kohls, 2001) reflects that weeks 9-16 of a sojourn are the most critical period when culture shock sets in. Known as the irritability/hostility phase of the culture shock cycle, there is a generalized negativity of feeling and a focus on the differences between the host and home cultures (p. 94-100). Measurement of gains during this period could possibly skew results and theoretically produce losses in the attitudes and affective factors. Selection could also impact gains results as study abroad students self-select into the programs and may have entered this study with high pretest levels on the factors being assessed, producing a ceiling effect. Although the P statistic-adjustment formula was used to adjust for possible ceiling effects, this may have been a factor in some lack of gains. A small sample size may have contributed to a reduction of power affecting gains results. Last, in some cases there may be a need to re-evaluate and hone the scales of the GCAI-1 and GCAI-2.

Implications for Practice

Study abroad

Study abroad programs should be carefully planned and pedagogically sound experiences that contribute to the overall academic program across disciplines and within institutions of higher education. They should include clear learning outcomes and the means to measure the effectiveness of the program in successfully achieving these outcomes. Careful attention should be placed on guiding students toward establishing their objectives using self-directed learning to maximize the impact of the study abroad experience. Experiences throughout the duration of study abroad should be structured to achieve the stated learning outcomes.

For example, while it appears that study abroad increases awareness of the culture of others, it is not clear how deep or how accurate this increased awareness might be. European-American students who study in Europe for a semester may only gain awareness of the dominant

cultures, but not of other populations. Lacking the proper preparation in understanding the dynamic nature of culture, and understanding the notion of power imbedded in culture, as posited by Nieto (2004), could lead to a negative awareness that includes perpetuating stereotypes, or viewing the dominant cultures as the norm and subordinate cultures as aberrant. This becomes an important consideration when designing a study abroad experience and preparing students for their sojourn.

A typology of study abroad programs, such one defined by Engle and Engle (2003) that includes five levels of programs with incrementally more profound cultural experiences, needs to be considered when establishing learning outcomes and the experiences to achieve these outcomes. Not all study abroad programs will produce the entire spectrum of the constructs of global competence and global consciousness. Institutions of higher education should carefully consider the various typologies of study abroad and the expected outcomes from each to be able to make substantive policy decisions on how to align study abroad goals with the overall curriculum objectives and internationalization mission of the institution.

Internationalizing the curriculum across disciplines using the Herrera model

The Herrera model for educating the next generation of global professionals unites theories of globalization, culture theories, cultural development theories, and standards of professional excellence into a consolidated model that can serve as a framework for internationalizing the curriculum across disciplines (Figure 1-1). This model posits that professionals across all disciplines must possess professional excellence, global competence, and global consciousness, and that these skills and constructs can be learned and should be taught. The sum total of the curriculum of a discipline (over a four-year period) should reflect all three elements of the model.

Professional excellence is reflected in the standards of excellence required by individual professions. These standards of excellence form an integral part of existing curricula and are reflected in the learning outcomes for the profession. Global competition and the need for global collaboration demand that graduating professionals excel in their professions by meeting or exceeding the standards of the profession.

Global competence is the ability to function effectively and successfully in a global environment. Professionals who possess global competence have the knowledge, skills and attitudes to operate economically, politically and socially in different cultural environments.

Global consciousness is the ability to understand the impact of globalization on humanity. Professionals who possess global consciousness have the knowledge, skills and attitudes to provide a balance between the economic drivers of globalization and the human impact. This requires understanding the complexity of human global interactions, the impact of the economic forces of globalization on the sustainability of humankind and the environment.

This requisite triad is an integrated, balanced model for internationalizing the curriculum across disciplines, providing a standard for learning outcomes for educating the next generation of global professionals. The Global Competence Assessment Instrument (GCAI-1) and the Global Consciousness Assessment Instrument (GCAI-2) integrate into the model providing the assessment measures to judge the effectiveness of the internationalized curriculum in achieving these outcomes. Content-area evaluation strategies should also be integrated into the model providing the assessment measures for the standards of professional excellence. The Herrera model provides an integrated curricular model that could create a developmental shift in global mindset that is reflected in the practice of next generation of global professionals. This model

contributes to the advancement of internationalizing higher education, and internationalizing the curriculum across disciplines.

Professional training and development

Global leadership competencies are increasingly being required in business, engineering, government, and other professional environments. Numerous studies have shown that the knowledge, skills and attitudes for global competence are requirements for global employees and highly valued for all employees on a local, national and global scale (Bikson, Treverson, Moini, Lindstrom, 2003; Bremer, 2006; Harris, Moran & Moran, 2004; Hunter, 2004; Jokinen, 2005). Harris, Moran & Moran (2004) stated that the challenge facing business today is to create new management models that work in global environments. To do so requires a new set of competencies that global leaders must possess. The constructs of global competence and global consciousness are essential components of global leadership competencies. These constructs and the means to measure them, can be a significant contribution to the development of global competency models and learning outcomes for the advancement of global professional development programs.

