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GLOBAL COMPETENCE SURVEY DEVELOPMENT

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Kathryn Brantley Todd, Student
Dr. Linda S. Levstik, Major Professor
Dr. Robert Shapiro, Director of Graduate Studies
GLOBAL COMPETENCE SURVEY DEVELOPMENT

DISSERTATION

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the College of Education at the University of Kentucky

By
Kathryn Brantley Todd

Lexington, Kentucky

Director: Dr. Linda S. Levstik, Professor of Social Studies Education

Lexington, Kentucky

2017

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ABSTRACT OF DISSERTATION

GLOBAL COMPETENCE SURVEY DEVELOPMENT

The research objective for this dissertation study was to build a preliminary survey that would, in its final form, allow educators and administrators to establish baseline information on individuals’ global competence characteristics prior to instruction, cross-cultural experience, international study or collaboration. A secondary aim concerned length: The intent was to keep the eventual final survey at 15 minutes or less to make it adaptable to a variety of settings. The researcher extracted terms and phrases from existing global competence definitions (e.g., Boix-Mansilla, Jackson, Asia Society & Council of Chief State School Officers, 2011; Hunter, 2005), related literature (e.g., Lambert, 1994), and previous research (Todd, 2013) to develop a definition and theoretical framework for this competence. Central to the developed definition and framework were the disposition/affective realm, knowledge, skill, and action elements, and a clear connection to cosmopolitanism (e.g., Appiah, 2006). Currently, a global competence definition and survey tied directly to cosmopolitanism do not exist. The learning theories of Vygotsky (1986), Bandura (1977), Lave (1993), and Kolb (Kolb, Boyatzis, & Mainemelis, 1999) also provided insight into global competence development for measurement purposes. The four-step study method included building a draft survey from the developed global competence definition, field testing the draft survey with a purposive sample (e.g., Babbie, 2007b; Teddlie & Yu, 2007) in order to make initial revisions to the instrument, conducting a Delphi review (e.g., Cyphert & Gant, 1970; Fogo, 2014; Helmer, 1967) of the revised draft survey to further refine the instrument, and describing the field-test sample using data from items retained in the resulting survey from the Delphi review. The outcome of each of the four steps constituted the findings for this research. Future research could involve adding new items and then field-testing the survey once again to examine the statistical structure of the developing instrument.

KEYWORDS: Global Competence, Cosmopolitanism, Survey Development, Delphi Method, Elaboration Model
GLOBAL COMPETENCE SURVEY DEVELOPMENT

By

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April 19, 2017
DEDICATION

For my husband and best friend, Jake, who listened to, loved, and encouraged me through the best and the hardest of times in this work. Thank you for challenging, motivating and stimulating my thought process. Your support as a partner is rare; I am so grateful to you and to have shared this experience with you. I love you. For Mom, Dad, and Troy, who encouraged my passion for education and for people. You taught me to appreciate and to value differences between individuals, but also to cherish those variations. You believed in me and helped me to understand that everyone, including me, has a meaningful contribution to make. I love you and I thank you. For David and Monica Bliss, who have loved and treated me like their own, and who believed I had the “grit” to complete this work. And for Dr. Linda Levstik, who taught me that less is more and that it’s okay to be idealistic in our ideas, because from such ideas change can happen. It is because of each of you that I was able to cross this finish line. Thank you.
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Chapter 1

Introduction

In 2009, the Council of Chief State School Officers (CCSSO) and the Asia Society Partnership for Global Learning established the EdSteps Global Competence Task Force to determine components of global competence and methods of infusing learning for such competence into P-12 curricula (Bayerl & Goldberg, n.d.). In 2011, the Asia Society and the CCSSO published a book co-authored by Task Force representatives, Drs. Veronica Boix-Mansilla of the Harvard Project Zero and Anthony Jackson of the Asia Society (Boix-Mansilla, Jackson, Asia Society & CCSSO, 2011). This book served as a source for the United States Department of Education’s International Strategy for 2012-2016 (USDE, 2012), which emphasized the need to “increase the global competencies of all students in the U.S., including those from traditionally disadvantaged groups” (p. 5). According to my review of the literature, this inclusion of the global competence concept represented the first time it appeared in a federal document.

The need for global competence arises from the ubiquity of globalization, as evidenced by human mass migration, the spread of disease, the global economy, the rise of technology, and the prevalence of environmental problems (Zhao, 2010). Boix-Mansilla et al.’s (2011) definition of global competence reads “…the capacity and disposition to understand and act on issues of global significance” with students being able to “…investigate the world…recognize their own and others’ perspectives, communicate ideas, and take action” (p. 102). The USDE (2012) employed this definition in its International Strategy. In their book, Boix-Mansilla et al. (2011)
described teaching methods for developing globally competent students capable of resolving globally pressing issues. With a focus on students understanding their own and others’ perspectives, and using investigation and effective communication to take informed action for positive change in the world, it is logical that Boix-Mansilla et al. (2011) placed this competence in the global education field.

The current work takes a similar stance to that of Boix-Mansilla et al. (2011) by situating global competence in the global education field. I, too, perceive the necessity for positive human interaction among culturally diverse people to solve global problems as an underlying reason for developing this competence in present and future generations. A review of existing global competence definitions included in the next chapter in Table 2.1, however, revealed the need for a definition that sufficiently portrays the concept’s complex bundle of characteristics as well as the theoretical link among them.

A number of terms with similar, though not always parallel, meanings have been employed to describe a competence related to living in the current globalized environment (Deardorff, 2004, p. 14). For example, there is intercultural competence (Deardorff, 2004; Devine, Green, & McDowell, 2010), intercultural communication competence (Gibson, Rimmington, & Landwehr-Brown, 2008), cross-cultural competence (Johnson, Lenartowicz, & Apud, 2006; Leiba-O’Sullivan, 1999), transnational competence (Adler & Bartholomew, 1992), and international competence (Lambert, 1993), among others. Even after identifying the many types of competences recorded in the literature, I selected global competence since globalization plays such a pervasive role in the everyday and professional lives of the world’s peoples.

1In addition, there are also many authors who use global competence (e.g., ACIE & the Stanley Foundation, 1994, 1996; Boix-Mansilla et al., 2011; Council on International Educational Exchange [CIEE], 1988; Engle, Mendenhall, & Stedham, 2001; Gragert, 2012; Hunter, 2004, 2005; Lambert, 1994).
In a paper released in October 2013, Reimers explained that,

The Education directorate of the Organisation for Economic Co-operation and Development [OECD]...is well positioned to assume a leadership role in advancing the development and implementation of cross-national assessments of global competencies of students. (Reimers, 2013, p. 2)

A presentation on the OECD’s website spoke of the “first Call for Tender (CFT)” (OECD, n.d.c, slide 2) in January 2014 for the “PISA [Programme for International Student Assessment] 2018 project” (slide 2). This project was stated to include “Major subject area: Reading; Minor subject areas: Mathematics, science” and an “Innovative assessment: Global Competence” (slide 3). The PISA instruments have been administered every three years since 2000 (OECD, n.d.a). According to an OECD document detailing the assessment’s development,

PISA seeks to measure how well young adults, at age 15 and therefore approaching the end of compulsory schooling, are prepared to meet the challenges of today’s knowledge societies – what PISA refers to as “literacy”. The assessment is forward looking, focusing on young people’s ability to use their knowledge and skills to meet real-life challenges… (OECD, n.d.d, p. 6)

The inclusion of global competence as part of such a global assessment as PISA, which intends to test subjects and topics applicable to authentic circumstances that students worldwide may encounter in everyday life, speaks to this concept’s growing international significance.

Even with the current international interest in global competence, for the purposes of this work I will focus on U.S. perspectives on this concept. This is, in part, because much of the literature on global competence originates from U.S. organizations such as the Council for International Educational Exchange, the American Council on International Intercultural Education and the Stanley Foundation, and the American Council on Education. All of these organizations emphasize the development of certain
qualities by U.S. citizens, which are either parallel to, or synonymous with, global competence characteristics.

Education helps prepare individuals to succeed in civic and professional environments, which are swiftly becoming globalized, and thus, it offers a potential setting for global competence development (Zhao, 2010). But despite the essential connection between the education field and global competence, authors from a variety of areas address this concept and its development, as discussed in the Literature Review of Chapter 2. Several works mentioned in Chapter 2 originate from the fields of education and international business because they intersect in important ways. For instance, according to Business Roundtable (2013),

International trade supports an estimated 38 million American jobs, and U.S. trade-related employment grew six and one-half times faster than total employment between 2004 and 2011. Trade – both exports and imports – supports more than one in five American jobs. (paras. 1-3)

The field of education, though, receives the greatest attention in the Literature Review because of the potential for educational settings to offer primary avenues for global competence development, which applies to social and professional environments alike.

A recent development that speaks to globalized community environments and to the need for global competence is a project called Mapping the Nation, which was launched by the Asia Society, The Longview Foundation, and Statistical Analysis System (SAS) (Asia Society, 2016b; SAS Institute Inc., n.d.). According to the Asia Society (2016e), “Mapping the Nation is an interactive map that pulls together demographic, economic, and education indicators…to show that the United States is a truly global
nation” (para. 1) with data derived from several entities.\(^2\) Looking at a couple of states that may not typically be considered as *global* proves enlightening.

For example, West Virginia’s foreign-born population increased by 25\% between 2000 and 2010, with Spanish, French, and German serving as the most frequently used foreign languages (Asia Society, 2016f). The data for Iowa reveals that the foreign-born population increased by 41\% between 2000 and 2010, with Spanish, German, and Vietnamese serving as the most frequently used foreign languages (Asia Society, 2016d). This growth in the presence of cultural and linguistic diversity in local communities through globalization supports a need for globally competent individuals and a method to measure its development. As the Asia Society (2016c) stated with regard to the *Mapping the Nation* project,

> Education data that measures global competence is incomplete. There are no data-centered assessments measuring student global competency. The lack of data is in many ways an indicator that, up to the present, the true value of global competency has not been recognized. (para. 1)

The present study is a step toward the establishment of an instrument to measure individuals’ global competence characteristics in the development process.

**Purpose of the Study**

This exploratory study presents a preliminary survey instrument to measure global competence. This study also offers a definition of global competence that details the elements and sub-elements of this concept. It is important to note that the survey resulting from this multi-step dissertation study is not in final form and ready for use. Rather, the survey from this study represents completion of the first phase in a process

\(^2\) Such entities include Datamyne, The Trade Partnership, NAFSA: Association of International Educators, Institute of International Education, the College Board, and the U.S. Census Bureau, among others (Asia Society, 2016a)
that will require future research to more fully develop the instrument. Furthermore, in the construction of this preliminary survey, it became clear that this instrument could only capture particular aspects of global competence due to the multifaceted nature of this concept and the limited possibilities of measurement that a survey tool can offer. Yet, this study provides a step toward the establishment of a survey that measures global competence as depicted in a definition that attempts to convey the very complex nature of this concept.

**Research Objective**

The research objective for this dissertation study was to build a preliminary survey that would, in its final form, allow educators, supervisors, administrators, and mentors to establish baseline information on individuals’ global competence characteristics prior to instruction, cross-cultural experience, international study or collaboration. A secondary aim concerned length: The intent was to keep the eventual final survey at 15 minutes or less to make it adaptable to a variety of settings and situations. Thus, the aim in this study was to build a preliminary survey that was brief in length at approximately 15 minutes.

An initial survey draft was developed using the following global competence definition, which I constructed from the literature and existing definitions of the concept:

Global competence is one’s embodiment of four elements: A disposition and affect toward culturally diverse peoples set into motion by open-mindedness; a body of knowledge founded on an understanding of one’s own cultural background, globalization, and world languages; a set of skills such as the abilities to collaborate, investigate globally pressing issues, and communicate effectively, with these three elements uniting for the purpose of taking action for the global good, thus rendering the globally competent individual a cosmopolitan. (Todd, 2013)
I discuss the development of this definition in Chapter 2. Both the survey and the definition were continually revised throughout the study based on data gathered at different points in the research. The study’s results consist of a preliminary survey, referred to as the Revised Survey in later chapters, as well as a revised global competence definition.

**Significance of the Study**

Although the Organisation for Economic Co-operation and Development (OECD) plans to assess global competence in 2018, the PISA test measures students’ knowledge and skills “at age 15 and therefore approaching the end of compulsory schooling” (OECD, n.d.d, p. 6). Thus, PISA represents more of an end-point assessment, even though students can continue learning throughout their lifetimes, a point acknowledged by the OECD (n.d.b). The survey under development in this study, however, is intended to provide insight into learners’ global competence characteristics for educators and other leaders prior to engaging in teaching for this competence.

A review of the literature uncovered a second tool for the measurement of global competence, called the Global Competence Aptitude Assessment® (Global Leadership Excellence, 2016a). Hunter (2005) developed the GCAA® based on his dissertation research and although our depictions of the characteristics of global competence converge at many points, the theoretical frameworks from which we derived them are different. He assumed a more work-related perspective with regard to the need for global competence, focusing on individual achievement and competition in the current globalized environment. In the theoretical framework for the present dissertation, cosmopolitanism as discussed by Appiah (2006), Rizvi (2009), and Saito (2010) serves as
the aforementioned theoretical link that binds the global competence characteristics, which I see as applicable to both personal and professional settings. Appiah (2006) explained cosmopolitanism as “two strands that intertwine…the idea that we have obligations…that stretch beyond those to whom we are related by the ties of kith and kind…” and “that we take seriously the value not just of human life but of particular human lives…People are different, the cosmopolitan knows, and there is much to learn from our differences” (p. xv). At this time, a global competence definition directly tied to cosmopolitanism and a survey built from such a definition do not exist.

Due to the current tide of global interconnectedness, Appiah (2006) described conversation among culturally diverse individuals as “inevitable” (p. xxi). It would seem, then, that the role of discourse across cultural and linguistic differences is an important one for solving problems and establishing effective relationships at all social levels – global, local, personal or professional. Today each of these settings is becoming more diverse and presents a need for productive conversations across differences. The current research presents a step toward a means of measuring individuals’ capacity to participate in the kinds of conversations and collaborations suggested by Appiah’s (2006) depiction of cosmopolitanism.

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Chapter 2

Literature Review

Interesting shifts in language have occurred as scholars discuss preparing students for the growing diversity in American communities. McJimsey, Ross, and Young (2016) described international and global education as “imperative to develop the skills, knowledge, and attitudes needed for responsible participation in a democratic society and in a global community in the twenty-first century” (para. 3). While both of these educational areas are important to understanding the world and its inner workings (e.g. geography, peoples, cultures, economic and political relationships), the present work situates the global competence concept within the field of global education.

McJimsey et al. (2016), on the National Council for the Social Studies (NCSS) website, characterized global and international education as,

Complementary approaches with different emphases….Global education focuses on the interrelated nature of condition [sic], issues, trends, processes, and events while international education emphasizes specific world regions, problems, and cultures. (paras. 2-3)

Understanding these differences between the two fields influenced my decision to align global competence with global education. An examination of the global education field’s historical development provided context for the McJimsey et al. (2016) definition and for the evolution of the global competence construct. The Literature Review begins with the historical development of the global education movement, proceeds with global competence descriptions and assessments from the literature, and is then followed by the conceptual and theoretical framework for this research.

The Historical Shift From International to Global

According to Sutton (1998), a desire for peace after World War II and for
information with which to defeat the Soviet Union during the Cold War served as foundations for *international* education prior to 1968 (para. 26). She then noted a shift in perspective that led to heightened interest in *global* education:

> In the late 1960s...a new theme emerged: the earth as seen from space. Pictures of the earth as a big blue marble adorned many of the earliest pieces written on global education. The global education movement, which arose concurrently with the landing of United States astronauts on the moon, placed new emphasis on understanding the world as a set of interlocking systems, rather than of self-contained political entities. (para. 26)

This shift toward a global perspective was especially evident in a report requested by the U.S. Office of Education and published in 1969. Spearheaded by James Becker, the national director of school services for the Foreign Policy Association at that time, the report was entitled *An Examination of Objectives, Needs, and Priorities in International Education in U.S. Secondary and Elementary Schools* (para. 27). Sutton (1998) explained that most historians consider this report as the origin of the global education movement.

> Anderson and Becker (1969), in a precursory document to the Foreign Policy Association report, infused their discussion of international education at that time with the guiding notions of what became known as global education:

> ...It has become useful to think of the *human species* [emphasis added] as reaching a point on the scales of *interdependence, common values, and shared problems* [emphasis added] where we can analytically view the planet’s population as members of a single, albeit loosely *integrated, society* [emphasis added]. (p. 438)

Despite the publication of this momentous report, Sutton (1998) noted that global education never received the needed government financial support to survive as a widely recognized field in education, nor did it have a single academic home within education, though it fit most easily within social studies and comparative education (para. 36).
Nevertheless, the 1970s saw a number of developments for teaching and learning in the fledgling field. These included global and international education-related organizations and centers for teaching and learning that were opened in U.S. universities and state departments of education\(^3\) (Sutton, 1998, para. 43). Also, NCSS heightened its advocacy for global education through its involvement with teacher travel programs, with social studies teachers abroad, and with the United Nations Educational, Scientific and Cultural Organization, and then included wording in its guidelines endorsing global education (paras. 40-41). But, the Vietnam War, the Civil Rights Movement, and the Reagan Administration’s priorities appeared to counter the progress of the global education movement by persuading teachers to devote more time to domestic topics (ACIIE & The Stanley Foundation, 1994; Sutton, 1998).

The 1983 report, *A Nation at Risk*, argued that educators should focus on preparing students to succeed in school and in their careers in order to benefit the U.S., which the report described as struggling economically (Sutton, 1998; Zhao, 2009). The impetus for global education, thus, became primarily economic as the Cold War ended in the late 1980s. Lack of funding once again, however, hindered the systematic inclusion of global education in the K-12 social studies curriculum and in U.S. postsecondary programs (Sutton, 1998).

While a number of the 1970s’ global education centers endured through the 1990s, *international* education’s governmental and organizational financial backing diminished in the 1980s (Sutton, 1998, para. 60). But, as Sutton (1998) discussed in her article, the CCSSO published a statement in 1985 that insisted on *global* education:

\(^3\) An example includes the Mid-American Program for Global Perspectives in Education (MAP) (Sutton, 1998, para. 37).
Students must have an opportunity to learn their own culture in a global perspective [emphasis added]. The perspective stresses the relation of human development to an appreciation of differences and similarities between cultures and the interdependence among peoples and environment [emphasis added]….The educational system must assure an informed citizenry aware of the political, social, and environmental issues of the world [emphasis added]… (CCSSO, 1985, p. 4)

I view these italicized global education elements as integral parts of the global competence concept examined in this work, and thus I situate this concept within the field of global education.

**Global Competence as Part of the Global Education Field**

Although research related to the global competence construct offers utility to numerous fields, I focus on its importance in and to education. As mentioned in Chapter 1 (p. 4), the field of education offers a potential avenue for global competence development applicable to globalized professional and social settings (Zhao, 2010). While certain authors aligned the global competence construct with the international education field, I align this construct with the global education field. With its emphasis on human interconnectedness, which I view as a central reason for global competence development, the global education field serves as the narrowed disciplinary home for this construct in the present work. Other authors have presented similar views on the importance of education and of global education to fostering global competence development, and it is to these works that I turn next.

In 1994, the American Council on International Intercultural Education (ACIIE) and the Stanley Foundation held a conference to develop a plan for how to incorporate

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4 Such fields include business (e.g., Adler & Bartholomew, 1992; Bismuth & Edmundson, 1994; Miller, 1994; Swiss Consulting Group, 2002), engineering (e.g., Sangster, 1994), global health (e.g., Wilson et al., 2012; Wilson et al., 2014), international and area studies (e.g., Jackson, 1994; Stohl, 1994), journalism (e.g., Huebner, 1994), and law (e.g., Young, 1994), among other areas.

global education into every U.S. community college (see Appendix A, p. 221 for more information on these two organizations). The ACIIE and the Stanley Foundation (1994) summarized the findings from this conference, and explained clearly that global education equaled international education and multicultural education: “Taken together, the two currents form the seamless web that many refer to as ‘global’” (p. 1). Furthermore, the report’s authors described global education as a “mandate” (p. 1) at the time of the report and for the 21st century. They also communicated the need for national community college associations to implement a statement claiming, “global competency is at the core of education” (p. 12).

In 1996, the ACIIE and the Stanley Foundation held a second conference on the topics of describing a “globally competent learner” (p. 1) and of developing such learners. In their conference findings, the ACIIE and the Stanley Foundation (1996) explained that community colleges needed to infuse learning for global competency into academic curricula, rather than treating it as an “additive” (p. 9). The authors also concluded that “global education is now recognized as a dominant component of meaningful, futuristic, and applicable education… [Provision of global education] is a worthy service to [learners] and to their community, college, nation, and world” (p. 19).

Reimers (2009), in an article released the year after the acts of terrorism in Mumbai, suggested that development of global competence and global citizenship could help people worldwide to adjust to the current globalized environment, and could encourage the pursuit of future peaceful resolutions (lines 1-10). Despite his interchangeable use of global and international competence in this article entitled “Global
Competency,” he connected his discussion of global competence development to the

global education field (see line 175).

Two years later, the Asia Society published the work of Boix-Mansilla et al.
(2011). As discussed in Chapter 1, these authors situated global competence within the
global education field. Again, this choice of field was logical given the authors’ focus on
students understanding their own and others’ perspectives, and using investigation and
effective communication to take informed action for positive change in the world. I first
learned of the global competence construct through Boix-Mansilla et al.’s (2011) book
and, thus, it greatly influenced my initial understanding of this construct.

**Definitions of Global Competence from the Literature**

In their book, Boix-Mansilla et al. (2011) defined global competence, argued for
its importance for all students, and placed sharp focus on P-12 education. They provided
numerous examples of classroom teaching and learning for global competence
development throughout P-12 to illustrate students’ embodiment of this competence. The
authors defined global competence as follows: “the capacity and disposition to
understand and act on issues of global significance,” with students being able to
“...investigate the world...recognize their own and others’ perspectives, communicate
ideas, and take action” (p. 102). Of equal importance, they offered guidance for infusing
a global focus into curricula for different content areas, and included global competence
matrices for the Arts, English Language Arts, Math, Science, Social Studies, and World
Languages (pp. 103-108).

Reviewing earlier documents pertaining to global competence provided
perspective on the evolution of the construct’s meaning over time. The first document to
address global competence derived from the Council on International Educational Exchange (CIEE, 1988), which introduced the term in a conference report, but did not define it. A description of the CIEE can be found in Appendix A. The CIEE (1988) report aimed to increase the number of U.S. postsecondary students who studied abroad. It explained that for the U.S. population to become globally competent, students involved in areas such as math, science, education, business, technology, economics, and international affairs should study abroad to learn different viewpoints from those within their academic field in other countries.

A year later, one of the CIEE (1988) report’s contributors, Lambert (1993) presented his ideas on international education and international competence, the latter of which he used interchangeably with global competence. To describe the global competence development process, Lambert (1993) drew on Bennett’s (e.g., 1986, 2004) Developmental Model of Intercultural Sensitivity. Lambert (1993) described this process as the shift from “ethnocentrism,” or the belief that everyone holds his or her cultural viewpoint, to “ethnorelativism” (p. 311), or comprehension of his or her culture as one among many. Lambert (1993) wrote that information, empathy, and a positive attitude regarding a country visited together equaled ethnorelativity; however, when foreign language ability and “interactive coping skills” were also included, the result was “international competence” (p. 319).

Lambert (1994) then served as the editor for a book with chapters written by attendees of a second CIEE conference in 1993. Jack Egle, then President-Executive Director of the CIEE, explained in the preface of the Lambert (1994) edited book that:

The landscape was permanently and dramatically altered by the [CIEE, 1988] publication….And yet there was one thing it did not do. It did not tell us what
was meant by the term global competence. The report assumed we all knew what global competence was and that, moreover, educational exchange was central to its acquisition. Over time some of us have come to realize that the term is by no means clear or obvious, nor is the relationship to exchanges. So we decided to take another look at the issue at our Annual Conference in 1993. (Egle, 1994, p. vii)

The purpose of this second conference and of the work published in 1994, thus, was to further examine the meaning of global competence and its connection to the international student exchange experience.

Lambert (1994) contended that there might be different kinds of global competence, an issue explored in some depth by authors from the fields of business, journalism, the sciences, (regional) area studies, law, engineering, and education in his edited volume. In his earlier article, Lambert (1993) considered this possibility given a shift he saw in the purpose of study abroad: a shift from “character building” to “task performance” (p. 323). The task performance component emphasized that students would need to be able to do something with their global competence. However, the book’s authors seemed to agree that how professional fields would prepare globally competent individuals, presumably to complete discipline-specific tasks, remained undetermined (Lambert, 1994). Regarding study abroad, Lambert (1994) described how students could gain understanding of, and empathy for, other cultures through “experiential” (p. 291) learning, as documented in the book’s chapters discussing accounts of returned students.

In addition to questions related to global competence development and study abroad the book’s authors also explored the topic of its assessment. One of these authors, Lapointe (1994), explained that while the Educational Testing Service possessed methods to measure skills such as foreign language ability, the most useful measurement
techniques for global competence could not be identified or formulated until researchers
determined a definition. He explained that even with established definitions of global
competence and its sub-components in hand,

…the most subtle and probably the most crucial elements of the definitions do not
lend themselves to easy evaluation. We have learned to live with this and to
develop an increasingly greater respect for the human judgment that must make
the final determination on whether a person is globally competent or not. (p. 279)

In the book’s closing chapter, Lambert (1994) concurred with this sentiment stating that
if researchers could not define this competence and its features, then they could not
assess it. Specifically, he concluded that, “It seems clear that the search for a precise
definition of the term [global competence] is illusive [sic]” (p. 285).

A number of other authors, however, have presented lists of proposed elements
and definitions of the global competence construct. Table 2.1 displays these elements
and definitions from over a period of approximately 20 years, and primarily from the
international business and education fields. Reviewing these descriptions
chronologically, they appear to gradually shift from lists of components to fluid
descriptions, perhaps demonstrating a growing evolution in the understanding of the
global competence construct.
<table>
<thead>
<tr>
<th>Author &amp; Year</th>
<th>Definition/Description</th>
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<tr>
<td>Adler &amp; Bartholomew (1992)</td>
<td>Globally competent business managers possess the following “skills” (p. 53): “[A] [g]lobal perspective; learn[s] about many cultures; work[s] with and learn[s] from people from many cultures simultaneously; adapt[s] to living in many foreign cultures; use[s] cross-cultural interaction skills on a daily basis…; interact[s] with foreign colleagues as equals; and [has] [f]oreign [e]xperience” (p. 54).</td>
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<tr>
<td>Lambert (1993)</td>
<td>Global/international competence: Ethnorelativity (information, empathy, and a positive attitude regarding a country one visits) along with foreign language ability and “interactive coping skills” (p. 319)</td>
</tr>
<tr>
<td>American Council on International Intercultural Education (ACIIE) &amp; the Stanley Foundation (1994)</td>
<td>In order to become globally competent, students need the following: “…knowledge and understanding in five areas: global interdependence; human resources, values, and culture; [the] global environment and natural resources; global peace and conflict management; and change and alternate futures [i.e., how to use creative thinking to find solutions to problems]” (p. 3).</td>
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<tr>
<td>Lambert (1994)</td>
<td>“In most of the papers [in this edited book], my own included, the definition of global competence comprises a list of essential components. There is a fair amount of agreement among the authors of the papers about what those components are. My own list…was: knowledge, empathy, favourableness [toward other countries], foreign language competency, and ability to perform a specific international task” (p. 285).</td>
</tr>
<tr>
<td>Wilson (1994)</td>
<td>“[S]ubstantive knowledge, perceptual understanding, capacity for personal growth, ability to develop international interpersonal relationships, and ability to act as a cultural mediator” (p. 285).</td>
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<tr>
<td>ACIIE &amp; the Stanley Foundation (1996)</td>
<td>“Global competency exists when a learner is able to understand the interconnectedness of peoples 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 and benefits of this diversity” (p. 4).</td>
</tr>
<tr>
<td>American Council on Education’s (ACE) Commission on International Education (1998)</td>
<td>“Will our citizens be competent in international affairs, comfortable with cultural diversity at home and abroad, and confident of their ability to cope with the uncertainties of a new age and a different world?” (p. vii).</td>
</tr>
<tr>
<td>Olson &amp; Kroeger (2001)</td>
<td>A globally competent individual has “…enough substantive knowledge, perceptual understanding, and intercultural communication skills to effectively interact in our globally interdependent world” (p. 117)</td>
</tr>
<tr>
<td>Swiss Consulting Group (2002)</td>
<td>“The capacity of an individual or a team to parachute into any country and get the job done while respecting the cultural pathways” (p. 4).</td>
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### Table 2.1

*Global Competence Definitions and Descriptions (continued)*

<table>
<thead>
<tr>
<th>Author &amp; Year</th>
<th>Definition/Description</th>
</tr>
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<tr>
<td>• Hunter (2005)</td>
<td>Global competence is “having an open mind while actively seeking to understand cultural norms and expectations of others, and leveraging this gained knowledge to interact, communicate and work effectively outside one’s environment” (p. 81).</td>
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<tr>
<td>• Shams &amp; George (2006)</td>
<td>A globally competent person has “...knowledge of world geography, conditions, and events...awareness of the complexity and interdependency of world issues...understanding of the historical forces that have shaped the current world system...sensitivity and respect for personal and cultural differences...empathy and can handle ambiguity and unfamiliarity...critical thinking and comparative skills ... [and] understanding of intercultural communication concepts (Green &amp; Olson, 2005).” (Introduction to Global Competency, para. 4)</td>
</tr>
<tr>
<td>• Reimers (2009)</td>
<td>Global competence consists of knowledge (i.e., knowledge of globalization, world history, and geography), skills (i.e., the capacity to “speak, understand, and think” in various languages) and attitudes (i.e., empathy and a “positive disposition towards cultural differences”) (lines 35-47).</td>
</tr>
<tr>
<td>• Van Rokel (2010)</td>
<td>A globally competent person has “...in-depth knowledge and understanding of international issues, an appreciation of and ability to learn and work with people from diverse linguistic and cultural backgrounds, proficiency in a foreign language, and skills to function productively in an interdependent world community”</td>
</tr>
<tr>
<td>• Boix-Mansilla, Jackson, Asia Society &amp; Council of Chief State School Officers (CCSSO) (2011)</td>
<td>Global competence is “…the capacity and disposition to understand and act on issues of global significance” with students being able to “…investigate the world...recognize their own and others’ perspectives, communicate ideas, and take action” (p. 102)</td>
</tr>
</tbody>
</table>

In 2005, Hunter completed a dissertation study on defining global competence. He conducted three rounds of a Delphi technique to develop an agreed-upon definition of global competence, which he placed under the umbrella of international education (Hunter, 2005). Eighteen individuals participated: Four described only as “non-Americans” (p. 61) having international experience in postsecondary education, government or business; seven international educators; and seven transnational corporation human resource managers. The resulting definition appears in Table 2.1. Hunter (2005), then, developed an online survey, based on his definition and literature
review, with the purpose of understanding more about the “knowledge, skills, attitudes, and experiences necessary to become globally competent” (p. 64). He disseminated it to 133 university representatives involved in on-campus international efforts and to 42 transnational corporation human resource officials (p. 82). He discussed his most significant findings in an article published with his advisors a year later.

Hunter, White, and Godbey (2006) noted that the most essential part of becoming globally competent involved developing “a keen understanding of his/her own cultural norms and expectations” (p. 18). From their perspective, a bachelor’s degree is not required for global competence, but it would be necessary to comprehend globalization and to have a strong grasp of world history. Additionally, according to these authors, the capacity to “identify cultural differences to compete globally, collaborate across cultures, and effectively participate in both social and business settings in other countries” (p. 20) is necessary for becoming globally competent. Hunter et al. (2006) explained that open-mindedness is also an underlying characteristic of global competence and included it in the final construct definition (see Table 2.1). The authors, however, depicted this definition as “one [authors’ emphasis] plausible, working definition” and as a “useful starting point, a formulation that can be customized to fit institutional mission and character” (p. 6). A similar version of this definition surfaced again, though, a few years later in an expansion on Hunter’s work for educational consultation purposes.

Global Competence Measurement in the Literature

In 2009, an educational consulting company called Global Leadership Excellence released the Global Competence Aptitude Assessment (GCAA),® the development of which was based on Hunter’s (2005) research (Global Leadership Excellence, 2016a).
The global competence definition presented by Global Leadership Excellence reads, “Having an open mind while actively seeking to understand cultural norms and expectations of others, and leveraging this gained knowledge to interact, communicate and work effectively in diverse environments” (Global Leadership Excellence, 2016e, para. 2). This definition only differs slightly from Hunter’s (2005) definition in Table 2.1, with the phrase “…work effectively outside one’s environment” now reading “work effectively in diverse environments” (para. 2). Intended for use by the education, business and government/nonprofit sectors, the GCAA® “has been thoroughly tested in over 40 countries across six (6) continents, and deemed statistically valid and reliable” (para. 2). Available through purchase, the GCAA® is for use with students from high school to graduate school, and employees in both private and public sectors worldwide (Global Leadership Excellence, 2016c).

The GCAA® measures eight dimensions of the Global Competence Model™, which is divided into “internal readiness aptitudes” and “external readiness aptitudes” (Global Leadership Excellence, 2016e, paras. 4, 6). Each of these larger categories includes four dimensions:

- **Internal Readiness:**
  - Self-Awareness
  - Open-Mindedness
  - Attentiveness to Diversity
  - Risk Taking (paras. 4-5)

- **External Readiness:**
  - Global Awareness
  - Historical Perspective
  - Intercultural Capability
  - Collaboration Across Cultures (paras. 6-7)
Global Leadership Excellence (2016b) describes the assessment’s design as follows:

[T]he GCAA® is comprised of four distinct sections, each with a different question style. There is cross-referencing through the GCAA® as each of the eight dimensions of global competence is evaluated from a variety of angles, using different styles of questions, and varying degrees of difficulty. Additionally, the assessment items are based on all the regions of the world, with particular emphasis placed on those countries that make significant contributions to the world’s population and economy. (para. 1)

The GCAA® is a web-based instrument and takes at least 30 minutes to an hour to complete, depending on individuals’ world history knowledge (Global Leadership Excellence, 2016d). Based on my experience taking the GCAA®, a downloadable assessment report, provided upon completion, presents scores between 0 and 100 for the internal and external readiness aptitudes, as well as on each of the eight dimensions. The report also offers suggestions for further reading related to the aptitudes and dimensions.

The work by Hunter (2005) and Global Leadership Excellence provided a helpful illustration of moving from a concept definition to the development of an instrument. Unfortunately, it was unfeasible to gain access to the inner workings of the survey given the proprietary nature of the GCAA® product. Hunter’s (2005) dissertation, however, provided an example of employment of the Delphi technique, which is also used in the present study. At the same time, the outcome of that method—his global competence definition—demonstrated differences between our conceptualizations as discussed later in the chapter.

DeGarmo and Daniels’ (2009) study, which was based at their own higher education institution, aimed to measure the global competence of Southern Illinois University Edwardsville (SIUE) students. The authors hypothesized that the students would not be globally competent. To build the survey for their investigation, the authors
employed the American Council on Education’s (ACE) descriptions of the necessary knowledge, skills, and attitudes for global competence:

- **Knowledge:** “Understands his/her culture within a global and comparative context….Demonstrates knowledge of global issues, processes, trends, and systems….Demonstrates knowledge of other cultures

- **Skills:** “Uses knowledge, diverse cultural frames of reference and alternative perspectives to think critically and solve problems….Communicates and connects with people in other language communities….Uses foreign language skills and/or knowledge of other cultures to extend his access to information, experiences, and understanding

- **Attitude:** “Appreciates the language, art, religion, philosophy, and material culture of different cultures….Accepts cultural differences and tolerates cultural ambiguity….Demonstrates an ongoing willingness to seek out international or intercultural opportunities” (DeGarmo & Daniels, 2009, p. 4)

The source cited by DeGarmo and Daniels (2009) for these descriptions could not be identified; however, a source on the ACE website presents descriptions closely resembling them.6

DeGarmo and Daniels (2009) then drew from established assessments such as the National Geographic Society’s *Global Literacy Survey*, the Educational Testing Service’s *Measures of Global Understanding*, and James Madison University’s *International Experience Questionnaire* (p. 5). The authors asked the SIUE instructors of 100 randomly selected courses (out of 782 courses offered that semester) to disseminate the survey to the approximate 2,000 potential student volunteers in those courses (p. 6). Only one of the 100 instructors responded, thus the authors approached others whom they knew and who were willing to assist. DeGarmo and Daniels (2009) only received 472 completed surveys (p. 6). As a result, the authors explained that the survey was neither

6 Compare with *Handbook for ePortfolio Raters* from the American Council on Education (ACE)/Fund for the Improvement of Postsecondary Education (FIPSE) Project Steering Committee (n.d.)
generalizable beyond the sample nor was it representative of all 13,449 SIUE students (pp. 2-3).

Using percentages to describe the sample’s results, DeGarmo and Daniels (2009) found that the participating SIUE students were not globally competent, according to their survey. Based on the survey results and an examination of students’ background characteristics, and despite the stated lack of representativeness of results, the authors explained, “The term ‘resistant population’ is being used to describe the students at SIUE” (p. 7). According to the authors, such a population is one that, for the most part, does not possess knowledge of politics or international relations, or travel experience outside their local communities. The authors suggested that these characteristics prevent the students from comprehending international affairs and lead to an opposition of “learning new ideas and concepts” and of “engag[ing] in conversations that do not portray the United States in positive light” (p. 7). Despite the authors’ inclusion of items that quickly became outdated (e.g., items querying current events at the time), their tool offered an example of a global competence measure that used items from existing instruments, resembling the method employed in the present work.

**Conceptual Framework**

As Shams and George (2006) suggested, developing an instrument to measure global competence would be challenging. Consequently, my research into the meaning and measurement of global competence can be described as an iterative process. I first sought to define a *concept*. Nardi (2006) helped in this regard explaining, “A *concept* [author’s emphasis] is an idea, a general mental formulation summarizing specific occurrences, such as ‘gender’ representing such things as masculinity and femininity…”
Nardi (2006), however, went on to explain, “Some concepts are specific and concrete, such as ‘height’ or ‘academic major,’ while others, sometimes called constructs [author’s emphasis], are more complex, abstract, or difficult to define, such as ‘happiness’” (p. 43). Thinking of global competence in this way helped me to grasp its multi-faceted nature involving variables and indicators that could also be described as constructs (e.g., the disposition/affective realm variable with an open-mindedness indicator). The authors within the global competence literature proposed various attributes to describe the global competence construct. However, a few attributes continued to appear in the literature (knowledge, skills, and attitude) resembling agreement on certain elements of this competence. The descriptions I first used for elements of global competence were broader in scope, with many of them derived from the literature on this competence, and from participants who volunteered for a pilot study on this topic (Todd, 2013). In that study, I examined how people learn from their experiences abroad and how they understand global competence as a result of these experiences. The findings from that pilot study informed the present work.

I used digital dictionary resources, specifically Dictionary.com and the Oxford Dictionary of English application, to supplement my understanding of several terms discussed in the global competence literature and voiced by the pilot study participants in the conceptualization stage of this research. As Nardi (2006) explained, “A concept can be defined with a dictionary to produce a common usage of the word, and a search of scientific publications can result in a more suitable definition for the appropriate field of

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7 Dictionary.com primarily draws from the Random House Unabridged Dictionary, “which is continually updated…and supplemented with American Heritage and Harper Collins to support a range of language needs” (Dictionary.com, LLC, n.d.)

8 affect, aware, competence, conscious, disposition, knowledge, open, realm, and skill
study” (p. 43). In the present case, the literature on this competence originated from a number of disciplines, so considering a commonly accepted description of a term sometimes aided in initially defining elements of global competence.

Boix-Mansilla et al.’s (2011) definition of global competence afforded preliminary insight into the construct, but it did not define the word competence. Therefore, I drew on a dictionary definition of competence: It is the “possession of required skill, knowledge, qualification, or capacity” (“Competence,” 2015). From the literature, I understood global as not only the aggregation of geographic elements, but also as the entanglement of human relations within and across those elements. A synthesis of existing literature also led me to view global as pertaining to the transformative change that individuals experience in their development of global competence. I speak to this perspective later, since this realization surfaced toward the end of the conceptualization process as the theoretical denouement.

Defining the Explanatory Variables

From the definitions in Table 2.1 and from the pilot study (Todd, 2013), I selected key descriptive terms of the global competence construct and grouped them based on similar meanings. Challenges arose, however, when I could place some words in multiple groups. These words were labeled outliers and they helped elucidate the foundation upon which I grounded my theory and definition of global competence. I called all final group headings explanatory variables (Preston, n.d.), and named all of the words falling underneath each variable indicators (Nardi, 2006). The explanatory variables reflect four elements as drawn from the literature: attitude, knowledge, skills, and action. Global competence, therefore, is the response variable (Preston, n.d.) defined
by the outcome of these explanatory variables. Although Nardi (2006) referred to an indicator as a survey item, I refer to the sub-elements measured by those items as indicators. The intention behind this decision was to clearly delineate the multi-layered conceptual structure of global competence. Table 2.2 (p. 31) demonstrates the relationship between the four explanatory variables and their constituent indicators.

**Disposition/affective realm.** The first explanatory variable is *attitude*. I changed *attitude* to *disposition* since the latter highlights an individual’s personal tendencies and includes *attitude* within its dictionary definition (“Disposition,” 2015). Reimers (2013) explained that global competence could be seen as “dispositions, ways of thinking and doing” (p. 12). While I refer to *disposition* in the singular, this word denotes a category of what could be several dispositions that describe a globally competent individual. Moreover, despite their correspondence, I separate *ways of thinking* from *doing* for definitional purposes, since the latter describes the *action* variable in this work. I added the phrase *affective realm* to *disposition*, because of the words of an interviewee in the pilot study (Todd, 2013). She used the word “affective” (p. 24) as a global competence characteristic to describe the emotional element that she thought individuals needed to become globally competent. This emotional aspect would lead a globally competent person to want to take action for the good of others. To encapsulate the main ideas of Reimers (2013) and the interviewee, I defined *disposition, affect, and realm* as follows:

- **Disposition** means “the natural or prevailing aspect of one’s mind as shown in behavior and in relationships with others” and “characteristic attitude” (“Disposition,” 2015)
- **Affect** means “feeling or emotion” (“Affect,” 2015)
- **Realm** refers to “the region, sphere, or domain within which anything occurs, prevails, or dominates” (“Realm,” 2015)
The disposition/affective realm variable, thus, describes the part of a person’s mind responsible for his or her temperament shown outwardly in interactions with others.

**Knowledge.** The second explanatory variable is knowledge. Sources within the literature\(^9\) addressed the types of knowledge needed for this competence, but did not elaborate on the actual meaning of the term knowledge. One definition described this term as “facts, information, and skills acquired through experience or education; the theoretical or practical understanding of a subject” (“Knowledge,” 2016b). A second definition described knowledge as “acquaintance with facts, truths, or principles, as from study or investigation; general erudition” (“Knowledge,” 2016a). I used a combination of the two definitions and made further adaptations to represent my comprehension of the word knowledge from the global competence literature. The adapted version of the definition reads as follows: an understanding of facts, information, or principles, gained from study or experience. I changed the word, investigation, to the word, experience, to parallel Vygotsky’s (1986b) account of the relationship between “scientific concepts” and “spontaneous concepts” (p. 147) in the learning process, with the former often learned in school and the latter gained through everyday experience. This process is described later in the chapter starting on page 50.

**Skill.** The third explanatory variable is skill. Addressing this term led me to think about the skills that globally competent people might possess and what they should be able to do with those skills. Reimers (2009) addressed “the ability to conduct effective interpersonal interactions in diverse cultural contexts” (line 92) as did Wilson (1994), who suggested that the “ability to develop international interpersonal relationships” (p.

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\(^9\) e.g., ACIE and the Stanley Foundation (1996); Olson and Kroeger (2001)
was an attribute of global competence. With these ideas in mind, I considered the common usage of the term *skill* and found that it is defined as, “the ability to do something well; expertise” (“Skill,” 2016b). Another definition of *skill* is “the ability, coming from one's knowledge, practice, aptitude, etc., to do something well” (“Skill,” 2016a). Drawing from the literature and from these definitions, I understood *skill* or rather *skills*—since global competence likely encompasses more than one—as certain abilities that allow a person to positively interact with culturally diverse people and in culturally contrasting environments. As for the *certain abilities* that foster such positive interactions, those are discussed later in this chapter (see p. 39).

**Action.** The fourth and final explanatory variable is taking *action* for global good. Appiah’s (2006) perspective on cosmopolitanism, embodied in the following quote, significantly contributed to how I defined the *action* variable and the phrase *global good*: “Cosmopolitanism is about intelligence and curiosity as well as engagement” (p. 168). His account of cosmopolitanism also addressed the importance of conversation with, and engagement on behalf of, *strangers*, or people we may never meet and with whom we may disagree on fundamental issues such as beliefs and ways of life. Thus, I defined *action as engagement*, and *global good* as solving *global issues affecting strangers*. Boix-Mansilla et al. (2011) also addressed engagement, but in the context of global competence:

…social and cognitive engagement—with issues that are both globally significant and part of students’ daily lives—produces emotional engagement as well….It is not uncommon…for students learning about complex topics like climate change, extreme poverty, and disease epidemics to encounter feelings of anguish or despair. The magnitude of these issues may make them feel rather impotent. But such feelings are often followed by the conviction to take action. (p. 62)
These emotional, cognitive, and social aspects of engagement mirror my present conceptualization of global competence: Motivated by a positive *disposition* and *affect* toward people of diverse backgrounds, globally competent individuals use their *knowledge* which informs their *skills* to take *action* for global good. The proposed connection among global competence, cosmopolitanism and the *action* variable form the foundation of the present study’s theoretical framework (see page 45).