Higher education leadership development

Internationalizing higher education, regardless of the approach used, requires a commitment on the part of the institution and the institutional leadership to embark in transformational change for this purpose. This requires creating a leadership team to lead the change, analyzing the campus culture's resistance to change, and creating a sense of urgency for this change (Kotter, 1996; Lick & Kaufmann, 2000).

Once the foregoing is in place, models for transformational change can be put in place to move forward in the process. Regardless of the model being used, institutional leaders must

show commitment to their own leadership and be committed to developing leadership within the institution that is capable of carrying out the internationalization mission.

Developing the next generation of academic global leaders is an essential step toward internationalizing higher education. Global competence and global consciousness as comprehensive, complementary and holistic constructs for internationalizing higher education can serve as the basis for the type of professional development needed for a system-wide institutional global leadership development program.

Recommendations for Future Research

The findings of this study suggest the following areas for future research on assessing the effectiveness of study abroad and other internationalized curriculum models in developing global competence and global consciousness:

- Different typologies of study abroad programs should be assessed to determine their effectiveness in developing global competence and global consciousness.
- Curriculum models such as international service learning should be constructed using the global learning outcomes of global competence and global consciousness, and their effectiveness in producing gains in these areas measured.
- A replication of this study should be conducted with a larger sample comparing those results with the results of this study.
- A panel of experts from countries outside of the United States should be assembled to review and validate the items representing factors of global competence and global consciousness on the GCAI-1 and GCAI-2 to assess their applicability to study abroad participants from other cultures.
- A similar study should be designed to measure gains in global competence and global consciousness of students participating in infused courses.
- Focus groups should be conducted with returning study abroad students to investigate perceived gains (or lack thereof) in the factors of global competence and global consciousness.

Impacting the Future of Humanity

Never before has it been so critical to understand the nature and impact of globalization. The obligation of preparing the next generation of global professionals who are able to function effectively in global environments, and who are also able and willing to contribute to the sustainability of humankind, lies in the hands of higher education leaders, policy-makers and professors. This responsibility cannot be underestimated or squandered. The condition of the world can be improved or diminished in great part by the types of professionals that graduate from our institutions of higher education. The challenge for the 21st century will be to have the courage and the commitment to develop the next generation of global professionals, those who have professional excellence, global competence and global consciousness.

Table 5-1. Global competence knowledge, skills/experiences and attitudes

Knowledge	
1.	Cultural self-awareness
2.	Awareness of the culture of others
3.	Understanding globalization
4.	Knowledge of current world events
5.	Knowledge of world history
6.	Knowledge of world geography
7.	Professional knowledge
Skills/experiences	
8.	Effective use of professional skills in other cultural environments
9.	Collaboration and teamwork across cultures
10.	Effective use of cross-cultural skills and strategies
11.	Effective assessment of cross-cultural situations
12.	Successfully living in a culture different from one's own
13.	Willingness and/or ability to speak a foreign language
Attitudes	
14.	Recognition of/and interest in multiple worldviews
15.	Willingness to step outside of own cultural comfort zone
16.	Acceptance of and/or sensitivity toward cultural differences
17.	Openness to new experiences
18.	Willingness to take risks to learn more about other cultures
19.	Possessing a long-term orientation

Table 5-2. Global consciousness knowledge, skills/experiences and attitudes

Knowledge	
1.	Understanding of globalization's impact on the world
2.	Understanding world history and politics
3.	Understanding of the human condition
4.	Understanding the concept of empowerment
5.	Understanding global environmental challenges
6.	Societal/historic self-awareness
7.	Understanding the nature of multicultural societies
Skills/experiences	
8.	Ability to communicate effectively across cultures
9.	Ability to cope with ambiguity
10.	Ability to understand and manage complex problems and issues
11.	Ability to transcend nation-state thinking to global thinking
Attitudes	
12.	Respect for human rights
13.	Desire/willingness to be a global citizen
14.	Desire/willingness to improve the human condition
15.	Valuing diversity

APPENDIX A
SAMPLE GLOBAL COMPETENCIES

Global Cultural Competencies: A. G. Cant

- **Cultural self-awareness:** To develop cultural sensitivity, a person needs to understand his or her own cultural values, assumptions and beliefs.
- **Cultural consciousness:** Global managers have to be able to adapt to other cultures, manage cultural diversity, be sensitive to other cultures, and be willing to step outside of their cultural comfort zone.
- **Leading multicultural teams:** To be able to lead and be part of successful multicultural teams, global managers have to use various techniques that will result in “culturally sensitive outcomes.”
- **Negotiating across cultures:** Negotiation across cultures requires the ability to understand how negotiation styles and parameters differ across cultures aiding in avoiding misunderstandings.
- **Global mindset:** This type of thinking allows global managers to view the “strategic implications of global commerce” and to develop a “long-term orientation toward business.” (Cant, 2004, pp. 277-278)

What Makes a Successful Career Professional in an International Organization: Rand Corporation 2003

- General cognitive skills (e.g. problem solving, analytical ability)
- Interpersonal and relationship skills
- Ambiguity, tolerance, adaptivity
- Personal traits (e.g. character, self-reliance, dependability)
- Cross-cultural competence (ability to work well in different cultures and with people of different origins)
- Ability to work in teams
- Ability to think in policy and strategy terms
- Written and oral English language skills
- Minority sensitivity
- Innovative, able to take risks
- Empathy, nonjudgmental perspective
- Substantive knowledge in a technical or professional field
- Multidisciplinary orientation
- Knowledge of international affairs, geographic area studies
- Competitiveness, drive
- General education breadth
- Internet and information technology
- Managerial training and experience

- Foreign language fluency
(Bikson, Treverton, Moini, & Lindstrom (2003))

Twelve Competencies for Global Leadership: Harris, Moran, Moran

Attitudinal Core Competencies

- Possesses a global mindset
- Works as an equal with persons of diverse backgrounds
- Has a long-term orientation

Leadership Core Competencies

- Facilitates organizational change
- Creates learning systems
- Motivates employees to excellence

Interaction Core Competencies

- Negotiates and approaches conflict in a collaborative mode
- Manages skillfully the foreign deployment cycle
- Leads and participates effectively in multicultural teams

Cultural Core Competencies

- Understands their own values and assumptions
- Accurately profiles the organizational and national culture of others
- Avoids culture mistakes and behaves in an appropriate manner in other countries
(Harris, Moran & Moran, 2004, p. 258)

Global Leadership Competencies: Tiina Jokinen

Level 1: Core Leadership Competencies

- Self-awareness
- Engagement in personal transformation
- Inquisitiveness

Level 2: Desired Mental Characteristics of Global Leaders

- Optimism
- Self-regulation
- Social judgment skills
- Empathy
- Motivation to work in international environments

- Cognitive skills
- Acceptance of complexity and its contradictions

Level 3: Desired Behavioral Competencies of Global Leaders

- Social skills
- Networking skills
- Knowledge
(Jokinen, 2005, p. 204)

Dimensions of Transnational Competence: Peter H. Koehn and James N. Rosenau

Analytic Competence

- Understanding of the central beliefs, values, practices, and paradoxes of counterpart culture(s) and society(ies)-including political and ethnic awareness
- Ability to link counterpart-country conditions to one's own circumstances and vice versa
- Number and complexity of alternative cultural paths assessed
- Ability to discern effective transnational transaction strategies and to learn from past successes and failures

Emotional Competence

- Motivation and ability to open oneself up continuously to divergent cultural influences and experiences
- Ability to assume genuine interest in, and to maintain respect for, different (especially counterpart) values, traditions, experiences, and challenges (i.e. intercultural/transnational empathy)
- Ability to manage multiple identities
- Sense of transnational efficacy

Creative/imaginative Competence

- Ability to foresee the synergistic potential of diverse cultural perspectives in problem solving
- Collaborative ability to articulate novel and shared transnational synthesis.
- Ability to envision viable mutually acceptable alternatives
- Ability to tap into diverse cultural sources for inspiration

Behavioral Competence/Communicative Facility

- Proficiency in and use of counterparts' spoken/written language
- Skill in interpretation and in using an interpreter
- Proficiency in and relaxed use of interculturally appropriate nonverbal cues and codes
- Ability to listen to and discern different cultural messages
- Ability to engage in meaningful dialogue; to facilitate mutual self-disclosure

- Ability to avoid and resolve communication misunderstandings across diverse communication styles

Behavioral Competence/Functional Adroitness

- Ability to relate to counterparts and to develop and maintain positive interpersonal relationships
- Ability to apply/adapt understanding, sensitivity, and imagination in transnational interactions
- Flexible ability to employ extensive and nuanced range of transnationally accommodative organizational strategies and interaction paths
- Ability to overcome problems/conflicts and accomplish goals when dealing with transnational challenges and globalization/localization pressures
- (Koehn & Rosenau, 2002, p. 110)

Global Competency Checklist: William D. Hunter

Knowledge

- An understanding of one's own cultural norms and expectations
- An understanding of cultural norms and expectations of others
- An understanding of the concept of "globalization"
- Knowledge of current world events
- Knowledge of world history

Skills/Experiences

- Successful participation on project-oriented academic or vocational experience with people from other cultures and traditions
- Ability to assess intercultural performance in social or business settings
- Ability to live outside one's own culture
- Ability to identify cultural differences in order to compete globally
- Ability to collaborate across cultures
- Effective participation in social and business settings anywhere in the world