**Defining the Explanatory Variables’ Indicators**

Having determined the four explanatory variables, I now describe each variable’s indicators and document supporting authors within the text and footnotes. The *disposition/affective realm* variable represents the most personal element of global competence and is, thus, described first. But I see individuals’ development of the *disposition/affective realm, knowledge, and skill* variables’ indicators as an interwoven process, with support for this assertion presented later in this chapter in the theoretical framework. As for development of the *action* variable, I envision its indicators unfolding last from the presence and purposeful employment of the first three variables’ indicators. Thus, I discuss *action* last because it provides the theoretical ties that bind all of the variables into my resulting conceptualization and definition of global competence. Table 2.2 presents each of the four global competence variables and their indicators.
### Table 2.2

*Global Competence Variables and Indicators*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Indicators</th>
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<tbody>
<tr>
<td><strong>Disposition/Affective Realm</strong></td>
<td>• Open-mindedness</td>
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<td></td>
<td>• Cultural Awareness</td>
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<td></td>
<td>• Acceptance of Diversity</td>
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<td>• Desire for Exploration</td>
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<td></td>
<td>• Adaptability</td>
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<td></td>
<td>• “Recognition of One’s Own and Others’ Perspectives” (Boix-Mansilla et al., 2011, p. 102)</td>
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<tr>
<td></td>
<td>• Empathy</td>
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<tr>
<td></td>
<td>• “Ethnorelativity” (Bennett, 1986, 2004)</td>
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<tr>
<td></td>
<td>• Self-Confidence</td>
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<tr>
<td></td>
<td>• Being a Lifelong Learner</td>
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<tr>
<td><strong>Knowledge</strong></td>
<td>• Understanding One’s Own Cultural Background</td>
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<td></td>
<td>• Knowledge of World Language(s)</td>
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<td></td>
<td>• Understanding of Globalization</td>
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<td></td>
<td>• Knowledge of Economics</td>
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<td>• Knowledge of World Regions and Cultures</td>
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<td></td>
<td>• Knowledge of Current Events</td>
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<tr>
<td><strong>Skills</strong></td>
<td>• Ability to Investigate</td>
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<td></td>
<td>• Ability to Collaborate</td>
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<td></td>
<td>• Ability to Communicate Effectively Across Diverse Audiences</td>
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<tr>
<td><strong>Action</strong></td>
<td>• Cultural Mediator</td>
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<td></td>
<td>• Global Citizen</td>
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<td></td>
<td>• Cosmopolitan</td>
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**Indicators of the disposition/affective realm variable.** My description of the *disposition/affective realm* variable as the innermost layer of global competence parallels the idea presented by Deardorff and Hunter (2006): “Attitudes of openness, curiosity, and respect are key starting points upon which to build the requisite knowledge and skills” (p. 79). The meanings and names for several of the indicators in the present research, however, stem from the findings of the Todd (2013) pilot study. I used in vivo coding and thematic analysis (Coffey & Atkinson, 1996) as well as taxonomic development (McCurdy, Spradley, & Shandy, 2005) to extract terms and phrases that the
research volunteers (three teachers and two professors) used to describe global competence. I selected the following characteristics from the taxonomy: “open-minded,” “culturally aware,” “embraces diversity,” “explorer,” and “able to adapt” (Todd, 2013, p. 24). Each of these characteristics pertains to individuals’ disposition or affective nature. The wording of three of these terms was adjusted to name the indicators: open-mindedness, cultural awareness, adaptability. I combined “explorer” with “desire” due to a volunteer’s phrase, “Has a desire for more experiences that help him/her understand the world better” (p. 24), which was derived from the taxonomic analysis. These two ideas were merged to form the condensed phrase desire for exploration.

The meanings of other disposition/affective realm indicators also stem from the taxonomy. If an individual embodies the indicator of open-mindedness, \(^{10}\) then that person “… [has a certain] mindset…[is] globally minded…[is] open to the possibility that there is more than one answer to a question…[is] open to listening” (Todd, 2013, p. 24). I define cultural awareness\(^ {11}\) as being “aware of other cultures, other languages and perspectives…embrac[ing] diversity” (p. 24). Here, “aware of” means “conscious of,” the dictionary definition of which includes “sensitive to” (“Aware,” 2015; “Conscious,” 2015). Therefore, I include cultural awareness under the current disposition/affective realm variable. Although this taxonomic definition includes “embrac[ing] diversity,” a number of authors discuss this phrase on its own. I follow this pattern, except that I chose a different name for this indicator for reasons explained shortly.

\(^{10}\) Adler and Bartholomew (1992); ACIE and the Stanley Foundation (1996); Appiah (2006); Deardorff and Hunter (2006); Eggington and Alsup (2005); Harris (2013); Hunter (2004); Lambert (1993); Olson and Kroeger (2001); Reimers (2009); and Van Roekel (2010)

\(^{11}\) ACIE and the Stanley Foundation (1996); Appiah (2006); Boix-Mansilla et al. (2011); Deardorff and Hunter (2006); Harris (2013); Hunter (2004); Olson and Kroeger (2001); Reimers (2009); Shams and George (2006); Swiss Consulting Group (2002); Van Roekel (2010); and Zhao (2010)
Hunter (2005) noted that “celebrating diversity” was a necessary component of global competence (p. 115). Several other authors also employed phrases similar to embracing diversity in their global competence descriptions, which helped me to define this indicator as a combination of the following definitions: “accept[ance] [of] the importance of all peoples” (ACIIE & the Stanley Foundation, 1996, p. 3); “respect (valuing all cultures)” (Deardorff & Hunter, 2006, p. 74); “embrac[ing] multiculturalism” (Eggington & Alsup, 2005, p. 48); and “respect and protec[tion] [of] cultural diversity” (Zhao, 2010, p. 426). Acceptance of diversity\textsuperscript{12} seemed to capture these characteristics because the phrase acknowledges the full spectrum of human differences, but does not necessarily imply approval of all types of diversity, such as in instances of sexism and racism.

The next indicator addresses the desire to, then, interact with culturally diverse people and to experience the unknown. Desire for exploration\textsuperscript{13} is defined from the taxonomy in Todd (2013) as a characteristic of a person who,

\[
\ldots\text{interested in and seeks…opportunities to meet peoples from other…cultures…ventures out [into unfamiliarity]…experiences cultures in meaningful, real ways…[and] has a desire for more experiences that help him/her understand the world better.} \text{ (p. 24)}
\]

This indicator also speaks to an affective drive to explore and solve “globally significant” problems, as Boix-Mansilla et al. (2011) explained that, “globally competent students do not seek a pre-established ‘right answer’: rather they engage intellectually and

\textsuperscript{12} \text{ACE Commission on International Education (1998); Appiah (2006); Harris (2013); Hunter (2004); Hunter, White, and Godbey (2006); Olson and Kroeger (2001); Todd (2013); and Van Roekel (2010)}

\textsuperscript{13} \text{Appiah (2006); Eggington and Alsup (2005); and Shams and George (2006)}
emotionally in searching for and weighing informed responses” (p. 21). Individuals who exemplify adaptability,\(^{14}\)

- “immers[e] [themselves] in a second culture,
- [are] willing to change to meet the circumstances…,
- [are] [comfortable] with uncertainty, [and]
- pu[t] [themselves] in positions…outside [their]…comfort zone” (Todd, 2013, p. 24).

The recognition of one’s own and others’ perspectives\(^ {15}\) indicator is also an integral part of the disposition/affective realm variable and originated from Boix-Mansilla et al.’s (2011) framework (p. 102). When individuals possess this recognition, they not only comprehend another person’s point of view and the cultural “influences” (p. 31) upon it, they understand their own perspective and the cultural influences that affect it, as well. This indicator relates closely to empathy,\(^ {16}\) which Lambert (1993) defined as “the ability of an individual to psychologically put her[self] or himself into another person’s shoes” (p. 15). While Lambert (1993) described this as an ability (a skill), Bennett (1986) explained that, “…empathy approximates a shift in cultural world view” (p. 185), thus relating this indicator to recognition of one’s own and others’ perspectives and to ethnorelativity,\(^ {17}\) both of which fall under the current variable. Bennett (2004) defined ethnorelativity as “the experience of one’s own beliefs and behaviors as just one organization of reality among many viable possibilities” (p. 62). The last seven

\(^{14}\) Adler and Bartholomew (1992); ACE Commission on International Education (1998); CIEE (1988); Deardorff and Hunter (2006); DeGarmo and Daniels (2009); Hunter (2004); Lambert (1993); Shams and George (2006); and Swiss Consulting Group (2002)

\(^{15}\) Adler and Bartholomew (1992); ACIE and the Stanley Foundation (1996); Deardorff and Hunter (2006); Harris (2013); Hunter, White, and Godbey (2006); Olson and Kroeger (2001); Shams and George (2006); Swiss Consulting Group (2002); United States Department of Education (USDE) (2012); Van Roekel (2010); and Zhao (2010)

\(^{16}\) Deardorff and Hunter (2006); Hunter (2004, 2005); Lambert (1994); Olson and Kroeger (2001); Reimers (2009); Shams and George (2006); and Zhao (2010)

\(^{17}\) ACIE and the Stanley Foundation (1996); Appiah (2006); Bennett (1986); Deardorff and Hunter (2006); Harris (2013); Hunter (2004, 2005); Hunter, White, and Godbey (2006); Lambert (1993); Olson and Kroeger (2001); Reimers (2009); and Zhao (2010)
indicators share in common a reliance on a person’s realization of the existence of cultural diversity; however, the first indicator discussed, open-mindedness, lays the groundwork for such a realization.

Although Hammer, Bennett, and Wiseman (2003) addressed intercultural competence, its requisite skills (“the ability to think and act in interculturally appropriate ways” p. 422) parallel those needed for global competence. They wrote, “As one’s experience of cultural difference becomes more complex and sophisticated, one’s potential competence in intercultural relations increases” (p. 423). Self-confidence\textsuperscript{18} could contribute to individuals’ willingness to experience diversity in “complex and sophisticated” ways. Such confidence could also encourage individuals to eventually take action by, for example, fostering amicable exchanges among culturally diverse people (Wilson, 1994). To temper this confidence, however, a globally competent person also needs to be a lifelong learner.\textsuperscript{19} The ACIIE and the Stanley Foundation (1996) addressed this term in their work: “The globally competent learner is committed to global, lifelong learning” (p. 3). Drawing from Wilson (1994), I define a lifelong learner as an individual who demonstrates a “willingness to continue to learn about the world's peoples, cultures, and issues” (p. 41). She suggested that such alacrity could further the personal growth of students who had recently completed study abroad.

**Indicators of the knowledge variable.** Since learning for several of the knowledge variable’s indicators can happen simultaneously and over a period of years, discussion of these in a strict order is unnecessary, with the exception of an

\textsuperscript{18} ACE Commission on International Education (1998)  
\textsuperscript{19} Deardorff and Hunter (2006); Harris (2013); and Todd (2013)
understanding of one’s own cultural background. According to Deardorff and Hunter (2006), “The acquisition of knowledge begins with exploring cultural self-awareness” (p. 79). The taxonomy in Todd (2013) also included the phrase “understand[ing] [one’s] self culturally” as a global competence characteristic (p. 24). As Rizvi (2009) explained in his account of cosmopolitan learning, which resembles learning for global competence, to learn about other people necessitates learning first about one’s self (p. 266). To name this knowledge indicator, I opted to use the phrase an understanding of one’s own cultural background since it derived from a pilot study volunteer.

Deardorff and Hunter (2006) also addressed language acquisition in relation to global competence and intercultural competence by emphasizing the lack of agreement on the importance of language to either of these competences. I see knowledge of world language(s) as facilitating communication among people from diverse linguistic and cultural backgrounds. Here I refer to world languages, as opposed to foreign languages given Tochon’s (2009) explanation that, “Languages other than English should no longer be considered ‘foreign’: They are world languages [author’s emphasis], as well as English, at the time of globalization” (p. 650). He recommended starting world language learning “as early as possible” (p. 653) in childhood, which can help increase the likelihood of reaching bilingualism as opposed to beginning second-language learning in adulthood.

Bilingual education often starts earlier in a child’s schooling than what many refer to as foreign language courses (Vega & Terada, 2013), which, in the United States at

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20 Appiah (2006); Boix-Mansilla et al. (2011); Hunter (2005); and Hunter, White, and Godbey (2006); Olson and Kroeger (2001); and Shams and George (2006)
21 ACE Commission on International Education (1998); Lambert (1993, 1994); Olson and Kroeger (2001); Reimers (2009); Todd (2013); USDE (2012); Van Roekel (2010); and Zhao (2010)
least, typically begin in middle school (e.g., grades 6-8). Adesope, Lavin, Thompson, and Ungerleider (2010), in their meta-analysis of the cognitive correlates of bilingualism, found statistically detectable mean effect sizes for the cognitive outcomes of metalinguistic and metacognitive awareness, working memory, abstract and symbolic representation, attentional control, and problem solving, which are all higher mental functions (p. 218). In addition to acquiring knowledge of another language and other cognitive benefits, children who learn a world language can develop “openness to and appreciation of other cultures…and an improved self-concept” (Tochon, 2009, p. 655) resembling the indicators of the disposition/affective realm variable.

For the present conceptual framework, a lack of bilingualism would not necessarily preclude someone from becoming globally competent. Conversely, achieving advanced expertise in an additional language (or languages) beyond the native language would not automatically result in global competence. In this conceptualization, it is preferable for individuals to study a language beyond the native language than to not make such an effort at all. This is because world language learning uniquely presents possible opportunities for people to gain dispositional, knowledge, and skill-related benefits (Adesope et al., 2010; Tochon, 2009). Regarding the number of languages needed for global competence, the answer remains undetermined as indicated by Deardorff and Hunter (2006). Tochon (2009) noted, however, that even learning one language in addition to a person’s native language strengthens that first language and deepens understanding of a different culture.
Although an understanding of globalization\textsuperscript{22} may develop in the later years of education (high school or college) when studying world economic issues, Boix-Mansilla et al. (2011) suggested that learning about globalization can begin as early as preschool. Zhao (2010) explained this global interconnectedness as follows: “When global distances shrink, human activities are no longer confined by geographical locations or bounded by political entities. The result is then what we call ‘globalization’” (p. 422). Boix-Mansilla et al. (2011) described globalization as including “the digital revolution…the flattened global economy…unprecedented global migration and the changing nature of neighborhoods, identities, and citizenship…and climate instability” (p. 1). If students understand the basics of globalization early in their global competence development, these can serve as a foundation for more specific content area knowledge. Such content areas include economics\textsuperscript{23} (e.g., micro, macro, international) and world regions and cultures.\textsuperscript{24} These basics could also serve as a foundation from which to understand current events\textsuperscript{25} at national and international levels. While it is important for people to understand community events at the local level, for the present conceptualization I focus on understanding events at the national and international levels.

I have presented knowledge of economics and of world regions and cultures as indicators of the knowledge variable given their inclusion as potential attributes of global

\textsuperscript{22} ACIIE and The Stanley Foundation (1994, 1996); Deardorff and Hunter (2006); Hunter, White, and Godbey (2006); Olson and Kroeger (2001); Reimers (2009); Shams and George (2006); Van Roekel (2010); and Wilson (1994)
\textsuperscript{23} Boix-Mansilla et al. (2011); Deardorff and Hunter (2006); Olson and Kroeger (2001); Reimers (2009); Shams and George (2006); Van Roekel (2010); and Wilson (1994)
\textsuperscript{24} Adler and Bartholomew (1992); ACE Commission on International Education (1998); ACIIE and the Stanley Foundation (1994, 1996); Boix-Mansilla et al. (2011); Clinton (2000); CIEE (1988); Deardorff and Hunter (2006); Hunter, White, and Godbey (2006); Lambert (1994); Olson and Kroeger (2001); Reimers (2009); Shams and George (2006); USDE (2012); and Wilson (1994)
\textsuperscript{25} ACE Commission on International Education (1998); Blumenthal and Grothus (2008); Boix-Mansilla et al. (2011); Hunter, White, and Godbey (2006); Olson and Kroeger (2001); Shams and George (2006); and Van Roekel (2010)
competence in the literature. However, the range of topics and depth needed for such content areas is unclear. Zhao (2010) explained:

There is no doubt that teachers are primarily responsible for helping their students learn what is needed to succeed in the global economy. The problem, however, is that this “what” is not well defined and currently hotly debated. (p. 426)

Hunter (2005, p. 110) and Zhao (2010, p. 426) called for a “broad” understanding of such knowledge areas, but what does broad mean? How much knowledge of world regions and cultures and/or world history does one need to know to become globally competent? In addition, where does one content area end and another begin? Further research may help clarify the role of such content area knowledge in global competence development.

**Indicators of the skill variable.** Boix-Mansilla et al. (2011) helped describe the first indicator of the skill variable. They discussed the ability to “investigate the world beyond [one’s] immediate environment” with which students “[frame] significant problems and [conduct] well-crafted and age-appropriate research” (p. 11). For brevity, I condensed this indicator to read the ability to investigate. 26 Although I postulate that skills are an outward expression of an individual’s possession of the necessary knowledge for global competence, I also think that, in many instances, skills can help compensate for lack of knowledge. If students who possess the ability to investigate have inadequate knowledge in a situation, they can use their investigative skills to help solve the problem.

Boix-Mansilla et al. (2011) noted that, “Individual teachers and schools are creatively introducing ways for students to analyze globally significant issues from a variety of perspectives, use international sources, and collaborate across cultures to produce evidence-based arguments and solutions” (p. 89). In these cases, students learn

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26 ACIE and the Stanley Foundation (1994); Appiah (2006); Blumenthal and Grothus (2008); Reimers (2009); Shams and George (2006); Swiss Consulting Group (2002); USDE (2012); and Van Roekel (2010)
how to collaborate in the classroom as preparation for responding to global problems throughout their lifetimes. The *ability to collaborate*\(^{27}\) influences one’s personal and professional life, whether at home or abroad. The *ability to communicate effectively across diverse audiences*\(^{28}\) facilitates such collaboration, especially with individuals who differ linguistically and culturally. This ability provides an opportunity for meaningful application of world language knowledge, which can help diminish language barriers whether in a collaborative setting or in an unfamiliar environment, such as when traveling for work or pleasure. For example, one of my interviewees spoke of his ability to speak Spanish with a police officer when he got lost while in Spain (Todd, 2013). He was a beginning Spanish speaker, but his ability to appropriately use his new skills helped him return safely to his hotel.

I derived the *ability to communicate effectively across diverse audiences* indicator from Boix-Mansilla et al. (2011), who explained that with this capability, a person should be able to do the following:

> Recognize and express how diverse audiences may perceive different meanings from the same information…; listen to and communicate…using appropriate verbal and nonverbal behavior, languages, and strategies; select and use appropriate technology…to communicate with diverse audiences; and reflect on how effective communication affects understanding and collaboration in an interdependent world. (p. 102)

Today, people encounter diversity everywhere. With the increase in diversity in the United States alone (Humes, Jones, & Ramirez, 2011), and undoubtedly overseas as well,

\(^{27}\) Adler and Barholomew (1992); ACE Commission on International Education (1998); Appiah (2006); Gibson, Rimmington, and Landwehr-Brown (2008); Hunter (2005); Hunter, White, and Godbey (2006); Shams and George (2006); USDE (2012); Van Roekel (2010); and Zhao (2010)

\(^{28}\) Adler and Barholomew (1992); ACE Commission on International Education (1998); Appiah (2006); Deardorff and Hunter (2006); Gibson et al. (2008); Hunter (2004, 2005); Monthienvichienchai, Bhibulbhawut, Kasemsuk, and Speece (2002); Olson and Kroeger (2001); Reimers (2009); Rimmington, Gruba, Gordon, Gibson, and Gibson (2004); Shams and George (2006); Swiss Consulting Group (2002); and USDE (2012)
communicative skills may be employed at home or abroad, using a native language or an acquired world language. Even if individuals speak the same language, but are from two different countries or from the same country, cultural differences necessitate the employment of communication skills to allow for maximal understanding between parties.

**Indicators of the action variable.** Given the strong dispositional and affective focus of the upcoming indicators, I originally placed each under that variable, referring to them as cultural mediation, global citizenship, and cosmopolitanism. I then realized that aspects of these indicators’ descriptions could actually fall under all three variables (i.e., disposition/affective realm, knowledge, and skill). This realization led to the conclusion that these indicators belonged to a fourth variable—the action variable. In this work, the combination of the disposition/affective realm, knowledge, and skill variables prepares and spurs a person to take action for global good, or to engage in solving global issues affecting strangers (Appiah, 2006). A person’s action on behalf of strangers leads him or her to become a cultural mediator, a global citizen, and a cosmopolitan, the three action variable indicators.

According to Wilson (1994), a cultural mediator embodies such qualities as “world-mindness, self-confidence, and adaptability” (p. 44) and serves as an intermediary between cultures. Bochner (1977) then explained that experience abroad should yield “multi-cultural individuals capable and desirous of exercising a mediating role in a culturally diverse world” (p. 15). From the taxonomic analysis in Todd (2013), a cultural mediator is defined as a person who,

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29 Adler and Bartholomew (1992); ACE Commission on International Education (1998); Appiah (2006); Hunter (2005); Hunter, White, and Godbey (2006); Olson and Kroeger (2001); and Zhao (2010)
“Realizes there’s a different way of doing things [than one’s own way],
has seen enough differences to know how to flow in and out of differences,
understands him/herself culturally
can communicate culturally [in culturally appropriate ways],
promotes global understanding, and
listens” (Todd, 2013, p. 24).

As for what it means to be a *global citizen*, Zhao (2010) explained:

As citizens of the globe, they [students] need to be aware of the global nature of societal issues, to care about people in distant places, to understand the nature of global economic integration, to appreciate the interconnectedness and interdependence of peoples, to respect and to protect cultural diversity, to fight for social justice for all, and to protect planet earth—home for all human beings. (p. 426)

Lastly, a *cosmopolitan* celebrates the cultural diversity of the world’s peoples and the attributes that render them different from him or herself. He or she also feels a responsibility to not only family and friends, but to unknown individuals, as well (see Appiah, 2006, p. xv). Moreover, a cosmopolitan navigates this responsibility toward unknown people in a balanced manner between home and abroad (Appiah, 2006). The literature explicitly linked global competence to becoming a *cultural mediator* (Wilson, 1994) and a *global citizen* (Zhao, 2010), but only implied a connection between this competence and *cosmopolitanism*. Therefore, I suggest in the present work a direct association between global competence and cosmopolitanism through the *action* variable.

To more fully elucidate the depiction of the *action* variable as the combination of the *cultural mediator, global citizen, and cosmopolitan* indicators, I return to my aforementioned decision to situate global competence within the global education field.

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30 ACE Commission on International Education (1998); ACIIE and the Stanley Foundation (1994, 1996); Appiah (2006); Blumenthal and Grothus (2008); Boix-Mansilla et al. (2011); DeGarmo and Daniels (2009); Gibson et al. (2008); Lamberton (1994); Lassahn (n.d.); Reimers (2009); Rizvi (2009); Saito (2010); Shams and George (2006); Swiss Consulting Group (2002); and Wilson (1994)
31 ACIIE and the Stanley Foundation (1994, 1996); Boix-Mansilla et al. (2011); Olson and Kroeger (2001); Reimers (2009); Rizvi (2009); Saito (2010); Shams and George (2006); Wilson (1994); and Zhao (2010)
McJimsey et al. (2016) characterized this field as “…focus[ing] on the interrelated nature of condition[s], issues, trends, processes, and events while international education emphasizes specific world regions, problems, and cultures” (para. 3). The authors also described *multicultural* education and how it is a “closely related approach” (para. 4) to the other two education types. However, they differentiated multicultural education by explaining how “Multicultural issues focus on accepting people from many cultural backgrounds within a political entity, whereas global and international education move far outside one’s own country” (para. 11). McJimsey et al. (2016), along with Lucas (2010), suggest that global education, like international education, turns students’ attention outward beyond national borders. Although I agree with McJimsey et al.’s (2016) definitions of multicultural, global and international education, I assert that global education actually *encompasses* international and multicultural education.

Support for this view stems from the ACIIE and the Stanley Foundation (1994) report, an early landmark document on global competence included in the Literature Review (see p. 13 of this chapter). As previously mentioned, its authors stated: “International and intercultural education are the two aspects of what many educators refer to as ‘global education’” (p. 1). According to the authors, “international education” focuses on Americans’ interactions with people and entities abroad, whereas “intercultural (or multicultural) education” (p. 1) centers on Americans’ domestic interactions with people from various cultural backgrounds. This global education definition (global education = international education + multicultural education), then, accounts for a person’s domestic and international encounters, which together equal the global nature of his or her interactions. I elected to align global competence with global
education since a person embodying this competence exercises such facility whether at home or abroad.

Linking this perspective to the *action* variable, I map my understanding of the global education field onto this variable’s indicators as follows:

- **Multicultural education** mirrors the role of a *cultural mediator*, which often comes into play close to home through the development of friendships with international members of a person’s own community as discussed by Wilson (1994).

- **International education** parallels Zhao’s (2010) account of what it means to be a *global citizen*, which is primarily focused beyond the borders of a person’s native country.

- **Global education** corresponds with being a *cosmopolitan* with balanced allegiances between home and abroad (Appiah, 2006, 2008; Saito, 2010).

Furthermore, just as global education encompasses local (multicultural education) and international (international education) aspects, in this work global competence also comprises inward and outward developmental elements. Specifically, the *disposition/affective realm* and *knowledge* variables represent inward elements that primarily manifest within an individual. Conversely, the *skill* and *action* variables represent outward elements that typically manifest in the presence of, or in interaction with, other people. Therefore, while the *global* of global competence signifies the world’s places, cultures, peoples, and their interconnectedness, it also signifies the *global* nature of the globally competent person who transforms inwardly and outwardly in the developmental process. Figure 2.3 displays a visual representation of the theoretical similarities among global education, cosmopolitanism, and global competence.
In 1996, when the ACIIE and the Stanley Foundation presented the first definition of global competence that went beyond a list of attributes, they did not include an action element. Hunter (2005) noted that his definition exemplified an “achievement-based undertone” with a work-related focus (p. 107). Boix-Mansilla et al.’s (2011) definition addressed action for human good, but fully understanding their global competence definition requires combining that definition with the companion framework. I offer my initial definition, therefore, as a potential remedy:

Global competence is one’s embodiment of four elements: A disposition and affect toward culturally diverse peoples set into motion by open-mindedness; a body of knowledge founded on an understanding of one’s own cultural background, globalization, and world languages; a set of skills such as the abilities to collaborate, investigate globally pressing issues, and communicate effectively, with these three elements uniting for the purpose of taking action for the global good, thus rendering the globally competent individual a cosmopolitan.

**Theoretical Framework**

Viewing global competence as inward and outward elements, and as variables and indicators can produce a compartmentalized representation of this term. This point
resembles Lambert’s (1994) sentiment stated in the concluding chapter of his edited book on defining global competence:

…when one moves beyond this very broad level of generality [of identifiable personal growth that occurs as the result of international experience or education], the concept fragments into lists of components, as if the quality of global competence is not one thing but an amalgam of various parts. (p. 285)

In this work, cosmopolitanism serves as the binder or the theoretical linkage that ties the global competence variables and indicators into a single construct.

Although Hunter adopted a similar depiction of global competence development as encompassing internal and external readiness characteristics (Global Leadership Excellence, 2016e), it is the focus on cosmopolitanism that differentiates the present work from that of Hunter (2004, 2005). Hunter (2005) mentioned cosmopolitanism as a desirable employee characteristic (“cosmopolitan workers,” p. 9) in his discussion of the need for global competence development. Furthermore, he explained the necessity for advanced proficiency in “international understanding” and “intercultural competence” (p. 11) for becoming globally competent. While he encouraged the development of this understanding and this competence to navigate between cultures for global competence, his perspective on the need for globally competent U.S. citizens appears more concerned with assuring U.S. global superiority. Hunter (2004) wrote, “As many researchers and associations noted, for the United States to continue as a superpower, its citizens must truly be educated with a wide range of cultural, linguistic, and international knowledge” (p. 12). The present work, instead, emphasizes global competence development for the purpose of taking action on behalf of strangers (Appiah, 2006) across both professional and community settings.
Saito’s (2010) approach to cosmopolitan education helps illustrate the interrelationships among the global competence construct’s various parts presented in this work. He addressed “affective,” “cognitive,” and “actional” (p. 339) aspects of this education that closely resembled the disposition/affective realm, knowledge, and action variables and indicators of global competence. In the current work, the skills for global competence, such as the ability to communicate effectively across diverse audiences, could also apply to becoming a cosmopolitan who engages in conversation with people across cultural differences (Appiah, 2006). In addition to these parallels, Saito (2010) explained how, “…cognitive and actional elements are built on an affective element” (p. 339) in his account of cosmopolitan learning. He described the affective element as pertaining to emotion such as attachment to people, the cognitive element as pertaining to knowledge acquisition such as learning about different cultures, and the actional element as taking action to solve global issues. For global competence development, the present work suggests that the disposition/affective realm variable is foundational to a person’s growth of the knowledge, skill and action variables. Just as a cosmopolitan feels a responsibility toward unknown individuals, and celebrates cultural diversity (Appiah, 2006), the disposition and affect for global competence reflects similar characteristics, such as open-mindedness, acceptance of diversity, desire for exploration, empathy, and ethnorelativity. The present work suggests that these indicators contribute to individuals’ desires to gain knowledge and skills for constructive, prosperous interaction with, and action for, culturally diverse people at home and abroad.

The recent accounts of cosmopolitanism also profoundly influenced the formation of the action variable. While Appiah (2006) spoke to engagement to solve

32 e.g., Appiah (2006); Rizvi (2009); Saito (2010)
global issues affecting strangers, Rizvi (2009) addressed cosmopolitan learning as “helping students examine the ways in which global processes are creating conditions of economic and cultural exchange that are transforming our identities and communities…” (p. 260). This emphasis on the local transformation through globalization emphasizes an important aspect of the action variable. This variable involves acting as a cultural mediator at home, in what is likely becoming a more diverse polity, and as a global citizen in the international community. A cosmopolitan takes action to shape change locally and internationally, navigating both spaces seamlessly with the ultimate effect of taking global action. Saito (2010) specifically spoke to the existence of global connections in local communities through people and objects. The presence of such connections offers tangible opportunities for students to learn, practice, and hone the variables and indicators of global competence. Cosmopolitanism, then, encourages learners to look for global connections in their local environment, and for opportunities to engage with and learn from them.

Given the close ties between global competence and cosmopolitanism, however, it was difficult to conceptually tease them apart. I view global competence as comprising specific variables and indicators, and cosmopolitanism as a perspective from which to teach and learn them (Appiah, 2006; Rizvi, 2009). Vygotsky’s (1986a, 1986b) social development theory, discussed shortly, offered valuable guidance on teaching and learning for global competence, and highlights the role of formal education in developing this competence. Global competence learning also relies on students gaining international experience, which I define as contact and interaction with diverse peoples and cultures in a local community or when traveling abroad. The increased diversity of
locales, such as in the United States (Humes et al., 2011), provides people with more opportunities to experience intercultural contact at home, as suggested by the notion of “everyday multiculturalism” (Harris, 2013, p. 6). Globally competent people, who are identified as cosmopolitan in this work, pursue intercultural contact not only through formal education or job scenarios, but also in their personal interactions. I assert that these individuals choose, as a result of their disposition and affect, to use their knowledge and skills to take action for what they perceive to be the good of humanity. Making this choice is the difference between a person who is globally competent, and a person who uses his knowledge and skills for the benefit of only himself, his kin, or his company.

**Learning for Global Competence: A Path from Theory to Practice**

In this section, I examine two main questions: What kind of a mind is global competence inhabiting? And what does global competence development look like at different ages? A fusion of theories helps explain the developmental process of this competence in children and adults. Vygotsky’s social development theory (Vygotsky, 1986a, 1986b; Wertsch, 1985a, 1985b, 1985c, 1985d) provides the primary explanation, with Bandura’s (1977), Kolb’s (Kolb, Boyatzis, & Mainemelis, 1999), and Lave’s (1993) learning theories offering the supporting details.

Cosmopolitanism, as an integral part of my global competence conceptual framework, also significantly contributes to this learning process. While Appiah (2006, 2008) expounds on the meaning of cosmopolitanism, emphasizing human communication and interaction, Saito (2010) offers illustrations of classroom teaching for developing cosmopolitan students. Boix-Mansilla et al. (2011) also provide classroom-teaching paradigms to demonstrate instruction and learning for global competence. Shams and
George (2006), as well as Harris (2013), then provide evidence of additional learning pathways to global competence outside of formal education. Coupling these complimentary learning scenarios and theories with an examination of the instructor’s role in teaching for global competence, a possible process is described for developing the four variables presented in the conceptual framework.

**Social development theory.** Vygotsky’s (1986b) social development theory provides an insightful account of the cognitive development of concepts, or “word meanings” (p. 146), through social interaction. This theory offers a potential blueprint for global competence development as envisioned in this dissertation. Triangulating from several sources that discussed Vygotsky’s research and that are cited in this learning theories section offered various angles from which to more fully understand and describe his theory.

In the first stage of this development, Vygotsky (1986a) described children as assembling “a number of objects in an *unorganized congeries*, or ‘heap’ [sic]” (p. 110). At this point, children’s “development of spontaneous concepts knows no systematicity and goes from the phenomena [objects] upward toward generalizations” (Vygotsky, 1986b, p. 148). Vygotsky (1986b) concluded that spontaneous concepts emerge from specific everyday circumstances and lead to unsystematic generalizations. In Wertsch’s (1985d) depiction of this first stage, a child may group blocks of varying sizes and colors to form a shape that he or she has seen before, such as a house. The child may then choose another block to add to the group simply because he or she thinks “it is pretty”

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In this case, the child made this choice for personal reasons unknown to an onlooker.

More systematic generalizations are found in the second stage, called “thinking in complexes” (Wertsch, 1985d, p. 101). Wertsch (1985d) described Vygotsky’s account of how a child at this stage could group specific items based on their physical characteristics, but not on characteristics decided by the child prior to the start of the grouping activity (p. 101). Children then move to the “transitional construct between complexes and [scientific] concepts” called a “pseudoconcept” (p. 105). A pseudoconcept outwardly appears as a concept, but does not have the degree of substance characteristic of a scientific concept. Vygotsky gives the example, described by Wertsch (1985d), of a researcher showing a child several blocks of different sizes, shapes, and colors. The researcher turns over one block to show an invented word label on the bottom, and asks the child to select other blocks that could have the same word written on the bottom based on the labeled block’s features. The researcher then turns over one of the child’s selected blocks and shows that it has a different word on the bottom. A child who eliminates all of the blocks in the chosen group and starts again, instead of only discarding the one block with the wrong word, demonstrates that he or she chose the group based on a hypothesized category of features resembling the original block with the invented word (pp. 105-106). This child illustrates “scientific” (p. 102) conceptual development because of a preconceived system of features, or pattern, used to choose blocks.

In the third stage, a child can connect “signs” (Wertsch, 1985d, p. 102) to other signs in a systematic manner. Signs are “psychological tools” (p. 79), which are spoken
or written language, gestures, systems of numbers, patterns, and drawings, among other types. A child can now, for example, link a word with another word ("sign-sign," p. 109), based on similarity in meaning, rather than simply linking a word to an object. Linking a sign to a sign is referred to as “decontextualized” (p. 110) sign usage, which is the basis of scientific concepts, whereas linking a sign to an object is “contextualized” (p. 110) sign usage. At this scientific concept stage, a child is able to connect a word to a concrete object as well as to another word, thus producing a “system of concepts” (p. 103). Contrasting systematic, scientific concepts with unsystematic, spontaneous ones, the latter of which are also sometimes called “everyday concepts” (Wertsch, 1985d, p. 102), helps illustrate the nature of these two concept types.

As an example of an everyday concept, Vygotsky (1986b) presented the word brother, the meaning of which is often derived from life experience. He then posed the Archimedean Principle as an example of a scientific concept typically learned in school (p. 158). Drawing from his research, Vygotsky (1986b) described how a child was more perplexed when asked to define brother than when asked to define the principle. According to his theory, this was because the child derived the meaning of brother from everyday experience, but acquired the principle’s meaning from a teacher’s description (p. 158). In children’s development of scientific concepts, “initial verbal definition” leads to “concrete phenomena” (p. 148) or coherent comprehension. Thus scientific concepts that are, at first, verbalized in a formal education setting develop into concrete phenomena through “systematic cooperation between the child and the teacher” (p. 148). It is the continuation of the teacher-student collaboration that contributes to growth in the student’s higher mental functioning, discussed shortly on page 54.
According to Vygotsky (1986b), a student should have gained an adequate grasp of spontaneous concepts in order to begin the development of scientific concepts. He also explained that students are able to learn scientific concepts faster than spontaneous ones once they are in school due to methodical employment of the former. However, these two types of concepts feed on each other’s assets. Everyday concepts supply the realistic context absent in scientific concepts; scientific concepts provide more systematic organization to everyday concepts for the child’s purposeful use (p. 194).

Returning to the brother and Archimedean Principle example, learning about family structure in different cultures in school could increase the child’s cognitive awareness of the brother concept and help him or her to formally define it. Moreover, completing an activity to demonstrate the principle would help provide experiential substance to the formal definition. For instance, in the classroom students could submerge vegetables of varying sizes in pots of water to understand the difference in water displacement through activity they’ve probably encountered at home (Encyclopedia Britannica, 2016). To relate the principle to students’ everyday lives, the teacher could also discuss common examples of the principle in action, such as the water displacement that occurs when getting into a bathtub (IAC Publishing, LLC, 2016). Such in-class discussion and students’ participation in the activity could help link a scientific concept to everyday scenarios.

Arising from the relationship between spontaneous and scientific concepts is the role of the learner’s “zone of proximal development” (Vygotsky, 1986b, p. 194), or ZPD, and of the teacher in this instructional process. The ZPD is defined as the space between
what a child can do on his or her own, and what he or she could do with the help of an adult or a more advanced individual (Duveen, 1997, p. 79). Vygotsky (1986b) explained:

Spontaneous concepts that confront a deficit of conscious and volitional control find this control in the zone of proximal development, in the cooperation of the child with adults. That is why it is essential first to bring spontaneous concepts up to a certain level of development that would guarantee that the scientific concepts are actually just above the spontaneous ones. (pp. 194-195)

Once verbal use of scientific concepts in school stabilizes as a more solidified understanding (“concretization,” p. 149), spontaneous concept development increases. In approximately the fourth grade, students are at about the same level in both their scientific and spontaneous concept development (p. 149).

While Vygotsky understood that a child receives instruction prior to schooling, he envisioned that learning within the ZPD would primarily take place during formal education in which a child learns scientific concepts (Wertsch, 1985c). Dixon-Krauss (1996) explained that the pseudoconceptual stage begins in the early school years and continues until the end of one’s adolescence. Scientific concepts begin to take shape during the pseudoconceptual stage, and reach advanced development following adolescence (p. 12). According to Vygotsky (1986b), higher mental functioning consists of “voluntary attention and logical memory” (p. 166). Development of scientific concepts characterizes higher mental functioning since they allow one to think in a decontextualized manner (Wertsch, 1985d, p. 104), an example of which is the ability to make inferences (Hasan, 2012, p. 84).

According to Wertsch (1985c), Vygotsky viewed teaching as part of a child’s social development and as catalyzing higher mental functioning. A teacher in formal schooling facilitates student learning through social discourse and interaction, or
“semiotically mediated social processes” (p. 62). When students begin to develop scientific concepts, they do so at first by verbalizing words, considered to be signs, and then later with symbols or the written words, also considered signs (Dixon-Krauss, 1996, p. 12). Children interact in semiotically mediated instruction with teachers who employ language, or word meanings, and communication patterns that originate from local, socially accepted customs and convention (p. 15). Thus, “cultural development converts elementary into higher mental processes” (Wertsch, 1985b, p. 24). The development of higher mental functions continues until an individual has “voluntary control” and “conscious realization” (p. 26) of his or her intellect.

Relating social development theory to global competence learning. Vygotsky’s (1986a, 1986b) theory forms the basis for three of my assumptions related to global competence learning. First, school plays an important role in the development of the kind of higher mental function essential for global competence - for example, the development of scientific concepts. In this context and from the U.S. perspective adopted in this work (see Chapter 1, p. 3), schooling refers to instruction in academic subjects such as math, science, social studies, reading and writing in an organized setting led by an instructor(s) as typically seen in K-12 education.

The second assumption is that an international experience involves contact and interaction with diverse peoples and cultures. This experience can take place through formal education or in a local community with international or religious organization members, with international exchange students, or local community residents who have emigrated from another country (Todd, 2013). While a member of the same community can certainly differ culturally in many respects, in the context of global competence, the
term *diverse cultures* refers to community members originating from different countries. Traveling abroad for personal, professional, or educational reasons naturally counts as international experience. However, for global competence development to occur, the essential elements in each of these international experience scenarios is that learners are open to encountering diversity and have contact with people who are culturally different from themselves (Bennett, 2004).

The third assumption pertains to the question, “What kind of a mind is global competence inhabiting?” I assume children enter school at the pseudoconceptual stage, and adults that have completed high school are in the scientific concept stage (Dixon-Krauss, 1996; Wertsch, 1985d). Some children, however, come from bicultural homes, offering a modulation on global competence learning. While children from bicultural families may still enter formal education at the pseudoconceptual stage, I assert that their development of spontaneous concepts involves elements of *both* cultures and languages learned through socialization at home. A child from a single-culture home might also travel with parents and, as a result, encounter diverse cultures and languages. Children in both of these situations may have learned more spontaneous concepts than those raised in single-culture and/or less-traveled homes.

*Learning through international experience.* According to Bennett (2004), international experience is “constructed” (p. 72) through cognitive, perceptual “categories” (p. 73). He explained that people, often through frequent interaction with culturally diverse individuals, could develop the ability to categorize difference in detail. Such detailed cognitive categorization of diversity then allows people to perceive intercultural dissimilarity in a more sensitive way (p. 73). Vygotsky’s theory of
conceptual development through social construction appears compatible with the idea of children learning from international experience during their formulation of spontaneous and scientific concepts (Smith, 1996). The level of categorization of difference, however, would depend on a child’s conceptual development. If only at an early point in pseudoconceptual development, the child may lack the organizational structure with which to distinguish cultural differences in as much detail as a child in middle or high school who has developed more scientific concepts. Adults who have reached refined scientific conceptual development would be able to categorize cultural difference in the greatest detail, but only if they are open to the existence of such difference (Bennett, 2004).

As mentioned earlier, Bennett (2004) asserted that detailed categorization of cultural differences leads to a perception that is “more interculturally sensitive” (p. 73). But he wrote, “I would hypothesize that people need to have a ‘critical mass’ of information about another culture in order to apprehend the worldview, and that even that amount of information is useless unless…they are ‘ready’ to hear the information” (p. 69). For Bennett (2004), “ready” meant that one has reached “acceptance” (p. 69) of and “adaptation to cultural difference” (p. 70), which indicate an ethnorelative perspective in his Developmental Model of Intercultural Sensitivity (see Figure 1 on page 63 of his work for a visual representation of the model). Individuals who often travel, and who have considerable skills and knowledge as a result, cannot become globally competent until they have the disposition and affect that spur them to act for the good of unknown individuals. At the same time, extending Bennett’s (2004) ideas to global competence development, having cultural knowledge about different countries can supplement
people’s disposition and affect, so as to allow them to more carefully comprehend the viewpoint of natives of those countries. Again, I assert that the disposition/affective realm variable lies at the core of global competence development, but it is the combination of all four variables that leads to gaining this competence.

Early learning for global competence in school, therefore, begins with developing the necessary disposition and affect. In line with Vygotsky’s theory, early socialization at home can offer children “…mental disposition…habits of mind, [which are] tendencies to respond to situations in certain ways…producing in social subjects a sense of what things are worth doing in their community, and how they are to be done” (Hasan, 2002, p. 4). Hasan (2002) refers to these tendencies as forms of “invisible” semiotic mediation, with “visible” semiotic mediation taking the form of learning “specific” concepts (p. 5). If invisible semiotic mediation can be understood to resemble spontaneous concepts in early development, and visible semiotic mediation comparable to scientific concepts, then, a teacher should be able to render the invisible habits of mind visible to the child in early education through social interaction. In the case of global competence development, these habits of mind are the indicators of the disposition/affective realm variable. Students’ dispositional growth would unfold with increasing maturity combined with international experience.

Cosmopolitanism in the classroom. In his discussion of cosmopolitan education, Saito (2010) drew on his observations of preschoolers in Japanese schools to describe the children’s early development of affective attachments to other countries. One such observation was that they acquired such attachments to peoples and cultures outside their home country prior to learning any factual knowledge about those cultures (pp. 338-339).
For example, Saito (2010) described a six-year old student who wanted to visit Australia, Brazil, and the North Pole because he wanted “to meet” (p. 339) stag beetles in Australia, Hercules beetles in Brazil, and polar bears in the North Pole. According to Saito (2010), “the child’s idiosyncratic interest functioned as ‘glue’ to attach him positively to foreign countries” (p. 340). Thus, if educators can extend students’ affections, ignited by personal interests, to their scientific conceptual development to supply structure to these emotional connections, then, teachers can motivate students to learn the knowledge and skills for global competence.

Saito (2010) explained that these more cognitive elements (knowledge and skills) could then provide substance to the “idiosyncratic” interest of which he speaks, so that this interest does not devolve into “simple-minded idealization or exoticization” (p. 341). Connecting students to artifacts and people from diverse cultures in countries other than their own in their proximate environment can help render globalization a tangible actuality (p. 342). On this specific matter he wrote:

Although I agree with philosophers and educators about the importance of learning global problems for the purpose of fostering the sense of ethical responsibility beyond national borders and ultimately achieving greater justice in the world, I do not think that cosmopolitan education can start here. The first step is to help students expand on their own understandings of transnational connections folded in their everyday life from the ground up. (p. 344)

He adapted the actor-network theory, which he derived from science and technology literature, to help describe cosmopolitanism as a palpable factor in everyday life today. He depicted “cosmopolitanism as the result of being embedded in a network of associations that traverse national borders” (p. 334). Linking students to diverse cultures through their local environment can help them to recognize and comprehend this network notion, which Saito (2010) also called “transnational connections” (p. 344).
Helping people, such as students, to identify those foreign connections in their local environment, and then to act through those linkages, aids in “concret[izing]” (Saito, 2010, p. 345) the cosmopolitanism concept. Learning about cosmopolitanism through identifying foreign connections in a local environment also means that students can find pragmatic ways to act through their network. In one such instance, Saito (2010) described how students in Japan learned about the current needs of Cambodian children through research and talks given by a local acquaintance (in Japan) with ties to Cambodia. The students then raised the money to build a needed school in Cambodia. In the process of the students’ work on this initiative, the local acquaintance showed them pictures of Cambodian children, thus potentially encouraging an emotional, personal connection (p. 345). The learning process the students experienced as a part of this effort, the action taken, and the possible resulting affect for the children all reflect elements of cosmopolitanism and of global competence development.

In their discussion of this development, Boix-Mansilla et al. (2011) explained that, “establishing a schoolwide [sic] culture of global competence…entails an environment where students are acculturated [authors’ emphasis] into globally competent ways of thinking and acting, ways that become habits of mind and heart” (p. 78). Such a culture encourages students to act collaboratively across geographic locations. As Saito (2010) explained, “Cosmopolitanism is not about becoming detached from one’s particular community. Rather, it is about working through attachments to people and objects across multiple particular communities [author’s emphasis]” (p. 335). Although students may not recognize the existence of global connections at home, educators can
help to illuminate such connections and to facilitate students’ learning about the global community of which their local community is a part (Boix-Mansilla et al., 2011).

The teacher’s role in global competence development. Lam, Cheng, and Ma’s (2009) work emphasized the importance of the teacher in fostering learning scenarios characteristic of global competence development. Using hierarchical linear modeling, Lam et al. (2009) found that teachers’ levels of intrinsic motivation toward project-based learning positively related to their students’ impressions of teacher assistance in the learning process. The more students felt like they received teacher assistance in the project, the higher the students’ levels of intrinsic motivation toward project-based learning (p. 574). Moreover, students’ and teachers’ intrinsic motivation levels toward project-based learning were identified as being directly related, as the authors wrote:

It might be due to imitative learning or modeling. Students might have picked up clues on the inherent enjoyment of project-based learning by observing their intrinsically motivated teachers. The correspondence between teacher and student motivation can thus be understood in terms of both instructional practices and modeling. (p. 574)

Bandura (1977) provided a base, through his social learning theory, from which to understand this conclusion. He stated, “Virtually all learning phenomena resulting from direct experience occur on a vicarious basis by observing other people’s behavior and its consequences for them” (p. 12). Boix-Mansilla et al. (2011) explained that global competence development entails what could be described as problem-based learning, which presents students with “globally significant” (p. 21) questions that require interdisciplinary thinking typically taking the form of collaborative projects.