Attitudes

- Recognition that one's own worldview is not universal
- Willingness to step outside of one's own culture and experience life as 'the other'
- Willingness to take risks in pursuit of cross-cultural learning and personal development
- Openness to new experiences, including those that could be emotionally challenging
- Coping with different cultures and attitudes
- A non-judgmental reaction to cultural difference
- Celebrating diversity
- (Hunter, 2004, p. 115)

APPENDIX B
SAMPLE GLOBAL LEARNING OUTCOMES

Institutional Outcomes for Global Competence

Outcomes for International Education: Kalamazoo College

- Perspective consciousness (recognizing that the individual has a view of the world that is not universally shared)
 - State-of-the-planet awareness (awareness of prevailing world conditions and global trends)
 - Cross-cultural awareness (awareness of the diversity of ideas and practices to be found in human societies around the world and how one's own society might be viewed from other vantage points)
 - Knowledge of global dynamics (comprehension of key traits and mechanisms of the world system and consciousness of global change)
 - Awareness of human choices (problems of choice confronting individuals, nations and the human species)
- <http://www.auburn.edu/academic/international/oie/strategic/outcomes3.pdf>

International Learning Outcomes: Michigan State University

Students should

- Demonstrate intellectual growth that reflects an understanding of different cultural frames of reference
 - Display skills for relating to others in various cultures and situations, such as academic settings, social venues, and professional/work environments
 - Describe, analyze, and compare/contrast the customs, traditions, values, ways of thinking, and practices of their own culture with those of other cultures
 - Acknowledge personal growth, including the development of confidence and self-reliance, stimulate a desire for exploration and trying new things, and expand their ability to interact in unfamiliar situations
 - Articulate increased interests in cross-cultural, international, and comparative learning
 - Demonstrate skills that today's employers seek (such as self-reliance, cultural awareness, and cross-cultural communication)
 - Identify and analyze how their intended professions may be viewed/practiced in different cultural contexts
 - Articulate increased interest in foreign language learning
 - Demonstrate increased competency in foreign language skills
- <http://www.auburn.edu/academic/international/oie/strategic/outcomes3.pdf>

Characteristics of a Globally Competent Student: Palo Alto College

- Understanding how his/her actions have global impact
- Having the ability to understand diverse cultural frames of reference

- Having the ability to participate in the global marketplace
 - Having an understanding of the economic interdependency among nations
 - Understanding the social, political, religious, and cultural constructions throughout the world
 - Understanding global environmental issues
 - Having knowledge of one or more foreign languages
 - Having the ability to access and evaluate global information
 - Accepting responsibility for global citizenship
- (<http://www.auburn.edu/academic/international/oie/strategic/outcomes3.pdf>.)

Georgia Institute of Technology, as part of its International Plan, has defined the following student learning outcomes and program objectives and has developed a comprehensive assessment plan to evaluate their effectiveness.

Characteristics of a Globally Competent College Graduate

- Second language proficiency
 - Communicate in a second language
 - Comparative global knowledge
 - Demonstrate knowledge about other cultures within a global and comparative context
 - Demonstrate knowledge of global issues, processes, trends, and systems
 - Demonstrate knowledge of at least one other culture, nation, or region, such as beliefs, values, perspectives, practices, and products
 - Intercultural assimilation
 - Readily use second language skills and/or knowledge of other cultures to extend their access to information, experiences and understanding
 - Convey an appreciation for different cultures in terms of language, art, history, etc.
 - Interact comfortably with persons in a different cultural environment and be able to seek out further international or intercultural opportunities
 - Global disciplinary practice
 - Use cultural frames of reference and alternate perspectives to think critically and solve problems within the discipline in the context of at least one other culture, nation, or region
 - Collaborate professionally with persons of different cultures, and function effectively in multi-cultural work environments
 - Intercultural sensitivity
 - Accept cultural differences and tolerate cultural ambiguity
 - Comfortably assimilate within other cultures
- (Georgia Institute of Technology International Plan, 2005, as cited in Lohmann et al., 2006)

Global Competence: The University of Pittsburgh (2003)

- The ability to work effectively in international settings
- An awareness of major currents of global changes and issues driving these changes.
- Knowledge of global organizations and business activities.
- Capacity of effective communications across cultural and linguistic boundaries.
- Personal adaptability to diverse cultures
(<http://www.ucis.pitt.edu/global/about.html>)

Global Competencies in University Teaching: G. Badley

- Andragogic expertise
- Specialized in academic subjects
- Concerned with sharing the lives and culture of those who are being taught
- Interested in the everyday life of the overseas institution and its environment
- Focused on discovering how students and teachers abroad see and understand the world
- Aware that what they themselves see abroad is a construction made out of their own experience and that their own conceptual tools are neither objectively neutral nor passive; they cannot represent the reality of abroad, instead they construct their own version of abroad
(Badley 2000, p. 246).

Global Competencies for the Global Learner: American Council on International Intercultural Education (ACIIE)

- Intercultural relations skills.
- Interest in/reading about international current events.
- Ability to identify countries of the world and their locations.
- Ability to communicate with non-English speaking persons.
- Ability to listen.
- Technological awareness (Internet literacy).
- Awareness of global issues.
- Empowered to acknowledge one's ability to make a difference.
- Understanding of the dynamics of interactivity between government, business, and education
- Comfortable with differences
- Understanding of different political and economic systems while acknowledging economic interdependence.
- Awareness of history.
- Realize that challenges facing our world cannot be solved by the same kind of thinking and actions that created them
- Knowledge of at least one non-Western culture.
- Environmental literacy.
- Understand the impact of other cultures on our lives and that culture affects behavior and attitude.

- Recognize that one's own culture, religion and values are not universally shared.
- Ability to speak at least one other language.
- Self-confidence in one's own ability, identity, skills, and cultural background.
- Seek peaceful resolution of differences.
- Awareness of diversity, similarities, and interdependencies.
- Read on a regular basis newspapers and magazines covering international issues.
- Identify historical and current major world events.
- Ability to be flexible and resourceful.
- Understand different education systems around the world.
- Understand different groupings within America's own multicultural structure.
- Participate in voluntary in-service programs (local, national, and international levels).
- Ability to work in diverse teams.
- Understand various faith traditions.
- Awareness of world demography.
- Be motivated by love rather than fear.
- Realize that all the people of the world are important.
- Have a commitment to lifelong global learning.
- Ability to empathize and sympathize even while not accepting.
- Exposure to other cultures through participation in international study.
- Ability to function as a responsible member of the human species within the community of life.
- Awareness of human rights issues.
- Tolerance for ambiguity.
- Have knowledge of the United Nations and other international organizations.
- Visit a non-English speaking community or country, having learned fifty words of their language before going.
- Focus on quality of life issues in the world community. (Recognize that the local concept of quality of life may be different in other parts of the world.)
- Participate in at least one student foreign exchange program.
- Understand decision making in a global community.
- Be able to apply trained skills to an international context.
- Accept responsibility for global citizenship.
- Ability to articulate human differences and similarities.
- Knowledge of human and social geography.
- Exercise moral leadership.
- Develop a long-term perspective.
- Understand that your community may become endangered without global competence.
- Experience the literature, music, and art of other cultures.
- Enjoy surprises, do not fear them.
- Be aware of the diversity of world sport.
- Have respect for human dignity.
- Speak, write, and read another language.
- Understand what it means to be ethical.

- Seek exposure to other cultures locally, including dining in ethnic restaurants whenever possible.
(ACIEE, 1996, pp. 36-37)

International/Intercultural Competencies: ACE Center for International Initiatives

Knowledge

- Knowledge of world geography, conditions, issues and events.
- Awareness of the complexity and interdependency of world events and issues.
- Understanding of historical forces that have shaped the current world system.
- Knowledge of one's own culture and history.
- Knowledge of effective communication, including knowledge of a foreign language, intercultural communication concepts, and international business etiquette.
- Understanding of the diversity found in the world in terms of values, beliefs, ideas and worldviews.

Attitudes

- Openness to learning and a positive orientation to new opportunities, ideas, and ways of thinking.
- Tolerance for ambiguity and unfamiliarity.
- Sensitivity and respect for personal and cultural differences.
- Empathy or the ability to take multiple perspectives.
- Self awareness and self esteem about one's own identity and culture.

Skills

- Technical skills to enhance the ability of students to learn about the world (i.e. research skills).
- Critical and comparative thinking skills, including the ability to think creatively and integrate knowledge, rather than uncritical acceptance of knowledge.
- Communication skills, including the ability to use another language effectively and interact with people from other cultures.
- Coping and resiliency skills in unfamiliar and challenging situations.
(Siaya, 2001 in Olson, Green & Hill, 2006, p. 88)

APPENDIX C
KEY ELEMENTS FOR RESPONSIBLE GLOBAL CITIZENSHIP

Table C-1. Key elements for responsible global citizenship

Knowledge and understanding	Skills	Values and attitudes
Social justice and equity	Critical thinking	Sense of identity and self-esteem
Diversity	Ability to argue effectively	Empathy
Globalization and interdependence	Ability to challenge injustice and inequalities	Commitment to social justice and equity
Sustainable development	Respect for people and things	Value and respect for diversity
Peace and conflict	Cooperation and conflict resolution	Concern for the environment and commitment to sustainable development
		Belief that people can make a difference

(Oxfam, 2006)

APPENDIX D
CULTURAL/GLOBAL ASSESSMENT INSTRUMENTS

Behavioral Assessment Scale for Intercultural Communication (BASIC)

Olebe, M. & Koester, J. (1989)

Eight scales: validated with 263 university students

(Source 1)

Cross-Cultural Adaptability Inventory (CCAI)

Kelley, C. & Meyers, J.E.