To clarify, according to Larmer (2013), problem-based learning can be considered as falling under project-based learning since a project can be presented to students as a
problem requiring a solution. As Lam et al. (2009) wrote with regards to project-based learning, “Students have to play an active role in the learning process [and] work collaboratively… [But they] may not always enjoy this challenging process…” (p. 574). If teachers model intrinsic motivation in their instruction for global competence development, students can see the positive personal experience that can be derived from working to solve globally pressing problems.

Duveen (1997) explained that, within their ZPD, students can “internalize” (p. 79) a teacher’s positive disposition and affect toward instruction for global competence and toward the culturally diverse individuals with whom he or she interacts in the teaching process. Internalization is a genetic “process involved in the transformation of social phenomena into psychological phenomena” (Wertsch, 1986c, p. 63). This process leads to the development of a person’s consciousness, which is an element of higher mental functioning (Wertsch, 1985b, p. 25). Although the ZPD typically concerns a student learning scientific concepts, I extend it to the development of positive dispositions and affect, which can be modeled by the teacher as previously discussed. Following Bennett’s (1986, 2004) suggestion to refrain from pushing individuals too far in their learning for intercultural sensitivity, teachers should instruct only slightly ahead of a student’s current level of ability within the student’s ZPD (Wertsch, 1985c, p. 70). The concept of students’ ZPD could apply to individual learning activities, but also to their entire K-12 learning experience for global competence. The development experienced in K-12 could, in many ways, reflect the stages of Bennett’s (2004) Developmental Model of Intercultural Sensitivity. For example, a student needs to first be open-minded to gain awareness of cultural variances, to then accept and enjoy learning about such variances,
to become adaptable to unfamiliarity, and to be able to understand experiences from another’s perspective. Learning for global competence is a process that should be guided by teachers and that should unfold at an individual’s own developmental pace.

**Global competence development through experiential learning.** For global competence development, students need learning experiences that are both applicable to their own lives and that are international in nature. According to Kolb, Boyatzis, and Mainemelis (1999) and their experiential learning theory:

> Concrete experiences [authors’ emphasis] are the basis for observations and reflections…[which] are assimilated and distilled into abstract concepts from which new implications for action can be drawn. These implications can be actively tested and serve as guides in creating new experiences. (p. 3)

We can compare this with spontaneous concepts providing life to scientific concepts and concrete experiences illuminating possibilities through reflection for using abstract, scientific concepts. Concrete international experience for global competence learning entails students interacting directly with culturally diverse individuals, and solving problems of an interdisciplinary nature individually and collaboratively.

Illeris (2007) depicted experiential learning as “includ[ing] three dimensions: the content dimension…the incentive dimension…and the social dimension…embedded in a societally situated context” (pp. 87-88), with the incentive dimension paralleling the affective realm in the present work. A teacher can help connect students’ interdisciplinary projects to their own lives and to those of people from countries worldwide. Such people may live in the students’ local community or may be easily contacted through the Internet using an educational website such as ePals.com. Investigating global problems in school allows students to apply their interdisciplinary learning and personal experience to find plausible solutions. Although Lave (1993)
addressed her situated learning theory in the context of learning math, the following still proves meaningful for global competence development:

Math in school is situated practice: school is the site of children’s everyday activity. If school activities differ from [those that] children and adults engage in elsewhere, the view of schooling must be revised accordingly; it is a site of specialized everyday activity… (p. 81)

In sum, connecting projects to students’ lives can provide an introduction to the existence and meaning of a global community (Fourcade & Go, 2012; Saito, 2010).

Classroom Examples of Global Competence Learning

Considering the tenets of everyday activity and concrete experiences, I now offer brief examples of global competence learning in a formal education setting. Starting with kindergartners, they can begin learning open-mindedness, while also learning collaboration and communication skills with classmates to investigate introductory topics pertaining to globalization, world regions, and cultural diversity (Boix-Mansilla et al., 2011, p. 14). They can investigate the process of how their handwritten letters arrive to friends, or to a class of students, abroad connecting via Skype in the classroom to communicate what they have learned (p. 14). Students at this early age can also begin a world language to increase their chances of becoming bilingual, and to learn about other cultures in addition to their own (Tochon, 2009; Vega & Terada, 2013). To understand the local economic impact of globalization, first and second graders can see where their clothes are made, find the locations on a map, and then choose three of the countries to investigate in more detail (Saito, 2010). The teacher could then invite community members originating from the selected countries to speak with students about the local cultures of their home countries, with such interactions helping students to develop as cultural mediators. Through such experiences over several years, fourth graders may feel
deeper affective attachments to different parts of the world having learned factual information from both tangible and personal sources, and from teachers’ formal instruction. At this point, spontaneous and scientific conceptual developmental levels inform each other, with the latter gaining liveliness from the former and the former gaining structure from the latter. This mutually beneficial developmental process could help students to accept diversity and to want to explore more about the world in the middle school years.

In the sixth grade, with guidance from their teachers, students could investigate a current international event such as a natural disaster through news outlets (Boix-Mansilla et al., 2011, p. 87), simultaneously learning the scientific concepts involved. They could then invite individuals who are native to the event location, but who live in the local community, to help the class learn about the destination, its peoples and cultures to understand how the students might contribute aid in culturally appropriate ways as global citizens (Saito, 2010, p. 345). Such direct contact with people from around the world can help children develop cultural awareness, and learn how to communicate effectively with diverse audiences as well as how to meaningfully take action for unknown individuals abroad as developing cosmopolitans.

When students then enter high school, given extensive global knowledge and international experience at least in an educational setting, they are more ethnorelative, cognizant of their own and others’ perspectives, empathetic toward individuals who differ culturally from themselves, and adaptable to unfamiliar environments. A tenth grade project would be for students to “investigate the impacts, positive and negative, that job migration has on job receiving communities in China, India, and Mexico” (Boix-Mansilla
et al., 2011, p. 14). By researching the production history of objects the students use every day, such as iPods, tennis shoes, and book bags, they can consider the effects of production from opposing perspectives of the involved manufacturer, non-governmental organizations, and hypothetical community, and present their positions (pp. 16-17).

When students graduate from high school, they should feel confident in their intercultural interactions, in their abilities to collaborate on, and help solve, global issues as cosmopolitans, while continuing to learn about the world and its peoples. This fusion of processes related to Vygotsky’s (1986a, 1986b) social development theory and learning for global competence is, of course, an approximation, with timing also subject to students’ personal experiences, linguistic and cultural background, among other elements.

**Additional Learning Pathways to Global Competence Development**

Since technology presently plays such a significant role in students’ lives, its use in the classroom to make international contact opens doors for the learning process (Lave, 1993), especially for students who may not have the opportunity to travel (Peters, 1996). Technology use also aligns with Vygotsky’s theory since the user governs the interaction with the Internet or software, which is a key element of higher mental functioning (Peters, 1996, p. 180). A computer, thus, serves as a mediation tool for students in their internalization process of concepts learned through technology use (p. 180).

Teachers can also permit students to electronically construct reflections on various international experiences gained inside and outside of school. According to Vygotsky (1986b), use of spoken language in social interactions, such as with exchange students at a local university, helps facilitate a child’s development of inner speech, that is, a shorter syntactical version of oral speech. Writing, then, serves as a “translation
from inner speech” (p. 182). Therefore, reflection involves students thinking about an experience and then transferring the abstract thought into written form. Vygotsky (1986b) explained that,

Consciousness and volitional control characterize the child’s written speech…Signs of writing and methods of their use are acquired consciously. Writing, in its turn, enhances the intellectuality of the child’s actions. It brings awareness to speech. (p. 183)

Considering, again, the work of Kolb et al. (1999), learning for global competence provides children with concrete experiences on which they can reflect to develop scientific concepts and connections.

Bilingual education is yet another way for students to develop higher mental functions and global competence. Tochon (2009) explained that, “Children who are proficient in two languages…sometimes attach different meanings to words via the two languages, which means that a bilingual person may develop the ability to think more flexibly not only about words but about everything” (p. 654). This directly applies to global competence, which is partially based on understanding abstract concepts such as globalization and cosmopolitanism. As noted earlier in the chapter, Tochon (2009) explained that children who learn a world language gain “openness and appreciation of other cultures” (p. 655). As also noted earlier, Adesope et al. (2010) discussed a number of positive effects on cognition, such as increased capacity for creative thinking and problem solving that can come from bilingual education (p. 210). Thus, bilingual education is a tremendous path by which students can increase communication capacities, learn scientific concepts, and develop positive disposition and affect toward diversity.

While adults may not have the same capacity to learn a second language as children, for reasons discussed in the conceptual framework, the former may still develop
the disposition and affect to become globally competent. I assume that adults are at the
scientific concept stage, so they most likely already have some understanding of
globalization and economics, and may even speak a second language. For such
individuals, service learning could offer a means to develop the disposition and affect for
global competence. Shams and George (2006) explained that service-learning projects
contribute to global competence development, requiring participants to collaborate by
pooling individual expertise to help solve an issue of significance for an economically
underdeveloped community whose members may or may not speak English. In doing so,
participants work with the community to decide how best to be of assistance,
investigating culturally appropriate solutions, developing the chosen solution, and
implementing it alongside the locals. A key piece is a reflection process by which
participants keep a journal throughout the experience to express their developing
thoughts derived from the service learning (Shams & George, 2006).

The research of Shams and George (2006) focused on college-aged students in
formal education. The service learning of which they wrote, however, can serve as a
pathway for global competence development outside of the classroom, in the literal sense
encountered in their article, but also outside of formal education altogether. Keeping in
mind Harris’ (2013) “everyday multiculturalism” (p. 6) whether service learning occurs
through formal education, a transnational firm, or a community organization, with adult
or young learners, I assert that a thoughtful educator, job trainer, or mentor can guide
participants’ progress toward global competence development.
Summary

The ultimate purpose of global competence is to take action for the good of humanity, most members of which individuals may never meet or see. A learning process, however, is essential to preparing students to take such actions as globally competent people. Scientific and spontaneous concepts supplement one another as the former provides organization to the latter’s provision of tangible experience. Vygotsky’s (1986b) social development theory calls for formal education, during which concrete international experiences coupled with academic learning can help lead one to global competence. However, I assert that service-learning opportunities, which encourage individual dispositional growth, can catalyze the personal, global transformation that defines global competence development for those with limited formal education. After all, Appiah (2006) wrote, “…cosmopolitanism shouldn’t be seen as some exalted attainment: it begins with the simple idea that in the human community, we need to develop habits of coexistence…of living together, association” (p. xix).
Chapter 3

Methodology

The research objective for this dissertation was to build a preliminary survey that would, in its final form, allow educators, supervisors, administrators, and mentors to establish baseline information on individuals’ global competence characteristics prior to instruction, cross-cultural experience, international study or collaboration. A secondary aim concerned length of survey time to completion. The intent was to keep the eventual final survey at 15 minutes or less to make it adaptable to a variety of settings and situations. The research design consisted of four parts:

1. building Draft Survey 1 based on a literature review and existing measures of global competence features that emphasized indicators consistent with the theoretical framework of this study,

2. conducting a field test of Draft Survey 1 with a sample of elementary education pre-service teachers and making survey revisions based on field-test response patterns resulting in Draft Survey 2,

3. conducting a Delphi review to provide a deeper foundation for revision of Draft Survey 2 resulting in the Revised Survey, and

4. describing the field-test sample of elementary pre-service teachers using the Revised Survey as a guide.

The method for each of these four steps is described in this chapter, with the findings for each step then presented in Chapter 4.

Method: Building Draft Survey 1

Each of the Draft Survey 1 sections represented variables of the global competence conceptual framework described in Chapter 2 (disposition/affective realm, knowledge, skills and action). As discussed in the theoretical framework, I proposed that individuals who possess the first three variables would feel compelled to take action for
global good, defined in Chapter 2 as engagement to solve global issues affecting strangers (Appiah, 2006). Since this survey is ultimately intended to establish baseline information on individuals’ characteristics prior to learning toward this competence, it seemed logical to assume that respondents may not yet possess action-related involvement, such as participation in an international aid effort in their local community.

To address this concern, I considered the meaning of engagement. Engagement to solve global issues frequently requires collaboration, such as in a work environment or in a community setting. In addition, Boix-Mansilla et al. (2011) wrote, “More than ever people, cultures, and nations are interdependent, requiring the preparation of students capable and disposed to solve problems on a global scale and participate effectively in a global economic and civic environment” (p. 97). Given the interdependence of societies, this collaboration is likely to happen among culturally diverse individuals. Therefore, investigating frequency and types of interaction with culturally diverse individuals could help illustrate if respondents engage in, and if they are comfortable with, such encounters.

I then considered the format of Draft Survey 1. Since respondents’ demographic background and experiences could provide context for their answers to items measuring the variables’ indicators, I included a section that queried respondent background. Furthermore, given that interaction-related items would most likely pertain to respondents’ experiences, it seemed logical for them to fall within this section. This section would also survey other types of experiential and demographic information and, thus, be placed at the end of the survey (Nardi, 2006).

The other Draft Survey 1 sections would query the three remaining global competence variables. I planned for those sections to appear in the following order:
disposition/affective realm, knowledge, skill, and respondent background. The first three sections represented the explanatory variables that, together, explained the response variable of global competence. For Draft Survey 1, I intended to treat the action variable as a test variable to see if differences in respondent answers in the disposition/affective realm, knowledge, and skill sections could be explained in part by responses to the interaction-related items in the respondent background section (Babbie, 2007e).

To determine the contents of the first three sections of Draft Survey 1, I examined the indicators for the disposition/affective realm, knowledge, skill and action variables, as described in Chapter 2. Given my goal of developing a brief survey applicable to different educational and professional settings, and using the theoretical framework as a guide, I refined each of these variables to include only their core indicators.

Establishing Core Indicators: The Disposition/Affective Realm Variable

In Chapter 2 (p. 27), I defined disposition as “the natural or prevailing aspect of one’s mind as shown in behavior and in relationships with others” and “characteristic attitude” (“Disposition,” 2015); I defined affect as “feeling or emotion” (“Affect,” 2015). This variable, thus, refers to the attitudinal and emotional domain of an individual’s mind that influences interactions with others. In examining the disposition/affective realm variable's 10 indicators from Chapter 2, five indicators appeared related to a person’s openness to understanding people different from him or herself. They were empathy, cultural awareness, recognition of one's own and other's perspectives, acceptance of diversity, and ethnorelativity. The other four indicators were related to individuals’ openness to experience difference or to expand their experience beyond the familiar: desire for exploration, adaptability, self-confidence, and being a lifelong learner.
The definition of the tenth indicator, *open-mindedness*, illustrated an association with the five indicators related to openness to understanding culturally diverse individuals: *Open-mindedness* is a characteristic of a person who “…[has a certain] mindset…[is] globally minded…[is] open to the possibility that there is more than one answer to a question…[is] open to listening” (Todd, 2013, p. 24). The definition of the word *open* then exemplified an association between *open*-mindedness and the four indicators related to openness to unfamiliar experiences: “relatively free of obstruction to sight, movement, or internal arrangement: an open floor plan” (“Open,” 2015). The bulleted information below helps demonstrate the connection between the *open* definition and the indicators related to openness to experience:

- Relatively free of obstruction to sight (lifelong learner)
- Movement (desire for exploration)
- Internal arrangement (self-confidence, adaptability)

Following from this reasoning, I characterize open-minded individuals in this research as those who welcome cultural diversity and new experiences. In summary, the core indicator for the *disposition/affective realm* variable is *open-mindedness*.

**Establishing Core Indicators: The Knowledge Variable**

As described in Chapter 2 (p. 35), the *understanding of one’s own cultural background* indicator is foundational to the development of the knowledge needed for global competence (e.g., Boix-Mansilla et al., 2011; Hunter, 2005). The process of gaining this understanding involves personal cultural introspection, but it also provides a helpful reference point for learning about different cultures (Bennett, 2004). To facilitate the search process for existing tools to measure this indicator, I used the condensed phrase “cultural self-awareness” (Deardorff & Hunter, 2006, p. 79). Using this search
term yielded mostly performance-based assessments due to the inclusion of cultural, thus I narrowed the indicator further to an understanding of one’s self. A subsequent search produced an instrument measuring self-knowledge, discussed shortly on pages 81 to 83. I decided to use self-knowledge to refer to an understanding of one’s self due to the less cumbersome phrasing of the former.

Although Deardorff and Hunter (2006) argued “that there is no consensus on the role of language or education abroad in intercultural competence and global competence,” many other scholars and education-related organizations argued for the importance of learning world languages to global competence development. Given that learning one world language, in addition to a native language, strengthens that first language and increases understanding of a different culture (Tochon, 2009), I retained the knowledge of world language(s) indicator for measurement in Draft Survey 1.

Attention to the goal of survey brevity helped cull several indicators from the knowledge variable. The knowledge of world regions and cultures and knowledge of economics indicators represent subject areas that could supplement individuals’ understanding of globalization, but querying these topics fell beyond the scope of this tool. Thus, I did not retain these indicators for measurement. In contrast, the understanding of globalization indicator was retained because, to become globally competent, it is important for individuals to comprehend the meaning of the interconnectedness of the world’s peoples. The knowledge of current events indicator was also retained given the significant attention that such knowledge has received in the

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34 e.g., Adesope et al., 2010; American Council on Education (ACE) Commission on International Education, 1998; Boix-Mansilla et al., 2011; Reimers, 2009; and Tochon, 2009
Establishing Core Indicators: The Skill Variable

In the refinement process for this variable, I re-named the *ability to investigate* indicator to read the *ability to problem-solve*, since the latter represents the intended outcome of a globally competent person’s investigations (Boix-Mansilla et al., 2011). Furthermore, global competence and cosmopolitanism involve engagement to solve global problems (Appiah, 2006). As previously discussed, *engagement* suggests collaboration of people in professional and community settings, and argues for retaining the *ability to collaborate* indicator.

Given that many of the search outcomes for methods to measure the *ability to collaborate* and *ability to problem-solve* presented performance-based assessments or group-related activities, the work of Rubin, Watt, and Ramelli (2012) offered a welcome option. In examining the social integration of Australian immigrants, the researchers employed an instrument surveying the concept of *problem-solving style*. This concept offered a theoretical union of the *collaboration* and *problem-solving* indicators appropriate for the global competence context. Moreover, since collaboration entails the *ability to communicate effectively across diverse audiences*, I maintained this indicator, as well. Tools to measure this indicator, however, were limited to performance-based assessments; hence, I further narrowed this indicator to *communication capacity*.

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35 e.g., ACE Commission on International Education (1998); Blumenthal and Grothus (2008); Boix-Mansilla et al. (2011); Hunter et al. (2006); Olson and Kroeger (2001); Shams and George (2006); and Van Roekel (2010)
Establishing Core Indicators: The Action Variable

In Chapter 2, I explained that through action, or engagement to solve global problems affecting unknown individuals, a person becomes a cultural mediator (Wilson, 1994), a global citizen (Zhao, 2010), and a cosmopolitan (Appiah, 2006), the three indicators of the action variable. I understood a cosmopolitan’s role, however, as encompassing both the cultural mediator and global citizen roles, just as the global education field encompasses the multicultural and international education fields (ACIIE & the Stanley Foundation, 1994). A cosmopolitan represents balanced allegiances between home and abroad (Appiah, 2006), so I assigned it as the action variable’s core indicator. Table 3.1 displays the original indicators from Chapter 2 and the core indicators of the variables measured in Draft Survey 1.

Table 3.1

Global Competence Variables' Original and Core Indicators

<table>
<thead>
<tr>
<th>Variable</th>
<th>Original Indicators</th>
<th>Core Indicator(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disposition/ Affective Realm</strong></td>
<td>- Open-mindedness</td>
<td>- Open-Mindedness</td>
</tr>
<tr>
<td></td>
<td>- Cultural Awareness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Acceptance of Diversity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Desire for Exploration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Adaptability</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Recognition of One’s Own and Others’ Perspectives</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Empathy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Ethnorelativity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Self-Confidence</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Being a Lifelong Learner</td>
<td></td>
</tr>
<tr>
<td><strong>Knowledge</strong></td>
<td>- Understanding of One’s Own Cultural Background</td>
<td>- Self-Knowledge</td>
</tr>
<tr>
<td></td>
<td>- Knowledge of World Language(s)</td>
<td>- Knowledge of World Language(s)</td>
</tr>
<tr>
<td></td>
<td>- Understanding of Globalization</td>
<td>- Understanding of Globalization</td>
</tr>
<tr>
<td></td>
<td>- Knowledge of Economics</td>
<td>- Knowledge of Economics</td>
</tr>
<tr>
<td></td>
<td>- Knowledge of World Regions and Cultures</td>
<td>- Knowledge of Current Events</td>
</tr>
<tr>
<td></td>
<td>- Knowledge of Current Events</td>
<td></td>
</tr>
</tbody>
</table>
Table 3.1

Global Competence Variables’ Original and Core Indicators (continued)

<table>
<thead>
<tr>
<th>Skill</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ability to Communicate Effectively Across Diverse Audiences</td>
<td>• Cultural Mediator</td>
</tr>
<tr>
<td>• Ability to Investigate</td>
<td>• Global Citizen</td>
</tr>
<tr>
<td>• Ability to Collaborate</td>
<td>• Cosmopolitan</td>
</tr>
<tr>
<td>• Communication Capacity</td>
<td></td>
</tr>
<tr>
<td>• Problem-Solving Style</td>
<td></td>
</tr>
</tbody>
</table>

Identifying Existing Tools to Measure the Core Indicators

To measure the disposition/affective realm, knowledge, and skill variables, I searched for existing, valid and reliable tools, including scales, subscales, and groups of items. I also searched for a tool to address the action variable with content appropriate to a survey that measured individuals’ baseline global competence characteristics. The identification of existing measures proved challenging as no single tool captured each of the indicators suggested by the global competence literature. Thus, I considered existing measures as a pool of items for use in the field test. When necessary, I developed original items to measure an indicator in Draft Survey 1. In this chapter, I describe the studies from which I identified tools to measure several of the indicators and offer examples of items from these tools. I then present the items with my adaptations, the original items that I developed, and the overall structure of Draft Survey 1 in Chapter 4.

The Actively Open-Minded Thinking (AOT) Scale (Stanovich & West, 2007).
The AOT Scale[^36] from Stanovich and West (2007) comprised both original subscales

written by the authors and other subscales derived from a number of sources. This scale included six subscales, totaling 41 items. The constructs measured in the six subscales are described in Table 3.2, which also presents item examples from each of the subscales. In addition, Appendix B (p. 222) includes the descriptive statistics and internal reliability information for these subscales from various sources, where available.\(^{37}\) Although the different groupings of items described in Table 3.2 are referred to with descriptors such as scale, subscale, or facet by their originating authors, I refer to each item grouping as a subscale given its relationship to the overall AOT Scale. The work of Stanovich and West (1997) and Sá, West, and Stanovich (1999), which used Principal Components Analysis (PCA) and Factor Analysis (FA), respectively, provided the statistical justification for Stanovich and West’s (2007) unification of the subscales into a composite scale.

Table 3.2

*Subscales Used in the AOT Scale and Item Examples (Stanovich & West, 2007)*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Description</th>
<th>Example</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flexible Thinking Scale from Stanovich and West (1997):</strong></td>
<td>&quot;There were 10 items on [this] scale, some tapping the disposition toward reflectivity... willingness to consider evidence contradictory to beliefs...willingness to consider alternative opinions and explanations... and a tolerance for ambiguity combined with a willingness to postpone closure...&quot; (p. 346). Example: &quot;There is nothing wrong with being undecided about many issues&quot; (p. 346).</td>
<td></td>
<td>10 items</td>
</tr>
<tr>
<td><strong>Openness-Values Facet of the Revised NEO Personality Inventory from Costa and McCrae (1992):</strong></td>
<td>&quot;Openness to Values means the readiness to reexamine social, political, and religious values. High scorers on this facet are seen as tolerant, broad-minded, nonconforming, and open-minded. Closed individuals tend to accept authority and honor tradition and as a consequence are generally conservative, regardless of political party affiliation. Low scorers on this facet are seen as dogmatic, conservative, and conforming. Openness to Values may be considered the opposite of dogmatism&quot; (Piedmont, 1998, pp. 88-89). Example: &quot;I believe that laws and social policies should change to reflect the needs of a changing world&quot; (Stanovich &amp; West, 1997, p. 346)</td>
<td></td>
<td>8 items</td>
</tr>
</tbody>
</table>

\(^{37}\) Other iterations of this scale were used in the works of Stanovich and West (1997); Sá, West, and Stanovich (1999); and Sá, Kelly, Ho, and Stanovich (2005).
Table 3.2

Subscales Used in the AOT Scale and Item Examples (Stanovich & West, 2007) (continued)

<table>
<thead>
<tr>
<th>Items from Rokeach’s (1960) Dogmatism Scale, but as presented or used in Paulhus and Reid (1991), Robinson, Shaver, and Wrightsman (1991), and Trolldahl and Powell (1965):</th>
<th>9 items</th>
</tr>
</thead>
<tbody>
<tr>
<td>“The primary purpose of this scale is to measure individual differences in openness or closedness of belief systems...the scale should also serve to measure general authoritarianism and general intolerance” (Rokeach, 1960, pp. 71-72). The more open the belief system, the more should the person be governed in his actions by internal self-actualizing forces and the less by irrational inner forces. Consequently, the more should he be able to resist pressures exerted by external sources to evaluate and to act in accord with their wishes....Conversely, the more closed the belief system, the more difficult should it be to distinguish between information received about the world and information received about the source. What the external source says is true about the world should become all mixed up with what the external source wants us to believe is true, and wants us to do about it” (p. 58). Example: “Of all the different philosophies which exist in the world there is probably only one which is correct” (Stanovich &amp; West, 1997, p. 347).</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Categorical Thinking Subscale of the Constructive Thinking Inventory (Epstein &amp; Meier, 1989):</th>
<th>3 items</th>
</tr>
</thead>
<tbody>
<tr>
<td>“A scale, Categorical Thinking, refers to making categorical, undifferentiated judgments about people, the self, and undifferentiated relationships. An example is the belief that there are basically two kinds of people in the world, good and bad. Categorical thinking, as measured by the [Constructive Thinking Inventory], is a form of crude, or undifferentiated, thinking about interpersonal and personal experience” (p. 337). Example: “I think there are many wrong ways, but only one right way, to almost anything” (Stanovich &amp; West, 1997, p. 347).</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Belief Identification Scale as developed by Sá, West, and Stanovich (1999), but based on the work of Cederblom (1989):</th>
<th>9 items</th>
</tr>
</thead>
<tbody>
<tr>
<td>“The belief identification scale was inspired by a theoretical paper by Cederblom (1989) in which he argued for a potential thinking style centered around the extent to which people identify their beliefs with their self-concept....A nine-item scale was distilled from Cederblom’s discussion of this concept” (Sá, West, &amp; Stanovich, 1999, p. 501). Example: “It makes me happy and proud when someone famous holds the same beliefs that I do” (p. 501).</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Counterfactual Thinking Scale (Stanovich &amp; West, 1997):</th>
<th>2 items</th>
</tr>
</thead>
<tbody>
<tr>
<td>“As an indicator of the ability to decenter and adopt alternative perspectives, we derived a two-item scale designed to tap counterfactual thinking” (p. 347). Example: “My beliefs would not have been very different if I had been raised by a different set of parents” (p. 347).</td>
<td></td>
</tr>
</tbody>
</table>

Stanovich and West (1997, 2007) drew from Baron (1985) to describe **actively open-minded thinking**. Baron (1985) described the following inclinations as pertaining to this type of thinking: “the disposition to weigh new evidence against a favored belief heavily…the disposition to spend a great deal of time…on a problem before giving up, or the disposition to weigh heavily the opinions of others in forming one’s own” (p. 15).
Thus, actively refers to the real-time process that open-minded individuals may experience when encountering beliefs that differ from their own. I adapted the AOT Scale by Stanovich and West (2007) to measure the open-mindedness indicator of the disposition/affective realm variable in Draft Survey 1. Sample and statistical details of the authors’ study in which this scale was used are included in Appendix B (p. 223).

Stanovich and West’s (2007) AOT Scale demonstrated face and content validity. For face validity, I read items such as “I believe that the different ideas of right and wrong that people in other societies have may be valid for them” and “There is nothing wrong with being undecided about many issues” as being related to the open-mindedness indicator and to the AOT construct because of the beliefs and opinions queried. Although the first item mentioned above could invite socially desirable answers, the scale intermingles positively and negatively worded items. This intermingling helps reduce response bias and socially desirable participant responses (Nardi, 2006). Stanovich and West (2007) anchored the scoring of this scale (regular and reverse) to the relationship of a given item to actively open-minded thinking. For example, an item that would receive a high score on the Dogmatism Scale (see Table 3.2), which measures closed-mindedness, would receive a low score on the AOT Scale, which measures open-mindedness.

Moreover, with regard to face validity, the subscale descriptions provided in Table 3.2 ideologically interlocked and closely corresponded with the open-mindedness indicator and the AOT construct. The openness-values and flexible thinking subscale descriptions directly mentioned their relationship to open-mindedness or were built especially to measure this construct. The dogmatism and categorical thinking subscale descriptions explain that the constructs they measure are the opposite of open-mindedness.
or imply such opposition. Furthermore, the constructs of openness-values, dogmatism, belief identification, and counterfactual thinking pertained to personal beliefs and principles, which can affect individuals’ open-mindedness toward certain issues or information. This range of dimensions that Stanovich and West (2007) used to measure the AOT construct speaks to the content validity of the scale (Nardi, 2006, p. 59).

Despite these favorable characteristics, the 2007 AOT Scale also presented limitations. The most discernible limitation was the lack of a consistent, focused research basis for the unification of its subscales. Although previous studies\textsuperscript{38} used different iterations of the AOT Scale, the construction of this scale was not the central focus of any of those investigations. The PCA from Stanovich and West (1997) and the FA from Sá et al. (1999) used different combinations of the subscales appearing in the 2007 AOT Scale, as well as other subscales not included in the 2007 version. Thus, a full statistical picture was not offered for the combination of subscales used in the 2007 AOT Scale. A second limitation stemmed from the sample that Stanovich and West (2007) used in their study. While it was a large sample ($N = 1045$), it primarily comprised White, female undergraduate students (Stanovich & West, 2007, p. 234), thus increasing the likelihood of sampling bias (Babbie, 2007b). A third limitation pertained to the emphasis on what Stanovich and West (2007) identified as “rational” thinking (p. 226). It was unclear how that might account for the emotional element of the disposition/affective realm variable.

The Integrative Self-Knowledge Scale (Ghorbani, Watson & Hargis, 2008). Ghorbani et al.’s (2008) study addressed the importance of self-knowledge to building cross-cultural understanding or to “human flourishing across cultures” (p. 396). The

\textsuperscript{38} i.e., Sá, Kelly, Ho, and Stanovich (2005); Sá, West, and Stanovich (1999); and Stanovich and West (1997)
theoretical framework connected such knowledge to fit mental health and “positive psychology” (p. 398), since understanding of an individual’s own behavior in different contexts over time can help him or her to adjust comportment to reach intended goals.

The authors discussed the cross-cultural need for individual development of self-knowledge, with an emphasis on Iranian and American cultural beliefs that highlighted the significance of individuals looking inward. Both of these theoretical elements related to this dissertation research, since globally competent people ideally self-reflect to understand their own behavior in order to collaborate cross-culturally. Moreover, the notion that self-knowledge held positive implications for individuals across cultures also pertained to the potential wide audience of the global competence survey under development. For these reasons, I adapted Ghorbani et al.’s (2008) Integrative Self-Knowledge Scale39 to measure the self-knowledge indicator of the knowledge variable.

The purpose of Ghorbani et al.’s (2008) study was to build an instrument, appropriate for varying cultural contexts, to measure integrative self-knowledge. They defined this term as “…an adaptive and empowering attempt of the self to understand its experience across time to achieve desired outcomes” (p. 397). The authors assumed that people strive to preserve a continuous account of life experiences through incorporation of the present into both the past and the intended future. Therefore, their research objective was to build a new instrument called the Integrative Self-Knowledge Scale that measured “a temporally integrated form of self-knowledge that seeks to empower” (p. 398) an individual’s intended goals. The authors also gauged various forms of validity.

for the new scale identified as convergent, criterion, discriminant, and incremental. Details of Ghorbani et al.’s (2008) multi-sample study method and statistical analyses are included in Appendix B (p. 223).

The theoretical framework and statistical support underlying the 12-item Integrative Self-Knowledge Scale influenced my decision to adapt it for use in Draft Survey 1. One of the drawbacks to using this scale, however, pertained to the absence of items assessing cultural self-knowledge. But since this tool pertained to individuals’ self-reflection on personal behaviors and experiences, both of which factor into global competence development, I elected to use it. A second drawback was the awkward wordiness of the items, but I expected that this issue would be addressed through repeated survey testing and refinement.

The Global Understanding Scale (Jeon & Lee, 2012). Jeon and Lee’s (2012) work explored the association between “exposure to foreign culture” (p. 159) and resulting global skills, since so few Korean studies had broached the topic. More specifically, they investigated university students’ foreign culture exposure and global competency, as well as any association between the two constructs using the Global Understanding Scale.40 This instrument presented items that I adapted for use in Draft Survey 1 to measure the understanding of globalization and knowledge of world language(s) indicators of the knowledge variable. I also adapted items from Jeon and Lee’s (2012) tool to measure the cosmopolitan indicator of the action variable, as well as other respondent characteristics in the respondent background section of Draft Survey 1.

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Jeon and Lee’s (2012) theoretical framework focused on foreign culture exposure, learner motivation, and global competency. They addressed firsthand exposure and secondhand exposure as two general exposure types. An example of the first exposure type would be experiencing a culture through travel or study abroad. An example of the second type is experiencing another culture through methods such as books and movies (p. 160). The authors advised, however, that an individual’s motivation for learning through exposure to diverse cultures should start with materials and gradually become more immersive, direct contact with individuals. This paralleled Bennett’s (2004) steps involved with developing intercultural sensitivity, an element that Jeon and Lee (2012) include in their depiction of global competence.

The authors understood global competence as comprising knowledge, skill, and attitudinal elements based on their research using a number of the sources41 presented in the Chapter 2 Literature Review. Drawing on Reimers (2009), Jeon and Lee (2012) operationalized global competence using the following elements:

1) **global understanding** – deep knowledge and understanding of world issues and of globalization, and a capacity to communicate critically and creatively within the boundary of global village [sic], 2) **intercultural sensitivity** – positive disposition toward cultural difference, and 3) **foreign language proficiency** – communication proficiency to be able to speak and understand a foreign language [English in Jeon & Lee’s (2012) research]. **Global understanding** is comprised of **substantive knowledge, perceptual understanding, and intercultural communication skill** [sic], whereas **intercultural sensitivity** is composed of individuals’ **acceptance** tendency, **adaptation** tendency, and **integration** tendency. (Jeon & Lee, 2012, p. 167)

In addition to presenting firsthand and secondhand types of foreign culture exposure, Jeon and Lee (2012) described three other forms of exposure. The first was “past exposure [authors’ emphasis] abroad” (p. 169), which meant either living in the same

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41 i.e., ACIEE and The Stanley Foundation (1996); Hunter (2004); Olson and Kroeger (2001); and Reimers (2009)
country or different countries for more than three months or visiting the same region more than three times. The second was “current exposure [authors’ emphasis] to foreign culture” gained through “one-way sources [authors’ emphasis]” (p. 169) such as books, music, movies, etc., through interactions with people from abroad in Korea, or interactions with people outside of Korea by telephone or Internet. Finally, the third form of exposure was “education experience [authors’ emphasis] of taking college courses related to globalization, international relations, and intercultural studies” (p. 169).

The university student participants completed an online survey consisting of three sections of items: 1) demographic background items; 2) foreign culture exposure items; and 3) global competence items assessing global understanding, intercultural sensitivity, and proficiency in English (Jeon & Lee, 2012, pp. 170-171). To measure global understanding, the authors adapted survey items from Olson and Kroeger (2001) for the Korean setting. The adapted items included four items measuring substantive knowledge, one item measuring perceptual understanding, and three items measuring intercultural communication ability. To gauge intercultural sensitivity, the authors also adapted subscales that Olson and Kroeger (2001) constructed to measure Bennett’s (2004) Developmental Model of Intercultural Sensitivity stages. Specifically, Jeon and Lee (2012) adapted the items pertaining to the acceptance, adaptation, and integration (i.e., ethnorelativity) stages of the model. Finally, to assess participants’ perspectives on their proficiency in English, Jeon and Lee (2012) employed four items from a Self-Efficacy Questionnaire from 2009 derived from a source only abbreviated as the NCLRC. I concluded from my research that the abbreviation refers to the National Capital Language Resource Center at The George Washington University (2015). These
items ask respondents’ opinions on their English proficiency in reading, writing, speaking
and listening comprehension.

The demographic section of the Global Understanding Scale asked for
participants’ home department or college at the university, their major, and their
university level (Jeon & Lee, 2012). The foreign culture exposure section consisted of
nine items including dichotomous items, multiple-choice items, and one open-response
item regarding reasons for lack of exposure. The global competence section included a
matrix of 23 items to be answered on a 4-point scale (i.e., strongly disagree, disagree,
agree, and strongly agree) (p. 171). The authors calculated respondents’ mean scores on
each of the subscales (e.g., substantive knowledge, intercultural communication ability,
English proficiency) within the matrix. Details on Jeon and Lee’s (2012) study
pertaining to the sample and to the analyses used appear in Appendix B (p. 225).

Jeon and Lee’s (2012) study uncovered insightful findings related to global
competence, but it also suffered from methodological and reporting issues. For example,
they only included female undergraduate business majors to reduce the effects of
confounding variables such as including males and students from other majors. This
decision, however, weakens the generalizability and, thus, the external validity of the
findings. Also, the exclusion of standard deviations from the reporting of participant
scores and independent sample $t$-test analysis results reduces readers’ ability to fully
comprehend the findings and weakens internal validity. Jeon and Lee’s (2012)
theoretical framework and instrument content, however, attracted my attention for
development of Draft Survey 1. From the Global Understanding Scale, I adapted the:
• Substantive knowledge items (e.g., “I am interested and spend considerable time working on global issues”) to measure the understanding of globalization indicator of the knowledge variable.

• Language proficiency items (e.g., “I am proficient in comprehending spoken English”) to measure the knowledge of world language(s) indicator.

• Foreign culture exposure items [e.g., “Do you expose yourself to foreign culture repetitively? (Or have you done so repetitively in the past?)”; “What are your sources of exposure?”; “Why did you have little or no exposure to foreign culture? …”] to measure the cosmopolitan indicator of the action variable. (J. Jeon, personal communication, August 20, 2015)

These borrowed items required substantial adaptation for use in Draft Survey 1. I describe these adaptations and present the resulting items in Chapter 4.

The Gapminder Foundation’s Ignorance Survey. I identified the next measure for Draft Survey 1 using a search term from Jeon and Lee (2012): global literacy (p. 160). I envisioned global literacy as a part of the understanding of globalization indicator of the knowledge variable. A search of scholarly databases and then of the Internet for items measuring this literacy produced a news story (Cullinane, 2013) about a non-profit organization investigating the “ignorance” (Gapminder, n.d.b, para. 1) of the world’s people on pervasive global trends. Hans Rosling, through his experiences as a medical doctor and a professor of global health at the Karolinska Institutet in the 1990s, recognized the need for an effort to correct gross misunderstandings about the world (Cullinane, 2013). From his time as a researcher in Africa and then in the classroom as a professor at the Karolinska Institutet in Sweden (Rosling, 2006), he learned that his students and colleagues possessed distorted ideas about global trends, especially about “the rest [developing countries] and the West [developed countries]” (Rosling & Rosling, 2014, timestamp 17:01).
Rosling tested this ignorance with his students and colleagues as well as with chimpanzees using global health-related quiz questions with two answer options each (Gapminder, n.d.b; Rosling, 2006). To answer a question, the chimps selected from two bananas that each included a written answer choice. He found that the chimps scored higher,\textsuperscript{42} with answers selected at random by choosing the banana with the right answer half of the time, than his students\textsuperscript{43} and colleagues\textsuperscript{44} (Rosling, 2006, timestamp 00:57). Rosling concluded that with his students and colleagues scoring “worse than random….the wrong answers could not be the results of guessing. They must be due to preconceived ideas that in a systematic way created and maintained ignorance” (Gapminder, n.d.b, para. 4). Such ideas often stem from inaccurate news reporting, facts gained in school from years ago, or prejudiced personal perspectives gained from life experiences (para. 6).

Hans Rosling established the non-profit Gapminder Foundation in 2005 with Ola Rosling and Anna Rosling Rönnlund (Gapminder, n.d.a; Rosling, 2006). The mission of this foundation is to “fight devastating ignorance with a fact-based worldview that everyone can understand” (Gapminder, n.d.b, para. 1). The Gapminder Foundation (henceforth the Foundation) intends to achieve this goal by testing the general public in countries worldwide to measure the lack of knowledge, or ignorance, on key patterns in global development; hence, the Foundation calls these instruments the “Ignorance Surveys” (Gapminder & Novus, n.d., p. 2). They partner with the Novus Group International AB—a Swedish company specializing in survey research—to construct questions and answer choices appropriate for the public (Gapminder & Novus, n.d., p. 2).

\textsuperscript{42} i.e., 2.5/5 (Rosling, 2006, timestamp 00:57)
\textsuperscript{43} i.e., 1.8 out of 5 (Rosling, 2006, timestamp 00:57)
\textsuperscript{44} i.e., 2.4/5 (Rosling, 2006, timestamp 00:57)
The Foundation conducted a pilot test in 2013 in the United States, Sweden and Norway, and posted results for each country on the Ignorance Project website (Gapminder, n.d.b; Rosling & Rosling, 2014). It also disseminated its surveys in the United Kingdom, Germany, and South Africa (Gapminder, n.d.b; Highlights from Ignorance Survey in the UK, n.d.). The surveys given in all of these countries comprised ten or less questions. The questions used were similar across countries, with variations in wording and in geographic locations to query respondent knowledge of certain parts of the world on a given trend. The Foundation released the Ignorance Survey results on its website, and included the questions, the correct answers, the data sources used to develop each item, and the number of respondents who answered each question.

The Ignorance Project, to this point, has demonstrated a number of positive changes in global trends that are contrary to common belief, such as a reduction in the proportion of people living in poverty, an increase in the length of time that women have attended school, and reduced death rates from natural disasters (Rosling & Bolling, 2015). The significance, then, of individuals holding a fact-based worldview is that they can take action and expend resources appropriately (para. 13). The Foundation openly shares its findings on areas of public misunderstandings under the Creative Commons Attribution License, and provides engaging methods to teach and learn factual global trends, so that people worldwide can work to solve current issues.

Given the alignment between the Foundation’s goal and the cosmopolitan framework underlying this study, I defined global literacy in the context of global competence as a fact-based worldview from which to take meaningful action. I understood this worldview as contributing to individuals’ understanding of globalization,
an indicator of the knowledge variable. To measure this worldview in Draft Survey 1, I used questions from the Ignorance Survey disseminated in the United States in 2013 (Gapminder & Novus, n.d.). The Foundation partnered with Novus to design the questions in the U.S. survey, which was disseminated in an online format. Furthermore, to ensure generalizable results, the Foundation enlisted the help of the Growth from Knowledge (GfK) Group. The GfK Group is a market research company that uses probability sampling to assemble a KnowledgePanel®, whose members respond to national polls and surveys such as the U.S. Ignorance Survey (Gapminder & Novus, n.d.; Growth from Knowledge [GfK], 2017a). Information regarding the sampling method for the U.S. Ignorance Survey appears in Appendix B (p. 226).

Since the Ignorance Survey constitutes an assessment with answers scored on correctness, I considered its measurement or inference validity. During a TED Talk, Ola Rosling explained, “So I've started actually contacting some [organizations], like [World Wildlife Fund for Nature] and Amnesty International and [United Nations Children's Fund], and asking them, what are your favorite facts which [sic] you think the public doesn't know?” (Rosling & Rosling, 2014, timestamp 11:48). This fact gathering process helps demonstrate measurement validity of the Ignorance Surveys through “evidence based on test content” (McMillan & Schumacher, 2010b, p. 175), since these experts have contributed specialized knowledge toward the survey content. Data from the World Health Organization, the World Bank, the United Nations, the International Energy Agency, and a research publication45 were used to construct the 10 questions employed in the U.S. Ignorance Survey and adapted for use in Draft Survey 1 (Gapminder & Novus, n.d.).

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45 i.e., van Zanden, Baten, Foldvari, and Leeuwen (2011)
The number of responses for each of the U.S. survey’s 10 questions ranged from 994 to 1005, with the overall low scores\textsuperscript{46} aligning with the Roslings’ expected results (Gapminder & Novus, n.d.). Based on the procedures of KnowledgePanel\textsuperscript{®}, it seems likely that the same panelists answered all 10 questions; however, internal validity of the instrument could still suffer due to subject effects, such as the need for “positive self-preservation” (McMillan & Schumacher, 2010a, p. 114). This effect may lead some panelists to look up answers to items they do not know, thus affecting the survey outcome. The KnowledgePanel\textsuperscript{®} procedure of allowing panelists to take the survey at home or at another location of their choice, protects the “ecological external validity” (p. 116) of the survey, but risks panelists looking up answers. Moreover, although the widespread news coverage of the Foundation’s work can be viewed as positive press, it could cause internal validity issues through “diffusion of intervention” (p. 113). While this most likely was not an issue for the U.S. sample since it was among the first countries tested and since the scores were low, publicizing the correct answers and the research purpose could influence how respondents answer in later surveys.

The methods used to develop and test the Ignorance Surveys, the surveys’ content, as well as the philosophical foundation upon which Hans Rosling established the Gapminder Foundation and its Ignorance Project were all reasons for including these items in Draft Survey 1. Regarding the U.S. Ignorance Survey’s test reliability, it appears strong with its clearly stated questions and short length (McMillan & Schumacher, 2010b). As for generalizability, according to the World Bank (2016), the U.S. population (N) includes 318,857,056 people. So \( n \approx 1,000 \) randomly selected respondents answering

\textsuperscript{46} The results for this Ignorance Survey can be found at: http://www.gapminder.org/GapminderMedia/wp-uploads/Results-from-the-Ignorance-Survey-in-the-US.pdf
each of the 10 questions resembled an adequate sample from which to gather a general idea of U.S. public knowledge of the global trends tested (Babbie, 2007b). Kent (2001) explained, “For any kind of quantitative analysis a minimum of 100 cases are needed even to be able to calculate simple percentages for each variable” (p. 201). If each of the 10 questions on the U.S. Ignorance Survey is considered a variable, then the Foundation and KnowledgePanel® secured approximately 1,000 cases per variable.