Measures 4 variables: Emotional Resilience, Flexibility and Openness, Perceptual Acuity, and Personal Autonomy

(Sources 1,3,4)

Cultural Competence Self-Assessment Questionnaire (CCSAQ)

Mason, J.L. (1995)

Designed to assist service agencies working with children with disabilities and their families in self-evaluation of their cross-cultural competence. For U.S. use.

(Source 1)

GAP Test: Global Awareness Profile

Corbitt, J.N.

Measures how much world knowledge a person has concerning selected items about international politics, economics, geography, culture, etc.

(Sources 1,3,4)

The Intercultural Conflict Style Inventory

Hammer, M.R.

Hammer Consulting, LLC (only authorized distributor)

Identifies fundamental approaches for resolving conflict across cultural and ethnic differences.

(Sources 1,3,4)

Intercultural Development Inventory (IDI)

Bennett, M.J. & Hammer, M.(2003)

Based on Bennett's Developmental Model of Intercultural Sensitivity (DMIS) that shows progression of intercultural sensitivity from ethnocentric to ethnorelative stages. The IDI measures the orientations toward cultural differences in the DMIS.

(Sources 1,3,4)

Intercultural Sensitivity Inventory (ICSI)

Bhawuk, D.P.S., Brislin, R.W. (1992)

Measures intercultural sensitivity using the concepts of individualism and collectivism

Validated with 46 undergraduate and 93 graduate students.

(Source 1)

The Individualism-Collectivism Interpersonal Assessment Inventory

Matsumoto, D., Weissman, M.D., Preston, K., Brown, B.R., & Kupperbush, C. (1997)

Context-specific measurement of individualism-collectivism on the individual level
(Source 2)

The Overseas Assignment Inventory (OAT)

Tucker (1999)

Used for selection, development and training. Develops awareness among managers and future expatriates on motivations, expectations and attitudes that affect intercultural adjustment.

(Sources 1, 4)

Sources:

1) Sietar Europa Online Documentation Center, Assessments & Instruments. Retrieved July 19, 2006 from <http://www.sietar.de/SIETARproject/Assessments&instruments.html>

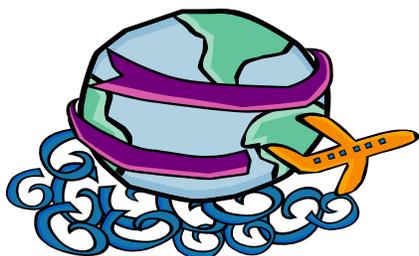
2) Taras, V. (2006). Instruments for Measuring Cultural Values and Behaviors. Retrieved July 20, 2006 from [http://www.ucalgary.ca/~taras/_private/CultureSurvey Catalogue.pdf](http://www.ucalgary.ca/~taras/_private/CultureSurvey%20Catalogue.pdf)

3) Bolen, M. (Ed.).(2007).A guide to outcomes assessment in education abroad. Carlisle, PA: Forum on Education Abroad

4) Earley, P.C., Ang, S. (2003). Cultural intelligence – Individual interactions across cultures. Stanford, CA: Stanford University Press

APPENDIX E CORRESPONDENCE

Letter to XXXXXXXXXXXXStudents



GO GLOBAL – GET THAT JOB!

Do you know what your study abroad experience will be able to do for your future career?
Would you like to find out?

Please come to an Information and Assessment event with cookies and beverages and meet others who will be studying abroad in the Spring!

Susan W. Herrera and Dr. Linda Serra Hagedorn invite YOU, a member of a very select group from the XXXXXXXX, to take two assessments, one before you go and one when you return, that will provide an indication of your gain in GLOBAL skills as a result of your study abroad experience. These assessments are NOT TESTS and your answers will in no way affect your grade. We invite you to do the following:

Come to an Information and Assessment event on Wednesday, November 7, 2007 from 3:00 – 4:30 pm at the XXXXXXXX. You will have take two assessments and have time to socialize with others who will be studying abroad in the Spring. You will also be able to ask questions about the Global Competence and Global Consciousness Assessments.

Then when you return to the U.S., we will invite you to a Welcome Back Party where you will reconnect with the other students who took the first assessments, share your experiences abroad, have a chance to win prizes, and take the second assessments.

After we evaluate the assessments, we will provide guidance on how you have become more GLOBAL and give you tips on how to sell your NEW GLOBAL SKILLS to future employers.

EASY!

So...who are we?

Susan W. Herrera is XXXXXXXXXXXX campus, XXXXXXXXXXXXXXXXXXXX and a Ph.D. student in the department of XXXXXXXXXX researching the development of Global Competence and Global Consciousness.

Dr. Linda Serra Hagedorn is XXXXXXXXXXXX She has extensive international experience lecturing and presenting in countries such as Russia, China, and Vietnam . She was also a Fulbright Scholar in Vietnam.