The Cognitive Communication Competence Scale (Duran & Spitzberg, 1995). Duran and Spitzberg’s (1995) work described cognitive communication processes as unfolding in a circular manner. They explained that, “To make communication choices that are adaptive to the situation, one must be able to identify variables that influence the situation” (p. 261). One such variable that they highlighted was that of culture, and how this among other aspects help shape the interactions of individuals who possess cognitive communication competence (p. 261). Duran and Spitzberg’s (1995) consideration of this cultural aspect as well as their method of operationalization of the communication process both served as reasons for selecting the Cognitive Communication Competence Scale47 (CCCS) for use in Draft Survey 1. Specifically, this scale measured the communication capacity indicator of the skill variable.

In their work, Duran and Spitzberg (1995) described the development process and initial validation of the CCCS. The CCCS consisted of 22-items and measured planning, modeling, presence, reflection and consequence cognitions (p. 275). A scarcity of research on the “cognitive domain of communication competence” served as the authors’

primary reason for their research. They described *fundamental competence*—an individual’s skill to continually acclimate to a given setting—as the “most basic form of communication competence” (p. 260). At the heart of fundamental competence is *adaptability*, or the ability to effectively communicate in a given situation due to recognition of applicable environmental factors (p. 260). Of particular interest to the authors, therefore, were “the psychological and psycho-motor processes that facilitate cross-contextual performances” with “concepts such as role-taking, flexibility, empathy, behavioral repertoires, and style-flexing…assumed to aid in this process” (p. 260).

Duran and Spitzberg (1995) drew on action assembly theory (Greene, 1984; Greene & Lindsey, 1989) to describe a kind of cognitive bridge between individuals’ ongoing, mental activities in a certain setting and their resulting, outward communication.

Action assembly theory holds that individuals learn from their experience of actions that did and did not work to help them achieve a goal (Duran & Spitzberg, 1995). Such learning entails the formation of “procedural memory,” which maintains “action-outcome contingencies” (p. 260) that resemble concepts learned through taking action and experiencing the results of that action. Duran and Spitzberg (1995) explained that environmental factors that have previously influenced results, along with a person’s quest to achieve a goal, both stimulate procedural memory to facilitate suitable communication to then reach that goal. This is a continual process from which individuals fine-tune their communication strategies according to situational objectives. *Cognitive communication competence*, then, is the capability to implement each aspect of the action assembly theory thereby producing successful interpersonal interactions. Duran and Spitzberg (1995) explained that this competence
…was conceptualized as comprised of four components: 1) *anticipation* [authors’ emphasis] of situational variables that have the potential to influence one’s communication behaviors [i.e., prior to a conversation], 2) *perception of the consequences* of one’s communication choices during an interaction, 3) *immediate reflection* upon one’s social performance after an interaction, and 4) *general reflection* and interest in observing social interaction. (p. 265)

The CCCS thus surveyed cognitions that contribute to the fruitful manifestation of effectual communication.

In previous research, Duran, Kelly, Schwager, Carone, and Stevens (1993) found that eight of their original 16 items gathered on a single factor using factor analysis. This factor gauged individuals’ consideration of the effects of their communication decisions. Duran and Spitzberg (1995) kept the eight items, which related to *immediate reflection* and *general reflection* described above, and then added 19 more items that were either revised or newly constructed to assess the cognitions used prior to and during a conversation. The response options assumed a 5-point Likert format.48 For information regarding Duran and Spitzberg’s (1995) study sample and statistical analyses, please see Appendix B (p. 227).

Duran and Spitzberg (1995) remarked that while their investigation offered preliminary evidence of construct validity of the CCCS using three scales49 pertaining to communication and interaction processes (see Appendix B), these three tools assessed cognitions pertinent to a *live* conversation. To confront this limitation, the authors explained that additional studies would need to examine the relationship between the CCCS and instruments that assess other points on the communication timeline.

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48 i.e., 5 = *always true of me...* 3 = *sometimes true of me...* 1 = *never true of me* (p. 275)
49 The Communicative Knowledge Scale (Spitzberg, 1990); the Interaction Involvement Scale (Cegala, 1981); and the Revised Self-Monitoring Scale (Lennox & Wolfe, 1984)
The Independent-Interdependent Problem-Solving Style Scale (Rubin, Watt & Ramelli, 2012). The 10-item problem-solving style tool used in Draft Survey 1 was derived from the research website of Mark Rubin (Rubin, n.d.b), a senior lecturer in the School of Psychology at the University of Newcastle in Australia (Rubin, n.d.a). Rubin, Watt, and Ramelli’s (2012) work, however, explained the development of the Independent-Interdependent Problem-Solving Scale (IIPSS), which originally consisted of 12-items. Rubin et al.’s (2012) research applied to the context of immigration, and primarily focused on the relationship between the approach-avoidance orientation and social integration of a sample of immigrants, and on the moderating role of their problem-solving style in that relationship. To measure the participants’ problem-solving style, Rubin et al. (2012) used the original 12-item IIPSS, but piloted it prior to applying it in their larger investigation. Information regarding the 12-item instrument, the pilot study sample, and the statistical methods used to analyze the data are discussed in Appendix B (p. 228).

The 10-item IIPSS. Comparing Rubin’s (n.d.b) 10-item version of the IIPSS from his website with those of the 12-item version, it is clear that the content of the latter was more suited for the immigration context. Conversely, the shorter version included items applicable to a range of contexts. Rubin (n.d.b) described this version as “a general purpose measure of dispositional preferences for independent and interdependent problem-solving” and then referenced the pilot study’s statistical findings in the 2012 study (para. 2). Rubin (n.d.b) intended for researchers to score the IIPSS with low scores representing independent problem solving and high scores representing interdependent problem solving, or vice versa, based on the goal of their investigations. For Draft
Survey 1, high scores represented *interdependent* problem-solving style since global competence calls for collaboration to solve globally relevant issues.

For the 10-item version of the IIPSS, Rubin (n.d.b) kept the two items by Triandis et al. (1986) and an item by Oyserman, Coon, and Kemmelmeier (2002), but elected not to re-use four items from the original IIPSS, most likely because they were tailored to the immigration context. Rubin (n.d.b) retained four items and modified two other items originally written for the 12-item scale for use in the revised IIPSS. Rubin (n.d.b) also constructed a new item for the revised version. Five of the 10 items assess a predilection for *independent* problem solving (“I prefer to make decisions on my own, rather than with other people”); the other five items gauge a penchant for *interdependent* problem solving (“I value other people's help and advice when making important decisions”). The revised IIPSS included the same 7-point Likert response format as the original 12-item tool (Rubin, n.d.b).

A significant limitation of Rubin’s (n.d.b) revised IIPSS is worth noting. In his discussion of the revised scale, Rubin (n.d.b) referred to the validity and reliability results from Rubin et al. (2012) for the 12-item tool. It was unclear, therefore, whether or not the revised 10-item tool had been further tested. Given the changes in the revised version from the original IIPSS, the validity and reliability of the scale could, and most likely would, be affected. The revised IIPSS, therefore, appears to remain in an exploratory stage. But since Rubin (n.d.b) maintained several of the same items and the same

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50 See Appendix B for additional details on the original IIPSS' 12 items.
51 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Partially Disagree*, 4 = *Neutral*, 5 = *Partially Agree*, 6 = *Agree*, 7 = *Strongly Agree*. Rubin et al. (2012) included these response options in the online supplemental material that accompanied their article.
proportion of *interdependent-independent* items, it seemed plausible that the revised scale could exhibit similar statistical qualities as the original 12-item scale.

**Method: Conducting the Field Test of Draft Survey 1**

Following construction of Draft Survey 1 using items adapted from the previously described tools, I field-tested it with elementary education pre-service teachers. The following sections detail the process used to complete this study.

**Population**

In Chapter 1, I discussed the U.S. Department of Education’s (USDE) International Strategy (2012) for 2012-2016 and its emphasis on the need to “increase the global competencies of all students in the U.S., including those from traditionally disadvantaged groups” (p. 5). Global competence, thus, applies to a broad population of people in the U.S. who have, or will have, a variety of professional and academic backgrounds. And despite the strong connection between global competence and the education field, authors from a variety of professions have written chapters or articles about this competence. The population for the survey under construction, therefore, is far-reaching and provides many possibilities for future research. The study population that I chose for the field test exemplified both a professional and an academic area: Elementary Teacher Education Program (TEP) pre-service teachers who were students at a large, public, southeastern university's (LPSU) college of education (COE).

The LPSU’s COE offers both traditional and alternative route programs. For the 2013-2014 academic year (AY), it enrolled approximately 640 pre-service teachers (students) total across both program types (USDE, n.d.). Of the 640 students, about 630 were enrolled in traditional route programs. In AY 2013-2014, the COE’s Elementary
TEP (a traditional route program) graduated about 120 students. Traditional programs are usually four-year undergraduate programs that include courses in academic subjects as well as in pedagogy (USDE, Office of Postsecondary Education, 2013, p. 4). Students enrolling in such programs, like the Elementary TEP, are typically entering during their junior year of college and have limited prior teaching experience (p. x). This particular COE was chosen as the field-test site since its mission calls for the preparation of teachers who are global citizens. As discussed in Chapter 2, I considered global citizenship and global competence to be related constructs. The Draft Survey 1 results, therefore, could have offered perspective into the pre-service teachers’ development of characteristics pertaining to both constructs.

For the AY 2013-2014, the estimated demographics for the approximately 630 students enrolled in traditional route programs, including the Elementary TEP, at the LPSU were as follows: 19% male and 81% female; 2% Hispanic/Latino of any race, .2% American Indian or Alaska Native, 1% Asian, 4% Black or African American, 0 Native Hawaiian or Pacific Islander, approximately 91% White, and .5% Two or More Races (USDE, n.d.). Considering the demographics, I expected that a majority of the Elementary TEP students sampled for this research would most likely be female and White, with a small number of students from minority backgrounds. Neither gender nor race was a factor of inclusion or exclusion for this research. Students enrolled in a particular course at the time of this field test was the only factor considered.

The participant selection criteria were defined specifically for this research as all pre-service teachers taking a social studies teaching course in Fall 2015 as part of the Elementary Teacher Education Program (TEP) in the LPSU’s COE. Conversations in
Spring 2015 with TEP administrators for the elementary, middle, and high school programs aided in the selection of the Elementary TEP as the study population for this research. From these discussions, I learned that this TEP consisted of the highest number of pre-service teachers (approximately 100) who would be enrolled in three sections of the social studies course in Fall 2015. I decided to use only the Elementary TEP in the study population in order to maintain the research focus of field-testing the instrument as opposed to gathering data from across various program concentrations.

**Field-Test Sample**

Much of the research on global competence originated from the education field, which provided the rationale for the decision to conduct the field test with pre-service teachers. This group served as a “calibration” (Wang, Li, Lin, & Shih, 2014, p. 551) sample such that the data resulting from their completed surveys were used to calibrate, or to amend and improve, Draft Survey 1. The unit of analysis for this field test was defined as an Elementary TEP pre-service teacher who completed Draft Survey 1. From a logistical standpoint, the Elementary TEP pre-service teachers were attending classes on LPSU’s campus at the time of this research. From a theoretical perspective, however, they were finishing their coursework and ready to enter classrooms for their practicums. This was, therefore, a purposive sample52 as I surveyed global competence characteristics of these pre-service teachers prior to the commencement of their formal training in an elementary classroom, and also tested the functionality of the instrument.

**Purposive sampling.** Teddlie and Yu (2007) described purposive sampling, also called purposeful sampling, “as selecting units (e.g., individuals, groups of individuals, institutions) based on specific purposes associated with answering a research study’s

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52 e.g., Babbie (2007b); Manning (2000); Stake (1973); Teddlie and Yu (2007)
questions” (p. 77). While I was only able to gather a small number of pre-service teachers, which thus fell short of statistical requirements for generalizability, the goal of survey calibration with a meaningful sample of participants was met. Regarding sample size in the purposive approach, sometimes referred to as “nonprobability sampling” and “qualitative sampling,” Teddlie and Yu (2007) explained that a group with fewer than 30 people would suffice in order to meet research objectives (p. 84). Researchers typically choose this form of sampling for studies that use qualitative approaches for data collection and analyses.\footnote{Castro, Kellison, Boyd and Kopak (2010); Stake (1973); Teddlie and Yu (2007)} While the present research was not purely qualitative, it was exploratory and primarily concerned with fine-tuning an instrument. Babbie (2007b) described purposive sampling as useful for assessing an early version of a tool to help “effectively uncover any peculiar defects in [the] questionnaire” (p. 184), which aligned well with the purpose of this research.

The maximum sample size, that is, the entire study population for the Elementary TEP consisted of about 100 pre-service teachers who were students enrolled in the social studies course in Fall 2015. Since the course instructors allowed me to speak with the students, gave time at the end of class for interested students to complete Draft Survey 1 (after my departure) and offered laptops to those individuals who needed one to complete the survey, I expected a higher response rate than what I received. Although 69 students signed up (i.e., the sampling frame) as interested in completing the survey, the actual response rate was much lower: 32 students accessed the survey and 19 completed it. Factors such as an unusually timed, large LPSU sporting event scheduled on the same day that I visited the classes may help explain the low response rate. The demographic background of the 19 student participants, however, paralleled the statistics of the LPSU
traditional route programs. Of the 19 participants, 16 answered the demographic survey items. All 16 were female with 15 describing their ethnic identity as White/Caucasian and one identifying as Chinese American.

**Procedures**

Once I received permission from the Internal Review Board (IRB)\(^{54}\) and from the social studies course instructors, I visited each of the three course sections in October 2015. During these visits, I spoke with students about this research, invited them to participate by completing the survey, and answered student questions. I explained that I had designed an instrument to measure global competence and discussed reasons for its importance to individuals today. I did not, however, define global competence since I did not want to reveal information that could affect survey responses. I disseminated a sign up sheet for interested students to provide an email address to then receive the official invitation by email. I explained that by signing up, it did not mean that they had to take the survey; it simply indicated interest in receiving the invitation.

The invitation email. Following each class visit, I disseminated the invitation email with the survey link to all students who signed up during the class visits. This email explained the study’s purpose, presented information related to participation, and invited the recipients to volunteer. It also explained that I would not know who took the survey unless identifying information was voluntarily provided in responses to the demographic and follow-up contact items. If participants chose to provide this information, the email stated that it would be kept confidential and that I, along with my advisor, were the only people who would have access to it, and only if necessary. Students were assured that their instructor would not have access to any of their

\(^{54}\) The IRB Protocol Number for the Draft Survey 1 field test is 15-0676-P4S.
responses. The email also mentioned that the survey would need to be completed in one sitting, as they would not be able to re-enter SurveyMonkey (the online survey venue used in this research) once they exited. This was due to the inclusion of the global competence definition at the end of the survey. Although respondents could return to earlier survey items after reading the definition, SurveyMonkey’s automatic erasure of responses given on previous pages as well as the instrument’s length would have likely precluded such action.

**Survey participation.** Once respondents opened the survey, a filter question asked whether or not they were enrolled in the social studies course to ensure they fell within the sample parameters. All 32 respondents selected *yes* to this item. The cover letter survey page in Draft Survey 1 (Appendix C) then appeared with consent information included. At the bottom of this page was an item asking respondents if they understood the cover letter’s contents and wanted to participate in the research. As explained in the cover letter, clicking *yes* to this question and then *next* to start the survey, and by clicking *done* at the end indicated consent for use of respondents’ data in this research (identified as completers). If respondents answered *yes* to the cover letter item but exited the survey early, then their answers were not used as data (identified as non-completers). All respondents, both completers and non-completers, answered *yes* to the cover letter item.

The invitation email and cover letter asked students to complete the survey before practicum began (October 19, 2015). On October 17, a reminder email was sent to the same recipients of the first email, since the number of completed surveys was less than the number of students who signed up to receive the invitation email. The survey
remained accessible until October 20 in case interested students needed extra time to complete it. At that point, the survey was closed.

**Methods of Data Analysis for Draft Survey 1 Responses**

The primary purpose of this data analysis was to make initial modifications to Draft Survey 1, thus producing Draft Survey 2 for use in the Delphi review. A second research aim was to keep the survey at 15 minutes or less to make it adaptable to a variety of settings, thus I examined the completion times (timestamps) of the completers and non-completers, and scanned the data for items that were consistently skipped by both sets of respondents.

I also examined where non-completers stopped in the survey, which led to the use of reliability analysis to shorten one of the adapted scales. Moreover, I combined survey items in order to streamline the instrument. Item order was changed in some subsections to keep respondents’ attention and to reduce the likelihood of socially desirable responses. Additional re-wording of certain items addressed word-choice issues and resolved double-barreled phrasing, while revisions to answer choices helped ensure the inclusion of adequate response options for given items (Babbie, 2007c). Despite the numerous revisions made to Draft Survey 1 resulting in Draft Survey 2, the latter still required further refinement. I, therefore, sought the expertise of individuals with experience in disciplinary fields related to global competence in a Delphi review.

**Field-Test Limitations**

Establishing reliability and validity were not a focus at this exploratory stage in the survey development process. Incorporating survey items, however, from previously tested, existing instruments, which had shown evidence of at least some forms of
reliability and validity, helped provide a foundation from which to shape this nascent tool. With variables and core indicators gathered from the global competence literature, this instrument shows promise of content and face validity (Nardi, 2006). Because there are so few instruments in existence that measure this construct, I assembled items from established tools originating from disparate research fields. The item content of these tools paralleled, but did not align as well as I had hoped with, the variables’ indicators.

Criterion validity was difficult to establish since other comparable instruments were either unavailable for use, (the GCAA®), or were misaligned with the content of the survey in this research, (DeGarmo & Daniels’ [2009] global competence survey). With no “external standards or criteria” (Nardi, 2006, p. 59) with which to compare the draft survey and its resulting data, criterion validity was unattainable in this study. The field test did, however, serve to shape revisions to Draft Survey 1.

Method: Conducting the Delphi Review of Draft Survey 2

The purpose of conducting the Delphi review was to further refine Draft Survey 2 through the use of a panel of experts with professional experience in fields related to the global competence construct. Rowe and Wright (1999) explained that the Delphi technique, originated in the 1950s by the RAND Corporation, was used as a method to gather expert opinion on given subject matter. The authors, for instance, describe the technique as capitalizing on “the positive attributes of interacting groups…while pre-empting their negative aspects” (p. 354). As Helmer (1967), one of the Delphi creators, argued, round-table discussions were often likely to produce results compromised by …undue influence of certain psychological factors, such as specious persuasion by the member with the greatest supposed authority or even merely the loudest
voice, the unwillingness to abandon publicly expressed opinions, and the bandwagon effect of majority opinion. (p. 7)

In contrast, the Delphi technique offered a “carefully designed program of sequential individual interrogations…interspersed with information and opinion feedback” (p. 7). While the Delphi technique arose from military and governmental needs, it has been used in a number of areas such as psychology, job training, education, engineering, and health care among others (Clayton, 1997; Rowe & Wright, 1999).

There are three forms of the Delphi technique: conventional, real-time, and policy (de Villiers et al., 2005, p. 639). The present research employed the conventional form. Generally, this form involves the establishment of an expert panel, with participants remaining anonymous except to the moderator(s), who assembles, disseminates, and analyzes questionnaires over successive rounds, the results of which are shared with the panel throughout the process for their consideration. The key to this process is the continuous current of feedback moving between the moderator and panelists by way of the completed questionnaires and the questionnaire results, respectively.

Four to five generally accepted characteristics describe a Delphi technique: (1) use of an expert panel; (2) anonymity of panelists to one another and anonymity of their thoughts, opinions, answers, etc.; (3) recursive use of a stimulant, typically taking the form of questionnaires; (4) statistical reporting by the moderator; and (5) continual feedback provided between moderator and panelists (Goodman, 1987; Rowe & Wright, 1999). The goal of this process is, many times, consensus. Rowe and Wright (1999) defined consensus as “reasoned acceptance of a position” (p. 363). From a statistical perspective, consensus is often determined through examination of a measure of central tendency, such as the mean, median, or interquartile range, and of deviation of responses
from this point (Clayton, 1997; de Villiers et al., 2005). Delphi panels can often reach consensus by the conclusion of the third round (Clayton, 1997; Fogo, 2014).

The question of panelist number also arises in Delphi technique planning. Clayton (1997) explained that a panel’s number typically ranged from 5 to 30 people depending on whether or not the panel constitutes a “heterogeneous” or “homogeneous” (p. 378) group of people. The former refers to panelists who possess expertise on a similar subject, but who “com[e] from different social/professional stratifications…” (p. 378); the latter refers to those from the same field of expertise. A heterogeneous panel calls for a smaller number of experts (e.g., 5 to 10), while a homogenous panel entails a larger number (e.g., 15-30) (de Villiers et al., 2005, p. 640).

Fink et al. (1984) explained that as the number of panelists and rounds increases, so does the reliability of the Delphi technique (p. 980). Furthermore, Goodman (1987) noted that use of this technique could strengthen content validity “If the selected panelists participating in the study can be shown to be representative of the group or area of knowledge under study” (p. 731). While these are certainly two points to consider in the Delphi planning process, Rowe and Wright (1999) provided a valuable reminder about this process:

Delphi is not a procedure intended to challenge statistical or model-based procedures, against which human judgment is generally shown to be inferior: it is intended for use in judgment and forecasting situations in which pure model-based statistical methods are not practical or possible because of the lack of appropriate historical/economic/technical data, and thus where some form of human judgment input is necessary (e.g., Wright, Lawrence & Collopy, 1996). (p. 354)

This being the case and given the exploratory nature of the present work, a Delphi review of Draft Survey 2 by individuals whose expertise intersected closely with global
competence seemed to be the most appropriate next step in the research process.

Additional information regarding the Delphi technique is available in Appendix B (p. 229).

**The Delphi Panel**

Although I see the development of global competence as applicable to a wide audience, the Literature Review in Chapter 2 delineated certain fields that directly relate to this construct. And since I planned for the Delphi procedure to begin with an examination of the four survey sections, as opposed to the survey items, a heterogeneous panel of 10 members from related, yet diverse professional and personal backgrounds was formed. The formation and composition of this panel resembled a purposive sample (e.g., Teddlie & Yu, 2007). The panel included employed and retired individuals from professional or academic positions associated with international affairs, international education, global education, world language instruction, global health, and educational leadership. Each of these individuals reflected the qualities of global competence in their careers, evidenced through projects that I learned about from working with them or from the research I conducted when gathering the sample.

Regarding panelist backgrounds, 8 of the 10 panelists worked at three universities in three states, two of which were located in the southeast and the other in the northeast of the United States. Of the eight university-affiliated individuals, three hold leadership positions in an international affairs office at either a director or managerial position; two teach world language acquisition; one teaches social studies to pre-service teachers; one is a professor of nursing with a focus in global health; and one is a university president. The ninth individual is a high school Spanish instructor, and the tenth is a retired
international education professor and a former U.S. intelligence employee. Seven of the 10 panelists hold PhDs in their respective line of work. The panel also represented diverse demographic backgrounds: The six male and four female panelists spanned from about 25 to 75 years old; one panelist is from Eastern Asia, one is from Southern Asia, two are from South America, with the other six from the United States. Thus, panelists exemplified various linguistic backgrounds, but all spoke English at an advanced to native level. As the panel’s moderator, I was the only participant to know the identities of the panelists. Participation involved completing three questionnaires across three Delphi rounds with the full review spanning about a month and a half in Spring 2016.

One of the benefits of using the Delphi technique is that panelists can remain in disparate locations and still participate in the procedure (de Villiers et al., 2005; Fink et al., 1984). To invite the 10 individuals to participate, I either met or spoke on the telephone with eight of them, and reached the remaining two individuals through an invitation email. The panelists selected for this review were well qualified to offer candid opinions and recommendations on Draft Survey 2. Given the diversity of panelists’ professional fields, however, I chose more general vocabulary and provided explanations that could function across disciplines.

**Procedures**

As guidance for using the Delphi technique, I looked to Fogo’s (2014) detailed account of a study he conducted to identify core history teaching practices. He included a panel of 26 “expert history educators” (p. 152) described as high school history teachers, teacher educators, and researchers. His study employed three rounds, web-based questionnaires with items producing both Likert-scale and narrative data, descriptive
statistics in the analysis process, as well as a 3.5 out of 5 cutoff point for decision-making purposes. Given the dearth of stringent procedures for employment of the Delphi,\textsuperscript{55} Fogo's (2014) study presented a detailed example of how to successfully use this technique and offered assistance for all rounds of the present work.

Treating the Delphi review as a funneling process, Questionnaire 1 solicited panelist opinions on whether or not to keep each of the survey sections as defined in the present research. Questionnaire 2 presented the items for those sections retained in the survey, as determined through Questionnaire 1 results. Questionnaire 3, then, presented the remaining survey items from Questionnaire 2 results and queried panelists’ final opinions on those items that I then included in the revised instrument (i.e., the Revised Survey). Questionnaire 3 also included additional proposals based on panelist comments from Questionnaires 1 and 2. This review, therefore, gathered qualitative and quantitative data, and used SurveyMonkey to facilitate the process. Since the data analysis results of each questionnaire helped determine the content for the subsequent questionnaire, the methods of analysis are discussed in the description for each round. I then discuss the quantitative and qualitative findings for each round in Chapter 4. At the beginning of the review, I assigned a random number to each panelist, which he or she entered at the beginning of each questionnaire. The ID number allowed me to identify panelists’ survey responses, while also helping to ensure the confidentiality of those responses.

**Round 1.** The purpose of Round 1 was to determine whether or not Draft Survey 2 should include the four proposed sections: disposition/affective realm, knowledge, skill, and respondent background. Following panel formation, I emailed the panelists a

\textsuperscript{55}e.g., Goodman (1987)
background statement on the present work, instructions on how to complete
Questionnaire 1, their ID number, the completion deadline and the SurveyMonkey link to
the first questionnaire. To provide sufficient time for completion, the panelists received a
week to finish each of the three questionnaires. Emailed reminders were used when
needed in order to keep the Delphi review moving in a timely manner.

**Questionnaire 1.** This questionnaire presented brief summaries for each of the
four survey sections and my theoretical reasoning for their inclusion in the instrument.
Panelists were asked to evaluate each section using a 4-point response format (i.e.,
*strongly disagree, disagree, agree, strongly agree*)

(de Villiers et al., 2005). I intended
to increase variability by excluding a mid-point response option, while also producing
two groups of panelists (i.e., those who agree with the given statement, and those who
disagree) (Likert, 1932; Nardi, 2006). Removing the mid-point seemed especially logical
to help reduce the possibility of producing conformity instead of consensus (Goodman,
1987; Rowe & Wright, 1999). I did not include numerals next to the response format
labels ([1] *Strongly Disagree*) in the Delphi questionnaires as done in Draft Survey 1
given the small number of 4-point response items presented to panelists. Following the
4-point response items in Questionnaire 1, I then posed an open-ended question asking
panelists to explain their Likert-type answer for each survey section. Since an important
characteristic of the Delphi technique is that panelists receive plenty of opportunities to

56 I refer to this as a “4-point response format” because, even though the value labels did not include
numbers next to them in the Delphi questionnaires, I assigned a 1 to a *strongly disagree* response, a 2 to a
disagree response, a 3 to an *agree* response, and a 4 to a *strongly agree* response in the data analysis
process. I also treated the four response categories “as equal-appearing intervals” (Nardi, 2006, p. 56) and,
thus, regarded these numerical responses as interval/ratio data with which to calculate descriptive statistics
including the mean and standard deviation for a given set of items.
give narrative feedback, I offered additional space at the end of Questionnaire 1 for panelists to provide any general comments (de Villiers et al., 2005).

**Data analysis: Questionnaire 1.** Treating the 4-point responses of the 10 panelists as interval/ratio data (Nardi, 2006, p. 56), I calculated descriptive statistics using SPSS to analyze panelists’ data for each of the four survey sections. Drawing on Fogo’s (2014) work, I designated a mean cutoff score of 3: Sections earning a mean score of 3 or above would remain in the survey for Round 2. As Fogo (2014) explained, this cut “represented a lean toward acceptance by the group” (p. 160). Since this research was still exploratory in nature, I began with a cut score of 3 and used a slightly higher average cut score only in Round 3 to tighten the statistical standards for determining panel consensus. I addressed the open-ended data from this first questionnaire in Rounds 2 and 3.

**Round 2.** The purpose of Round 2 was to determine which items to keep in each of the survey sections remaining from Round 1. The email for this round included Round 1 results, a document introducing panelists to Draft Survey 2, instructions for completing Questionnaire 2, and a link to the questionnaire. The introduction document acclimated panelists to the format of the survey, to the sources used to develop it, and to the meaning of reverse scoring for those unfamiliar with the concept. The items needing such scoring were marked with an “(R)” in Questionnaire 2.

**Questionnaire 2.** This questionnaire presented the items in the Draft Survey 2 sections that the panel decided to keep in Round 1. Since Questionnaire 2 was formatted with panelists in mind, instead of future respondents, I explained the layout of this questionnaire in the instructions. For each survey section, panelists were asked to
indicate their opinion on retaining each item using a dichotomous response format 
(Alexandrov, Pullicino, Meslin & Norris, 1996): disagree or agree. This format served 
to ease the response burden on panelists, since they were asked to indicate their opinion 
on each survey item. Panelists were then asked to explain their reasoning for any items 
with which they disagreed. Following this open-ended item, panelists had space to give 
any additional comments.

**Data analysis: Questionnaire 2.** For this questionnaire, I established a cutoff 
point of 75% agreement among panelists to determine whether an item was retained or 
removed from Draft Survey 2. This was consistent with the mean cutoff score of 3 in the 
4-point response format (75%) in Round 1. Items receiving at least 75% panel agreement 
remained and those receiving less than 75% were removed from the survey. Using a 
percentage cut point also provided a means of analysis for items inadvertently skipped by 
the panelists. Each survey item received a 1 when a panelist agreed with its inclusion in 
the survey; items received a 0 when panelists disagreed with keeping them in the survey. I, then, summed the ones and divided by the total number of panelists who answered, 
which produced the percent agreement of the panel on retaining a given item. In 
analyzing results from Rounds 1 and 2, I also categorized panelist comments topically, 
which resulted in several *Proposals for Consideration*. These proposals represented my 
understanding of panelists’ suggestions and thoughts on how I might operationalize their 
recommendations. Then, I queried their opinions on these proposals in Round 3.

**Round 3.** The purpose of Round 3 was to determine whether consensus could be 
reached on the remaining items, which I presented in Questionnaire 3. Essential to 
Round 3 was the explanation of how the qualitative and quantitative data from earlier
rounds informed the development of Questionnaire 3. This time, the results from Round 2 were included at the beginning of Questionnaire 3, instead of in the email.

**Questionnaire 3.** This questionnaire opened with basic instructions followed first by an explanation of how I determined whether or not to retain survey items. A table then followed that displayed panelists’ results from Rounds 1 and 2, with significant opinion changes highlighted. Next, panelists were asked to rate their agreement or disagreement with the remaining items for each survey section using a 4-point response format and a comment section. Finally, panelists were asked to respond to a section on *Proposals for Consideration.* Panelists were asked to provide their opinion on each proposal using the 4-point response format of *strongly disagree, disagree, agree, strongly agree.* Panelists also had space to provide any further feedback.

**Data analysis: Questionnaire 3.** To analyze responses to this questionnaire, I calculated descriptive statistics. I followed de Villiers et al.’s (2005) process in a similar study (3 rounds; a 4-point response format) in selecting a higher mean cut score to help determine if panelists’ opinions on the remaining survey items reflected consensus:

Mean values between 2 and 3 indicated uncertainty, while 3.5 and 1 indicated positive and negative certainty respectively. The [standard deviation] was used to provide a measure of dispersion of the responses. The smaller the SDs, the more certain we were about the consensus or not. (p. 641)

In gauging panel consensus on the survey sections’ remaining items, I applied a more stringent mean cutoff score (3.5) than was used in Round 1. Due to the exploratory nature of the *Proposals for Consideration,* however, I designated a cutoff mean value of 3. Those proposals reaching a mean score of 3 or above would be used as revisions for the developing survey.
Delphi Review Limitations

Rowe and Wright (1999) reminded readers that the Delphi technique is not intended to rival statistical research methods, which typically display increased validity and reliability as compared with methods that are qualitative in nature (e.g., small sample size, nonprobability sampling). To address validity using this method, I selected panelists from heterogeneous personal and professional backgrounds that reflected expert knowledge and experience related to the characteristics of global competence identified in this work (de Villiers et al., 2005). Regarding reliability, qualitative and quantitative data were gathered in each questionnaire, with the former providing a contextual backdrop to the latter (Babbie, 2007d). Furthermore, gathering both types of data in each questionnaire allowed panelists multiple opportunities to critique the survey instrument. However, while three rounds of data gathering led to extensive feedback on the developing tool, a fourth round could have allowed for further exploration of results gained later in the review.

Method: Using the Revised Survey as a Guide to Describe the Field-Test Sample

The methods of data analysis discussed in this section pertain to the items that the Delphi panel retained and that appear in the Revised Survey. Given the small field-test sample size, the overall purpose of the data analysis was to describe respondents based on their survey scores and background characteristics, using the elaboration model (i.e., Babbie, 2007e). The employment of programs such as SPSS and Microsoft Excel facilitated the identification of patterns in the data, with graphs and tables from these programs offering visual support (see Chapter 4).
Since the scales remaining after the Delphi review included a different total number of items, I calculated a mean score for the individual respondents on each scale. This method allowed for comparison of individuals’ scores on each scale and across the scales. The responses to the scales were treated as interval/ratio data, so that the mean and standard deviation for each respondent and for the sample could be calculated and contrasted. The median and mode were also calculated for each scale because of the small sample size and the sensitivity of the mean to outliers.

As for the elaboration model, Babbie (2007e) defined this as, “A logical model for understanding the relationship between two methods by controlling for the effects of a third…” (p. 431). In its traditional form, this model seeks to further explain an initially established relationship between two variables “through the simultaneous introduction of additional variables” (p. 431), or “test” variables (p. 435). The flexibility of this model served well the needs of the present research. As Babbie (2007e) noted:

…it’s primarily a logical device for assisting the researcher in understanding his or her data….this model suggests neither which variables should be introduced as controls nor definitive conclusions about the nature of elaboration results. For all these things, you must look to your own ingenuity. (p. 444)

In the present work, I was chiefly interested in identifying any respondent background characteristics that could explain differences in survey item scores.

To examine the mean scores on the scales, I graphed the respondents’ individual mean scores and the sample mean score in a scatter plot. I then formed respondent subsamples for each scale using 1) a given scale’s cut score and 2) the standard deviation for the sample mean score on that scale. I designated cut scores for each scale depending on the variable indicator represented and its importance to the global competence theory, as discussed in Chapter 2. The lowest cut score for a scale was set at 3, since it signals an
inclination toward being, for example, self-knowledgeable or communicatively capable. For a given scale, those respondents with scores equal to or above the cut score formed one subsample (the high scorers), while those scoring below the cut score formed a second subsample (the low scorers). I then placed respondents who scored one standard deviation above the sample mean score in the high outlier subsample, and those scoring one standard deviation below the sample mean score in the low outlier subsample. Due to the small field-test sample size, overlap in respondent subsample membership often occurred with high scorers, for example, also belonging to the high outlier subsample for a given scale.

Once the two subsample sets (high/low scorers and high/low outliers) for each scale were determined, I examined how the two groups’ participants differed with regards to additional variables of interest (i.e., the test variables in the elaboration model) that reflected a dichotomous (i.e., yes/no) response format. To examine one of the dichotomous variables, I divided each of the subsamples (high scorers and low scorers; high outliers and low outliers) into those who answered yes and those who answered no (Babbie, 2007e, p. 435). I then calculated proportions to represent those in each subsample who possessed and did not possess the given characteristic (test variable). I repeated this division process for all of the remaining scales.

Using the elaboration model helped identify any differences in respondents’ survey scores based on whether or not they had foreign culture exposure, the interaction-related items that addressed the cosmopolitan indicator of the action variable. Application of this model also allowed me to describe the respondents who scored above, and those who scored below, the cut point on all of the scales remaining from the Delphi
review. The non-dichotomous, remaining respondent background items then offered additional data with which to compare these two respondent subsamples. This broader use of the elaboration model to examine the field-test results in a more holistic manner provided an approximate determination of which respondents most clearly reflected the surveyed global competence characteristics. Chapter 4 then presents results related to initial evidence of a linear relationship between two scales’ respondent mean scores.

Summary

Both the field test and the Delphi review provided opportunities to revise the developing measure of global competence. However, each of these research steps offered different perspectives on the needed revisions. The field test revealed issues with the functionality of the survey instrument from the perspective of survey respondents. The Delphi review disclosed revisions pertaining to content from the perspective of 10 experts in fields related to global competence. Analyzing the field-test data from the items retained in the Delphi review then afforded an opportunity to explore the possibility of relationships between variables for use in future research.

Chapter 4 presents the results from each of the four research steps, which are Draft Survey 1, Draft Survey 2, the Revised Survey, and the description of the 19 field-test respondents using the retained survey items from the Delphi review as a guide.

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Chapter 4

Findings

The research objective for this dissertation was to build a preliminary survey that would, in its final form, allow educators, supervisors, administrators, and mentors to establish baseline information on individuals’ global competence characteristics prior to instruction, cross-cultural experience, international study or collaboration. A secondary aim concerned length. The intent was to keep the eventual final survey at 15 minutes or less to make it adaptable to a variety of settings.

The results of the four-step research design (see Chapter 3) are presented as follows in this chapter:

1. findings related to building Draft Survey 1, which was used in the field test with the sample of 19 elementary pre-service teachers,
2. initial revisions to Draft Survey 1 as suggested by the field-test response patterns, which produced Draft Survey 2,
3. findings from the Delphi review of Draft Survey 2, which produced the Revised Survey, and
4. description of the field-test sample of elementary pre-service teachers using the Revised Survey as a guide.

Findings: The Formation of Draft Survey 1 Used in the Field Test

Draft Survey 1 (Appendix C) was developed as a pool of items across four sections, with each section gauging one of four global competence variables. Table 4.1 provides an overview of (a) the survey sections; (b) the subsections, item type and number; (c) the sources of existing items or a note indicating that items were developed for Draft Survey 1 (i.e., Developed Item); and (d) the indicator measured by an item or items, or a note signifying that items gathered only contextual data (i.e., Context).
Assembling Draft Survey 1 also required a series of adaptations to the selected tools, including: (a) item removal; (b) revision of “double-barreled” phrasing (Nardi,
2006, p. 78); (c) revision of wording for reasons pertaining to grammar, syntax or clarity, word choice, reduction in “leading” and “loaded” language (p. 79), and (d) revision of item phrasing to increase relevance to realistic situations and to the U.S. perspective represented in the instrument (see Chapter 1, p. 3). An example of each type of adaptation is presented below.

**Item Removal**

This adaptation type affected the Actively Open-Minded Thinking (AOT) Scale, the substantive knowledge items, and the global literacy items. The following items were removed in order to:

- Prevent respondent confusion, for example:
  - “What beliefs you hold have more to do with your own personal character than the experiences that may have given rise to them” (AOT Scale)

- Eliminate extreme and colloquial wording, for example:
  - “My blood boils over whenever a person stubbornly refuses to admit he’s wrong” (AOT Scale)

- Maintain the substantive knowledge items’ focus on interest in and knowledge of global-related issues, for example:
  - “I use a language other than my native language at least 25% of the time”

- Eliminate correct answer choice validity issues, for example:
  - “Which of the curves below shows the present income distribution of all people in the world?” The correct answer choice for this item (a graph) resembled a normal distribution and it seemed possible that respondents could select the right answer using statistical knowledge rather than knowledge of the global trend (global literacy)

**Revision of Double-Barreled Phrasing**

Double-barreled phrasing describes a single survey item that asks two questions, but that only allows for one response (Nardi, 2006). To remedy the issue, a double-
barreled item should be divided into two items to permit respondents to answer both questions. Adaptations related to double-barreled phrasing affected the Integrative Self-Knowledge Scale (ISKS; items 1, 3, and 4), the substantive knowledge items (items 2–5), and the Independent-Interdependent Problem-Solving Scale (IIPSS; items 2 and 5).

For example:

- Revised “By thinking deeply about myself, I can discover what I really want in life and how I might get it” to read “By thinking deeply about myself, I can discover what I really want in life” (ISKS, item 1)

- Divided “I am interested and spend considerable time working on global issues” into “I am interested in working on global issues” and “I spend considerable time working on global issues” (substantive knowledge items 2 and 3)

- Revised “I value other people’s help and advice when making important decisions” to read “I value other people’s advice when making important decisions” (IIPSS, item 2)

Revision of Wording

Several items in Draft Survey 1's four sections required revisions related to wording, such as the following:

- Grammar, syntax or clarity issues affected the AOT Scale (items 1, 23, 31, and 33), the ISKS (items 8 and 11), the Cognitive Communication Competence Scale (CCCS; items 17 and 18), the IIPSS (item 1), and four foreign culture exposure items:

  - Grammar example: Changed which to that in “Of all the different philosophies that exist in the world there is probably only one that is correct” (AOT Scale, item 23)

  - Syntax example: Changed, “Do you expose yourself to foreign culture repetitively? (Or have you done so in the past?),” to, “Do you often expose yourself to foreign culture? (Or have you done so repeatedly in the past?)” (foreign culture exposure item)

  - Clarity examples: Added “differently” to the end of “After a conversation I think about what I could have said differently” (CCCS, item 17); removed and contradictory from “Often my feelings about an experience
are so complex and contradictory that I don't even try to understand them as they are going on” (ISKS, item 8); and added how to solve it in “When faced with a difficult personal problem, it is better to decide yourself how to solve it rather than to follow the advice of others” (IIPSS, item 1)

- Word choice issues affected a substantive knowledge item in the knowledge section and the foreign country stay item in the respondent background section:
  
  o Example: The word substantive was changed to substantial in the item, “I have substantial competence in analyzing global issues” (substantive knowledge item 4)

- Leading and loaded language also served as reasons for revisions, which affected a respondent background section item, the AOT Scale (items 9, 35, and 39), and the ISKS (items 9, 10, and 11):

  o Leading language example: Removed “(e.g., lack of opportunities, lack of necessity, lack of understanding, etc.)” from the item “Why do you think you have had little to no exposure to foreign culture? Please answer in the space below” (respondent background section item)

  o Loaded wording example: Replaced hate, for instance, with dislike in the item, “There are a number of people I have come to dislike because of the things they stand for” (AOT Scale, item 9)

  o Loaded wording example: Replaced never with don’t in the item, “During a demanding experience, I don’t even try to understand the thoughts and feelings that are flowing through me because it is all too confusing” (ISKS, item 9)

Although the word always constitutes loaded language, I elected to retain it in item 3 of the AOT Scale, since removing it would have changed the item’s meaning and encouraged participants to select the strongly agree response option.

Revisions for Relevance to Realistic Situations and to the U.S. Perspective

Finally, I revised the wording of items to increase their relevance to realistic situations and to the U.S. perspective represented in the survey. Items 1 through 3 of the CCCS were revised to increase their relevance to realistic situations. For example:

- Added when possible to, “Before a conversation, when possible, I mentally
practice what I am going to say” because many conversations happen in an impromptu manner (CCCS, item 2)

One of the substantive knowledge items, all four of the language proficiency items, and four of the foreign culture exposure items were then revised to align with the U.S. perspective of the instrument. Examples include:

- Replaced outside of Korea with outside of the United States in the item, “I have substantive knowledge about at least one other culture outside of the United States” (substantive knowledge item 1)

- Changed the focus of learning English to learning any language by shifting “I am proficient in writing in English” to “I am proficient in writing in a language other than my native language(s).”

In addition to these adaptations, several items were also developed for Draft Survey 1.

**Item Development**

Sections I, II, and IV included items that were developed specifically for Draft Survey 1. The following items were developed in order to:

- Provide a positively worded version of a negatively worded item, for example:
  - Item 12 of the AOT Scale, “We should be free to argue with religious authorities on moral issues,” served as a positively worded version of Item 6, “I believe we should look to our religious authorities for decisions on moral issues”

- Query behavior related to a surveyed opinion, for example:
  - Item 1(a) of the substantive knowledge items, “I apply this knowledge (about at least one other culture) with confidence in my professional work” queries behavior related to item 1

- Query respondent knowledge in Section II, for example:
  - Developed the defining globalization item; the nine follow-up global literacy items; the first three knowledge of world language(s) items; and the four knowledge of current events items

- Gather respondent background information in Section IV, for example:
developed the *home location* item; the first two *travel* items; the first *foreign culture exposure frequency* item; the two *self global competence* items; and the *gender* and *ethnicity* items.

Items developed for Sections II and IV were designed to gather primarily open-response data (see Appendix C). This format allows respondents to give a range of answers on different surveyed topics. The dichotomous items in Sections II and IV served mainly to direct respondents to the appropriate questions depending on whether or not they possessed the types of knowledge or experiences surveyed.

**Overall Draft Survey 1 Format**

Because Draft Survey 1 was long—it contained 120-137 total items, excluding the filter, consent, and permission for follow-up contact items—I made a number of decisions pertaining to survey organization and response formatting to ease participant response burden, as follows:

- Applied “skip logic” to several items, so that respondents were directed to the next appropriate item depending on their selected answer (SurveyMonkey, 2016, para. 1)

- Labeled every page with *Global Competence Survey* along with consistent section and subsection headings (e.g., Section II, Subsection A) to notify respondents of their place in the survey

  - Note: Section and subsection headings did not refer to the variables and indicators measured, so as to prevent any influence on respondents' answers (Babbie, 2007c)

- Added *Previous* and *Next* buttons to the bottom of each page, so that respondents could return to earlier items; in doing so, however, SurveyMonkey automatically cleared answers provided on those earlier pages

- Added a progress bar at the bottom of each page (McMillan & Schumacher, 2010c)

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57 If respondents selected answers that did not require them to answer follow-up items, then they answered 120 total items.
• Selected an appropriate number of items per page to prevent the need for scrolling (Nardi, 2006)

• Used straightforward language and vocabulary in the instructions, in the developed and adapted items, and in the response options

• Developed and used the same brief instructions for each of the four scales, instead of using the instructions from the original sources

• Formulated instructions throughout Draft Survey 1 to guide respondents on how to answer items depending on the response format used (i.e., open-response, radio boxes, or check boxes; Babbie, 2007c; Nardi, 2006). For instance:

  o Foreign Culture Exposure check box item: “What are your sources of exposure? You may select more than one source.”

Pre-testing Draft Survey 1 helped ascertain the suitable number of items per page, modify wording, and determine if a desktop or laptop computer best displayed the content.

**Section and subsection formatting.** As mentioned earlier, Draft Survey 1 included four sections with each section measuring one of the four global competence variables; the sections' items then measured the indicators of the given variables. For organizational purposes, the knowledge and skill sections included items grouped into subsections by indicator measured or by item formatting. For example:

• The knowledge section's (Section II) items were grouped as follows:

  o By indicator measured: Subsection A measured the self-knowledge indicator using the Integrative Self-Knowledge Scale (ISKS)

  o By item formatting: Subsections B and C together measured the understanding of globalization indicator

    ▪ But Subsection B’s defining globalization item was grouped with the substantive knowledge items since the latter were small in number

    ▪ And Subsection C’s nine global literacy items included visuals and follow-up questions, thus forming a subsection of their own

• The skill section's (Section III) items were grouped by indicator measured:
Subsection A included the Cognitive Communication Competence Scale (CCCS) from Duran and Spitzberg (1995) to measure the communication capacity indicator.

Subsection B included the Independent-Interdependent Problem-Solving Scale (IIPSS) to measure the problem-solving style indicator.

Other Draft Survey 1 sections did not include subsections for the following reasons:

- **Disposition/affective realm** section (Section I): Because it only included the Actively Open-Minded Thinking (AOT) Scale measuring the open-mindedness indicator.

- **Respondent background** section (Section IV): Because using subsections would have resulted in several groupings of only one or two related items.

Following Nardi’s (2006) suggestion, the respondent background section querying demographic and experiential information was placed at the end of Draft Survey 1. This section included the foreign culture exposure items (derived from Jeon & Lee, 2012), which gauged the cosmopolitan indicator of the action variable and provided contextual data for responses given throughout Draft Survey 1. Two of these items queried respondents’ length of stay in a foreign country and their foreign studies coursework experience. I viewed and analyzed these items separately from the other exposure items since differences in income could affect individuals’ experiences in these two areas. Two other respondent background items that gathered contextual data gauged respondents’ perception of their own global competence (i.e., self global competence). Since one of these two items presented the global competence definition, and knowledge of this definition could influence other Draft Survey 1 item responses, the self global competence items appeared in Section IV (Babbie, 2007c).
Contextual items also appeared in the knowledge section (Section II), and were either placed in the same subsection as or in an adjacent subsection to the items they supported. For instance:

• The substantive knowledge items (Section II, Subsection B) provided context for the defining globalization item (Section II, Subsection B) and for the nine global literacy decontextualized items (Section II, Subsection C)

• The global literacy follow-up items provided context for the global literacy decontextualized items, all of which appeared in Section II, Subsection C

Contextual data were not considered as part of a person’s global competence score; rather this data served as informative background for scored items (e.g., if respondents claimed to “have substantial competence in analyzing global issues,” did they also perform well on the decontextualized global literacy items querying global trends?).

Response choice formatting. Radio buttons constituted the response format most often used in Draft Survey 1. Many of the items using this format belonged to the four scales: the Actively Open-Minded Thinking (AOT) Scale, the Integrative Self-Knowledge Scale (ISKS), the Cognitive Communication Competence Scale (CCCS), and the Independent-Interdependent Problem-Solving Scale (IIPSS).58 From here forward, I refer to them as follows for purposes of alignment with the global competence variable indicators that they represent:

• The AOT Scale as the open-mindedness scale
• The ISKS as the self-knowledge scale
• The CCCS as the communication capacity scale
• The IIPSS as the problem-solving style scale

58 A more fitting description for the first, second, and fourth tools would perhaps be indexes or summated scales (Nardi, 2006, p. 57), since their respective authors weighted each of the tools’ items equally and totaled the item responses for an overall scale score (Babbie, 2007a). The third tool most closely resembled a scale since Duran and Spitzberg (1995) treated the CCCS as representing five dimensions based on their factor analysis results. They analyzed responses on each of the five subscales separately to prevent the loss of information that could result from calculating an overall score. Nevertheless, I refer to all four tools as scales since that was how the authors originally labeled them.
In this way, the scale titles directly refer to the names of the global competence indicators that they measured. The titles also remain italicized since they refer to the indicators.

For each of the four scales, I used a 4-point response format ranging from (1) *Strongly Disagree*, (2) *Disagree*, (3) *Agree*, and (4) *Strongly Agree* to increase the likelihood of variance in the data collected and to avoid the use of a mid-point (Nardi, 2006). As a result, the four scales assumed a Likert-type quality (Likert, 1932). Babbie (2007a) addressed the topic of variance in relation to the number of points: “How far to the extremes…should the index extend? In this decision, the question of variance enters….Almost always, as the possible extremes of an index are extended, fewer cases are to be found at each end” (p. 162). An item using an even-numbered response format is often referred to as a “forced-choice question” (Nardi, 2006, p. 83). On the one hand, this may cause respondents to declare agreement or disagreement even when they may not truly have an opinion on the matter. On the other hand, an even-numbered response format circumvents respondents’ differing interpretations of the mid-point and helps prevent them from answering toward the middle of the response range (i.e., central tendency bias; Mattell & Jacoby, 1972; see Nadler, Weston, & Voyles, 2015, p. 73).

All four scales in Draft Survey 1 employed the same response format, so that respondents could focus on item content (Losby & Wetmore, 2012). I used value labels that were most likely familiar to respondents and included numbers next to each label to help reduce participant response burden given the length of Draft Survey 1. By including the numbers next to the value labels, I intended to help participants remember the directionality of the response format for each index. In Section II, Subsection D of Draft Survey 1, however, I chose to use a 4-point response format employing only numbers
(i.e., 1, 2, 3, 4) since I was asking participants to rate their proficiency in a world language. Keeping in line with the other 4-point response format that used value labels and numbers, I maintained the same directionality and the same number of points for ease of responding.

Although measures assuming a Likert-type quality are often said to produce ordinal data (e.g., Babbie, 2007a), the results can also be treated as interval/ratio data (Nadler et al., 2015). Nardi (2006) explained:

Another example is an intensity measure, such as a 5-point range (often called Likert scales) where 1 is “strongly agree” and 5 is “strongly disagree.” These are ordinal measures, but researchers treat intensity scales as interval/ratio measures when the amount of agreement or disagreement is assumed to vary in equal intervals along the points of the measure. (p. 54)

The assumption of interval/ratio data, thus allowed for the calculation of descriptive statistics including means and standard deviations with which to compare respondent scores (Kent, 2001).

Findings: Revising Draft Survey 1 Using Field-Test Response Patterns

The field test pointed out several issues with Draft Survey 1, beginning with length. The timestamps of the 19 survey completers ranged from about 10 to 52 minutes, with an outlier completion time of about two hours and 38 minutes, perhaps resulting from a respondent leaving the survey open while away from the computer. Excluding this outlier, the average completion time was 25 minutes and 20 seconds for the completers, which was a shorter time to completion than expected given the length of Draft Survey 1. It is possible that the notification in the invitation letter of the Draft Survey 1 potentially taking 30-45 minutes based on pre-testing kept other interested students from even starting the survey. With regard to the non-completer group, 8 of the
13 respondents left the survey before the end of the *open-mindedness* scale in Section I. The other five non-completers exited before or at the end of the *communication capacity* scale, with many skipping the *global literacy* open-response items. Given that 40% of the original larger sample (13 of 32 individuals) did not complete Draft Survey 1, and that 8 of these 13 non-completers exited in the first section, I reduced the number of items starting with the *open-mindedness* scale. With an average completion time of over 25 minutes for the 19 Draft Survey 1 completers, the item reduction presented a plausible method by which to meet the goal of developing a brief survey of 15 minutes or less.

Recognizing the statistical limitations of a small sample size, I conducted a reliability analysis on the 39-item *open-mindedness* scale only as an initial effort to reduce the number of items. Using this method, I was able to identify a 20-item solution with good internal consistency, $\alpha = .821$ (Field, 2009b), and with all items reflecting positive item-total correlation. Additional detail on this analysis can be found in Appendix D.

Following the *open-mindedness* scale revisions, I re-ordered the *self-knowledge* and *communication capacity* scales’ items to intermix the regularly and reverse-scored items of the former, and to render the temporal order of the latter’s items less noticeable to better maintain respondents’ attention. I, then, removed groups of items because most completers and non-completers skipped them (i.e., the *global literacy* open-responses), or because they invited socially desirable responses and unnecessarily lengthened Draft Survey 1 (i.e., the *substantive knowledge* and *language proficiency* items).

Next, I removed all of the dichotomous (*yes/no*) filter items from Sections I and II, and one such item from Section IV. This decision affected the *language, current*
events, and travel survey items, respectively. As revised, respondents without additional language or travel experience could mark N/A as their response. I revised the two remaining current event items to define national and international instead of giving examples of such events, which could rapidly become outdated. Respondents who were unable to answer these items could then just leave the spaces blank.

The foreign culture exposure items were also revised. Because these items did not allow respondents to identify frequency for each of the exposure types selected, I restructured and re-worded them. Additional word-choice revisions to the Jeon and Lee (2012) items included the replacement of foreign with different descriptors, such as other than your home country, cultures different from your own, and global/international studies to reflect more sensitive language. Finally, because items related to the knowledge of current events indicator were retained in Draft Survey 2, this indicator was added to the global competence definition in Section IV. Draft Survey 2 then formed the basis for the Delphi review used in the next revision phase.

**Findings: The Delphi Review**

As described in Chapter 3, the purpose of conducting the Delphi review was to further refine Draft Survey 2 using a panel of experts with professional experience in fields related to the global competence construct. The Delphi review consisted of three rounds, each of which used a questionnaire to gather panelist opinions on Draft Survey 2:

- Round 1 queried opinions through Questionnaire 1 on whether or not each of the four sections in Draft Survey 2 should be retained in the Revised Survey
- Round 2 gathered opinions through Questionnaire 2 on which Draft Survey 2 items should be retained in the Revised Survey
- Round 3 sought panel consensus through Questionnaire 3 on the remaining items from Round 2 and queried opinions on further revision-related proposals
In analyzing each round’s data, I was particularly attentive to suggestions for alteration or areas of concern raised by panelists. In the following discussion, then, I focus on those areas, also noting important areas of agreement as representative of panelist recommendations. Table 4.2 provides panelist descriptions for reference in the discussion of Delphi review results.

Table 4.2

*Delphi Panelist Descriptions*

<table>
<thead>
<tr>
<th>Respondent ID</th>
<th>Panelist Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>World Language Acquisition Instructor with Focus in English as a Second Language</td>
</tr>
<tr>
<td>2</td>
<td>Professor of Nursing with Focus in Global Health</td>
</tr>
<tr>
<td>3</td>
<td>University President</td>
</tr>
<tr>
<td>4</td>
<td>Social Studies Professor</td>
</tr>
<tr>
<td>5</td>
<td>Retired International Education Professor &amp; U.S. Intelligence Employee</td>
</tr>
<tr>
<td>6</td>
<td>World Language Acquisition Professor</td>
</tr>
<tr>
<td>7</td>
<td>International Affairs Manager</td>
</tr>
<tr>
<td>8</td>
<td>International Affairs Director</td>
</tr>
<tr>
<td>9</td>
<td>International Affairs Executive Director</td>
</tr>
<tr>
<td>10</td>
<td>High School Spanish Instructor</td>
</tr>
</tbody>
</table>

**Round 1**

Round 1 gathered panelist opinions on whether or not the four sections, as defined in Questionnaire 1 (Appendix E), should be retained in the Revised Survey.

Table 4.3 presents the results from panelist responses to Questionnaire 1 with the sections arranged from highest to lowest panel mean score. Panelists agreed most strongly with keeping the *respondent background* section and agreed least with keeping
the *knowledge* section. Since all four sections received mean scores above 3, each of the sections’ items were then examined in Round 2. In the following discussion, Round 1 results are organized around high, medium, and low variability in panelist responses to keeping the four sections.

Table 4.3

*Descriptive Statistics for Questionnaire 1 Responses*

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>Median</th>
<th>Mode</th>
<th>SD</th>
<th>Range</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep RESP BKGR</td>
<td>3.80</td>
<td>4.00</td>
<td>4</td>
<td>.42</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Keep DISP</td>
<td>3.70</td>
<td>4.00</td>
<td>4</td>
<td>.48</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Keep SKILL</td>
<td>3.60</td>
<td>4.00</td>
<td>4</td>
<td>.52</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Keep KNOW</td>
<td>3.40</td>
<td>3.50</td>
<td>4</td>
<td>.70</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

*Note.* N = 10. 1 = *strongly disagree*, 2 = *disagree*, 3 = *agree*, 4 = *strongly agree.* RESP BKGR = *respondent background* section; DISP = *disposition/affective realm* section; SKILL = *skill* section; KNOW = *knowledge* section.

**High variability: the knowledge section.** The panel's responses in regard to keeping the *knowledge* section as defined in Questionnaire 1 reflected high variability (see Table 4.3) as compared with their responses for the other three sections. As shown in Table 4.4, the panelist score frequencies for the *knowledge* section corroborated this finding. Of all the sections, *knowledge* received the fewest *strongly agree* (4) scores and was the only section to include a 2 score (*disagree*). Table D1 (see Appendix D) then displays comments that reflect the high variability observed in the panelist scores for the *knowledge* section. As for reporting the outcome of Round 1 to the panel, I returned the de-identified but otherwise unedited quantitative and qualitative results, along with a brief analysis of the statistical findings (see Tables 4.3 and 4.4).
Table 4.4

Frequency of Scores Marked by Panelists

<table>
<thead>
<tr>
<th>Survey Section</th>
<th>Score by Number of Panelists (N = 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep RESP BKGR</td>
<td>3 → 2 panelists</td>
</tr>
<tr>
<td></td>
<td>4 → 8 panelists</td>
</tr>
<tr>
<td>Keep DISP</td>
<td>3 → 3 panelists</td>
</tr>
<tr>
<td></td>
<td>4 → 7 panelists</td>
</tr>
<tr>
<td>Keep SKILL</td>
<td>3 → 4 panelists</td>
</tr>
<tr>
<td></td>
<td>4 → 6 panelists</td>
</tr>
<tr>
<td>Keep KNOW</td>
<td>2 → 1 panelist</td>
</tr>
<tr>
<td></td>
<td>3 → 4 panelists</td>
</tr>
<tr>
<td></td>
<td>4 → 5 panelists</td>
</tr>
</tbody>
</table>

Note. 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree

The panelists’ comments in Table D1 fell into three groups, beginning with the definition of this section (i.e., variable) and its sub-elements (i.e., indicators). Panelists 2 and 3, for instance, suggested that the knowledge indicators required additional defining. Panelist 3 expressed agreement with the inclusion of self-knowledge as an indicator of the variable, but also suggested a new way to define the knowledge variable arguing that curiosity was a more important indicator to this variable than fact-based knowledge indicators. Panelist 3’s comment explained the one outlying score (i.e., disagree) in the entire Delphi review, while illustrating an issue worth noting in any categorization of human behavior: categories often overlap. Whereas I would categorize curiosity under the disposition/affective realm variable, because of its potential to influence individuals’ desire to learn more about a topic, to gain a new skill, or to take certain action, Panelist 3 categorized curiosity under the knowledge variable. Panelist 3’s comment suggested overall that the knowledge variable pertains at least as much to inward-looking factors as to an accumulation of fact-based knowledge.
Panelist 4 raised a second issue: the difference between “knowledge of self” and “knowledge of one’s own cultural background” (Table D1, p. 244). This matched a concern that I held about the degree to which refining an indicator altered the original construct. Ghorbani et al.'s (2008) Integrative Self-Knowledge Scale (i.e., the self-knowledge scale), for instance, purports to measure an individual’s understanding of his or her feelings, reactions, and experiences over time. This is assumed to help in cross-cultural communication, but this is a particular form of self-knowledge that may have relatively little to do with, say, knowledge of one’s own cultural background. As discussed in Chapter 3, an understanding of one's own cultural background was the original, foundational indicator of the knowledge variable based on the global competence literature.\textsuperscript{59} The search process for existing tools to measure this indicator, however, produced performance-based assessments, which did not align with establishing respondents’ baseline global competence information in 15 minutes or less. Therefore, I condensed the indicator from understanding of one's own cultural background to self-knowledge, yet this decision altered the construct of the former as suggested by Panelist 4’s comment. Future research on developing this survey will, thus, likely include construction of items to measure the original understanding of one's own cultural background indicator.

The response from Panelist 6 raised a third issue regarding the types of items or sub-elements (indicators) that the knowledge section should include. Possessing knowledge of cultural practices could certainly aid individuals in cross-cultural interactions, but how much of this type of information do people need to be globally competent? Panelists’ Round 1 scores and comments for the knowledge section

\textsuperscript{59} e.g., Boix-Mansilla et al. (2011); Hunter (2005); Hunter et al. (2006)
suggested a shift in focus for the global competence construct from querying fact-based knowledge to gauging *knowledge of self* and *of one’s own cultural background*. This shift, therefore, appears to reduce the need for fact-based *knowledge* items and instead calls for the inclusion of more introspective items. In summary, panelists’ responses in Round 1 for the *knowledge* section remained consistent across the two subsequent rounds of the Delphi review and, as a result, greatly informed the Revised Survey.

**Medium variability: the disposition/affective realm and skill sections.** Seven of the 10 panelists *strongly agreed* (see Table 4.4) with the *disposition/affective realm* section as defined in Questionnaire 1, producing medium variability in their responses as compared with those for the other three sections (see Table 4.3). But there were nuances in the panelists' comments on the *disposition/affective realm* section, which formed three groups of opinion.

First, seven panelists *strongly agreed* (selected a score of 4) with keeping the *disposition/affective realm* section as defined and gave comments reflecting this sentiment, such as:

- “I strongly agree that open mindedness is ESSENTIAL for one to be a globally competent global citizen...Unfortunately, I believe that the root of many of our global problems is the failure to be open to considering other views and perspectives.”

- “I think open-mindedness is a prerequisite to attaining global competence. If not already so disposed, an individual may need to first undergo a process/training to get to this stage before undergoing an internationalization experience.”

Second, Panelist 6 *strongly agreed* with keeping the *disposition/affective realm* section, but provided a comment reflecting hesitancy with the section's definition:

> It seems like the definition is hedged to allow for a wider interpretations [*sic*] (e.g., “relatively open,” “possibility” or even “listen”). It's hard to disagree with
something that seems like a non-exclusive definition for something that I haven't defined for myself yet.

Third, three panelists agreed (selected a score of 3) with the inclusion of the
disposition/affective realm section as defined and provided reasons for selecting a 3 score
instead of a 4 score. For instance, Panelist 5 commented:

I agree with one important caveat. Many open minded “liberal” [sic] cannot understand people with an ultra nationalistic or religious world view [sic]. It was very difficult for intelligence officers and diplomats to take serious [sic] the precepts of the Iranian revolution in 1978. How could a man in 1975 talked [sic] about stoning women to death?

The last two comments raised important points. Panelist 6's comment highlighted the broad scope of the disposition/affective realm section. Since I derived this section definition from a number of sources in the literature on global competence, instead of from one specific source, the definition offered the possibility of differing interpretations. The definition’s broad scope may also reflect the exploratory nature of the current work. As the research continues into the development of this survey, the survey revision process could further refine the instrument as well as the descriptions of the variables and indicators from which it was built. Panelist 5's comment then underscored a human behavioral element: the difficulty for even open-minded people to understand other individuals' inhumane behavior. A lack of understanding of such “anti-cosmopolitanism” (Appiah, 2006, p. xvi) may, indeed, be an inherent characteristic of the open-mindedness attribute that this work ascribes to global competence.

The panel's responses in regard to keeping the skill section as defined in Questionnaire 1 also reflected medium variability as compared with their responses for the other three sections (see Table 4.3). The skill section responses presented greater variability than those in the disposition/affective realm section with only six panelists
strongly agreeing and four panelists agreeing to keep the skill section. Panelist comments for this section fell into two categories.

First, the six panelists who strongly agreed with keeping the skill section as defined made comments that paralleled their selected score of 4. For instance, Panelist 10 commented:

This element certainly suggests the application of Global Competence, without which progress would be impossible. Certainly, at the root of Global Competence is the assumption of interaction with others of different belief systems, perspectives, and cultural norms. Without the ability to problem-solve or communicate this interaction could not happen. (See full quote in Appendix D, p. 245)

Second, the four panelists who agreed with keeping the skill section as defined made comments that explained their reason for selecting a score of 3 instead of the highest score of 4. The most oft-cited reason pertained to disagreement with the skill sub-elements (i.e., indicators). For instance:

- Panelist 2 remarked, “I agree that both communication and problem solving are important, but see these as separate competencies. I would also suggest that ability to collaborate is perhaps more appropriate than problem solving…” (See full quote in Appendix D, p. 245)

- Panelist 3 remarked, “I think the two sub-elements (communication capacity and problem-solving style) nicely capture the range of skills (or even attributes) that are measures of global competence. Communication is the very essence of society; communication skills (including expression of empathy) pave the way for and are honed by global competence. I am less sure about ‘problem-solving style.’ It seems like you are leading up to a single answer to this sub-element (collaborative). If you are not collaborative, can you engage effectively in global action? You may want to rethink this sub-element”

Panelist 2's comment provided a different perspective on the structural composition of the skill variable (i.e., separating communication and problem-solving) than that presented in the current work (i.e., placing communication and problem-solving
under the same *skill* variable). Panelist 2 also found the ability to collaborate more suitable to the global competence context than the ability to problem-solve. While I understand this perspective, problem solving seems to be a critical element to the global competence construct in this work given the cosmopolitan foundation upon which it is built. Cosmopolitanism calls for “engagement” (Appiah, 2006, p. 168) to solve widespread issues affecting the world’s people, such as hunger and disease. Engagement suggests collaboration (see Chapter 3), thus I use the *problem-solving style* indicator to survey whether or not respondents are inclined toward collaborative problem solving approaches. Panelist 3, however, questions the need for a *collaborative* problem-solving style in order to “engage effectively in global action.” The opinion that people do not have to be collaborative to take such action raises a valid point and receives further consideration later in the chapter.

**Low variability: the respondent background section.** Eight of the 10 panelists *strongly agreed* (see Table 4.4) with the *respondent background* section as defined in Questionnaire 1, thus producing low variability among their responses as compared with those for the other three sections (see Table 4.3). Panelists who *strongly agreed* (i.e., a score of 4) with keeping the *respondent background* section as defined made comments that echoed their score selections. For instance:

- **Panelist 3:** “Effectiveness in acquiring or improving one’s global competence very much depends on one’s starting point. I believe gathering the background information will allow the ‘tailoring’ of different approaches to different groups based on the starting point.”

- **Panelist 9:** “One’s experience speaks very loudly about the responses to questions…. Therefore, although I strongly agree to include backgrounds, I am sure the detailed questions and survey analysis will take into considerations [sic] how different types of background, especially experience
can effect [sic] the outcome of the survey.” (See full quote in Appendix D, p. 245)

Panelist 3’s point spoke to one of the objectives of this research, which is to build a survey to establish baseline information on individuals’ global competence characteristics prior to instruction or activity related to the development of this competence. Panelist 9 then addressed the value of gathering respondent background information: to understand how individuals’ experiences may influence their survey results. This comment touched on the analytical method, which was the elaboration model (Babbie, 2007e) that I used to examine the Draft Survey 1 data from the 19 elementary education pre-service teachers. I speak further to this method in the field-test findings section later in the chapter.

Two panelists agreed with the inclusion of the respondent background section as defined in Questionnaire 1, and gave comments that provided insight into their selection of a 3 rather than a 4 score. For instance:

- Panelist 4 commented that, “I have some concerns that this will exclude certain people who have not had the opportunity (due to finances) to travel many places…. [I]t seems like a person could grow up as part of a marginalized group in the US (and not have done much travel, if any) yet still have a good understanding of how cultural difference works and that people have different backgrounds and beliefs. Their experience as a subjugated group might infuse them with conceptual understandings of this even though they haven't had the opportunity to experience it firsthand…. “ (See full quote in Appendix D, p. 245)

- Panelist 8 commented that, “I definitely agree that one’s background informs one’s global competence. Are you measuring development or just accounting for one’s background [?] This seems two different issues.”

These panelists’ comments indirectly questioned whether or not answers in this section would count toward respondents’ global competence scores. Questionnaire 1 (see Appendix E) briefly explained that the respondent background section would only be used as context for answers provided in the other sections (i.e., disposition/affective
realm, knowledge, skill). The questionnaire did not, however, state that the respondent background section would not be scored. To ensure that the focus of the Delphi Review remained on the sections and items of Draft Survey 2, I refrained from presenting potential scoring procedures to the panel. In hindsight, a brief note about the scoring plans for the respondent background section would have been helpful to the panelists.

**Round 2**

All 10 panelists ($N = 10$) responded to Questionnaire 2 (Appendix F), which asked their opinions on the Draft Survey 2 items that should be retained in the four sections. Four respondents skipped one item each for a total of four skipped items. Three of these items reached the 75% threshold and appeared in Questionnaire 3:

- Item 8 in the disposition/affective realm section,
- Item 10 in the self-knowledge subsection, and
- Item 18 in the communication capacity subsection.

For these items, the percent agreement was calculated out of nine total panelists’ responses. The fourth skipped item—Item 15 in the communication capacity subsection—did not reach 75% agreement among the nine panelists who answered and was, thus, not included in Questionnaire 3. Tables D2 through D5 (see Appendix D) display each section’s remaining items.

**Section 1: disposition/affective realm.** As displayed in Table D2 (p. 246), the panel agreed to keep 16 items: Seven items required regular scoring and nine items required reverse scoring. Although panelists agreed to keep items from the open-mindedness scale’s three subscales (see p. 246) that remained following the item analysis in research step 2, they also suggested removing items from each of those subscales:

- Item 1—“I tend to classify people as either for me or against me” (reverse scored; from the categorical thinking subscale)
• Item 6—“Basically, I know everything I need to know about the important things in life” (reverse scored; from the flexible thinking subscale)

• Item 16—“I believe that the morality of permissiveness is no morality at all” (reverse scored; from the openness-values subscale)

• Item 17—“I think that if people don’t know what they believe in by the time they’re 25, there’s something wrong with them” (reverse scored; from the openness-values subscale)

For the first two items listed above, panelists objected to wording that might elicit socially desirable rather than candid responses. As one panelist explained, “I disagree with Item 1] because I think most (all) people would simply rate themselves as not being judgmental.” Commenting on Item 6, another panelist said, “It seems like it is obvious this is a ‘wrong’ answer.” Items 16 and 17 also raised wording issues. For Item 16, several panelists explained that the phrase “morality of permissiveness” was confusing. One noted, “I disagree with including this item in its current iteration, as the term ‘morality of permissiveness’ should be clarified or defined to ensure respondent comprehension.” Panelists also found the use of age 25 as “random” and questioned Item 17’s usefulness in measuring open-mindedness.

Even items the panel agreed to include in the survey received some criticism. For example, Items 5, 10, 12, and 14 barely made the 75% cut with only 80% agreement among panelists for reasons related to extreme wording (Item 5: “I think there are many wrong ways, but only one right way, to almost anything”), pertaining to factors other than open-mindedness (Item 10: “Coming to decisions quickly is a sign of wisdom”; Item 12: “If I think longer about a problem I will be more likely to solve it”), and related to redundancy to other scale items (Item 14: “There is nothing wrong with being undecided about many issues”).
Section II: knowledge. The panel suggested reductions in decontextualized fact-based items that were drawn largely from the global literacy items and in the self-knowledge scale. Table D3 (see p. 247) presents the knowledge items that remained following Questionnaire 2. The panel disagreed with including the following reverse scored self-knowledge items:

- Item 3—“When I get upset, I immediately react without any clear awareness of what I am doing” (reverse scored)
- Item 4—“While I am in the middle of a personal problem, I get so involved that I just can’t at the same time rise above the situation to clearly examine what I am thinking and feeling” (reverse scored)
- Item 6—“In some situations, I can’t understand why I have behaved in particular ways, so I usually don't even try” (reverse scored)
- Item 8—“Anytime I try to analyze my contributions to a problem, I get confused” (reverse scored)
- Item 11—“Often my feelings about an experience are so complex that I don’t even try to understand them as they are going on” (reverse scored)

Item 4 was criticized for “complex” word structure and redundancy, and Items 6, 8 and 11 appeared to duplicate content. One panelist, who disagreed with including Items 3, 4, 6, 8, and 11, remarked that many of the scale’s items were “organized around negative self judgment.” Another panelist disagreed with including Items 3, 4, 6, and 11 due to “extreme” wording that would “not give the reader a chance to demonstrate any nuance in the response.”

Ghorbani et al. (2008) phrased many of the Integrative Self-Knowledge Scale’s (the self-knowledge scale) statements negatively because they understood respondents to provide more valid answers to items reflecting a lack of self-knowledge. The Delphi panel continually noted, however, that the negative wording could confuse respondents
and argued for removing all of the items requiring reverse scoring. One panelist raised an overarching question about this scale: “Is self reflection really a component of global competence or of general emotional intelligence and maturity?” As this panelist notes, the scale may be tapping a person’s inclination toward self-reflection about personal behavior. Panelist 4 distinguished between “knowledge of self” and “knowledge of one’s own cultural background” in Questionnaire 1. This scale did not capture the cultural aspect of the original understanding of one’s own cultural background indicator, as drawn from the literature. This scale did, however, measure self-reflection, which two other panelists argued was an important component of global competence. As a result of panelist feedback, I returned to this self-knowledge subsection in Questionnaire 3.

While the defining globalization item surpassed the 75% agreement point to remain in the Revised Survey, only one of the nine fact-based items in the global literacy set reached/surpassed the 75% cut point. Item 9 received 80% agreement from the panel (“In 1965, the number of babies born per woman in the world, on average, was 5….”). Panelists’ comments, however, expressed similar reservations about all nine items:

- “[Items] 1-9 I disagree – these questions are asking about very specific facts…I am not sure of the answers myself, yet I consider myself to be globally competent…I would avoid too many specific facts in the assessment…”
- “I marked ‘Disagree’ on all, because I am not sure these questions get to ‘Global Literacy.’ By this definition, I will confess I am globally illiterate. My answers to these questions would be total guesses…”
- “These are hard questions and are so [factually] based. I think I am fairly globally literate, but I have a hard time with these…”

Given these panelist concerns, I questioned the validity of these items in measuring global competence. I, therefore, removed all nine items, including the one that reached 80% panel agreement, explaining this decision to the panel in Questionnaire 3, which is
discussed shortly. As one of the panelists commented in Round 1, “these sub-elements [an understanding of globalization, global literacy, world languages, current events] help, but I don't think they are necessary.” The comments from across Rounds 1 and 2 led me to revisit the knowledge section’s composition in Questionnaire 3.

In regards to the language items, panelists agreed that they should be kept in the Revised Survey. There was less agreement on the national current event item (did not reach the 75% cut point) and the international current event item (only received 80% agreement). The chief concern with these items had more to do with scoring than the substance of the items. Panelists wanted to know how answers would be quantified and what degree of detail would be required. On the basis of this feedback, I included proposals related to these items for the panel’s consideration in Questionnaire 3.

Section III: skill. Based on panelists’ review, 17 communication capacity and eight problem-solving style scale items survived at the 75% level or better. Table D4 (see p. 248) presents the skill items that remained following Questionnaire 2. Thus, the communication capacity and problem-solving style scales were reduced from 22 to 17 items and from 10 to 8 items, respectively.

Examining the remaining items in the communication capacity scale, each of the five cognition subscales of the Cognitive Communication Competence Scale by Duran and Spitzberg (1995) was still represented (planning, modeling, presence, reflection, and consequence cognitions). Five items, however, failed to meet the 75% cut off:

- Item 8—“Generally, I am aware of people’s interests” (modeling)
- Item 12—“When I first enter a new situation I try to ‘size up’ the event” (modeling)
- Item 15—“Generally, I study people” (modeling)
• Item 20—“Before a conversation, I mentally practice what I am going to say” (planning)

• Item 21—“After a conversation I think about my performance” (reflection)

Of the communication capacity subscales, the panelists least agreed with the modeling cognitions items. Duran and Spitzberg (1995) defined modeling cognitions as “an awareness of contextual variables that provide information that serves to inform interaction choices” (p. 270). The modeling cognitions item that panelists agreed to retain related directly to a clear action (“When I first enter a new situation I watch who is talking to whom”) as opposed to the more ambiguous items about “sizing up” or studying people’s “interests,” which could easily be interpreted in different ways. One panelist raised the point, too, that Item 21 “[a]ssumes [respondents] think of a conversation as [a] ‘performance.’” Overall, panelists felt that items were too general or ambiguous, and too often redundant. Moreover, they questioned the communication capacity subsection’s relationship to measuring global competence and offered suggestions in the form of modulations on the communication concept for use in measuring global competence. I addressed these suggestions in Round 3 of the Delphi review.

Eight out of 10 items on the problem-solving style scale in Section III survived the panelists’ review. Four of these items required regular scoring and four items required reverse scoring. Panelists suggested removing the following two items, primarily because they saw them as redundant:

• Item 4—“I prefer to make decisions on my own, rather than with other people” (R)

• Item 10—“I usually prefer to ask other people for help rather than to try to solve problems on my own”
Once again, panelists commented on the scale as a whole in ways that helped me to reconsider the scope of the problem-solving style items. They mentioned other concepts related to communication capacity and problem solving that may be better suited for the global competence context than what I included in Draft Survey 2, and for which non performance-based measures may already exist. I addressed these suggestions in the proposals presented in Questionnaire 3.

**Section IV: respondent background.** All 17 items in the respondent background section exceeded the 75% threshold for remaining in the Revised Survey as noted in Table D5 (see p. 249). It is interesting to note, however, that the two items receiving the lowest percentage agreement pertained to respondents’ opinions of their own global competence (dichotomous item 14 and open-ended item 15). One panelist commented that Item 15 might not elicit useful information from respondents. Another panelist, who disagreed with keeping Item 14, misunderstood that the global competence definition from the current research would be presented as part of the item. This panelist, therefore, might have given a different answer with this knowledge. Feedback received in Rounds 1 and 2 helped shape several proposals related to the respondent background section that appeared in Questionnaire 3.

**Round 3**

Table 4.5 presents the statistical results from Questionnaire 3 (Appendix G) in descending order from highest to lowest panel mean score. Although all four sections received panel mean scores of 3.5 or more, indicating increased panel agreement from Round 1, the knowledge section barely reached this cut point, paralleling the panel’s prior responses in Round 1. In Round 3, panelists agreed most strongly, for instance, with the
items in the *respondent background* section and least strongly with those in the *knowledge* section. A review of the standard deviations in Table 4.5 demonstrates that the *respondent background* section exhibited the narrowest dispersion of scores among the panelists as well as the highest mean score, while the *knowledge* section included the widest dispersion of scores and the lowest mean score. This conclusion becomes clear when reviewing the number of panelists per score provided in Questionnaire 3 in Table 4.6. A majority of panelists strongly agreed with the refined *respondent background* section, whereas the panelists were split in their opinions on the *knowledge* section.

Table 4.5

*Descriptive Statistics for Questionnaire 3: The Refined Sections*

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>Median</th>
<th>Mode</th>
<th>SD</th>
<th>Range</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refined RESP BKGR</td>
<td>3.80</td>
<td>4.00</td>
<td>4</td>
<td>.42</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Refined SKILL</td>
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<td>4.00</td>
<td>4</td>
<td>.48</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Refined DISP</td>
<td>3.60</td>
<td>4.00</td>
<td>4</td>
<td>.52</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Refined KNOW</td>
<td>3.50</td>
<td>3.50</td>
<td>3&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.53</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

*Note. N = 10. 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree. RESP BKGR = respondent background section; SKILL = skill section; DISP = disposition/affective realm section; KNOW = knowledge section.  
<sup>a</sup> Multiple modes exist. The smallest value is shown.*
The panelists who agreed (a score of 3) with the remaining items in the respondent background section still stated some concerns with those items:

- **Panelist 1**: “… [These questions] may confuse lack of opportunity for lack of interest in some cases.” (See full quote in Appendix D, p. 250)

- **Panelist 8**: “I am not sure how you will use the open response questions….You may need to clarify how you define home. Global nomads may have a passport home different from their primary home culture…” (See full quote in Appendix D, p. 250)

These two comments echo concerns similar to others stated in previous rounds.

Panelist 1 did not specify as to which items in the respondent background section he or she was referring. This individual’s comment, however, could relate to several items, that is, the travel, exposure, and coursework items, which I included in the respondent background section because they would be used only as context for answers in the other sections. Answers to the open-ended exposure item (“Why do you think you have had little to no exposure to cultures that differ from your own?”) could explain respondents’

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**Table 4.6**

*Frequency of Scores Marked by Panelists*

<table>
<thead>
<tr>
<th>Survey Section</th>
<th>Score by Number of Panelists (N = 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refined RESP_BKGR</td>
<td>3 → 2 panelists 4 → 8 panelists</td>
</tr>
<tr>
<td>Refined SKILL</td>
<td>3 → 3 panelists 4 → 7 panelists</td>
</tr>
<tr>
<td>Refined DISP</td>
<td>3 → 4 panelists 4 → 6 panelists</td>
</tr>
<tr>
<td>Refined KNOW</td>
<td>3 → 5 panelists 4 → 5 panelists</td>
</tr>
</tbody>
</table>

*Note. 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree.*
limited experience in these areas, such as “lack of interest” or “lack of opportunity” from Panelist 1’s comment.

This discussion also relates to Panelist 8’s comment. Even though several respondents within a sample may select no to the item, “Do you often expose yourself to cultures that differ from your own…” answers to the open-response exposure item could flesh out the reasons behind the no responses, which may be very different from one another. In a larger sample, these open-responses could be coded to detect any patterns that are present. For survey administrators, however, these items simply provide supporting information for the yes/no exposure item.

As to the reasoning for the lowest mean score and highest standard deviation for the knowledge section, Table 4.6 shows an even split between panelists who agreed and strongly agreed with the remaining knowledge items. As seen in Table 4.6, this even split in panelist scores for the knowledge section’s remaining items produced a bimodal distribution. A greater number of panelists commented on the knowledge section’s remaining items than for those of the other three sections. Excerpts of comments from the knowledge section are as follows:

• Panelist 1 agreed with the remaining knowledge items: “Items such as 1 and 10 [of the self-knowledge scale] may seem to indicate that someone is not globally oriented if answered in the affirmative, but may just indicate a great degree of self-awareness, self-criticism or honesty. And although items such as the world language and knowledge of current events would generally show a relationship to international interest, in some cases they simply indicate opportunity.”

• Panelist 2 agreed with the remaining knowledge items: “I would delete the open response question asking for a definition of globalization – you have not told us how you will score this.”

• Panelist 8 agreed with the remaining knowledge items: “I am not sure I understand #10. The wording of #12 is tricky [both items from the self-
knowledge scale]. I am not sure how you will code #1 in Defining Globalization.”

- **Panelist 5 strongly agreed** with the remaining knowledge items (panelist wrote comment in all capital letters): “I think the inclusion of the world [l]anguage question and the knowledge of current event question are very important.”

- **Panelist 10 strongly agreed** with the remaining knowledge items: “I fully agree with the inclusion of the elements listed….However, I feel it pertinent to reiterate the multifaceted ways by which World Languages can be acquired…” (See full quote in Appendix D, p. 250)

These comments helped explain why this section earned the lowest mean score. In particular, Panelist 2’s comment questions the scoring method for the defining globalization item. As previously mentioned, I purposefully chose not to discuss scoring as part of the Delphi review so as to maintain the focus on the survey item content.

Contrary to the knowledge section, panelists did not make many comments on the disposition/affective realm or skill sections’ remaining items to explain their decrease in agreement with the former and their increase in agreement with the latter from Round 1. Instead, examining the number of panelists who agreed or strongly agreed with the disposition/affective realm and skill sections' remaining items (see Table 4.6) provided helpful feedback. Seven panelists strongly agreed with the skill section’s remaining items as compared with six panelists who strongly agreed with the disposition/affective realm section’s remaining items.

**Proposals for consideration: development and submission to the panel.**

Panelists’ comments suggested several avenues of possible revisions to Draft Survey 2. In giving panelists the opportunity to respond to revisions planned on the basis of their feedback, I hoped to strengthen the validity of those revisions. In analyzing panelist comments from Rounds 1 and 2, I categorized them topically:
• Measure *curiosity*, *respondent engagement*, and *knowledge of one’s own cultural background* in the survey using non open-ended items

• Remove *defining globalization* and *international current event* items from the *knowledge* section

• Revise the *language*-related items and move them to the *respondent background* section

• Replace *communication capacity* and *problem-solving style* items with items measuring *intercultural communication effectiveness* in the *skill* section

• Remove *travel*-related items from the survey

From these categories, I then developed seven overarching and two secondary proposals, appearing in Questionnaire 3 as nine *Proposals for Consideration* to which panelists were asked to indicate their level of agreement.

• Proposal 1: Add non open-ended items measuring *curiosity* to the survey.

• Proposal 2: Add non open-ended items measuring *respondent engagement* to the *respondent background* section.

• Proposal 3: Remove the *defining globalization* and *international current event* items from the *knowledge* section.

• Proposal 4: Add non open-ended items measuring *knowledge of one’s own cultural background* to the *knowledge* section.

• Proposal 5: Include a revised set of *language*-related items.
  
  o Proposal 6: Move the *language*-related items to the *respondent background* section.

• Proposal 7: Replace the *communication capacity* and *problem-solving style* items with items measuring *intercultural communication effectiveness* in the *skill* section.
  
  o Proposal 8: Definition of *effective intercultural communication* proposed: “The ability to respectfully exchange thoughts and ideas with individuals who culturally contrast from one’s self, using appropriate verbal and body language tailored to those present in the conversation, for the purpose of gaining mutual understanding of the various points of view offered despite any differences in personal, fundamental beliefs.”
Proposal 9: Remove the travel-related items from the survey.

These proposals represented a stronger focus on the disposition/affective realm and self-knowledge, as well as on skills related to effective intercultural communication, and a move away from decontextualized fact-based knowledge. These changes had the added advantage of potentially shortening the survey to meet the time limitations suggested for the survey.

Proposal 1. The first proposal suggested adding non open-ended items measuring curiosity to the survey. In Round 1, Panelist 3 commented,

I think curiosity about the world we live in, curiosity about the unknown, are the necessary driving force. These sub-elements [global literacy, world languages, current events] help, but I don’t think they are necessary. (See full quote in Table D1, p. 244)

As mentioned earlier, even though I link curiosity to the disposition/affective realm variable and this panelist connects it with the knowledge variable, this comment correlates with remarks from panelists in Rounds 1 and 2, especially in regards to the fact-based global literacy and current event items, and whether or not a need exists for such items. I considered such remarks in conjunction with the panelists’ exclusion of a majority of the global literacy items and the national current event item in Round 2. Together, these results signaled that presenting panelists with a proposal to add curiosity items measuring individuals’ proclivity to gain factual knowledge might address their concerns regarding the inclusion of fact-based items. Ten or less non open-ended items measuring curiosity could, therefore, demonstrate a respondent’s willingness to seek new information, ideas, experiences, etc.

At this early point of considering curiosity-related items, I defined the curiosity indicator as “a strong desire to know, learn, or experience something” (adapted from
“Curiosity,” 2016). I would place these new items in the disposition/affective realm section, as they appeared to gauge the emotional, or affective, aspect of this variable, and to parallel one of its original indicators (desire for exploration in Todd, 2013). I adapted the aforementioned definition of curiosity from “a strong desire to know or learn something” (“Curiosity,” 2016) to include “…or experience something.” I based this adaptation on a quote from an interviewee in Todd (2013) and on Vygotsky’s (1986a, 1986b) social development theory. This theory helped describe what I see as the global competence learning process due to its emphasis on learning from experience (see Chapter 2, p. 50).60

Proposal 2. The second proposal suggested adding non open-ended items measuring respondent engagement to the respondent background section. In Round 1, Panelist 4 raised an important point, “…it seems like there might be a bit of a gulf between the idea that someone is open to other views in general and that they might take action…” and that the “…idea of taking action suggests stronger commitment than just basic open-mindedness.” As discussed in Chapter 2, I theorized that individuals who possess the disposition/affective realm, knowledge, and skills for global competence would, as a result, take action. Furthermore, when ready for use, this survey is intended to establish baseline information on individuals' global competence characteristics before instruction or cross-cultural experience take place. Thus, it’s plausible that respondents may not possess extensive action-related involvement. Surveying their exposure to

60 According to Vygotsky (1986b), learning spontaneous concepts, which are gained through experience, provides a foundation from which to learn formal, scientific concepts, such as those learned in a school setting. Development of scientific concepts characterizes higher mental functioning, since they allow people to think in a decontextualized manner, for example, by making inferences (Hasan, 2012; Wertsch, 1985d). This type of thinking can contribute to solving problems or to understanding complex concepts like cosmopolitanism, both of which relate to global competence development. Thus, individuals who are curious and who seek new experiences create potential opportunities to learn new concepts and to expand their thought processes.
foreign cultures, however, could illustrate if respondents had experience with diversity, hence exposure items appeared in the respondent background section of Draft Surveys 1 and 2. From Panelist 4’s comment, however, it does seem necessary to include a set of items querying respondents’ actions along with the exposure-related items.

Other panelists speak to the linkage between the disposition/affective realm and taking action to help others, which supported the inclination to include a set of items measuring respondent engagement. For example,

- **Panelist 7:** “…In my own experience, I think openness to those who are different from you, think, act and believe different from you, allow you to grow as a person and gain a greater understanding of the world and people in it. Through greater understanding, one can be further motivated to interact and even help others who may or may not agree with one’s cultural norms and values, even when these make you uncomfortable or make you question your own norms/values.”

- **Panelist 2:** “I strongly agree that open mindedness is ESSENTIAL for one to be a globally competent global citizen…” (See full quote in Appendix D, p. 250)

The first comment posits a connection between individuals’ openness and motivation toward helping people with differing values than their own. The second comment emphasizes the need for open-mindedness to become a “global citizen,” which was an indicator of the action variable (see Chapter 2, p. 41). Including respondent engagement items would allow for exploration of associations between action and open-mindedness, and action and the other indicators. I, therefore, proposed to the panel to include 10 or less non open-ended items measuring types and frequency of respondent engagement in activities such as service learning, community service, or international aid participation in the respondent background section.
Proposal 3. The third proposal suggested removing the *defining globalization* and *international current event* items from the *knowledge* section. In Round 2, several panelists questioned how the open-ended items (the *defining globalization* and *current event* items) in the *knowledge* section would be scored. The following are a few of the comments pertaining to this topic:

- **Panelist 8 disagreed** with keeping the *international current event* item: “How will you quantify these answers?”

- **Panelist 3 agreed** to keep the *defining globalization* item: “From a survey analysis perspective it might be simpler to have the respondents select from several definitions.”

- **Panelist 5 agreed** to keep the *defining globalization* item: “Good question. How much time [do] they have to respond? How do [you] evaluate the response?....Does this question penalize the deeper thinker, with a slower response?” (See full quote in Appendix D, p. 250)

- **Panelist 5 agreed** to keep the *international current event* item: “…how do you measure the response? Are you going to insist on [short], one sentence answers? Or are you looking for some detail?”

Each of these comments highlights issues about the scoring of the open-response items in Draft Survey 2. Even if criteria were provided along with the survey about how to score these items, it cannot be guaranteed that administrators would score them as directed. Furthermore, the open-ended *current event* items place a significant burden on the scorer to follow the news or to research the event responses. As one of the panelists noted in Questionnaire 2, “Many of the questions are going to be hard to quantify. This will require considerable manual summarizing.”

Although the *defining globalization* and *international current event* items reached 75% agreement among panelists, I proposed removing both of these items. Not only do
these open-ended items pose potential scoring difficulties, theoretically they may also be unnecessary given the Revised Survey’s shift away from fact-based, finite knowledge.

Proposal 4. The fourth proposal suggested adding non open-ended items measuring knowledge of one’s own cultural background to the knowledge section. Based on panelist comments about the importance of the self-knowledge items, but the need for items gauging respondents’ knowledge of their own cultural background, I proposed keeping the former and adding the latter. In Round 1, Panelist 10 (the high school Spanish instructor) commented,

I strongly agree that knowledge of self is another fundamental element in determining Global Competence. This ties with the trait of open-mindedness mentioned previously, adding the reflective element. Although the knowledge of self does not necessitate interaction with others or other beliefs, as does open-mindedness, it does lend a sort of self-regulating element to speak to the effectiveness of such interactions. Other sub-elements of KNOWLEDGE stand out to me as important, but not imperative [emphasis added].