Why is this study important?

Globalization requires that the new workforce be both globally competent and globally conscious. Our goal is to help others to develop and enhance their skills.

Please note that your participation in this study is strictly voluntary and your grades will not be affected in any way if you don't want to participate. Your confidentiality will be fully protected.

If you have any questions, please contact us:

THANK YOU!

Susan W. Herrera

XXXXXXXXX

Dr. Linda Serra Hagedorn

XXXXXXXXX

Letter to XXXXXXXXXX Students



Go Global XXXX

Global competence and global consciousness are two important concepts that employers are looking for, and that can also improve the world in which we live.

Would you like to participate in a research study that will help us understand how your study abroad will affect your global competence and consciousness?

Susan W. Herrera and Dr. Linda Serra Hagedorn invite YOU, a study abroad student, to take two assessments before you go and two when you return. These assessments will provide an indication of your gain in GLOBAL skills as a result of your study abroad experience. These assessments are NOT TESTS and your answers will in no way affect your grade.

To participate, all you have to do is click on the TWO links below, one for each assessment. PLEASE TAKE BOTH ASSESSMENTS. This process will take you about 30 minutes.

Global Competence Assessment Instrument Int. Center SA v.1.2

<http://www.zoomerang.com/survey.zgi?p=WEB2276X86EWXJ>

Global Consciousness Assessment Instrument Int. Center SA v. 1.2

<http://www.zoomerang.com/survey.zgi?p=WEB2276X8XEXET>

Then, when you return, we will contact you again to take the Posttest assessments.

EASY!

So...who are we?

Susan W. Herrera is XXXXXXXXXX. and a Ph.D. student in the department of XXXXXXXXXX researching the development of Global Competence and Global Consciousness.

Dr. Linda Serra Hagedorn is XXXXXXXXXXXXXXX. She has extensive international experience lecturing and presenting in countries such as Russia, China, and Vietnam . She was also a Fulbright Scholar in Vietnam.

Why is this study important?

Globalization requires that the new workforce be both globally competent and globally conscious. Our goal is to help students develop and enhance these skills.

Please note that your participation in this study is strictly voluntary and your grades will not be affected in any way if you don't want to participate. Your confidentiality will be fully protected.

If you have any questions, please contact us:

THANK YOU!

Susan W. Herrera

XXXXXXXXXX

Dr. Linda Serra Hagedorn

XXXXXXXXXX

We wish you a successful and enjoyable study abroad experience!
November, 2007 (for Spring 2008 study abroad students)

Letter to XXXX Control Group



January 7, 2008

We kindly request your participation in a study that is designed to understand if students can develop global competence and global consciousness through participation in internationalized courses such as study abroad.

This study is important because globalization requires that the new workforce be both globally competent and globally conscious. Our goal is to help students develop and enhance their global skills.

Your participation is strictly voluntary and will not affect your grade in any way if you don't want to participate. Your confidentiality will be fully protected.

To conduct this study we need two groups of students: One group who is NOT participating in an internationalized course (Control group) and one group who did (Experimental group).

We would like to ask for your participation as a member of our control group if you ARE NOT PARTICIPATING IN A STUDY ABROAD COURSE DURING THE SPRING OF 2008.

To participate we will ask you to take TWO assessments ONLINE, first at the beginning of this Spring semester, and TWO at the end of the Spring semester. These assessments are NOT TESTS and your answers will in no way affect your grade.

It is easy to participate! Just go to the following links and take BOTH assessments (one for each link).

The Global Competence Assessment Instrument (GCAI-1)

<http://www.zoomerang.com/survey.zgi?p=WEB227B7K626U8>

The Global Consciousness Assessment Instrument (GCAI-2)

<http://www.zoomerang.com/survey.zgi?p=WEB227B7L727GC>

Please respond by: February 1, 2008

THANK YOU VERY MUCH!

The researchers are:

Susan W. Herrera, Ph.D. candidate XXXXXXXXXXXXXXXXXXXX researching the development of Global Competence and Global Consciousness as part of her dissertation.

Susan is also the XXXXXXXXXXXX

Dr. Linda Serra Hagedorn, XXXXXXXXXXXXXXX She has extensive international experience lecturing and presenting in countries such as Russia, China, and Vietnam . She was also a Fulbright Scholar in Vietnam. Dr. Hagedorn is Susan's doctoral committee chair.

If you have any questions, please contact us:

THANK YOU!

Susan W. Herrera

XXXXXXXX

Dr. Linda Serra Hagedorn

XXXXXXXX

Letter to returning students for posttest participation

April 1, 2008

Dear Spring 2008 Study Abroad Students:

THANK YOU for participating in the Global Competence and Global Consciousness study by taking the pretests before you left. As you recall, there were two parts to this study, pretests and posttests.