Given Panelist 10’s background, this comment was of interest because the knowledge section included knowledge of world language(s) items. Panelist 10’s comment continued by using world language as an example of a helpful type of knowledge to facilitate a person’s interactions with culturally diverse individuals, understanding of current events, and development of global literacy. But he or she argued that while these sub-elements were “important,” they were “not imperative” like the knowledge of self sub-element.

Panelist 3 made the aforementioned comment that, “These sub-elements [global literacy, world languages, current events] help, but I don’t think they are necessary. I fully agree that a reflective nature (knowledge of self) is critical…” . Although this panelist disagreed with including 5 of the 12 self-knowledge items, primarily because he
or she felt many of them were repetitive, this person felt that self-reflection was important to global competence. Due to such panelist sentiment, I proposed keeping the *self-knowledge* items that remained following Round 2.

Panelist 4, the social studies professor, commented in Round 1 that:

> Again, this sounds good but I think there is a difference between knowledge of self and knowledge of one’s own cultural background….it should be made clear or at least considered in some way that a person should be able to demonstrate knowledge of how they might have difficulty seeing or learning something because of their particular cultural milieu. (See full quote in Appendix D, p. 244)

This comment was especially instructive given that Panelist 4’s expertise directly concerns the two indicators under consideration (*knowledge of self* and *knowledge of one’s own cultural background*). Panelist 4’s comment offered support for adding items that measure this cultural background indicator. But as discussed in Chapter 3, the search for tools measuring the original *understanding of one’s own cultural background* indicator produced performance-based measures, thus leading to the narrowed *self-knowledge* indicator. Panelist comments, however, seemed to call for the addition of newly developed items measuring the cultural aspect of self-knowledge.

*Proposals 5 and 6.* The fifth and sixth proposals suggested including a revised set of *language*‐related items and moving these items to the *respondent background* section. In Round 2, the high school Spanish instructor, Panelist 10, questioned the scoring of the *world language* item: “Please list any additional language(s) learned and how long you have been learning each language (Example: French – 6 months, Spanish – 2 years). Please type N/A if you have not learned additional languages.” This panelist explained that,

> Although I agree with the second Open Response statement, I feel that it should be clarified. Years learning a language is a highly subjective concept….I would
suggest either using hours and giving examples of conversions (e.g., two years of Spanish in high school would be 240 hours) or having respondents reference…[proficiency] charts….Alternatively, the respondents could reply with how comfortable they feel using their additional language to interact with speakers/users of that language….Perhaps a third question should be added asking about interaction with native speakers…. (See full quote in Appendix D, p. 250)

Panelist 1, who teaches world language acquisition (specifically ESL) at the university-level and who is bilingual, also commented on this world language item:

…it is a little odd for some of us who speak two languages more or less fluently to say how long we have been learning them...Maybe it is better to say how long we took classes in them or something. (See full quote in Appendix D, p. 251)

Panelist 6, the world language acquisition professor, remarked, “A better measure of global interaction is whether or not they use the language on a regular basis…” These comments from three world language experts led to the reconsideration of this item.

Panelists did not take issue with the native language item, which earned 100% agreement for inclusion in the Revised Survey. Thus, I proposed keeping the native language item and adjusting the world language item. The first proposed adjustment included asking respondents to list any additional language(s) that they speak, but not ask about length of time spoken. The second and third proposed adjustments were to add a group of items surveying the frequency of and setting for use of the additional language(s). Since global competence in this work pertains to engagement with culturally diverse individuals, it seems appropriate to query respondents' additional spoken languages, as well as how often, where, and with whom they speak the language(s). Aside from asking respondents to name their native and additional language(s) spoken, these items would assume a non open-ended format.

Based on previously discussed panelist comments demonstrating a greater concern for self-reflection and knowledge of one’s own cultural background than on
knowledge of facts and languages, I then proposed to move both language-related items to the respondent background section. As mentioned previously, the items in this section would serve only as context for answers provided in the other survey sections and, thus, would not be scored. Now that I do not intend to score either of these language items, or any new language items, it seemed logical to propose placing them in the respondent background section.

Proposals 7 and 8. The seventh proposal suggested replacing the communication capacity and problem-solving style items with intercultural communication effectiveness items in the skill section. The eighth proposal suggested a definition of intercultural communication effectiveness for the panel’s consideration. In Round 2, Panelist 2 noted in regards to the communication capacity items, “What about some assessment of communication effectiveness,” while Panelist 8 commented about the same subsection that, “Too many questions are similar…Maybe some statements about how one understands their own barriers in effective intercultural communication.” Panelist 8 also explained that he or she did not “…see the ‘global’ relevance of these [problem-solving style] questions. They look more like general decision making or problem solving questions.” These last two comments led to the consideration that items measuring intercultural communication effectiveness might address both communication capacity and problem-solving style.

Panelist 3 noted in Round 1 with regard to the skill section, “…I am less sure about ‘problem-solving style’ [than communication skills]. It seems like you are leading up to a single answer to this sub-element (collaborative). If you are not collaborative, can you engage effectively in global action?” This comment raised an important point.
While the word engagement suggests collaboration, just because people might prefer solving problems independently, this inclination does not necessarily preclude them from solving global issues on their own or from working well with others when needed. I attempted to capture panelists’ perspectives on this topic by proposing that the communication capacity and problem-solving style items be replaced with items measuring intercultural communication effectiveness defined in Questionnaire 3 as:

The ability to respectfully exchange thoughts and ideas with individuals who culturally contrast from one’s self, using appropriate verbal and body language tailored to those present in the conversation, for the purpose of gaining mutual understanding of the various points of view offered despite any differences in personal, fundamental beliefs.

Proposal 9. The ninth proposal suggested removing the travel-related items from the survey. In Round 1, Panelist 5 remarked:

Travel does not have to be international. I grew up in a Jewish section of Pittsburgh. I learned Jewish religion and customs in class and as a member of a school council. I was surrounded by signs in Yiddish and Hebrew; Jewish houses of worship; restaurants and bakeries; and businesses. My interest in travel came in large part [due] to that exposure.

Additionally, Panelist 8 explained in Round 2 that, “One can have an international experience at home.” In Round 1, Panelist 4 noted the financial aspect of travel abroad: “I have some concerns that this will exclude certain people who have not had the opportunity (due to finances) to travel many places” (see full quote in Appendix D, p. 245). These comments emphasized two points, both of which are discussed in Chapter 2: (a) Individuals can often gain international experience in their local communities, and (b) travel abroad may be prohibitively expensive for many individuals. Moreover, it is challenging to meaningfully capture and then score a person’s travel experiences in a survey (e.g., has he/she traveled abroad? If so, what was the reason? Was the purpose of
the travel for service learning or for vacation? Even if it was for vacation, how was the
time spent? Did he/she spend time getting to know the local people at the destination or
remain in the resort?). From a formatting perspective, querying an individual’s travel
experience requires a number of open-ended items and time for some respondents to feel
like they have adequately answered the question. From a theoretical standpoint, as the
two panelists noted, international experience can happen in local communities.

From panelist comments, it appeared that they thought that interacting with
individuals of diverse cultural backgrounds was as influential as travel. I proposed,
therefore, to remove the travel-related questions from the survey.61 Instead, I proposed
that an external measure of travel could be administered in conjunction with the present
survey during a future field test to gauge any relationships between global competence
and travel experience. If such a relationship is confirmed, then travel-related items could
be added back in to the survey.

Table D6 presents the statistical results from the analysis of panelists’ responses
to the Proposals for Consideration. A limitation of this study was the need for additional
Delphi rounds to seek panel consensus on these proposals. Table D6 presents these
proposals in vertical descending order, such that the panel agreed most with adding items
to the survey measuring curiosity and moving the language-related items to the
respondent background section, and agreed the least with removing the travel-related
items from the survey. Several of the proposals, however, received the same mean score
and, thus, could have been arranged differently within the table. Since the travel
proposal did not reach the mean cut score of 3 of acceptance, the travel-related items are

61 i.e., “Have you traveled outside the country that you consider as your home?” And “Have you stayed in a
country, other than your home country, for over three months or visited one region repeatedly [over three
times]?”
included in the Revised Survey. I address all of the other proposals either in the Revised Survey or in the discussion in Chapter 5.

Draft Survey 2 presented to the Delphi panel included 95 items. The Revised Survey resulting from the Delphi review contained 67 items with the defining globalization and international current events items removed (Proposal 3). Thus, 28 items were removed using the Delphi procedure. The language-related items also appear in the respondent background section in the Revised Survey (Proposal 6). The rest of the panel-approved proposals that have not yet been applied to the survey and examples of measures to address them are discussed further in Chapter 5 as avenues for future research. The Revised Survey from this research appears in Appendix H and comprises items that have each been subjected to empirical scrutiny in this dissertation.

**Findings: Using the Revised Survey as a Guide to Describe the Field-Test Sample**

I used the Revised Survey as a guide to determine which Draft Survey 1 data to use in describing the field-test sample of 19 pre-service teachers. Table 4.7 presents the descriptive statistics for each of the four scales. The sample earned the highest mean scores on the open-mindedness and self-knowledge scales. Since these measures included a different total number of items (open-mindedness: 16 items; self-knowledge: 7 items; communication capacity: 17 items; and problem-solving style: 8 items), I calculated individual mean scores for the respondents on each of the four scales.
Table 4.7

**Descriptive Statistics for the Field-Test Sample’s Scale Mean Scores**

<table>
<thead>
<tr>
<th>Scale</th>
<th>M</th>
<th>Median</th>
<th>Mode</th>
<th>SD</th>
<th>Range</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open-Mindedness</td>
<td>3.11</td>
<td>3.13</td>
<td>2.75a</td>
<td>.33</td>
<td>1.13</td>
<td>2.56</td>
<td>3.69</td>
</tr>
<tr>
<td>Self-Knowledge</td>
<td>3.05</td>
<td>3.00</td>
<td>2.71</td>
<td>.46</td>
<td>1.57</td>
<td>2.43</td>
<td>4.00</td>
</tr>
<tr>
<td>Communication Capacity</td>
<td>2.93</td>
<td>2.94</td>
<td>2.47a</td>
<td>.50</td>
<td>1.88</td>
<td>1.94</td>
<td>3.82</td>
</tr>
<tr>
<td>Problem-Solving Style</td>
<td>2.89</td>
<td>2.88</td>
<td>3.00</td>
<td>.49</td>
<td>1.88</td>
<td>2.13</td>
<td>4.00</td>
</tr>
</tbody>
</table>

*Note. N = 19.*

a Multiple modes exist. The smallest value is shown.

Duran and Spitzberg’s (1995) Cognitive Communication Competence Scale (CCCS), which was used to measure the *communication capacity* indicator for the *skill* variable, originally consisted of five subscales (planning, modeling, presence, reflection, and consequence cognitions). Since the authors’ factor analysis revealed these five subscales, I examined the 19 respondents’ scores on each of the subscales as well as on the scale as a whole. With the modeling subscale reduced to one item in the Delphi review, a respondent’s score on this item was considered on its own alongside the person’s mean scores on the four remaining CCCS subscales. In the case of a missing value on a CCCS subscale, the mean of the *completed* subscale items was first calculated. This mean was then inserted for the missing value and the subscale mean was then re-calculated. At this point, the overall CCCS mean could also be computed. For a missing response on one of the other three scales, the answers to the completed items on a given scale were used to calculate the scale mean, which was then input for the missing value. The scale mean was then re-calculated (Babbie, 2007a). Calculating an overall mean
score for each respondent on the CCCS facilitated a comparison with his or her mean scores on the other three scales.

Producing a scatter plot (e.g., Figure 4.9) of respondents’ individual mean scores on each scale provided a visual method from which to understand the descriptive statistics presented in Table 4.7. Moreover, the scatter plots presented in this chapter from pages 168 to 181 helped determine whether or not a pattern existed among the respondents’ mean scores for each scale: respondents’ answers congregated toward the top of the open-mindedness and self-knowledge scales, whereas a majority of their responses on the communication capacity and problem-solving style scales grouped around the middle of the 4-point response options. The difference between the open-mindedness scale’s standard deviation of .33 and the standard deviations of the other three scales, ranging from .46 to .50, were also more apparent from a review of the scatter plots. The open-mindedness scale scatter plot exhibited the tightest distribution of respondents’ mean scores around the sample mean score of 3.11, which was the highest of the four scales. The open-mindedness and communication capacity scale scatter plots also demonstrated the former’s bimodal distribution with mean scores of 2.75 and 3.31 occurring the most often, and the latter’s multimodal distribution with two respondents each earning mean scores of 2.47, 2.82, 2.94, 3, 3.12, and 3.82.

Regarding sample demographics, of the 16 respondents who answered the gender and ethnic identity items, all were female with 15 of them responding as either “White” or “Caucasian,” and one individual answering as “Chinese American.” Eighteen respondents answered the home location item: 13 respondents were from Kentucky, two were from Ohio, one was from Tennessee, one was from Illinois, and one answered with
the “United States.” All 19 respondents spoke English as a first language. Table D7 (see Appendix D, p. 253) presents an overview of additional respondent background characteristics ($N = 19$). Table 4.8 provides an overview of the analysis methods of the 19 field-test respondents’ data.

Table 4.8

Field-Test Data Analysis Methods

<table>
<thead>
<tr>
<th>Survey Element</th>
<th>Type of Variable</th>
<th>Analysis Method</th>
<th>Scoring Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISP: Open-Mindedness</td>
<td>Explanatory</td>
<td>Calculate Individual &amp; Sample Scale Mean</td>
<td>Cut Score = 3.5</td>
</tr>
<tr>
<td>KNOW: Self-Knowledge</td>
<td>Explanatory</td>
<td>Calculate Individual &amp; Sample Scale Mean</td>
<td>Cut Score = 3.00</td>
</tr>
<tr>
<td>SKILL: Communication</td>
<td>Explanatory</td>
<td>Calculate Individual &amp; Sample Scale Mean</td>
<td>Cut Score = 3.00</td>
</tr>
<tr>
<td>SKILL: Problem-Solving Style</td>
<td>Explanatory</td>
<td>Calculate Individual &amp; Sample Scale Mean</td>
<td>Cut Score = 3.00</td>
</tr>
<tr>
<td>RESP BKRG:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional Language</td>
<td>Test</td>
<td>Elaboration Model</td>
<td>Not Scored</td>
</tr>
<tr>
<td>Travel</td>
<td>Test</td>
<td>Elaboration Model</td>
<td>Not Scored</td>
</tr>
<tr>
<td>Stay Abroad</td>
<td>Test</td>
<td>Elaboration Model</td>
<td>Not Scored</td>
</tr>
<tr>
<td>Exposure (ACTION)</td>
<td>Test</td>
<td>Elaboration Model</td>
<td>Not Scored</td>
</tr>
<tr>
<td>Coursework</td>
<td>Test</td>
<td>Elaboration Model</td>
<td>Not Scored</td>
</tr>
<tr>
<td>Self Global Competence</td>
<td>Test</td>
<td>Elaboration Model</td>
<td>Not Scored</td>
</tr>
</tbody>
</table>

Note. Explanatory variable = independent variable. Global competence is the response (i.e., dependent) variable. Test variable = control variable. In this exploratory research, respondents with mean scores at or above the cut point on each of the four scales signal possession of the given indicator. DISP = Disposition/Affective Realm, KNOW = Knowledge, RESP BKGR = Respondent Background.

The analysis of the field-test sample data revealed several key findings. First, there did not appear to be an association between the pre-service teachers’ high scores on
the four scales and their *foreign culture exposure* responses. As explained in Chapter 2, I theorized that individuals who embodied the *disposition/affective realm, knowledge, and skills* for global competence would feel compelled to take *action* for global good on behalf of strangers (Appiah, 2006). The *foreign culture exposure* items preliminarily surveyed the *cosmopolitan* indicator of the *action* variable in Draft Survey 1. I was especially surprised by the lack of apparent association between respondents’ high scores on the *open-mindedness* scale and their *exposure*. This is because the *disposition* and *affect* for global competence, according to the literature, play a prominent role in respondents’ feeling compelled to take *action*. An interesting result did surface, however, when a respondent who earned high scores across all four scales also reported experience with all of the *foreign culture exposure* types. This finding is discussed further at a later point in this chapter (see p. 190).

Second, respondents earning low mean scores on the *communication capacity* scale demonstrated more *foreign* (*i.e.*, *world*) *language* experience than those respondents earning high scores on this scale. These high scorers reported no *foreign language* experience, but instead reported extensive *travel* experience. And third, a scatter plot exhibited initial evidence of a positive linear relationship between respondent mean scores on the *open-mindedness* and *self-knowledge* scales. Due to the small sample size, any potential associations between variables were only exploratory in nature.

Given the small field-test sample size, and the even smaller resulting subsample sizes for the four scales stemming from use of the elaboration model (Babbie, 2007e), the following discussion of results focuses on the most conspicuous data trends. Because only one respondent in the field-test sample had stayed in a foreign country for over three

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62 e.g., Boix-Mansilla et al. (2011)
months, for instance, this experience does not play an informative role in the early part of the discussion. It does assume significance at the end of the chapter in the discussion of respondents' scores across the four scales, since the one person who had stayed in a foreign country for over three months also scored exceptionally well on all four of the scales. The presentation of findings from across the four scales includes further details on this result.

**Open-Mindedness Scale**

With a cut score of 3.5, which was greater than a standard deviation from the sample mean, only three respondents (Respondents 2, 12 and 14) were considered open-minded in this exploratory research. Figure 4.9 helps demonstrate this result.

![Figure 4.9](image)

*Note.* The scores shown underneath data points denote sample outliers that fall at or above, or at or below, one standard deviation relative to the sample mean.

The respondent background characteristics for the two resulting subsamples appear in Table 4.10. Notable findings included:
• For the high scorers
  o None had *traveled* outside their home country
  o None reported *yes* to *foreign culture exposure*

• For the low scorers
  o 63% had *traveled* outside their home country
  o 25% reported *yes* to *foreign culture exposure*

Table 4.10

*Elaboration Model Results: Open-Mindedness Scale with 3.5 Cut Score*

<table>
<thead>
<tr>
<th>Respondent Score Type</th>
<th>Additional Language</th>
<th>Travel</th>
<th>Foreign Country Stay</th>
<th>Exposure</th>
<th>Foreign Studies Courses</th>
<th>Self Global Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Scorers: Mean Score ≥ 3.50, n = 3</td>
<td>No → 1</td>
<td>No → 3</td>
<td>No → 3</td>
<td>No → 1</td>
<td>No → 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes → 2</td>
<td>Yes → 0</td>
<td>Yes → 0</td>
<td>Yes → 0</td>
<td>Yes → 2</td>
<td></td>
</tr>
<tr>
<td>Low Scorers: Mean Score &lt; 3.50, n = 16</td>
<td>No → 8</td>
<td>No → 6</td>
<td>No → 15</td>
<td>No → 12</td>
<td>No → 10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes → 8</td>
<td>Yes → 10</td>
<td>Yes → 1</td>
<td>Yes → 4</td>
<td>Yes → 6</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.11 displays the *respondent background* characteristics of the high and low outliers on the *open-mindedness* scale. Using the standard deviation criterion meant that one of the high outlier's mean scores fell below the 3.5 cut point (Respondent 5 with mean score = 3.44 in Figure 4.9), and that the three individuals in the *high scoring* subsample also fell in to the *high outlier* subsample. Findings of interest for the outlier subsamples included:

- For the high outliers
  o 75% reported *yes* to *additional language experience*
  o 75% had *not traveled* outside their home country
  o 75% thought of themselves as globally competent

- For the low outliers
  o 60% reported *yes* to *additional language experience*
  o 60% had *not traveled* outside their home country
  o 60% had completed *foreign studies coursework*
Neither the high nor the low outliers reported yes to foreign culture exposure.

Table 4.11

Elaboration Model Results: Open-Mindedness Scale Mean Score Outliers

<table>
<thead>
<tr>
<th>Respondent Score Type</th>
<th>Additional Language</th>
<th>Travel</th>
<th>Foreign Country Stay</th>
<th>Exposure</th>
<th>Foreign Studies Courses</th>
<th>Self Global Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High Outliers:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Score ≥ 3.44, n = 4</td>
<td>No → 1</td>
<td>No → 3</td>
<td>No → 4</td>
<td>No → 4</td>
<td>No → 2</td>
<td>No → 1</td>
</tr>
<tr>
<td></td>
<td>Yes → 3</td>
<td>Yes → 1</td>
<td>Yes → 0</td>
<td>Yes → 0</td>
<td>Yes → 2</td>
<td>Yes → 3</td>
</tr>
<tr>
<td><strong>Low Outliers:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Score ≤ 2.78, n = 5</td>
<td>No → 2</td>
<td>No → 3</td>
<td>No → 5</td>
<td>No → 5</td>
<td>No → 2</td>
<td>No → 1</td>
</tr>
<tr>
<td></td>
<td>Yes → 3</td>
<td>Yes → 2</td>
<td>Yes → 0</td>
<td>Yes → 0</td>
<td>Yes → 3</td>
<td>Yes → 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Missing → 2</td>
</tr>
</tbody>
</table>

*Note.* Overall sample mean score on the open-mindedness scale = 3.11 (SD = .33). Respondents’ mean scores were considered outliers if they fell at or above, or at or below, one standard deviation relative to the sample mean.

The high outliers on the open-mindedness scale did not report having any foreign culture exposure and only one of them reported travel outside the United States.

Following from the theoretical framework of this research, it seemed possible that frequent exposure to different cultures could positively associate with high open-mindedness scores. Therefore, this finding was especially pertinent to this work. A majority (75%) of the high outliers did, however, possess additional language experience beyond English. Examination of the specific foreign language backgrounds of the three high outliers who reported such experience demonstrated the following: Respondent 5 had eight years of Spanish and two months of German, Respondent 12 had six years of Spanish, and Respondent 14 had two years of Spanish. One possible explanation for the presence of language background among these high outliers is that learning a language, whether inside or outside a classroom, involves learning about and potentially developing...
“appreciation,” and perhaps open-mindedness, for cultural aspects of the target location of the new language (Tochon, 2009, p. 655, see Chapter 2, p. 37).

**Self-Knowledge Scale**

To examine the self-knowledge scale results, I divided the sample into two subsamples using a cut score of 3, which was lower than the sample’s mean score as seen in Figure 4.12. Unlike the subsample sizes resulting from the cut score division for the open-mindedness scale, the sample was split into nearly even groups based on the self-knowledge scale results.

Figure 4.12

![Individual Self-Knowledge Scale Mean Scores](image)

*Note.* The scores shown underneath data points denote sample outliers that fall at or above, or at or below, one standard deviation relative to the sample mean.

The respondent background characteristics for the two resulting subsamples divided by cut score on the self-knowledge scale appear in Table 4.13. Notable findings included:

- For the high scorers
  - 50% reported yes to additional language experience
- 60% had traveled outside their home country
- 70% reported no to foreign culture exposure
- 60% thought of themselves as globally competent

- For the low scorers
  - 56% reported yes to additional language experience
  - 44% had traveled outside their home country
  - 89% reported no to foreign culture exposure

Examining the high and low scorer subsamples in tandem revealed that both groups were either evenly or almost evenly split on respondents with additional language experience, but the high scorers exhibited more travel experience than the low scorers. And although the high scorers displayed a smaller number of respondents reporting no foreign culture exposure as compared with the low scorers, neither subsample included many respondents with such exposure.

Table 4.13
Elaboration Model Results: Self-Knowledge Scale with 3.00 Cut Score

<table>
<thead>
<tr>
<th>Respondent Score Type</th>
<th>Additional Language</th>
<th>Travel</th>
<th>Foreign Country Stay</th>
<th>Exposure</th>
<th>Foreign Studies Courses</th>
<th>Self Global Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Scorers: Mean Score ≥ 3.00, n = 10</td>
<td>No → 5</td>
<td>No → 4</td>
<td>No → 9</td>
<td>No → 7</td>
<td>No → 6</td>
<td>No → 3</td>
</tr>
<tr>
<td>Low Scorers: Mean Score &lt; 3.00, n = 9</td>
<td>No → 4</td>
<td>No → 5</td>
<td>No → 9</td>
<td>No → 8</td>
<td>No → 5</td>
<td>No → 3</td>
</tr>
</tbody>
</table>

Table 4.14 displays the respondent background characteristics for the high and low outliers on the self-knowledge scale. Findings of interest included:

- For the high outliers
  - Neither had traveled outside their home country
  - Neither reported yes to foreign culture exposure
  - Both thought of themselves as globally competent
• For the low outliers
  o 2 out of the 3 low outliers had traveled outside their home country
  o 1 reported yes to foreign culture exposure
  o Neither of the respondents who answered the self global competence item thought of themselves as globally competent

Table 4.14

Elaboration Model Results: Self-Knowledge Scale Mean Score Outliers

<table>
<thead>
<tr>
<th>Respondent Score Type</th>
<th>Additional Language</th>
<th>Travel</th>
<th>Foreign Country Stay</th>
<th>Exposure</th>
<th>Foreign Studies Courses</th>
<th>Self Global Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Outliers: Mean Score $\geq 3.51$, $n = 2$</td>
<td>No $\rightarrow$ 1</td>
<td>No $\rightarrow$ 2</td>
<td>No $\rightarrow$ 2</td>
<td>No $\rightarrow$ 2</td>
<td>No $\rightarrow$ 1</td>
<td>No $\rightarrow$ 0</td>
</tr>
<tr>
<td>Low Outliers: Mean Score $\leq 2.59$, $n = 3$</td>
<td>Yes $\rightarrow$ 2</td>
<td>Yes $\rightarrow$ 1</td>
<td>No $\rightarrow$ 3</td>
<td>No $\rightarrow$ 2</td>
<td>No $\rightarrow$ 2</td>
<td>No $\rightarrow$ 0</td>
</tr>
</tbody>
</table>

Note. Overall sample mean score on the self-knowledge scale = 3.05 ($SD = .46$). Respondents' mean scores were considered outliers if they fell at or above, or at or below, one standard deviation relative to the sample mean.

Four of the five respondents across the outlier subsamples answered the self global competence dichotomous item and the follow-up open-response item. The respondents’ reasoning for their yes or no answers were as follows:

• For the high outliers (both marked yes)
  o Respondent 2: “I am culturally open to everyone, I have a body of knowledge of my own culture, and skills to collaborate.”
  o Respondent 14: “I have an open mind and I know that there are many other cultures and people different from me. Everyone’s opinions and beliefs matter.”

• For the low outliers (both marked no)
  o Respondent 4: “I do not think I am globally incompetent, but when looking at the definition, I have so much to learn and take action on involving global competency.”
  o Respondent 19: “I do not take action for the global good, unfortunately. I am only one person; therefore, I don't know how to make a difference nationally.”
Respondent 2’s comment exuded a confident tone and specifically mentioned having a body of knowledge of her own culture, which seemed to parallel her high mean score on the self-knowledge scale. Although this particular scale does not include any culturally related items, this individual’s comment exhibited certainty with regard to cultural self-knowledge. Respondent 4’s comment addressed a need for increased learning toward global competence, aligning with her mean score on this scale. On the other hand, her comment demonstrates a keen sense of self-reflection, which contradicts her low self-knowledge mean score. This comment calls into question the validity of the self-reflection scale, yet a larger sample is needed in order to further examine this issue. Respondent 14’s open-response tended mainly to the open-mindedness aspect of global competence, but it seemed noteworthy that the confident nature of her comment paralleled her high mean score on the self-knowledge scale. Respondent 19 mentioned doubts on how to meaningfully take individual action for global good. While the comment addresses the action aspect of global competence, the negative phrasing of “I don't know how…” parallels this respondent’s low outlying score on this knowledge related indicator.

Communication Capacity Scale

To examine the communication capacity scale results, the field-test sample was divided into two subsamples using a cut score of 3. Figure 4.15 displays respondents' mean scores in relation to this cut point.
Figure 4.15

The communication capacity scale subsamples were almost equally apportioned as displayed in Table 4.16. Notable findings included:

- **For the high scorers**
  - 34% reported *yes* to additional language experience
  - 78% had *traveled* outside their home country
  - 34% reported *yes* to foreign culture exposure
  - 67% had *not* completed foreign studies coursework

- **For the low scorers**
  - 70% reported *yes* to additional language experience
  - 30% had *traveled* outside their home country
  - 10% reported *yes* to foreign culture exposure

Comparing the two subsamples’ results, it was intriguing to find that the number of low scoring respondents with additional language experience was more than twice the number of higher scoring respondents with such experience, especially since these results were derived from the communication-related measure.

*Note.* The scores shown underneath data points denote sample outliers that fall at or above, or at or below, one standard deviation relative to the sample mean.
Table 4.16

*Elaboration Model Results: Communication Capacity Scale with 3.00 Cut Score*

<table>
<thead>
<tr>
<th>Respondent Score Type</th>
<th>Additional Language</th>
<th>Travel</th>
<th>Foreign Country Stay</th>
<th>Exposure</th>
<th>Foreign Studies Courses</th>
<th>Self Global Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Scorers: Mean Score ≥ 3.00, n = 9</td>
<td>No → 6</td>
<td>No → 2</td>
<td>No → 8</td>
<td>No → 6</td>
<td>No → 6</td>
<td>No → 3</td>
</tr>
<tr>
<td></td>
<td>Yes → 3</td>
<td>Yes → 7</td>
<td>Yes → 1</td>
<td>Yes → 3</td>
<td>Yes → 3</td>
<td></td>
</tr>
<tr>
<td>Low Scorers: Mean Score &lt; 3.00, n = 10</td>
<td>No → 3</td>
<td>No → 7</td>
<td>No → 10</td>
<td>No → 9</td>
<td>No → 5</td>
<td>No → 3</td>
</tr>
<tr>
<td></td>
<td>Yes → 7</td>
<td>Yes → 3</td>
<td>Yes → 0</td>
<td>Yes → 1</td>
<td>Yes → 5</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.17 displays the *respondent background* characteristics for the respondents with outlying scores on the *communication capacity* scale. Findings of interest included:

- For the high outliers
  - None reported yes to *additional language* experience
  - 100% had *traveled* outside their home country

- For the low outliers
  - 67% reported yes to *additional language* experience
  - None had *traveled* outside their home country
  - 100% had completed *foreign studies coursework*

Comparing the two subsamples with one another, the two most noteworthy findings were that the high outliers did not report any *additional language* experience, but all three of them reported experience traveling outside their home country. Conversely, more than half of the low outlying respondents reported *additional language* experience, but none of them had traveled outside their home country.
Table 4.17

Elaboration Model Results: Communication Capacity Scale Mean Score Outliers

<table>
<thead>
<tr>
<th>Respondent Score Type</th>
<th>Additional Language</th>
<th>Travel</th>
<th>Foreign Country Stay</th>
<th>Exposure</th>
<th>Foreign Studies Courses</th>
<th>Self Global Competence</th>
</tr>
</thead>
</table>
| High Outliers: Mean Score 
≥ 3.43, n = 3          | No → 3              | Yes → 0| No → 3               | Yes → 0  | No → 1                 | No → 1                 |
| Low Outliers: Mean Score 
≤ 2.43, n = 3          | No → 1              | Yes → 2| No → 3               | Yes → 0  | No → 0                 | No → 2                 |

Note. Overall sample mean score on the communication capacity scale = 2.93 (SD = .50). Respondents' mean scores were considered outliers if they fell at or above, or at or below, one standard deviation relative to the sample mean.

Studying the results in Tables 4.16 and 4.17, a majority of the individuals with low scores (the low scorers and low outliers) possessed additional language experience, whereas all or a majority of the individuals with high scores (the high scorers and high outliers) possessed travel experience. For this communication-related scale, the high scorers’ lack of additional language experience was the most noteworthy finding. Since the high and low outliers' scores offered a starker comparison than those of the high and low scorers, I examined the additional language and travel experiences of the former:

- **Travel background for the high outliers**
  - Respondent 4: England, Ireland, Scotland, Wales, and France
  - Respondent 7: Sweden, Czech Republic, Canada, Mexico, and Jamaica
  - Respondent 17: Mexico

- **Additional language background for the low outliers**
  - Respondent 6: No Additional Language Background
  - Respondent 12: Spanish—6 years
  - Respondent 15: Spanish—about 2 years

The communication capacity scale does not query use of a language beyond a person’s native language. Thus, a plausible explanation for the high outliers’ travel experience...
could be that traveling outside the United States means that they have to communicate with culturally diverse individuals in a setting from a cultural minority position. The high outliers traveled mostly to English speaking countries or to countries close to the United States. Therefore, they were probably able to speak English, while gaining communicative experience in the navigation of cultural differences. Again, since this scale does not pertain to use of a world language, the two low outliers' backgrounds in Spanish may not have contributed to their communication capacity scale scores.

Figures 4.18 to 4.22 present the field-test sample’s results on each of the five communication capacity subscales. The Delphi review resulted in the removal of all but one of the items on the modeling cognitions subscale, thus Figure 4.19 displays each respondent’s score on the one item.

Figure 4.18

![Individual Planning Cognitions Subscale Mean Scores](image)

Note. The scores shown underneath data points denote sample outliers that fall at or above, or at or below, one standard deviation relative to the sample mean.
Note. The scores shown underneath data points denote sample outliers that fall at or above, or at or below, one standard deviation relative to the sample mean.

Figure 4.19

Figure 4.20

Note. The scores shown underneath data points denote sample outliers that fall at or above, or at or below, one standard deviation relative to the sample mean.
Note. The scores shown underneath data points denote sample outliers that fall at or above, or at or below, one standard deviation relative to the sample mean.

In descending order, the field-test sample of 19 earned the highest mean score on the presence cognitions subscale, followed by the modeling cognitions item score, and then by the consequence, reflection, and planning cognitions subscales. I interpreted this finding to mean that this sample’s respondents are most cognitively active and perform
best when present in a conversation (i.e., “During a conversation I pay attention to how others are reacting to what I am saying”). This group also pays attention to their surroundings upon entering the setting of an upcoming conversation (i.e., “When I first enter a new situation I watch who is talking to whom”—the remaining modeling cognitions subscale item). Conversely, the sample seems less engaged in the cognitive processes leading up to and following a conversation (i.e., the planning, reflection, and consequence cognitions).

**Problem-Solving Style Scale**

Analysis of the problem-solving style scale results began with dividing the sample into two subsamples using a cut score of three. Figure 4.23 illustrates respondents’ mean scores on this scale in relation to the cut point.

Figure 4.23

![Image](image.png)

*Note. The scores shown underneath data points denote sample outliers that fall at or above, or at or below, one standard deviation relative to the sample mean.*
As shown in Table 4.24, the problem-solving style scale subsamples were almost equally divided on number of respondents. This particular scale measures problem-solving style instead of capability, thus respondents with mean scores of 3 or above were considered to have an interdependent problem-solving style, while those earning mean scores below 3 were considered to have an independent style. Notable findings included:

- For the interdependent problem-solvers
  - 56% reported yes to additional language experience
  - 56% had traveled outside their home country
  - 33% reported yes to foreign culture exposure
  - 56% had completed foreign studies coursework
  - 56% thought of themselves as globally competent

- For the independent problem-solvers
  - 50% reported yes to additional language experience
  - 50% had traveled outside their home country
  - 10% reported yes to foreign culture exposure
  - 30% had completed foreign studies coursework
  - 50% thought of themselves as globally competent

Table 4.24

Elaboration Model Results: Problem-Solving Style Scale with 3.00 Cut Score

<table>
<thead>
<tr>
<th>Respondent Score Type</th>
<th>Additional Language</th>
<th>Travel</th>
<th>Foreign Country Stay</th>
<th>Exposure</th>
<th>Foreign Studies Courses</th>
<th>Self Global Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interdependent Scorers: Mean Score ≥ 3.00, n = 9</td>
<td>No → 4</td>
<td>No → 4</td>
<td>No → 8</td>
<td>No → 6</td>
<td>No → 4</td>
<td>No → 4</td>
</tr>
<tr>
<td></td>
<td>Yes → 5</td>
<td>Yes → 5</td>
<td>Yes → 1</td>
<td>Yes → 3</td>
<td>Yes → 5</td>
<td>Yes → 5</td>
</tr>
<tr>
<td>Independent Scorers: Mean Score &lt; 3.00, n = 10</td>
<td>No → 5</td>
<td>No → 5</td>
<td>No → 10</td>
<td>No → 9</td>
<td>No → 7</td>
<td>No → 2</td>
</tr>
<tr>
<td></td>
<td>Yes → 5</td>
<td>Yes → 5</td>
<td>Yes → 0</td>
<td>Yes → 1</td>
<td>Yes → 3</td>
<td>Missing → 3</td>
</tr>
</tbody>
</table>

Of the notable findings, two results stood out in particular. First, even though 50% of the independent problem-solvers reported travel outside their home country, only 10% reported yes to having foreign culture exposure. Examining the data from the
independent problem-solvers who reported travel experience revealed the following about their foreign culture exposure and travel destinations visited:

- **Respondent 1** answered no to exposure: Mexico
- **Respondent 5** answered no to exposure: Canada
- **Respondent 7** answered yes to exposure: Sweden, Czech Republic, Canada, Mexico, and Jamaica
- **Respondent 10** answered no to exposure: France, Germany, England, Austria, and Italy
- **Respondent 13** answered no to exposure: Dominican Republic

Reviewing the answers provided by Respondents 1, 5, and 13, it seems that these individuals either do not think that they have traveled enough to report having foreign culture exposure or that the places they have visited present substantial cultural difference from the United States. More specifically, perhaps Respondents 1 and 13 stayed in resorts instead of visiting locations in Mexico and the Dominican Republic that embodied more of the local culture. Likewise, for Respondent 5, it seems plausible that she visited an area of Canada with cultural elements similar to those of the United States, and thus did not feel that she had gained foreign culture exposure. Follow-up interviews with these three respondents could have helped clarify details about their travel abroad experiences, their understanding of foreign culture exposure and their ideas on how to gain such exposure.

For Respondents 7 and 10, their answers reflect more extensive travel experiences as compared with the aforementioned respondents. These two particular individuals had each traveled to five countries. Respondent 7, however, answered yes to having foreign culture exposure while Respondent 10 answered no to that item, even though the latter
seemed to possess more experience with traveling to countries further from the United States than the former. Respondent 10's travel experience and foreign culture exposure answer is reviewed in additional detail below. Examining Respondent 7's data pertaining to exposure revealed that she had contact with international people outside the United States once a month by phone or Internet; had contact with international people in the United States one to two times a week either face-to-face or through the Internet; and preferred contact with international people in the United States. A follow-up interview could have helped account for the differences between Respondents 7 and 10 pertaining to their foreign culture exposure answers and experiences. Although Respondent 10 traveled to five European countries, and Respondent 7 had traveled to fewer European countries and to others closer to home, their foreign culture exposure answers raised questions as to how they spend their time when traveling abroad and how they would define foreign culture exposure.

The second significantly notable finding was that 56% and 50% of the interdependent and independent problem-solvers, respectively, thought of themselves as globally competent (i.e., reported yes to self global competence). Results from the Delphi review provided a perspective from which to consider this finding. As discussed earlier in Chapter 4, one of the Delphi panelists emphasized that independent problem-solvers could also solve globally significant issues—an important aspect of global competence—but that they may just operate in a different manner than interdependent, collaborative problem-solvers. Although respondents' answers to the self global competence item did not necessarily mean that they were globally competent, responses to this item offered a starting point from which to consider problem-solving style in the context of this
competence. I return to this finding after examining the interdependent and independent outlier results.

The interdependent and independent outliers on the *problem-solving style* scale formed two subsamples, as seen in Table 4.25. Due to the Delphi panelist’s comment and the small subsample numbers, I focused on the *self global competence* data from the interdependent and independent outliers. This item seemed especially pertinent because the two independent outliers thought of themselves as globally competent, whereas two of the three interdependent outliers did not consider themselves as globally competent.

Table 4.25

_Elaboration Model Results: Problem-Solving Style Scale Mean Score Outliers_

<table>
<thead>
<tr>
<th>Respondent Score Type</th>
<th>Additional Language</th>
<th>Travel</th>
<th>Foreign Country Stay</th>
<th>Exposure</th>
<th>Foreign Studies Courses</th>
<th>Self Global Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interdependent Outliers: Mean Score ≥ 3.38, n = 3</td>
<td>No → 2</td>
<td>Yes → 1</td>
<td>No → 3</td>
<td>No → 1</td>
<td>No → 2</td>
<td>No → 2</td>
</tr>
<tr>
<td></td>
<td>Yes → 1</td>
<td>No → 2</td>
<td>Yes → 0</td>
<td>Yes → 2</td>
<td>Yes → 1</td>
<td>Yes → 1</td>
</tr>
<tr>
<td>Independent Outliers: Mean Score ≤ 2.40, n = 2</td>
<td>No → 1</td>
<td>Yes → 1</td>
<td>No → 2</td>
<td>Yes → 0</td>
<td>Yes → 2</td>
<td>Yes → 0</td>
</tr>
<tr>
<td></td>
<td>Yes → 1</td>
<td>Yes → 0</td>
<td>Yes → 0</td>
<td>Yes → 0</td>
<td>Yes → 0</td>
<td>Yes → 2</td>
</tr>
</tbody>
</table>

*Note.* Overall sample mean score on the *problem-solving style* scale = 2.89 (SD = .49). Respondents’ mean scores were considered outliers if they fell at or above, or at or below, one standard deviation relative to the sample mean.

With the distance between the interdependent and independent outliers’ scores, such that the former were the most and the latter were the least interdependent in *problem-solving style*, respectively, I compared their reasons for selecting *yes* or *no* responses to the *self global competence* item:

- For the interdependent outliers
  - **Respondent 3** (reported *yes*): “I enjoy learning about other countries. I
think that it’s important that students are exposed to cultures that are
different from their own. Going on international mission trips to help
those less fortunate.”
  o **Respondent 4** (reported *no*): “I do not think I am globally incompetent,
but when looking at the definition, I have so much to learn and take action
on involving global competency.”
  o **Respondent 6** (reported *no*): Did not give a response

- **For the independent outliers**
  o **Respondent 2** (reported *yes*): “I am culturally open to everyone, I have a
body of knowledge of my own culture, and skills to collaborate.”
  o **Respondent 5** (reported *yes*): “I have the first three [i.e., variables of
disposition, knowledge, and skills] at least and I would like to take action
toward the fourth by teaching my class to be culturally aware etc.”

The most noteworthy open-response of those displayed was that of Respondent 2. As an
independent problem-solver, according to her responses to this scale, it was intriguing
that she specifically remarked, “I have….skills to collaborate.” This raised a couple of
questions: Is the scale a valid measure of *problem-solving style* (i.e., this person’s score
indicates an independent problem-solver, but yet she says she’s collaborative)? Or does
she think that she is an independent problem-solver, but realizes that she also has the
skills to collaborate, which are mentioned in the global competence definition in the
survey item? Further field-testing with a larger sample could help answer the first
question, while a follow-up interview could provide answers to the second. The other
three respondents' open-responses did not seem to counter their *problem-solving scale*
scores, but each of these comments offered candid, thoughtful feedback about the people
who provided them.

To address the Delphi panelist’s question (i.e., “…If you are not collaborative,
can you engage effectively in global action?”), I looked to the closest approximation of
the personal characteristics that would influence a person to take such action: the outliers’
mean scores on the other three scales and their *foreign culture exposure* responses.
While it was difficult to draw any concrete conclusions from the problem-solving outliers’ data, some interesting findings surfaced. One of the independent problem-solvers (Respondent 2 noted just above) earned scores exceeding the cut point on the three other scales, and in fact was a high outlier on the open-minded scale (scored 3.56 with a cut score of 3.5). On the other hand, this person did not report having foreign culture exposure with the reason for this reported as, “I come from a very small town.” So, perhaps, with encouragement to engage in cross-cultural experiences, this individual could be a strong candidate for becoming globally competent and taking action. This example does not speak specifically to whether or not this person will be able to “engage effectively in global action,” but it supports the general notion suggested by the Delphi panelist that someone with independent problem-solving strengths could also possess global competence characteristics. On a related note, this person reported that she thought of herself as being globally competent and as having “skills to collaborate,” discussed earlier. Future research would allow for further examination of differences in global competence characteristics between individuals who prefer independent problem-solving and those who prefer interdependent problem-solving.

Each of the three interdependent outliers scored at or above the cut point on one of the other three scales and two of them reported foreign culture exposure. Both of the respondents who reported the exposure had face-to-face, cross-cultural interaction at least once a month, with one of them reporting such interaction one to two times a week. So while the interdependent outliers possessed more of the cross-cultural experience, and the independent outlier earned high open-mindedness, self-knowledge, and communication capacity scale scores, their responses suggested that these three individuals showed
progress toward developing global competence characteristics in different ways. The survey under development, then, seemed to offer a method to preliminarily examine certain respondent strengths and weaknesses related to attributes of global competence.

**Respondent Findings Across All Four Scales**

Given the small field-test sample size and the exploratory stage of this research, designating respondents’ global competence or lack of global competence with certainty was unrealistic. Cut points for each of the four scales based on the theoretical framework, however, helped identify respondents who scored above or below those points on all four of the scales. Respondents with scores above the four cut points signaled an inclination toward global competence; respondents with scores below the four cut points signaled less of an inclination toward this competence. Reviewing each individual’s mean scores across the four scales, however, revealed that none of the 19 respondents scored at or above the cut point of 3 on the *self-knowledge*, *communication capacity*, and *problem-solving style* scales, as well as at or above the 3.5 cut point on the *open-mindedness* scale. Relaxing the 3.5 cut point to 3 revealed that two respondents scored at or above 3 on all four scales; they formed the *high scorer* group. Three respondents who scored below 3 on all four scales then formed the *low scorer* group. Table 4.26 exhibits *respondent background* characteristics of the two respondents who scored at or above the cut point of 3, and of the three respondents who scored less than 3 on all four of the scales.
Table 4.26

*Elaboration Model with Cut Score of 3 on All Four Scales*

<table>
<thead>
<tr>
<th>Respondent Score Type</th>
<th>Additional Language</th>
<th>Travel</th>
<th>Foreign Country Stay</th>
<th>Exposure</th>
<th>Foreign Studies Courses</th>
<th>Self Global Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Scorers Mean Score ≥ 3.00, n = 2</td>
<td>No → 1</td>
<td>No → 0</td>
<td>No → 1</td>
<td>No → 1</td>
<td>No → 1</td>
<td>No → 0</td>
</tr>
<tr>
<td>Low Scorers Mean Score &lt; 3.00, n = 3</td>
<td>No → 1</td>
<td>No → 2</td>
<td>No → 3</td>
<td>No → 3</td>
<td>No → 2</td>
<td>No → 0</td>
</tr>
</tbody>
</table>

Tables 4.27 and 4.28 exhibit the details behind the dichotomous information in Table 4.26 for the two high scoring and the three low scoring respondents, respectively.

With only a couple of similarities, the two high scoring respondents' backgrounds were quite different from one another. Both respondents possessed *travel* experience and to similar locations, and both individuals thought of themselves as globally competent. Beyond this, however, the respondents' backgrounds diverged. It was especially interesting to note Respondent 17’s comment. The latter part of this open-response (i.e., “parents never took us to too many places out of the country”) implies that this individual thinks that she must travel outside her home country in order to gain exposure to diverse cultures instead of being able to acquire such experience closer to home. A follow-up interview could have clarified what this respondent meant by “Havent [sic] traveled that much…busy with school,” since this could mean travel abroad or travel to a bigger city with greater diversity than what may be present in her local community.
Table 4.27

Respondent Background of High Scorers

<table>
<thead>
<tr>
<th>Item</th>
<th>Yes (Y)/No (N)</th>
<th>Response Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Language</td>
<td>R17 = No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>R18 = Yes</td>
<td>R18: French (2 yrs.) and Spanish (2 yrs.)</td>
</tr>
<tr>
<td>Travel</td>
<td>R17 = Yes</td>
<td>R17: Mexico</td>
</tr>
<tr>
<td></td>
<td>R18 = Yes</td>
<td>R18: Mexico &amp; Caribbean Islands</td>
</tr>
<tr>
<td>Foreign Country Stay</td>
<td>R17 = No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>R18 = Yes</td>
<td></td>
</tr>
<tr>
<td>Exposure</td>
<td>R17 = No</td>
<td>R17: &quot;Havent [sic] traveled that much…busy with school…parents never took us to too many places out of the country&quot;</td>
</tr>
<tr>
<td></td>
<td>R18 = Yes</td>
<td>R18: Type 1; Type 2: 1-2x/week by Facebook &amp; Instagram; Type 3: Everyday by text or face-to-face; Prefers Type 3</td>
</tr>
<tr>
<td>Foreign Studies Course</td>
<td>R17 = No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>R18 = Yes</td>
<td></td>
</tr>
<tr>
<td>Self Global Competence</td>
<td>R17 = Yes</td>
<td>R17: No reason provided</td>
</tr>
</tbody>
</table>
|                       | R18 = Yes      | R18: "I believe I still have plenty of room to grow in my global competence but through having a diverse group of friends from different countries and backgrounds around the world and traveling I've developed an open minded way of looking at the world and enjoy embracing the diversity of other people (I think it is pretty darn exciting)."

*Note. R17= Respondent 17. R18 = Respondent 18. For Exposure item, Type 1 = Foreign books, dramas, movies, music, etc., Type 2 = Contact with international people outside of the United States, Type 3 = Contact with international people in the United States.*

Respondent 18 gave yes answers to the six respondent background items as well as reasons for her selections. As noted earlier in the field-test results section, the one positive answer to the foreign country stay item prevented it from contributing much to the explanation of results for each scale. When adopting the broader perspective on results across the four scales, however, I was intrigued to find that the only individual with such experience was one of the two high scorers on all of the scales (Respondent
18). This respondent attributes her open-minded perspective to her culturally diverse group of friends and to her international experience, and notes in the last phrase of her comment how she “enjoy[s] the diversity of other people (I think it is pretty darn exciting).” This comment demonstrates an affective characteristic toward difference that moves beyond simple acceptance of its existence. Moreover, her frequent foreign culture exposure offers behavioral support for the attitudes she presented in her self global competence response (Nardi, 2006).

The findings for this respondent parallel the theoretical framework in Chapter 2, which asserted that individuals who possess the disposition/affective realm, knowledge, and skills for global competence would feel compelled to take action on behalf of strangers. Frequent exposure to culturally diverse people represented the cosmopolitan indicator of the action variable in Draft Surveys 1 and 2, and in the Revised Survey. Even though the findings from Respondent 18 pertained to one case in this research, they offered a hint of support for the global competence theory in Chapter 2. The answers provided in the respondent background section by Respondent 17, however, tempered the intrigue. This was because two individuals (Respondents 17 and 18) with very different foreign culture exposure backgrounds could earn similar high scores on the four scales. This could be a result of the small field-test sample size, or of a survey that still requires additional testing and revisions, or both.

Table 4.28 presents the answers to the respondent background section items from the low scorers across the four scales. One of the most interesting findings was that two out of three of these respondents had additional language background. Additionally, Respondent 10 had learned Spanish for four years and had traveled to a number of...
countries overseas; however, this same individual marked no to having foreign culture exposure. Since travel abroad can occur sporadically due to the finances involved, it is possible that this respondent felt that she did not gain exposure on a frequent basis while at home, either through face-to-face contact or through use of the Internet, or that she just did not interact with anyone but other Americans like herself. Respondent 9’s open-response to the exposure item, which stated that she had “just always been surrounded by my same culture” raised questions of how this individual would define culture and how she would describe her own culture. And although Respondent 15 raised a valid point with regard to the expense involved with traveling, the rest of her answer to the exposure open-response item implied that an individual could only gain foreign culture exposure through travel as opposed to through local settings. Several of these open-response examples from respondents in the high and low scoring subsamples offer reasons for conducting follow-up interviews. Such interaction with respondents could further clarify how they interpret the survey items, which in turn could help me to understand more about the audience for this developing tool.
Table 4.28

**Respondent Background of Low Scorers**

<table>
<thead>
<tr>
<th>Item</th>
<th>Yes (Y)/No (N)</th>
<th>Response Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Additional Language</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R9 = No</td>
<td>R10 = Yes</td>
<td>R10: Spanish (4 yrs.)</td>
</tr>
<tr>
<td>R15 = Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Travel</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R9 = No</td>
<td>R10 = Yes</td>
<td>R10: France, Germany, England, Austria, &amp; Italy</td>
</tr>
<tr>
<td>R15 = No</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Foreign Country Stay</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R9 = No</td>
<td>R10 = No</td>
<td>R10: ------</td>
</tr>
<tr>
<td>R15 = No</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Exposure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R9 = No</td>
<td>R10 = No</td>
<td>R9: “I have just always been surrounded by my same culture”</td>
</tr>
<tr>
<td>R15 = No</td>
<td></td>
<td>R10: No reason provided</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R15: “travel is expensive and I don’t have a lot of time to travel”</td>
</tr>
<tr>
<td><strong>Foreign Studies Course</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R9 = No</td>
<td>R10 = No</td>
<td>R10: ------</td>
</tr>
<tr>
<td>R15 = Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Self Global Competence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R9 = No answer</td>
<td>R10 = No answer</td>
<td>R15: No reason provided</td>
</tr>
</tbody>
</table>


**Additional Findings of Interest**

As part of the analysis process, I also produced grouped scatter plots to determine if patterns existed among respondents' continuous mean scores on the four scales and their responses to the six dichotomous *respondent background* variables (i.e., *additional language, travel, foreign country stay, foreign culture exposure, foreign studies coursework*, and *self global competence*). Guided by Field (2009a), I first constructed scatter plots with respondents' mean scores for one scale on the x-axis and for a second scale on the y-axis:
In the context of the field-test data analysis, each of these scales was considered to be an explanatory variable, since together they determined the response variable of global competence. In order to detect any potential relationships when building a scatter plot with the data from two scales, however, respondents' mean scores for one scale were plotted on the y-axis as the response variable, while the mean scores for the second scale were plotted on the x-axis as the explanatory variable. Each of the six respondent background variables was then introduced into these simple scatter plots, rendering 36 grouped scatter plots in total.

Upon review, only the scatter plot for the open-mindedness and self-knowledge scale mean scores exhibited a relationship, which was not perfectly linear. Figure 4.29 displays the resulting scatter plot with a line to denote a positive linear association: Respondents who earned a high mean score (i.e., between 3 and 4) on one scale also typically earned a high mean score on the other scale. The same could generally be said for respondents with low mean scores. The dichotomous respondent background variables were, then, each entered into this simple scatter plot to render the grouped scatter plot for the open-mindedness and self-knowledge scales; however, the 19 data points were too few to demonstrate any additional associations.
This initial evidence of a positive linear relationship between the open-mindedness and self-knowledge scale mean scores seemed theoretically logical since these two scales are the most intimate, inward-looking of the four scales. The open-mindedness scale measures the pliability of respondents’ beliefs and ways of thinking, while the self-knowledge scale measures respondents’ tendency to self reflect, and to consider why they behave and feel certain ways. The communication capacity and problem-solving style scales involve the respondents' consideration of themselves in relation to others, such as speaking or working with other individuals. Future research with a larger sample could help determine if a relationship may exist between these two latter scales. For now, the preliminary evidence of a linear relationship between the
open-mindedness and self-knowledge scales provides impetus to continue investigation on the interplay among the global competence variables and their constituent indicators.

Summary

The findings from the field-test and Delphi review steps in this study provided revisions for Draft Surveys 1 and 2, as well as avenues for future research. While the field-test results could only be used to describe the 19 respondents, they raised potential questions to explore with a larger sample and with the Revised Survey (Appendix H). Ultimately, both steps helped in developing the Revised Survey. This survey version includes only those items that the Delphi panel agreed should be retained. The findings from the proposals for consideration in Delphi Questionnaire 3 exposed additional modifications and enhancements for the instrument, two of which have been applied to the Revised Survey in Appendix H: The defining globalization and international current event items were removed, and the language-related items were moved from the knowledge section to the respondent background section. The rest of the panel-approved proposals will be reserved for future testing discussed in Chapter 5. In summary, the results from the four steps in this research design helped calibrate and revise a new instrument, and raised questions for use in continued research on the topic and measurement of global competence.
Chapter 5

Discussion and Implications

The main objective of the research reported here was to build a preliminary survey (i.e., the Revised Survey) that would, in its final form, allow educators, supervisors, administrators, and mentors to establish baseline information on individuals’ global competence characteristics prior to instruction, cross-cultural experience, international study or collaboration. The development of Draft Survey 1 was based on the theoretical framework and definition presented in Chapter 2. This framework and definition depicted global competence as comprising four elements, with the first three as follows: disposition/affective realm founded on open-mindedness; knowledge based on an understanding of one’s own cultural background, globalization, and world languages; and skills pertaining to collaboration, investigation of globally pressing issues, and communication. The fourth element of taking action then resulted from an individual embodying the first three elements. As a result of taking action, the individual could then be described as a cosmopolitan. Defining global competence guided the formulation of the sections in Draft Survey 1, which was then field tested with 19 elementary pre-service teachers. Field-test results guided the revisions reflected in Draft Survey 2 and it was this draft that the Delphi panel reviewed.

The secondary aim of this research was to keep the survey at 15 minutes or less. The Delphi panel’s suggestions helped to shorten Draft Survey 2 by eliminating some items and refining others, with the Delphi review ultimately resulting in the Revised Survey (Appendix H). Of equal importance, the Delphi review also led to revisions for the global competence theory and definition, and offered suggestions for further changes.
to the Revised Survey that could be explored through future research. This chapter begins with a discussion of the revisions to the theory and definition, and then proceeds to the implications of the dissertation findings for future research.

**Revisions to the Global Competence Theory**

In Chapter 3, I discussed the refinement of the global competence variable indicators from the theoretical framework for purposes of building Draft Survey 1. This survey draft included the four sections of *disposition/affective realm, knowledge, skill,* and *respondent background.* Each of these sections comprised items to measure the refined indicators of the four variables with the *respondent background* section including the *action*-related items (i.e., the *foreign culture exposure* items). The Delphi panel’s review of Draft Survey 2 then further narrowed and refined the variables’ indicators.

According to the Delphi review results, *disposition/affective realm, knowledge, skill,* and *action* belong in the global competence theoretical framework, with the first of these serving as the foundational element. The way in which these elements are operationalized, however, requires additional consideration. These conclusions, discussed below, stem from the Delphi panelists’ comments and questionnaire scores (see Chapter 4), which indicated the following:

- The survey should include a measure to gauge *curiosity*
- The *knowledge* survey section should not include finite *knowledge* items, but should keep the *self-knowledge* scale and also include items to measure *knowledge of one’s own cultural background* (henceforth called *cultural self-knowledge*)
- The *skill* section should include items measuring *intercultural communication effectiveness* and exclude the *communication capacity* and *problem-solving style* measures
The survey should include additional items to measure action, specifically respondent engagement items.

I discuss the implications of each of these survey changes for the global competence theoretical framework, prior to presenting the revisions to the construct’s definition.

**Revisions to the Disposition/Affective Realm Survey Section and Variable**

Panelist comments in Questionnaire 1 indicated that the global competence theory, with the disposition/affective realm variable as the underpinning element, is on the right track. For instance, a panelist commented:

I think open-mindedness is a prerequisite to attaining global competence. If not already so disposed, an individual may need to first undergo a process/training to get to this stage before undergoing an internationalization experience. (See Chapter 4, p. 136)

Other comments, however, signaled that revisions to this variable were needed. For example, panelists noted:

- “…it seems like there might be a bit of a gulf between the idea that someone is open to other views in general and that they might take action…” (p. 154)
- “I think curiosity about the world we live in, curiosity about the unknown, are the necessary driving force.” (p. 153)

As discussed in Chapter 4, the panelist who made the second comment attached curiosity to the knowledge variable, whereas I linked it to the disposition/affective realm variable. The addition of curiosity as a disposition/affective realm variable indicator provides a potential method to fill the “gulf” between open-mindedness and taking action mentioned in the first comment. In Chapter 4, I defined curiosity as “a strong desire to know, learn, or experience something” (adapted from “Curiosity,” 2016). The “strong desire” ascribed to curiosity speaks to the affective aspect of the disposition/affective realm...
variable that was previously missing from its operationalization and from the global competence theory.

Panelist 7’s comment then presented a potential connection among open-mindedness, curiosity, and action:

...I think openness to those who are different from you, think, act and believe different from you, allow you to grow as a person and gain a greater understanding of the world and people in it. Through greater understanding, one can be further motivated to interact and even help others who may or may not agree with one’s cultural norms and values. (Chapter 4, p. 155)

Open-mindedness could encourage individuals to “gain a greater understanding of the world and people in it” (i.e., curiosity). This understanding could then help individuals to develop the motivation to “interact and even help others who may or may not agree with one’s cultural norms and values” (i.e., action). The two indicators of open-mindedness and curiosity together, then, seem to provide a stronger theoretical bridge between the disposition/affective realm and action variables than open-mindedness alone. The disposition/affective realm variable now, therefore, includes both the open-mindedness and curiosity indicators. Additionally, in future work, this variable will be referred to as disposition/affect since each of the four variables could be viewed as representing different realms of an individual’s mind.

Revisions to the Knowledge Survey Section and Variable

The knowledge survey section received the most attention from the Delphi panel in terms of suggested revisions. Specifically, panelists did not view finite, decontextualized knowledge as a part of becoming globally competent. For instance, a panelist noted, “…these [Ignorance Survey] questions are asking about very specific facts…I am not sure of the answers myself, yet I consider myself to be globally
competent…” (Chapter 4, p. 142). Instead of surveying finite knowledge (i.e., the understanding of globalization, knowledge of world language(s), and knowledge of current events indicators), panelists suggested gauging introspective propensities. For example, a panelist commented:

….These sub-elements [understanding of globalization, knowledge of world languages, knowledge of current events] help, but I don't think they are necessary. I fully agree that a reflective nature (knowledge of self) is critical. If you are reflective, you cannot help wanting to understand the unknown. (Chapter 4, p. 145)

Based on panelist comments such as these as well as on the statistical findings from the Delphi review, the Revised Survey only includes the retained items from the self-knowledge scale. Future research, such as correlation and item analyses, could help demonstrate whether or not the self-knowledge scale should remain in the survey alongside any newly added cultural self-knowledge items, such as an original scale of items measuring this indicator. All items pertaining to finite knowledge have been removed from the Revised Survey, except for the language-related items. Based on the results from the proposals for consideration in Questionnaire 3, these items were moved to the respondent background section. These items could provide valuable data for future study and for eventual survey administrators, but will not count toward the survey score.

Due to these modifications to the knowledge survey section, the theoretical framework also required similar revisions. One panelist noted in regards to the self-knowledge indicator that:

…I think there is a difference between knowledge of self and knowledge of one’s own cultural background….it should be made clear or at least considered in some way that a person should be able to demonstrate knowledge of how they might have difficulty seeing or learning something because of their particular cultural milieu. (See Chapter 4, p. 158)
This panelist notes that “there is a difference between” self-knowledge and cultural self-knowledge. It seems from this comment, however, that cultural self-knowledge could help an individual to develop the self-knowledge described in the present work, that is, an individual’s understanding of his or her feelings, reactions, and experiences over time (see Chapter 3, p. 82). Cultural self-knowledge, then, appears to encapsulate self-knowledge, and thus the knowledge variable now includes the sole indicator of cultural self-knowledge.

Locating a tool to measure the original understanding of one’s own cultural background indicator proved difficult because the results encompassed performance-based measures. Future research efforts, however, could include the development of original items to measure the cultural self-knowledge indicator.

Revisions to the Skill Survey Section and Variable

Following the refinement process described in Chapter 3, the skill variable included the communication capacity and the problem-solving style indicators. In the Delphi review of Draft Survey 2, examination of the communication capacity scale items led one panelist to recommend surveying communication effectiveness, with a second panelist suggesting the inclusion of items measuring “how one understand[s] their own barriers in effective intercultural communication.” Pertaining to the operationalization of the problem-style indicator, two panelists commented in Questionnaires 1 and 2, respectively, that:

- “I am less sure about 'problem-solving style.' It seems like you are leading up to a single answer to this sub-element (collaborative). If you are not collaborative, can you engage effectively in global action? You may want to rethink this sub-element.” (See Chapter 4, p. 138)
• “….it seems like the items are measuring collaboration tendency rather than problem solving style”

The first comment questions whether or not individuals need to be collaborative in their *problem-solving style* in order to become globally competent (i.e., “engage effectively in global action”). The second comment then seems to respond to the first comment by emphasizing the apparent collaboration-focus of the *problem-solving style* items. In the context of these comments related to the *problem-solving style* and *communication capacity* items, I proposed in Questionnaire 3 to replace all of these items with others measuring *intercultural communication effectiveness*.

As reported in Chapter 4, nine panelists agreed or strongly agreed with this proposal. The Revised Survey does not yet reflect this change, however, since a second field-test would be required prior to the inclusion of the *intercultural communication effectiveness* items, and the exclusion of the *problem-solving style* and *communication capacity* items. From the panelists’ responses, however, I revised the global competence theory. Since the *communication capacity* and *intercultural communication effectiveness* indicators conceptually overlap in that they both relate to communication, I removed the first of these two indicators from the theoretical framework. Future research such as correlation and item analyses could help demonstrate whether or not the *communication capacity* items in the Revised Survey should remain alongside any newly added *intercultural communication effectiveness* items to help measure the latter indicator.

Future research could also determine whether or not the *problem-solving style* items in the Revised Survey should be kept. The inclusion of the *intercultural communication effectiveness* indicator is intended to address a key feature of *problem-solving style*, which is the ability to engage in productive communication with individuals
across cultural, linguistic, and other differences. So even if the problem-solving style items are removed, a closely related indicator, intercultural communication effectiveness, will still be represented in the survey. At this time, the problem-solving style items remain in the Revised Survey and problem-solving style remains as an indicator of the skill variable alongside intercultural communication effectiveness. But only intercultural communication effectiveness appears in the revised global competence definition since most of the panelists agreed in Round 3 that the survey’s skill section should only measure intercultural communication effectiveness.

Revisions to the Respondent Background Survey Section and the Action Variable

In Round 1 of the Delphi review, a panelist commented, “…it seems like there might be a bit of a gulf between the idea that someone is open to other views in general and that they might take action” (see Chapter 4, p. 154). In addition to its implications for the disposition/affective realm variable discussed earlier, this comment seems to suggest a need for items that represent a more direct measure of action than the foreign culture exposure items to test this theoretical element. The Delphi panel’s review of Draft Survey 2 resulted in all 17 respondent background section items remaining in the Revised Survey, including the foreign culture exposure items. But the panel agreed in Questionnaire 3 with the proposal to add respondent engagement items to this survey section. These added items, along with the retained foreign culture exposure items, would measure the action variable. The respondent engagement items, however, do not yet appear in the Revised Survey since further field-testing is required prior to their inclusion.
While the revisions resulting from the Delphi review primarily pertained to the operationalization of the action variable for measurement purposes, a panelist’s comment suggested modifications to the action variable in the global competence theory. In Chapter 2, I theorized that people who possess the disposition/affective realm, knowledge, and skills for global competence would feel compelled to take action for global good, or in other words, on behalf of strangers (Appiah, 2006). A comment in Questionnaire 1, however, seemed to challenge this inter-variable relationship. The comment reads, “One can be engaged but not be skillful. Are you measuring someone's global engagement skills or just how engaged he/she is?” The theory described in Chapter 2 held that the disposition/affective realm, knowledge, and skill variables would need to be developed before individuals would feel compelled to take action. However, based on the panelist’s comment, it seems possible that people could take action for global good to help develop not only the skill variable, but also the disposition/affective realm and knowledge variables for global competence. For example, service learning involves communication and interaction with culturally diverse people to address social issues; it also incorporates individual reflection on the service experience (Shams & George, 2006). Thus participating in and reflecting on such service could be considered taking action and could catalyze growth in the disposition/affective realm (i.e., open-mindedness), knowledge (i.e., cultural self-knowledge), and skill (e.g., intercultural communication effectiveness) variables of global competence. Figure 5.1 illustrates the framework from Chapter 2 and how the panelist’s comment shifted the theorized relationship between action and the other three variables.
The prevalence of global issues provides ample service-learning and volunteer opportunities for people at different levels of global competence to take action and to develop the other competence characteristics. Such issues are often massive in scope (e.g., hunger, poverty, the effects of natural disasters), requiring the engagement of thousands of people in different roles who work in tandem to find a solution. The following scenario presents a possible global competence development opportunity for the participating volunteers, who provide important services for individuals in need following a natural disaster:

An international non-profit organization sends teams of volunteers from Country A to Country 1, which is experiencing a shortage of drinkable water due to a recent earthquake. These teams consist of engineers, geologists, and manual workers who build wells with potable water. The engineers and geologists establish the plan for the well, while the manual workers construct the tangible structures based on the plan. Until the wells are completed, the non-profit organization also supplies Country 1’s residents with bottles of water, which are packed into boxes for shipment by teams of volunteers at home in Country A. Ultimately, Country 1’s residents gain the needed access to water due in part to the contributions of Country A’s volunteer teams.
The volunteers in this scenario could have been students from a university that partnered with the non-profit international organization. In this case, the volunteer opportunity would be tied to the students’ academic coursework, in which they would reflect on the application of formal concepts during the experience and on the experience itself. Even if an educational institution is not involved with the volunteer experience, however, global competence development for the participants could still be possible.

For instance, in the water provision scenario, the volunteer team members most likely differed in their global competence development. Viewed as a group, though, they could embody collective global competence. More specifically, in a group of three volunteers, one may have the knowledge and skills; the second may have the disposition/affective realm, knowledge, and action (service-learning or community engagement experience) elements; and the third may have the disposition/affective realm, skill, and action elements. Considered all together, however, all of the global competence elements are represented across the three volunteers, who can help each other strengthen their weakest competence areas in the volunteer process. These variations in global competence could be displayed using spectra that represent differing points of development for each of the four variables. Figure 5.2 displays the global competence development spectra of the three volunteers. Despite their developmental differences, it would appear that they exemplify some aspect of the disposition/affective realm variable (e.g., curiosity) to lead them to volunteer. It may be possible through future research to depict finer features of the spectra representations. For example, the four spectra (variables) could be further divided into sub-spectra (indicators) and
numerical scores could be used to demarcate the breadth of each spectrum and sub-spectrum.

Figure 5.2

*Global Competence Spectra Examples*

Vygotsky’s (1986b) social development theory and the role of the Zone of Proximal Development (ZPD) in the learning process (see Chapter 2, p. 53) provide a possible explanation of how people could help each other learn from a volunteer opportunity. The ZPD is the space between what people can do on their own and what they could do with help from a *more advanced individual* (Duveen, 1997, p. 79).

Vygotsky envisioned learning in the ZPD as unfolding in a formal education setting, in which students learn scientific concepts such as decontextualized knowledge (Wertsch, 1985c). But teaching and learning can happen in less formal settings, such as in volunteer work. For the three volunteers, they could each serve as the more advanced
individual by teaching the global competence areas in which they are the strongest. In
doing so, they each “scaffold,” or support, the learning process for the volunteers who
need help developing certain global competence characteristics (Wood, Bruner, & Ross,
1976, p. 90). The same idea can also be applied to the volunteer work itself (i.e., action).
More advanced volunteers can help guide less-advanced volunteers by modeling
activities and behaviors associated with volunteerism (Lam et al., 2009).

While the water provision volunteers may learn factual information pertaining to
the tasks at hand (e.g., the required amount of water for survival, different water sourcing
methods, the government structure of the country receiving assistance), the gain of such
information is not a focal point of developing global competence, as identified in the
Delphi review. The focus instead would be on lessons pertaining to areas such as open-
mindedness, cultural self-knowledge, and intercultural communication effectiveness.
Organizations hosting volunteer experiences could help catalyze the teaching and
learning process for global competence by speaking to competence characteristics early
in the volunteer experience, and encouraging their growth among participants. In doing
so, organizations could raise awareness of global competence and its potential for
fostering prosperous community interactions to volunteers.

Although the water provision scenario is a simplified example of taking action,
due to the various contributions of volunteers, a major problem was solved or at least
abated. The key to these contributions is that the people who made them wanted to help
and acted on that desire in ways they felt they could (e.g., appropriate to the time they
had available to volunteer). As previously mentioned, it would seem that the volunteers
already embodied an aspect of the disposition/affective realm variable (e.g., curiosity) to
lead them to volunteer. Volunteering could then spur the development of other aspects of global competence. Taking action, then, could conceivably instigate learning and provide opportunities for the application of lessons learned. I suggest that continually applying lessons learned from taking action describes a person who has become cosmopolitan.

Considering the precepts of cosmopolitanism, Appiah (2006) describes conversation among culturally different individuals as “inevitable” (p. xxi). Moreover, Harris (2013) writes that “A focus on everyday multiculturalism involves attention to the ordinary social spaces within which people of different backgrounds encounter one another, and the mundane practices they construct and draw on to manage these encounters” (p. 6) — skills consonant with developing global competence. The indicators, such as intercultural communication effectiveness and cultural self-knowledge, are abstract in nature when trying to define them, and thus appear to align with Vygotsky’s (1986b) scientific concepts learned in formal education settings. And yet these indicators would seemingly be best developed in everyday, multicultural settings through personal experience, similar to the way in which individuals learn spontaneous concepts (Vygotsky, 1986b, p. 147). I suggest that, as a result of globalization, opportunities exist in daily settings in the United States and plausibly in communities worldwide for people to develop the characteristics needed for global competence (Asia Society, 2016e; Humes et al., 2011).

Findings from this study, particularly from the Delphi review, seemed to emphasize that the term strangers (e.g., Appiah, 2006) does not only refer to unseen individuals in foreign countries. For example, a panelist noted, “…it seems like a person
could grow up as part of a marginalized group in the U.S. (and not have done much travel, if any) yet still have a good understanding of how cultural difference works” (Chapter 4, p. 140). Globalization has made it possible for people native to a given locale to live in the same neighborhood with strangers, or individuals who diverge culturally and linguistically from the local language and customs (e.g., Saito, 2010). It is possible, then, that through perpetual interaction with strangers in a local community, people could develop the characteristics for global competence. For instance, communicating and interacting directly with strangers presents the possibility of developing affective attachments or relationships (e.g., Saito, 2010), thus potentially leading toward the development of the disposition/affective realm foundational element.

The theoretical picture of global competence presented in Chapter 2 focused on action as high-level global problem solving and on the need for formal education as a result. But this study suggests that action actually involves willing individuals contributing, either in their own way or in a concerted effort, in a manner appropriate to their circumstances and characteristics (e.g., a doctor volunteering weekly at an inner-city clinic or a construction worker from the U.S. digging wells for two weeks in South America for a non-profit organization). The indicators of the four global competence variables have shifted away from areas requiring formal schooling (i.e., decontextualized knowledge), and toward a need for introspection and effective intercultural communication skills. Certainly, service-learning experiences and formal education settings are helpful environments for parsing the meaning of these abstract indicators and for using the survey under development. But even if unacquainted with the global competence construct, individuals living in multicultural spaces could learn of the need
through personal experience for productive methods of communication and interaction with culturally diverse neighbors. Furthermore, the findings from this study indicate that global competence is not about finite, factual knowledge often gained in formal education settings. Thus, global competence development becomes possible for individuals with, and without, a formal education background. Appiah (2006) explained the possibility of becoming cosmopolitan resides in people of all backgrounds, and in the elite and non-elite alike. This study suggests that global competence does, as well.

Given the U.S. Department of Education’s (2012) call for global competence for all K-12 students through its International Strategy, learning for this competence may often take place within formal education settings (e.g., schools). But experiences such as the water provision scenario, whether at home or abroad, could also offer an informal educational environment conducive to the development of global competence in people of differing ages, educational levels, and cultural backgrounds. The revisions to the theoretical framework present the possibility of individuals developing global competence primarily through engagement (e.g., volunteering) and everyday experiences. Of course, individuals who learn in both formal and informal education settings would likely benefit from exposure to a wide range of experiences pertinent to global competence development.

**Revisions to the Global Competence Definition**

The earliest global competence definition was based on what I understood to be the most essential indicators to each of the four variables. Before presenting it to the Delphi panel, I updated the definition to include the knowledge of current events indicator since I kept the current events items in Draft Survey 2. The Delphi review ultimately led
to the variable indicators displayed in Table 5.3, which represents the indicator shifts as the research progressed.

Table 5.3

*Global Competence Variables and Indicators*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Original Indicators</th>
<th>Indicators Represented in Drafts Surveys 1 and 2</th>
<th>Resulting Indicators From Delphi Review</th>
</tr>
</thead>
</table>
| Disposition/Affective Realm | • Open-mindedness  
• Cultural Awareness  
• Acceptance of Diversity  
• Desire for Exploration  
• Adaptability  
• Recognition of One’s Own and Others’ Perspectives  
• Empathy  
• Ethnorelativity  
• Self-Confidence  
• Being a Lifelong Learner | • Open-Mindedness  
• Curiosity | |
| Knowledge                  | • Understanding of One’s Own Cultural Background  
• Knowledge of World Language(s)  
• Understanding of Globalization  
• Knowledge of Economics  
• Knowledge of World Regions and Cultures  
• Knowledge of Current Events | • Self-Knowledge  
• Understanding of Globalization  
• Knowledge of World Language(s)  
• Knowledge of Current Events | • Cultural Self-Knowledge |
| Skill                      | • Ability to Communicate Effectively  
• Ability to Investigate  
• Ability to Collaborate | • Communication Capacity  
• Problem-Solving Style | • Intercultural Communication Effectiveness  
• Problem-Solving Style |
| Action                     | • Cultural Mediator  
• Global Citizen  
• Cosmopolitan | • Cosmopolitan | • Cosmopolitan |
The resulting indicators from the Delphi review can be found in the latest global competence definition presented in Table 5.4, which provides a comparison among the three different iterations of the definition. The revisions made to the second and third definition iterations appear in bold font.

Table 5.4

*Iterations of the Global Competence Definition*

<table>
<thead>
<tr>
<th>Iteration</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iteration 1: Draft Survey 1</td>
<td>Global competence is one’s embodiment of four elements: A disposition and affect toward culturally diverse peoples set into motion by open-mindedness; a body of knowledge founded on an understanding of one’s own cultural background, globalization, and world languages; a set of skills such as the abilities to collaborate, investigate globally pressing issues, and communicate effectively, with these three elements uniting for the purpose of taking action for the global good, thus rendering the globally competent individual a cosmopolitan.</td>
</tr>
<tr>
<td>Iteration 2: Draft Survey 2</td>
<td>Global competence is one’s embodiment of four elements: A disposition and affect toward culturally diverse peoples set into motion by open-mindedness; a body of knowledge founded on an understanding of one’s own cultural background, globalization, world languages, and current events; a set of skills such as the abilities to collaborate, investigate globally pressing issues, and communicate effectively, with these three elements uniting for the purpose of taking action for the global good, thus rendering the globally competent individual a cosmopolitan.</td>
</tr>
<tr>
<td>Iteration 3: Revised Survey</td>
<td><em>Global competence</em> is an individual’s embodiment of four elements: A disposition and affect toward culturally diverse peoples set into motion by open-mindedness and curiosity; cultural self-knowledge; skills related to intercultural communication effectiveness; and a propensity to continually apply lessons learned to take action on behalf of strangers, thus rendering the globally competent individual a cosmopolitan.</td>
</tr>
</tbody>
</table>

The third definition reflects the changes to the variable indicators, and the shift in the relationship between *action* and the other three variables as demonstrated earlier in the chapter in Figure 5.1. Similar to the Revised Survey (Appendix H), the global competence definition will continue to evolve as the research on this topic progresses.
Implications of the Dissertation Findings for Future Research

The Revised Survey comprises items that have each been subjected to empirical scrutiny through the field test and Delphi review. While the Delphi review’s primary purpose was to gather panelists’ opinions on which Draft Survey 2 items to retain and discard, the findings from the proposals for consideration in Delphi Questionnaire 3 (Appendix G) highlighted additional improvements for the survey. Two of the proposals have already been applied to the Revised Survey (i.e., removed the defining globalization and international current event items, and moved the language-related items from the knowledge section to the respondent background section). The other panel-approved proposals, which have not yet been applied to the Revised Survey, and possible measures to address them, are as follows:

• Add non open-ended items measuring curiosity to the survey: The Curiosity and Exploration Inventory-II (Kashdan et al., 2009) [10 items]
  o Example: “I am at my best when doing something that is complex or challenging.”

• Add non open-ended items measuring respondent engagement to the respondent background section: The global civic engagement dimension of the Global Citizenship Scale (Ogden, 2010) [17 items]
  o Example: “Over the next 6 months, I plan to do volunteer work to help individuals and communities abroad.”

• Add non open-ended items measuring cultural self-knowledge to the knowledge section: Develop original items

• Include a revised set of language-related items: Develop original items

• Replace the communication capacity and problem-solving style items with items measuring intercultural communication effectiveness in the skill section: The Intercultural Effectiveness Scale (Portalla & Chen, 2009), which surveys interactional and communication behaviors when engaging in intercultural conversational exchanges [20 items]
Example: “I often miss parts of what is going on when interacting with people from different cultures.”

Prior to presenting the survey with these supplemental items included, however, additional research is needed to assess them alongside the existing items appearing in the Revised Survey. For instance, before replacing the communication capacity and problem-solving style items with those from the Intercultural Effectiveness Scale, a field test of the survey including the existing and the new items would help determine the items that should remain and that should be removed. Before using any of the new scales, I would seek permission from the respective authors.

While the addition of new items could temporarily lengthen the survey, future research would allow for identification of the most effective combination of scales and number of items per scale to measure global competence. During the Delphi review, panelists also suggested wording modifications for several of the survey items, thus future research would provide an opportunity to apply and test such item rewording.

Given the intricacies of building a new survey instrument and the use of existing scales to form Draft Survey 1, I opted to make incremental changes (see Chapters 3 and 4) and to reserve additional modifications for later investigations with a larger respondent sample.

**Gather a Larger Respondent Sample**

Future research with a larger sample could facilitate the use of statistical analyses (e.g., correlational, reliability, and factor analyses) to determine any relationships between the global competence variables and to understand the survey’s structure (Mertler & Vannatta, 2002). With a typical survey response rate of 20 to 30%, disseminating the survey to 1,500 individuals could result in a sample of approximately 300 to 450 respondents or more using follow-up procedures (Nardi, 2006, p. 123).
Within this larger sample, I could also gather respondents enrolled in different higher education programs such as business, public health, global health, medicine, journalism, and international relations to allow for the exploration of similarities and differences in results among such groups.

Additionally, future research could explore the questions that surfaced from the Draft Survey 1 field-test results. For example, such investigation could further examine whether or not a relationship exists between the open-mindedness and self-knowledge indicators, which arose in research step four discussed in Chapter 4 (p. 194). Along with adding the aforementioned new scales, I would also retain the existing scales and items that appear in the Revised Survey to re-test them with a larger sample. In this way, relationships between each of the new and existing scales, as well as between all of the scales and the respondent background items could be investigated and more thoroughly understood.

**Conduct Factor Analysis**

Employment of factor analyses with data from a larger sample would help uncover the inner statistical workings and associations between the survey’s scales and the items of each scale. This type of analysis is described as follows: “Factor analysis...is essentially a process by which the number of variables is reduced by determining which variables ‘cluster’ together, and factors are the groupings of variables that are measuring some common entity or construct” (Mertler & Vannatta, 2002, p. 249). The results of such an analysis would demonstrate the factor structure of the survey, as well as potentially provide support, and areas of needed revision, for the global competence theory and definition. Additionally, factor analysis could uncover methods
by which to shorten and increase the validity of the survey instrument. These two goals of shortening and strengthening the validity will continue to shape future research studies on developing this survey. Appendix I provides additional information on how factor analysis could be used to further the development of the global competence survey.

**Re-Apply Elaboration Model and Conduct Interviews**

With a larger sample of respondents, I would also re-employ the elaboration model (i.e., Babbie, 2007e) to investigate potential patterns between the dichotomous and continuous survey data. A larger sample size would, in turn, produce larger subsamples than those presented in Chapters 3 and 4 of the current work. Future subsamples could be divided using similar cut points to those used in the field-test data analysis (see Chapter 4). Due to the importance in Chapter 4 of *respondent engagement* to the *action* variable and to the overall global competence conceptual framework, it would be helpful to examine the data from the new items (e.g., global civic engagement dimension of the Global Citizenship Scale [Ogden, 2010]) in a similar manner to that used with the other scale data. Use of the elaboration model and statistical analyses may help determine if the *action* variable should appear as a fifth and, perhaps, scored survey section.

Any patterns arising from the elaboration model data could then guide the development of an interview protocol for use with survey respondents. Given the exploratory stage of the survey, follow-up interviews with respondents could help to identify items that they found to be confusing and to clarify unclear answers provided, among other possible topics. Interviews could then be conducted with respondents' mentors and professors in order to gather informed opinions on the global competence of those within the sample. Since currently there are no publicly available global
competence values, the provision of such information could offer a criterion against which to compare the results from the survey used in future research (Nardi, 2006).

**Conclusion**

The findings from field-test Respondent 18, who scored well on all four scales and who answered yes to each of the respondent background items (see Chapter 4, p. 190), offered the first glimpse of encouragement for the developing global competence theory, definition, and survey. Her reason for answering positively to the self global competence item paralleled her high scale scores:

> I believe I still have plenty of room to grow in my global competence but through having a diverse group of friends from different countries and backgrounds around the world and traveling I've developed an open minded way of looking at the world and enjoy embracing the diversity of other people (I think it is pretty darn exciting). (p. 190)

Although this encouragement was only derived from the results of one respondent in the field test, perhaps the Revised Survey, theory, and definition are on the right path and ripe for refinement.

The Delphi review panel provided additional support for this conclusion. The removal of the finite knowledge items may mean that global competence development is less dependent on formal education than was originally suggested in the theoretical framework. Instead, the focus has shifted toward open-mindedness, curiosity, cultural self-knowledge, and a willingness to engage in effective intercultural communication, all of which could potentially be gained through service learning types of experiences. Globally competent individuals continually apply what they learn to take action on behalf of strangers (Appiah, 2006).
Appiah (2006) reminds his readers that cosmopolitanism is for everyone, not just for those at the highest ranks of society. Founded on the principles of cosmopolitanism, I suggest that global competence also applies to people of all cultural and educational backgrounds. This competence is a construct defined by nuance, as reflected by the number of variables and indicators used to describe it and by the various possible pathways by which it can be developed. In contrast, a survey seeks simplicity in its measurement, thus reducing the possibility of capturing such subtleties. The Revised Survey presented in this work exemplifies a starting point of the global competence survey development process. Future development of the Revised Survey will focus on identifying the most concise measures to address the multifaceted, complex nature of the global competence construct.
Appendix A

Chapter 2 Supplemental Material

American Council on International Intercultural Education and the Stanley Foundation (Chapter 2, p. 13):

The American Council on International Intercultural Education (ACIIE) and the Stanley Foundation hosted U.S. postsecondary leaders and international office directors, heads of international development boards, an American Council on Education (ACE) representative, participants from community college associations and boards, and leadership of both the Stanley Foundation and of the ACIIE (pp. 16-17). According to the Secretary of State for Illinois website, the ACIIE no longer exists. The ACIIE and the Stanley Foundation (1994) report, however, described the Council as one that “help[ed] community colleges cultivate educational partnerships and participate in programs with organizations worldwide” (p. 32). The Stanley Foundation, which does still exist, is a “nonpartisan, private operating foundation” that “advances multilateral action to create fair, just, and lasting solutions to critical issues of peace and security” through various programs (Stanley Foundation, 2015, “Who we are,” para. 1).

The following questions guided the ACIIE and the Stanley Foundation’s second conference in 1996: 1) “What does it mean to be a globally competent learner?” and 2) “What is required institutionally for community colleges to produce globally competent learners?” (p. 1). For the first question, the report stated that “The globally competent learner...accepts responsibility for global citizenship” (p. 3). To answer the second conference question, the report explained that community colleges needed to infuse learning for global competency into academic curricula, rather than treating it as an “additive” (p. 9). This report concluded by explaining that “global education is now recognized as a dominant component of meaningful, futuristic, and applicable education...[Provision of global education] is a worthy service to [learners] and to their community, college, nation, and world” (p. 19).

Council on International Educational Exchange (CIEE) (Chapter 2, p. 15):

The Council on Student Travel (precursor to the Council on International Educational Exchange [CIEE]), a “nonprofit, nongovernmental organization,” was established in 1947 to assist international exchange associations that arose after World War II (CIEE, “Who we are,” 2015, para. 1). Initially the Council had a membership of over 30 U.S. organizations involved with study abroad (para. 9); however, “today, [the CIEE] serve[s] more than 340 U.S. colleges and universities, 1,000 U.S. high schools, and 35,000-plus international exchange students each year” (para. 4). In 1967, the CIEE became a leader in policy planning for intercultural education (para. 11).
Appendix B

Chapter 3 Supplemental Material

Statistical Background of Subscales Used in the Actively Open-Minded Thinking (AOT) Scale of Stanovich and West (2007) (Chapter 3, p. 78):

10 items on the AOT Scale: Flexible Thinking Scale (Stanovich & West, 1997)
- \( N = 349 \) undergraduate university students
- 215 females, 134 males; neither participant race nor ethnicity provided
- \( \text{Mean Age} = 18 \text{ yrs., 10 mos., } SD = 2.2 \)
- Response format = 6 (Agree Strongly), 5 (Agree Moderately), 4 (Agree Slightly), 3 (Disagree Slightly), 2 (Disagree Moderately), 1 (Disagree Strongly)
- Split-half Reliability of Scale = .49 (Spearman-Brown corrected); Cronbach's Alpha = .50
- Source: Stanovich and West (1997)

Eight items on the AOT Scale: Openness-Values Facet of the Revised NEO Personality Inventory (Costa & McCrae, 1992)
- \( N = 349 \) undergraduate university students
- 215 females, 134 males; neither participant race nor ethnicity provided
- \( \text{Mean Age} = 18 \text{ yrs., 10 mos., } SD = 2.2 \)
- Response format = 6 (Agree Strongly), 5 (Agree Moderately), 4 (Agree Slightly), 3 (Disagree Slightly), 2 (Disagree Moderately), 1 (Disagree Strongly)
- Split-Half Reliability of Scale = .73 (Spearman-Brown corrected); Cronbach's Alpha = .71
- Source: Stanovich and West (1997)

Nine items on the AOT Scale: Dogmatism Subscale (three items each drawn from Paulhus & Reid [1991]; Robinson, Shaver, & Wrightsman [1991]; and Trolldahl & Powell [1965]); the statistical background for the nine dogmatism items used in Stanovich and West (1997) is as follows:
- \( N = 349 \) undergraduate university students
- 215 females, 134 males; neither participant race nor ethnicity provided
- \( \text{Mean Age} = 18 \text{ yrs., 10 mos., } SD = 2.2 \)
- Response format = 6 (Agree Strongly), 5 (Agree Moderately), 4 (Agree Slightly), 3 (Disagree Slightly), 2 (Disagree Moderately), 1 (Disagree Strongly)
- Split-Half Reliability of Scale = .54 (Spearman-Brown corrected); Cronbach's Alpha = .60
- Source: Stanovich and West (1997)
Three items on the AOT Scale: Categorical Thinking Subscale of the Constructive Thinking Inventory (Epstein & Meier, 1989); statistical background unavailable for the three items used in the AOT Scale of Stanovich and West (1997), but the following is the background for the 12-item Categorical Thinking Subscale in Epstein and Meier (1989):

- \( N = 124 \) undergraduate university students
- 94 females, 30 males; neither participant race nor ethnicity provided
- Participants offered extra credit
- Response format: 5 point scale used to indicate the level to which a statement was true or false
- Cronbach's Alpha = .70

Nine items on the AOT Scale: Belief Identification Scale from Sá, West, and Stanovich (1999); statistical background unavailable from the literature

Two items on the AOT Scale: Counterfactual Thinking Scale from Stanovich and West (1997); statistical background unavailable from the literature

Stanovich and West’s (2007) Actively Open-Minded Thinking (AOT) Scale (Chapter 3, p. 80):

Stanovich and West (2007) tested the AOT Scale at a mid-sized state university with a sample of 1,045 undergraduate students taking an introductory psychology course (female = 726, male = 319; \( M = 19 \) years of age, \( SD = 1.8 \); White = 921, Asian American = 57, African American = 29, and Other = 38, p. 234). The authors used a 6-point response scale (i.e., 1 = \textit{strongly disagree} to 6 = \textit{strongly agree}), with scores toward the high end of the 6-point scale indicating a stronger inclination toward AOT (pp. 235-36). The authors totaled the answers to the 41 items to calculate a respondent’s score on the scale (\( M = 170.7, SD = 18.2 \), p. 236). The scale demonstrated moderate to strong internal reliability, split-half reliability = .75 (Spearman-Brown corrected), Cronbach’s \( \alpha = .83 \) (p. 236). The strong coefficient alpha could have resulted from the large number of items included in this scale (Field, 2009b). I address this subject further in Chapter 4.


Ghorbani, Watson, and Hargis (2008) gathered data from 900 total U.S. students (women = 484, men = 416, White = 64%, Black = 30%, Other Ethnic Groups = 6%) and 723 total Iranian students (women = 497, men = 226, p. 399). The authors formed three samples with each including one Iranian sub-sample and one U.S. sub-sample in order to compare the respondents’ data across countries on various measures. Thus, the study employed a total of six sub-samples, with three sub-samples derived from each country. The six sub-samples comprised undergraduate students from two universities, with one in the United States and the other in Iran. The respondents completed several mental health measures related to the study, some of which were unique to their respective sample and others that were given to all three samples. Among the measures disseminated to all three samples were 30 trial items gauging integrative self-knowledge with a 0 (\textit{largely untrue}) to 4
(largely true) response format (p. 400). A number of the integrative self-knowledge items required reverse scoring since they represented a lack of self-knowledge. Ghorbani et al.’s (2008) reasoning for this stemmed from Brown and Ryan (2003), who found that participants gave “more insightful and thus more valid self-reports of the absence rather than the presence of self-awareness” (Ghorbani et al., 2008, p. 398).