NOW, as you approach the end of your study abroad experience, we ask you to please take the posttests for Global Competence and Global Consciousness. IT IS EXTREMELY IMPORTANT that you take the posttests as we will not be able to use the data without BOTH the pre and post- tests completed. These are shorter than the pretests!

You must take BOTH tests before April 11, 2008. To take the tests, please go to the following links. Take one test first, and then the other test. It will take you no more than 30 minutes to complete both.

<http://www.zoomerang.com/Survey/?p=WEB227MD3E8WMT>
Global Competence GCAI-1

<http://www.zoomerang.com/Survey/?p=WEB227MD3H8WPM>
Global Consciousness GCAI-2

If you have any questions about this study, please email me, Susan W. Herrera, at XXXXXXX, and I will be happy to discuss it with you. You can also call me at any time at XXXXXXXX

Thank you again for your participation, and we hope you are having a wonderful study abroad experience.

Susan W. Herrera, Ph.D. Candidate
Linda Serra Hagedorn, Ph.D.

APPENDIX F
INFORMED CONSENT FORM

Informed Consent

Protocol Title: Assessing Global Competence and Global Consciousness (Pilot and Implementation)

Please read this consent document carefully before you decide to participate in this study.
Purpose of the research study: To determine the effectiveness of “internationalized” curricula in developing global competence and global consciousness.

What you will be asked to in the study: To complete two assessment instruments on two occasions, first at the beginning of the course and then at the end of the course, the Global Competence Assessment Instrument GCAI-1 and the Global Consciousness Assessment Instrument GCAI-2.

Time required: 30 minutes

Risks and Benefits: This study will add to the understanding of the internationalization process in institutions of higher education, by providing an insight into the effectiveness of course models in developing global competence and global consciousness. There are no anticipated risks except for a minimal loss of instructional time while taking the test.

Compensation: There is no compensation for participating in the study.

Confidentiality: Your identity will be kept confidential to the extent provided by law. You will be asked to create a code number to identify you for the pre and posttest. This identification will be your birth date in two-digit format, month, day and year, followed by the first initial of your first name and the first initial of your last name. All data will be analyzed in the aggregate and under no circumstances will individual responses be made known.

Voluntary participation: Your participation in this study is completely voluntary. There is no penalty for not participating. Not taking this test will not affect your grade for the class.

Right to withdraw from the study: You have the right to withdraw from the study at anytime without consequence. You do not have to answer any questions you do not want to answer or provide materials you do not want to provide.

Whom to contact if you have questions about the study: Dr. Linda Serra Hagedorn,
XXXXXXXXXX Susan W. Herrera, Ph.D. student, XXXXXXXXXXXX

Whom to contact about your rights as a research participant in the study:
XXXXXXXXXXXXXXXXXXXX

I have read the procedure outlined above. I voluntarily agree to participate in this study and have received a copy of this description.

Participant's signature and date _____

Principal investigator's signature and date

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BIOGRAPHICAL SKETCH

Susan W. Herrera is a Ph.D. candidate in higher education administration at the University of Florida in 2008 with a minor in English for speakers of other languages. She holds a master's degree in education from National Louis University in Evanston, Illinois, and a Bachelor of Science in Foreign Language and Mass Communication Media from American University in Washington, D.C.

Ms. Herrera's interest in internationalizing higher education was fueled by the need to educate the next generation of professionals to be able to function effectively in global environments and to understand the impact of globalization on humanity. This need became apparent as a result of her over 20-year career as a cross-cultural consultant and trainer preparing executives and employees to conduct business internationally. She has also consulted for public and private organizations in managing and leveraging diversity. Her successful business ventures, as president and CEO of The Global Institute of Languages and Culture, Inc. and president of CultureSense International, Inc. have been featured in The Miami Herald, Ft. Lauderdale Sun-Sentinel, Delta Sky Magazine, Broward County—The Venice of America, and the South Florida Business Journal. Her list of clients have included companies such as Motorola, Pepsi-Cola, IBM, American Express, Blockbuster, Citibank, Caterpillar, GE Medical Systems and nonprofit government and academic organizations.

Ms. Herrera is presently the assistant director for the University of Florida Leadership Development Institute. Her primary responsibilities include the design, development, and implementation of the Executive Global Leadership Program and core curriculum. She is also a member of the board of directors and of the leadership team creating national and global strategy for the institute. She directs all faculty, instructional designers, and project coordinators. She is

also responsible for formulating strategic plans for curriculum/product development aligned with finance, business development, and marketing.

In addition to corporate teaching and training, Ms. Herrera's academic experience includes teaching education courses at the University of North Florida and St. Johns River Community College in Florida; English as a second language at Nova Southeastern University and Ft. Lauderdale College in Florida, and at St. Augustine College in Chicago; and teaching in and directing a high school bilingual education program at West Aurora High School in Aurora, Illinois.