Ghorbani et al. (2008) expected integrative self-knowledge to offer valuable mental health findings, thus they began the analysis process by selecting the integrative self-knowledge trial items that most strongly correlated with the mental health instruments used in the three sub-samples in each country. They paid special attention to positive and negative correlations with the adjustment (i.e., self-esteem) and maladjustment (i.e., depression, anxiety, and perceived stress) mental health measures. The authors explained that, “Statements displaying the most robust and consistent associations with mental health in both societies were chosen for further examination” (p. 401). Ghorbani et al. (2008) used each country’s data from the statements selected from the three samples in exploratory factor analyses. The authors used such analyses to first determine a scale that would then reflect a parallel factor structure through confirmatory factor analysis and structural equation modeling for the sub-samples in both Iran and the United States (p. 401). The authors finally considered the validity of the integrative self-knowledge items.

A principal components analysis using varimax rotation with the U.S. data produced a three-factor model from which the authors identified 12 integrative self-knowledge items, nine of which required reverse scoring. Each of the model’s three factors had eigenvalues greater than one and together they accounted for about 49% of the variance, with “maximal loadings of all items on a factor [being] greater than .45 with minimal cross-loadings” (Ghorbani et al., 2008, p. 401). The authors, then, used confirmatory factor analysis (CFA) and determined that the three-factor model satisfactorily fit the U.S. and Iranian data.

Findings from the CFA indicated that the three-factor model was a good fit to the data from the six sub-samples, with all factor loadings in the anticipated direction and significantly associated at $p < .05$ with their intended constructs (Ghorbani et al., 2008). For both countries, Factor 1 gathered three items investigating past and future experiences (Iranian sub-samples: all loadings were .5 or greater; American sub-samples: all loadings were .56 or greater). Factor 2 assembled four present experience items for the Iranian sub-samples: all loadings were .69 or greater and the American sub-samples: all loadings were .57 or greater. Factor 3 gathered five past and present experience items. In the Iranian sub-samples all loadings were .51 or greater and for the American sub-samples all loadings were .54 or greater (p. 403).

Ghorbani et al. (2008) highlighted that the way in which items representing different time frames loaded on to the same factors (i.e., Factors 1 and 3) helped illustrate the scale’s integrative characteristics. The statistical results from the examination of four models using structural equation modeling implied “measurement equivalence” (p. 401) between the two countries. An example of a regularly scored item from this new scale is, “What I have learned about myself in the past has helped me to respond better to difficult
situations” (p. 403). A reverse scored item example is: “Most of the time, I get so involved in what is going on that I really can't see how I am responding to a situation” (p. 403).

Ghorbani et al.’s (2008) new 12-item scale demonstrated internal reliability across all three Iranian sub-samples, with alpha coefficients from .81 to .82, and all three U.S. sub-samples, with alphas ranging from .74 to .78 (p. 404). This scale also exhibited convergent validity with significant (all ps < .001), moderate positive correlations with reflective self-knowledge (Ghorbani, Bing, Watson, Davison, & LeBreton, 2003), experiential self-knowledge (Ghorbani et al., 2003), and mindfulness (Brown & Ryan, 2003) measures across all three sub-samples in Iran and the United States (p. 404). For convergent validity, the new scale positively and significantly (all ps < .001) correlated to a moderate extent with reflection (Trapnell & Campbell, 1999) and private self-consciousness (Fenigstein, Scheier, & Buss, 1975) measures in the third sample of the two countries (p. 406). The new scale demonstrated criterion validity in Iran and the United States with significant, low to moderate positive correlations, all ps < .001, with measures of adjustment (pp. 405-406). Criterion validity was also evident through the new scale’s significant, moderate negative correlations with many of the maladjustment measures in both Iran and the United States (all ps < .001, p. 405).

As for discriminant validity, Ghorbani et al. (2008) explained that the new 12-item scale did not correlate significantly with either the self-monitoring (Snyder & Gangestad, 1988) or public self-consciousness (Fenigstein et al., 1975) measures. Since these two measures pertained to self-assessment relative to exchanges with others, and integrative self-knowledge concerned understanding the self through personal experiences, the authors explained that it was logical that the new scale did not significantly correlate with the other two tools. Finally, regression analyses helped determine incremental validity for the new 12-item scale. Ghorbani et al. (2008) found that integrative self-knowledge accounted for significant variance for the measures unique to the three samples in both countries when it was entered in the second step after reflective self-knowledge, experiential self-knowledge, and mindfulness were entered in the first step. As for scoring this 12-item scale, once the necessary items are reverse scored, a mean score is calculated for each respondent (P. J. Watson, personal communication, July 30, 2016).

**Jeon and Lee’s (2012) Global Understanding Scale (Chapter 3, p. 83):**

Jeon and Lee (2012) derived the study’s sample from what they called “A” university in Seoul and obtained 121 completed responses (p. 168). They used frequency analysis to understand participants’ past exposure abroad, current foreign culture exposure, and education experience. They also used descriptive analysis to examine students’ global competence, and independent sample t-tests to investigate the association between participants’ global competence and past experience abroad, current foreign culture exposure, and education experience (assuming equal variances for the dependent variables and using a standard of p < .05 to evaluate significance). Finally, they used correlation analyses to examine the association between the different kinds of current exposure and global competence (using p < .05 to evaluate significance, p. 172).
The correlation analyses revealed key findings in Jeon and Lee’s (2012) study that also pertained to the present work and Draft Survey 1. Current foreign culture exposure through one-way sources, contacts with people abroad (e.g., by phone or Internet), and contacts with people from abroad in Korea all significantly and positively correlated with participants’ substantive knowledge scores \(r = .36, p < .001; r = .43, p < .001;\) and \(r = .35, p < .001,\) respectively, all two-tailed, p. 181). All three types of current foreign culture exposure also significantly and positively related to participants’ intercultural communication ability \(r = .25, p = .005; r = .41, p < .001;\) and \(r = .32, p < .001,\) respectively, all two-tailed) and to the English proficiency scores \(r = .35, p < .001; r = .45, p < .001;\) and \(r = .40, p < .001,\) respectively, all two-tailed, p. 181). Furthermore, individuals’ growth in intercultural sensitivity was best realized through interaction with people than through one-way sources. In particular, interaction with people abroad, for example, by phone or Internet, was significantly and positively related to adaptation and integration scores \(r = .20, p = .025\) and \(r = .32, p < .001,\) respectively and both two-tailed, p. 181). Interaction with people from abroad in Korea was also significantly and positively related to integration \(r = .23, p = .012,\) two-tailed, p. 181). Exposure through one-way sources, however, did not significantly correlate with acceptance, adaptation, or integration scores.

**The Gapminder Foundation’s Sampling Method (Chapter 3, p. 87):**

To ensure generalizable results, the Foundation enlisted the help of the Growth from Knowledge (GfK) Group, a market research company that uses probability sampling to assemble its KnowledgePanel® (Gapminder & Novus, n.d., p. 2). The members of this panel complete “national polls and surveys” (Growth from Knowledge [GfK], 2017a, para. 1). The GfK Group sends invitations to participate on this panel to randomly selected mailing addresses of U.S. households. All members of a given household that have received the invitation can join KnowledgePanel® as long as they are 13 years or older, with guardian permission required for minors (GfK, 2017b). Individuals in households that receive an invitation may not invite others to participate. The mailed invitation includes a code that recipients then enter on the KnowledgePanel® website if they choose to participate (GfK, 2017c).

KnowledgePanel® invites households with and without access to a computer to participate. The company sends a computer and provides free Internet access to those who need it for the length of their tenure on the panel (GfK, 2017b). Panelists take approximately one 10 to 15 minute survey a week and receive access to the instrument through email (GfK, 2017b). The GfK Group uses a point system to reward panelists who already have access to a computer and Internet. Panelists earn 1000 points, valued at $1, for each survey they complete (GfK, 2016d). Panel members’ receipt of a computer and Internet for survey completion constitutes another type of reward. This access to technological equipment and the Internet for all members of the panel also helps strengthen its representativeness of the U.S. public (Babbie, 2007c).

Duran and Spitzberg’s (1995) research question asked, “What is the dimensional structure of the Cognitive Communication Competence Scale [i.e., CCCS]?” (p. 265). They expected the CCCS would reflect a time-based structure: “…cognitive competence is a cyclical process that leads to the continual refinement of one’s social communication repertoire…” (p. 270). Since the authors also aimed to investigate the construct validity of the CCCS, they selected three tools to help accomplish this goal: the Communicative Knowledge Scale (Spitzberg, 1990); the Interaction Involvement Scale (Cegala, 1981); and the Revised Self-Monitoring Scale (Lennox & Wolfe, 1984). Duran and Spitzberg (1995) hypothesized that a positive association would exist between these three scales and the CCCS. The sample included 411 students in a general communications course at three universities in the northeast, west and southwest of the United States (p. 266).

Duran and Spitzberg (1995) employed a factor analysis (FA) with oblique rotation to answer the research question, stepwise multiple regression to assess the hypotheses regarding the Communication Knowledge and Revised Self-Monitoring Scales, and canonical correlation analysis to assess the hypothesis concerning the Interaction Involvement Scale. The FA revealed a 22-item, 5-factor, time-based structure with eigenvalues greater than 1 and 57% of the shared variance explained (pp. 267-268). The factor structure also displayed cognitions (i.e., planning, presence, modeling, reflection, and consequence) that diverged from the authors’ expectations (i.e., prior to, during and immediately after a conversation, as well as in general):

- Factor 1, Reflection Cognitions, described as “a process of reflecting upon a performance with the objective to improve one’s self-presentation” (included items 14 -18 with loadings from .69 to .86, explained 27% of the shared variance, $\alpha = .86$, p. 268). Example item: “After a conversation I think about what I said” (p. 275).

- Factor 2, Presence Cognitions, defined as “an awareness of how the other is reacting to a conversation” (included items 10-13 with loadings from .60 to .80, explained 11% of shared variance, $\alpha = .68$, p. 268). Example item: “During a conversation I am aware of when it is time to change the topic” (p. 275).

- Factor 3, Planning Cognitions, described as “the anticipation, mental rehearsal, and monitoring of topics of conversation” (included items 1-5 with loadings from .55 to .77, explained 7% of shared variance, $\alpha = .73$, p. 268). Example item: “Before a conversation I think about what people might be talking about” (p. 275).

- Factor 4, Modeling Cognitions, defined as “an awareness of contextual variables that provide information that serves to inform interaction choices” (included items 6-9 with loadings from .60 to .75, explained 6%...
of shared variance, $\alpha = .71$, p. 268). Example item: “When I first enter a new situation I watch who is talking to whom” (p. 275).

- Factor 5, Consequence Cognitions, described as “a general awareness and concern for the effects of one's communication performance” (included items 19-22 with loadings from .7 to .83, explained 6% of shared variance, $\alpha = .81$, p. 268). Example item: “Generally, I think about how what I say may affect others” (p. 275).

The authors confirmed the first hypothesis pertaining to the Communication Knowledge Scale using a stepwise multiple regression analysis (p. 269). They also confirmed the second hypothesis related to the Interaction Involvement Scale (IIS) using a canonical correlation analysis (p. 269), and confirmed the third hypothesis related to the Revised Self-Monitoring Scale using two stepwise multiple regression analyses (p. 269). To address each of the five dimensions demonstrated by the factor analysis, the authors scored the five subscales separately in the scoring process (R. Duran, personal communication, June 26, 2016).

Rubin, Watt, and Ramelli’s (2012) 12-item Independent-Interdependent Problem-Solving Style Scale (IIPSS) (Chapter 3, p. 95):

Rubin, Watt, and Ramelli (2012) described independent problem-solvers as those who are more likely to take action on their own to resolve an issue, and interdependent problem-solvers as those who are more likely to rely on the help of others to overcome obstacles. To measure each of these problem-solving styles, the authors assembled 12-items, with half measuring interdependence and the other half measuring independence. Specifically, Rubin et al. (2012) adapted two items from Triandis et al.’s (1986) Individualism-Collectivism Scale, one item from Oyserman, Coon, and Kemmelmeier’s (2002) work, and two items from Singelis’ (1994) Self-Construal Scale; Rubin himself then devised the rest of the scale items. Rubin et al. (2012) used the following 7-point scale, which appears in the online supplemental material included with their article: 1 = Strongly Disagree, 2 = Disagree, 3 = Partially Disagree, 4 = Neutral, 5 = Partially Agree, 6 = Agree, 7 = Strongly Agree. The authors reverse-scored the interdependent items, such that high scores on the scale indicated independent problem-solving style.

In the pilot test of the IIPSS, Rubin et al. (2012) disseminated the new scale as well as other instruments to a sample of 267 female and 45 male ($N = 312$) undergraduate students in psychology at an Australian university ($M = 22.48$ years old, $SD = 7.34$) (p. 500). After they reverse-scored the interdependent IIPSS items, the authors calculated a mean score on the scale for each respondent with high scores signaling an independent problem-solving style. An exploratory factor analysis, using principal axis factoring and the promax rotation method with Kaiser normalization, indicated one factor with an eigenvalue of 3.96 and 33.03% variance explained (p. 500). All 12 items loaded onto this factor ($\alpha = .81$); however, one item from Singelis’ (1994) Self-Construal Scale only loaded at .17, while the other 11 items loaded higher than .33 (p. 500). Rubin et al. (2012) decided to keep the 12th item since it did not greatly reduce the scale’s reliability.
Regarding convergent validity, Rubin et al. (2012) discovered that the scale negatively associated with the Relational-Interdependent Self-Construal Scale (Cross, Bacon, & Morris, 2000) \( (r = -.34, p < .001) \) and the 10-item Extraversion Scale (Goldberg et al., 2006) \( (r = -.19, p < .001) \) (p. 500). For predictive validity, Rubin et al. (2012) found a positive association between participants’ IIPSS scores and their inclination to solve a school-related issue using the Internet, and a negative association between the scores and participants’ inclination to request assistance from a fellow student on a similar issue.

**Delphi Panel (Chapter 3, p. 104):**

Delphi panels can often reach consensus by the conclusion of the third round (Clayton, 1997; Fogo, 2014). The number of rounds may, however, increase or decrease depending on the type of Delphi used, and on the problem or question at hand (de Villiers et al., 2005). Rowe and Wright (1999) described changes in the accuracy of Delphi outcomes depending on the type of feedback used in the technique. They explained from their research that when panelists modified their stance based on qualitative “‘reasons’ feedback (with no averages)” (p. 371), they were more accurate than when changing their position based on statistical feedback or iteration (i.e., repeating the task). Based on a meta-analysis of empirically based Delphi studies, Rowe and Wright (1999) concluded that providing both quantitative and reasoning (qualitative) feedback to panelists can produce more statistically accurate judgments than when only numerical data is provided.

Items or issues examined by a Delphi panel must also fall within the panelists’ realm of expertise (Rowe & Wright, 1999). But Goodman (1987) noted the fuzzy meaning of the terms “expert” and “expert opinion” (p. 731) in relation to the Delphi technique. Clayton (1997), however, defined an expert as “someone who possesses the knowledge and experience necessary to participate in a Delphi” (p. 377).
Appendix C

Draft Survey 1

Hello! Are you currently enrolled in EDC 326, Section 001, 002, or 003 for the Fall 2015 semester?

___ Yes
___ No

To Potential Research Participant:

My name is Kathryn Todd and I am a PhD candidate in the University of Kentucky College of Education's Department of Curriculum and Instruction (C & I). I am currently working on my dissertation entitled, "Global Competence Survey Development," under the guidance of Dr. Linda Levstik, a Department of C & I Professor. As a part of my dissertation research, I have constructed a global competence survey and would now like to field-test it, or "try it out". Given the reality of globalization worldwide, a person's global competence can help him or her to adapt personally and professionally in this environment. Global competence, therefore, applies to a broad population of people, who have or will have a variety of professional and academic backgrounds. The strong bonds between education and the concept of global competence evidenced in previous research, however, have led to my interest in testing this instrument with participants from the field of education. The population in which I am particularly interested in for this field-test is pre-service teachers who exemplify both a professional and an academic area.

You are receiving this survey due to your enrollment as a student/pre-service teacher in UK’s Elementary Teacher Education Program (TEP) and since you are taking EDC326 (Section 001, 002, or 003) in Fall 2015. I would like to invite you to serve as a volunteer in this field-test by taking the Global Competence Survey. In addition to your enrollment in the Elementary TEP and in EDC326, I am also interested in understanding the level of global competence of pre-service teachers in your class prior to starting your practicum placement in a classroom. Your name, nor any other identifying information, will be connected to your survey responses, unless you voluntarily provide it at the end of the survey. Furthermore, results will be presented in an aggregated (group) form. If you complete the survey, results will be made available to you in Spring 2016.

Although you will not get personal benefit from taking part in this research study, your responses may help us understand more about global competence and its development, which are currently significant topics in the field of education at all levels of learning (P-20 and beyond).

We hope to receive completed surveys from about 40 to 100 people, so your answers are important to us. Of course, you have a choice about whether or not to complete the survey, but if you do participate, you are free to skip any questions or discontinue at any time.

The survey will take about 30-45 minutes to complete.

There are no known risks to participating in this study.

If you choose not to provide any identifying information in the survey (i.e., gender, ethnic identity, or your email address for follow-up purposes if I have any questions regarding your responses), then your response to the survey is anonymous, which means no names will appear or be used on research documents, or be used in presentations or publications. The research team will not
know that any information you provided came from you, nor even whether you participated in the study.

If you do choose to provide identifying information in the survey (i.e., gender, ethnic identity, or your email address for follow-up purposes if I have any questions regarding your responses), then your responses to the survey will be kept confidential to the extent allowed by law. When we write about the study you will not be identified.

Please be aware, while we make every effort to safeguard your data once received from the online survey/data gathering company, given the nature of online surveys, as with anything involving the Internet, we can never guarantee the confidentiality of the data while still on the survey/data gathering company’s servers, or while en route to either them or us. It is also possible the raw data collected for research purposes may be used for marketing or reporting purposes by the survey/data gathering company after the research is concluded, depending on the company’s Terms of Service and Privacy policies.

If you have questions about the study, please feel free to ask; my contact information is given below. If you have complaints, suggestions, or questions about your rights as a research volunteer, contact the staff in the University of Kentucky Office of Research Integrity at 859-257-9428 or toll-free at 1-866-400-9428.

Thank you in advance for your assistance with this important project. If you would like to take the survey and choose to select "Yes" to the statement below, please then proceed immediately to the survey by clicking the "Next" button. To ensure your responses will be included, please complete the survey before 11 pm on October 18, 2015.

Sincerely,

Kathryn Todd
Department of Curriculum & Instruction, University of Kentucky
E-MAIL: k.todd@uky.edu

Please click “Yes” below if you have read and understood the terms presented in the cover letter, and if you would like to participate in this study by taking the Global Competence Survey. If you decide now to take part in the study you still have the right to decide at any time that you no longer want to continue.

__ Yes
__ I choose not to participate
**Section I**

For each of the statements below, please mark the alternative that best describes your opinion.

(1) Strongly Disagree   (2) Disagree   (3) Agree   (4) Strongly Agree

1. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of speech of certain groups. [Dogmatism]
2. I tend to classify people as either for me or against me. [Categorical Thinking]
3. A person should always consider new possibilities. [Flexible Thinking]
4. There are two kinds of people in this world: those who are for the truth and those who are against the truth. [Dogmatism]
5. Changing your mind is a sign of weakness. [Flexible Thinking]
6. I believe we should look to our religious authorities for decisions on moral issues. [Openness Values]
7. I think there are many wrong ways, but only one right way, to almost anything. [Categorical Thinking]
8. It makes me happy and proud when someone famous holds the same beliefs that I do. [Belief Identification]
9. There are a number of people I have come to dislike because of the things they stand for. [Dogmatism]
10. Abandoning a previous belief is a sign of strong character. [Belief Identification]
11. No one can talk me out of something I know is right. [Dogmatism]
12. We should be free to argue with religious authorities on moral issues. [Newly Added Item for Draft Survey 1]
13. Basically, I know everything I need to know about the important things in life. [Flexible Thinking]
14. It is important to persevere in your beliefs even when evidence is brought to bear against them. [Belief Identification]
15. Considering too many different opinions often leads to bad decisions. [Flexible Thinking]
16. There are basically two kinds of people in this world, good and bad. [Categorical Thinking]
17. I consider myself broad-minded and tolerant of other people's lifestyles. [Openness Values]
18. Certain beliefs are just too important to abandon no matter how good a case can be made against them. [Belief Identification]
19. Most people just don't know what's good for them. [Dogmatism]
20. It is a noble thing when someone holds the same beliefs as their parents. [Belief Identification]
21. Coming to decisions quickly is a sign of wisdom. [Flexible Thinking]
22. I believe that loyalty to one's ideals and principles is more important than "openmindedness." [Openness Values]
23. Of all the different philosophies that exist in the world there is probably only one that is correct. [Dogmatism]
24. My beliefs would not have been very different if I had been raised by a different set of parents. [Counterfactual Thinking]
25. If I think longer about a problem I will be more likely to solve it. [Flexible Thinking]
26. I believe that the different ideas of right and wrong that people in other societies
have may be valid for them. [Openness Values]
27. Even if my environment (family, neighborhood, schools) had been different, I probably would have the same religious views. [Counterfactual Thinking]
28. There is nothing wrong with being undecided about many issues. [Flexible Thinking]
29. I believe that laws and social policies should change to reflect the needs of a changing world. [Openness Values]
30. I believe that the morality of permissiveness is no morality at all. [Openness Values]
31. One should disregard evidence that conflicts with his or her established beliefs. [Belief Identification]
32. Someone who attacks my beliefs is not insulting me personally. [Belief Identification]
33. A group that tolerates too much difference of opinion among its members cannot exist for long. [Dogmatism]
34. Often, when people criticize me, they don’t have their facts straight. [Dogmatism]
35. Beliefs should be revised in response to new information or evidence. [Belief Identification]
36. I think that if people don’t know what they believe in by the time they’re 25, there’s something wrong with them. [Openness Values]
37. I believe letting students hear controversial speakers can only confuse and mislead them. [Openness Values]
38. Intuition is the best guide in making decisions. [Flexible Thinking]
39. People should take into consideration evidence that goes against their beliefs. [Flexible Thinking]

(Note: The phrases in brackets did not appear in Draft Survey 1 and only serve to denote the subscale to which each item belonged in Stanovich and West’s (2007) Actively Open-Minded Thinking [AOT] Scale.)
**Section II: Subsection A**

For each of the statements below, please mark the alternative that best describes your opinion.

(1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree

1. By thinking deeply about myself, I can discover what I really want in life.
2. What I have learned about myself in the past has helped me to respond better to difficult situations.
3. If I need to, I can reflect about myself to understand the feelings and attitudes behind my past behaviors.
4. While I am in the middle of a personal problem, I get so involved that I just can’t at the same time rise above the situation to clearly examine what I am thinking and feeling.
5. Most of the time, I get so involved in what is going on that I really can’t see how I am responding to a situation.
6. Often, I am unaware of my thoughts and feelings as they are happening and only later get some idea about what I may really have been experiencing.
7. When I get upset, I immediately react without any clear awareness of what I am doing.
8. Often my feelings about an experience are so complex that I don’t even try to understand them as they are going on.
9. During a demanding experience, I don’t even try to understand the thoughts and feelings that are flowing through me because it is all too confusing.
10. In some situations, I can’t understand why I have behaved in particular ways, so I usually don’t even try.
11. Spending time to understand my thoughts and feelings has not usually helped me to know myself better.
12. Anytime I try to analyze my contributions to a problem, I get confused.

**Section II: Subsection B**

For the statement below, please mark the alternative that best describes your opinion.

1. I have substantive knowledge about at least one other culture outside of the United States.

(1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree

1 (a). I apply this knowledge (about at least one other culture) with confidence in my professional work.

(1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree

2. I am interested in working on global issues.

(1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
3. I spend considerable time working on global issues.
   (1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree

4. I have substantial competence in analyzing global issues.
   (1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree

5. I have a working knowledge of concepts and methods that can describe, explain, and predict changes in global systems.
   (1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree

In your own words, please define the term “globalization.” (Open Response - OR)

Section II: Subsection C

For the questions in Subsection C, please mark your answer and then explain your reasoning for the answer selected.

1. In 1950 there were fewer than one billion children (aged 0-14) in the world. By 2000 there were almost two billion. How many do UN experts think there will be in 2100? (Please see graph below)
   ( ) 4 billion
   ( ) 3 billion
   ( ) 2 billion

Why did you choose this answer? Please explain in the space below. (OR)

2. There are 7 billion people in the world today. Of the maps below, which one do you think shows best where they live in the Americas, Europe, Africa and Asia?
   ( ) A
   ( ) B
   ( ) C
3. What do you think is the life expectancy in the world as a whole today?

__ 70
__ 60
__ 50

Why did you choose this answer? Please explain in the space below. (OR)

4. What percentage of adults in the world today are literate – can read and write?

__ 80%
__ 60%
__ 40%

Why did you choose this answer? Please explain in the space below. (OR)

5. On average, in the world as a whole today, men aged 25-34 have spent 8 years in school. How many years on average have women in the same age group spent in school?

__ 3 years
__ 5 years
__ 7 years

Why did you choose this answer? Please explain in the space below. (OR)

6. What percentage of the world’s one-year old children is vaccinated against measles?

__ 20%
__ 50%
__ 80%

Why did you choose this answer? Please explain in the space below. (OR)
7. In the last 20 years the proportion of the world population living in extreme poverty has…

__ Almost doubled
__ Remained more or less the same
__ Almost halved

Why did you choose this answer? Please explain in the space below. (OR)

8. What percentage – approximately – of total world energy generated, comes from solar and wind power?

__ 1%
__ 5%
__ 10%

Why did you choose this answer? Please explain in the space below. (OR)

9. In 1965, the number of babies born per woman in the world, on average, was 5. What do you think the number is today? (Please see graph below)

__ 4.5 babies
__ 3.5 babies
__ 2.5 babies

Why did you choose this answer? Please explain in the space below. (OR)

Section II: Subsection D

Please state your native (first) language(s) in the space below. (OR)

Have you learned a language (or languages) in addition to your native language(s)?

__ Yes
__ No
Please list the additional language(s) learned and how long you have been learning each language. (Example: French – 6 months, Spanish – 2 years) (OR)

On a scale from 1 to 4, with 1 representing the lowest level of proficiency and 4 representing the highest of proficiency, please rate yourself on the following statements.

1  2  3  4

1. I am proficient in comprehending the written form of a language other than my native language(s).
2. I am proficient in writing in a language other than my native language(s).
3. I am proficient in comprehending the spoken form of a language other than my native language(s).
4. I am proficient in speaking a language other than my native language(s).

Section II: Subsection E

Can you name two examples of current national events from the past two months? An example of a national event would be: The state legislature of South Carolina passed a bill ordering the removal of the Confederate Flag from its Capitol grounds.

__ Yes
__ No

Please provide two examples of current national events from the past two months in the space below. (OR)

Can you name two examples of current international events from the past two months? Examples of international events are as follows: The upper house of the Russian Parliament approved use of air force in Syria, or Pope Francis visited the United States.

__ Yes
__ No

Please provide two examples of current international events from the past two months in the space below. (OR)
**Section III: Subsection A**

For each of the statements below, please mark the alternative that best describes your opinion.

(1) Strongly Disagree  (2) Disagree  (3) Agree  (4) Strongly Agree

1. Before a conversation, when possible, I think about the topics that people might be talking about. [Planning Cognitions]
2. Before a conversation, when possible, I mentally practice what I am going to say. [Planning Cognitions]
3. Before a conversation, when possible, I think about what I am going to say. [Planning Cognitions]
4. When I first enter a new situation I think about what I am going to talk about. [Planning Cognitions]
5. During a conversation I think about what topic to discuss next. [Planning Cognitions]
6. When I first enter a new situation I watch who is talking to whom. [Modeling Cognitions]
7. When I first enter a new situation I try to “size up” the event. [Modeling Cognitions]
8. Generally, I study people. [Modeling Cognitions]
9. Generally, I am aware of people’s interests. [Modeling Cognitions]
10. During a conversation I am aware of when a topic is “going nowhere.” [Presence Cognitions]
11. During a conversation I am aware of when it is time to change the topic. [Presence Cognitions]
12. During a conversation I pay attention to how others are reacting to what I am saying. [Presence Cognitions]
13. During a conversation I know if I have said something rude or inappropriate. [Presence Cognitions]
14. After a conversation I think about what the other person thought of me. [Reflection Cognitions]
15. After a conversation I think about my performance. [Reflection Cognitions]
16. After a conversation I think about what I said. [Reflection Cognitions]
17. After a conversation I think about what I could have said differently. [Reflection Cognitions]
18. After a conversation I think about what I said in order to improve for the next conversation. [Reflection Cognitions]
19. Generally, I think about how others might interpret what I say. [Consequence Cognitions]
20. Generally, I think about the consequences of what I say. [Consequence Cognitions]
21. Generally, I think about how what I say may affect others. [Consequence Cognitions]
22. Generally, I think about the effects of my communications. [Consequence Cognitions]

(Note: The phrases in brackets did not appear in Draft Survey 1 and only serve to denote the subscale to which each item belonged in Duran and Spitzberg’s (1995) Cognitive Communication Competence Scale [CCCS].)
Section III: Subsection B

For each of the statements below, please mark the alternative that best describes your opinion.

(1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree

1. When faced with a difficult personal problem, it is better to decide yourself how to solve it rather than to follow the advice of others.
2. I value other people’s advice when making important decisions.
3. In general, I do not like to ask other people to help me to solve problems.
4. I prefer to make decisions on my own, rather than with other people.
5. I like to get advice from my friends or family when deciding how to solve my personal problems.
6. I prefer to consult with others before making important decisions.
7. I usually find other people’s advice to be the most helpful source of information for solving my problems.
8. I would rather struggle through a personal problem by myself than discuss it with a friend.
9. I do not like to depend on other people to help me to solve my problems.
10. I usually prefer to ask other people for help rather than to try to solve problems on my own.

**Section IV: Respondent Background Information**

Please indicate the location that you identify as your home in the space below.

(OR)

Have you traveled outside the country that you consider as your home?

__ Yes
__ No

Please list the country(ies) to which you have traveled in the space below. (OR)

Have you stayed in one foreign country for over three months or visited one region repeatedly (over three times)?

__ Yes
__ No

Do you often expose yourself to foreign culture? (Or have you done so repeatedly in the past?)

__ Yes
__ No
What are your sources of exposure? You may select more than one source.

__ Foreign books, dramas, movies, music, etc.
__ Contact with international people outside of the United States (e.g., friends, teachers, etc.)
__ Contact with international people in the U.S. (e.g., friends, teachers, etc.)

How often do you expose yourself to the sources you identified above?

__ Once a month
__ 2-3 times a month
__ 1-2 times a week
__ Over 3 times a week
__ Everyday

How often do you contact international people outside of the U.S.?

__ Once a month
__ 2-3 times a month
__ 1-2 times a week
__ Over 3 times a week
__ Everyday

How do you contact them? (e.g., telephone, Internet, etc.). Please answer in the space below. (OR)

How often do you contact international people in the U.S.?

__ Once a month
__ 2-3 times a month
__ 1-2 times a month
__ Over 3 times a week
__ Everyday

How do you contact them? (e.g., face-to-face, telephone, Internet, etc.). Please answer in the space below. (OR)

Which sources of exposure do you prefer the most?

__ Foreign books, dramas, movies, music, etc.
__ Contact with international people outside of the United States (e.g., friends, teachers, etc.)
__ Contact with international people in the U.S. (e.g., friends, teachers, etc.)

Why do you think you have had little to no exposure to foreign culture? Please answer in the space below. (OR)

Have you ever taken college courses that were related to foreign studies?

__ Yes
__ No
Considering the global competence definition below, do you think that you are globally competent?

"Global competence is one's embodiment of (includes) four elements: A disposition and affect toward culturally diverse peoples set into motion by open-mindedness; a body of knowledge founded on an understanding of one's own cultural background, globalization, and world languages; a set of skills such as the abilities to collaborate, investigate globally pressing issues, and communicate effectively, with these three elements uniting for the purpose of taking action for the global good, thus rendering the globally competent individual a cosmopolitan."

__ Yes  
__ No

Please briefly explain your reasoning for your answer in the space below. (OR)

Please identify your gender in the space below. (OR)

Please indicate your ethnic identity in the space below. (OR)

Do you give your permission to be contacted in the future by Kathryn Todd, the principal researcher for this study, regarding any questions that may arise in the review of your responses in the data analysis process? If you do give your permission, your name and contact information will be kept confidential and will not be included in the reporting of research results.

__ Yes  
__ No

[If yes was selected above] Thank you! Please enter your email address in the space below. Should Kathryn need to contact you, she will do so by email. Her email address is k.todd@uky.edu if you have any questions. (OR)
Appendix D

Chapter 4 Supplemental Material

Findings: Revising Draft Survey 1 Using Field-Test Response Patterns (Chapter 4, p. 129)

Completers’ scores on the open-mindedness scale (i.e., Actively Open-Minded Scale from Stanovich & West, 2007) ranged from 2.44 to 3.26 ($M = 2.89$, $SD = .24$) and were non-normally distributed, as expected from the sample size (skewness = .072, $SE = .524$; kurtosis = -.948, $SE = 1.014$). The internal consistency of the 39-item scale seemed acceptable at $\alpha = .794$, but the large number of items on this scale could have increased this coefficient (Field, 2009b). Moreover, five items exhibited negative corrected item-total correlations, which signaled a potential problem with the scale since appropriate items were already reverse-scored. A larger sample size could have produced different corrected item-total correlation results. However, this was a first attempt to reduce the number of open-mindedness scale items.

After assessing the internal reliability of various subscale combinations, I identified a possible 20-item solution for the open-mindedness scale: the openness-values (eight items), flexible thinking (nine items), and categorical thinking subscales (three items). The first two subscales included both regularly and reverse scored items, thus still reducing the likelihood of response bias (Nardi, 2006). The categorical thinking subscale included all reverse scored items. The 20-item scale reflected good internal consistency, $\alpha = .821$, with all positive item-total correlations. Also, 15 of the 20 items exhibited acceptable corrected item-total correlations, $r > .3$ (Field, 2009b). Those that did not belonged to the flexible thinking and openness-values subscales. I posited that the behavior of these correlations stemmed from the inclusion of the categorical thinking subscale (a closed-minded construct). When I attempted to remove the three categorical thinking items, however, the internal consistency dropped to $\alpha = .779$. As a result, I retained the three subscales.
Findings: The Delphi Review (Chapter 4, p. 131)

Round 1 (Chapter 4, p. 132)

High variability: the knowledge section (Chapter 4, p. 133)

Table D1

Panelist Comments from Questionnaire 1 for the Knowledge Section

<table>
<thead>
<tr>
<th>Panelist Score</th>
<th>Panelist Reasoning for Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A = 3</td>
<td>Panelist 2: “I agree in principle that knowledge is an important component of global competence, but I believe that each component of this section may need to be more specifically defined...for example, ‘knowledge of self’ is a HUGE concept...I think this needs to be more clearly defined...most of us spend our entire lives trying to better know ourselves; I think that it would be possible to measure ‘understanding of the meaning of the term globalization,’ [sic] but ‘global literacy’ is also a huge topic...what exactly is meant by ‘accuracy of worldview with regards to knowledge of global trends’...which global trends, and who would determine whether this knowledge is accurate? Knowledge of world languages is also too broad...do you mean knowledge of at least one other language besides one’s native language? Finally, knowledge of national and international current events is very broad...I think all of these competencies need to be defined more specifically.”</td>
</tr>
<tr>
<td>D = 2</td>
<td>Panelist 3: “I disagree with the details, not necessarily the concept. I don’t think it is necessary to have knowledge of the term ‘globalization.’ In any case, there are multiple interpretations. I am also not sure about the other elements (global literacy, world languages, current events). I think curiosity about the world we live in, curiosity about the unknown, are the necessary driving force. These sub-elements help, but I don’t think they are necessary. I fully agree that a reflective nature (knowledge of self) is critical. If you are reflective, you cannot help wanting to understand the unknown.”</td>
</tr>
<tr>
<td>A = 3</td>
<td>Panelist 4: “Again, this sounds good but I think there is a difference between knowledge of self and knowledge of one’s own cultural background. I think there is a tendency in the US context (particularly for White folks) to view themselves as individuals so knowledge of self might relate more to personality traits or personal talents/weaknesses rather than to knowledge of how one’s cultural background influences their worldview. I imagine it is hard to tease out how one’s culture influences them but it should be made clear or at least considered in some way that a person should be able to demonstrate knowledge of how they might have difficulty seeing or learning something because of their particular cultural milieu.”</td>
</tr>
<tr>
<td>A = 3</td>
<td>Panelist 6: “I’m curious why it seems like knowledge about cultural practices (e.g., taking off shoes or leaving them on, walls to keep us out vs. walls to keep in, shaking hands tight shake or loose shake, personal space) doesn’t fit into this definition very well. [It] could fit it into global literacy but it seems forced. And it seems excluded from current events since cultural practices and products often have a significant history to them.”</td>
</tr>
</tbody>
</table>

Note. 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree
Medium variability: the disposition/affective realm and skill section (Chapter 4, p. 136)

**Panelist 10 full quote:** “This element certainly suggests the application of Global Competence, without which progress would be impossible. Certainly, at the root of Global Competence is the assumption of interaction with others of different belief systems, perspectives, and cultural norms. Without the ability to problem-solve or communicate this interaction could not happen. The assumption that there will be difference of perspective and belief are not enough without the constant give and take between the interactors to mutually comprehend.”

**Panelist 2 full quote:** “I agree that both communication and problem solving are important, but see these as separate competencies. I would also suggest that ability to collaborate is perhaps more appropriate than problem solving...in the health professions we are placing increasing emphasis on competencies in inter professional collaboration and teamwork. I think these are critical global competencies.”

Low variability: the respondent background section (Chapter 4, p. 139)

**Panelist 9 full quote:** “One’s experience speaks very loudly about the responses to questions. However, a positive experience whether of a course work [sic] taken or a trip will have different responses to the same question. [T]herefore, although I strongly agree to include backgrounds, I am sure the detailed questions and survey analysis will take into considerations [sic] how different types of background, especially experience can effect [sic] the outcome of the survey.”

**Panelist 4 full quote:** “I have some concerns that this will exclude certain people who have not had the opportunity (due to finances) to travel many places. I realize that is just part of the deal but it seems like a person could grow up as part of a marginalized group in the US (and not have done much travel, if any) yet still have a good understanding of how cultural difference works and that people have different backgrounds and beliefs. Their experience as a subjugated group might infuse them with conceptual understandings of this even though they haven't had the opportunity to experience it firsthand.”
Table D2

Section I Disposition/Affective Realm Items Remaining after Questionnaire 2

<table>
<thead>
<tr>
<th>Item</th>
<th>Panelist Agreement on Item Inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. A person should always consider new possibilities. (FT)</td>
<td>100%</td>
</tr>
<tr>
<td>3. Changing your mind is a sign of weakness. (R; FT)</td>
<td>90%</td>
</tr>
<tr>
<td>4. I believe we should look to our religious authorities for decisions on moral issues. (R; OV)</td>
<td>90%</td>
</tr>
<tr>
<td>5. I think there are many wrong ways, but only one right way, to almost anything. (R; CT)</td>
<td>80%</td>
</tr>
<tr>
<td>7. Considering too many different opinions often leads to bad decisions. (R; FT)</td>
<td>90%</td>
</tr>
<tr>
<td>8. There are basically two kinds of people in this world, good and bad. (R; CT)</td>
<td>100%</td>
</tr>
<tr>
<td>9. I consider myself broad-minded and tolerant of other people’s lifestyles. (OV)</td>
<td>90%</td>
</tr>
<tr>
<td>10. Coming to decisions quickly is a sign of wisdom. (R; FT)</td>
<td>80%</td>
</tr>
<tr>
<td>11. I believe that loyalty to one’s [ideals] and principles is more important than &quot;open-mindedness.&quot; (R; OV)</td>
<td>100%</td>
</tr>
<tr>
<td>12. If I think longer about a problem I will be more likely to solve it. (FT)</td>
<td>80%</td>
</tr>
<tr>
<td>13. I believe that the different ideas of right and wrong that people in other societies have may be valid for them. (OV)</td>
<td>90%</td>
</tr>
<tr>
<td>14. There is nothing wrong with being undecided about many issues. (FT)</td>
<td>80%</td>
</tr>
<tr>
<td>15. I believe that laws and social policies should change to reflect the needs of a changing world. (OV)</td>
<td>100%</td>
</tr>
<tr>
<td>18. I believe letting students hear controversial speakers can only confuse and mislead them. (R; OV)</td>
<td>90%</td>
</tr>
<tr>
<td>19. Intuition is the best guide in making decisions. (R; FT)</td>
<td>90%</td>
</tr>
<tr>
<td>20. People should take into consideration evidence that goes against their beliefs. (FT)</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Note. N = 10. R = reverse scored. FT = flexible thinking subscale, OV = openness-values subscale, and CT = categorical thinking subscale. In item 11, the word *ideals* appears in brackets because, while I presented this word correctly in Questionnaire 2, the word *idea* was mistakenly used in Questionnaire 3 and, thus, appears in Appendix G. The wording of item 11 appearing in this table will be used in the Revised Survey.*
Table D3

Section II Knowledge Items Remaining After Questionnaire 2

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Panelist % Agreement on Item Inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-Knowledge</strong></td>
<td></td>
</tr>
<tr>
<td>1. Often, I am unaware of my thoughts and feelings as they are happening, and only later get some idea about what I may really have been experiencing. (R)</td>
<td>80%</td>
</tr>
<tr>
<td>2. During a demanding experience, I don't even try to understand the thoughts and feelings that are flowing through me because it is all too confusing. (R)</td>
<td>80%</td>
</tr>
<tr>
<td>5. By thinking deeply about myself, I can discover what I really want in life.</td>
<td>80%</td>
</tr>
<tr>
<td>7. What I have learned about myself in the past has helped me to respond better to difficult situations.</td>
<td>100%</td>
</tr>
<tr>
<td>9. If I need to, I can reflect about myself to understand the feelings and attitudes behind my past behaviors.</td>
<td>80%</td>
</tr>
<tr>
<td>10. Most of the time, I get so involved in what is going on that I really can't see how I am responding to a situation. (R)</td>
<td>77.78%</td>
</tr>
<tr>
<td>12. Spending time to understand my thoughts and feelings has not usually helped me to know myself better. (R)</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Defining Globalization</strong></td>
<td></td>
</tr>
<tr>
<td>1. In your own words, please define the term “globalization.” (Open Response)</td>
<td>80%</td>
</tr>
<tr>
<td><strong>Knowledge of World Language(s)</strong></td>
<td></td>
</tr>
<tr>
<td>1. Please state your native (first) language(s) in the space below. (OR)</td>
<td>100%</td>
</tr>
<tr>
<td>2. Please list any additional language(s) learned and how long you have been learning each language (Example: [French] - 6 months, Spanish – 2 years). Please type N/A if you have not learned additional languages. (OR)</td>
<td>80%</td>
</tr>
<tr>
<td><strong>Knowledge of Current Events</strong></td>
<td></td>
</tr>
<tr>
<td>1. Please state two examples of international (outside your home country) events from the past two months. (OR)</td>
<td>80%</td>
</tr>
</tbody>
</table>

Note. N = 10. (R) = reverse scored. In item 2 under Knowledge of World Language(s), the word French appears in brackets because, although it was included in the item in the field-tested Draft Survey 1, it was mistakenly excluded from the item in both Questionnaires 2 and 3. Its exclusion, however, did not appear to affect panelists’ responses as evidenced through a review of their comments for this item in Round 2. The item as it appears in this table will be used in the Revised Survey.
Table D4

Section III Skill Items Remaining After Questionnaire 2

<table>
<thead>
<tr>
<th>Skill</th>
<th>Panelist % Agreement on Item Inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication Capacity</strong></td>
<td></td>
</tr>
<tr>
<td>1. After a conversation I think about what I said. (reflection)</td>
<td>80%</td>
</tr>
<tr>
<td>2. During a conversation I pay attention to how others are reacting to what I am saying. (presence)</td>
<td>100%</td>
</tr>
<tr>
<td>3. Generally, I think about how what I say may affect others. (consequence)</td>
<td>100%</td>
</tr>
<tr>
<td>4. Before a conversation, when possible, I think about what I am going to say. (planning)</td>
<td>100%</td>
</tr>
<tr>
<td>5. Generally, I think about the consequences of what I say. (consequence)</td>
<td>80%</td>
</tr>
<tr>
<td>6. During a conversation I think about what topic to discuss next. (planning)</td>
<td>90%</td>
</tr>
<tr>
<td>7. Generally, I think about how others might interpret what I say. (consequence)</td>
<td>80%</td>
</tr>
<tr>
<td>9. During a conversation I know if I have said something rude or inappropriate. (presence)</td>
<td>90%</td>
</tr>
<tr>
<td>10. When I first enter a new situation I watch who is talking to whom. (modeling)</td>
<td>90%</td>
</tr>
<tr>
<td>11. When I first enter a new situation I think about what I am going to talk about. (planning)</td>
<td>90%</td>
</tr>
<tr>
<td>13. After a conversation I think about what I said in order to improve for the next conversation. (reflection)</td>
<td>90%</td>
</tr>
<tr>
<td>14. During a conversation I am aware of when a topic is “going nowhere.” (presence)</td>
<td>100%</td>
</tr>
<tr>
<td>16. Before a conversation, when possible, I think about the topics that people might be talking about. (planning)</td>
<td>80%</td>
</tr>
<tr>
<td>17. After a conversation I think about what the other person thought of me. (reflection)</td>
<td>100%</td>
</tr>
<tr>
<td>18. Generally, I think about the effects of my communication. (consequence)</td>
<td>88.89%</td>
</tr>
<tr>
<td>19. During a conversation I am aware of when it is time to change the topic. (presence)</td>
<td>100%</td>
</tr>
<tr>
<td>22. After a conversation I think about what I could have said differently. (reflection)</td>
<td>90%</td>
</tr>
<tr>
<td><strong>Problem-Solving Style</strong></td>
<td></td>
</tr>
<tr>
<td>1. When faced with a difficult personal problem, it is better to decide yourself how to solve it rather than to follow the advice of others. (R)</td>
<td>90%</td>
</tr>
<tr>
<td>2. I value other people’s advice when making important decisions.</td>
<td>100%</td>
</tr>
<tr>
<td>3. In general, I do not like to ask other people to help me to solve problems. (R)</td>
<td>90%</td>
</tr>
<tr>
<td>5. I like to get advice from my friends or family when deciding how to solve my personal problems.</td>
<td>100%</td>
</tr>
<tr>
<td>6. I prefer to consult with others before making important decisions.</td>
<td>90%</td>
</tr>
<tr>
<td>7. I usually find other people’s advice to be the most helpful source of information for solving my problems.</td>
<td>100%</td>
</tr>
<tr>
<td>8. I would rather struggle through a personal problem by myself than discuss it with a friend. (R)</td>
<td>90%</td>
</tr>
<tr>
<td>9. I do not like to depend on other people to help me to solve my problems. (R)</td>
<td>80%</td>
</tr>
</tbody>
</table>

*Note. N = 10. Under Communication Capacity, the words in parentheses indicate the cognition subscale to which each item belongs (i.e., planning, modeling, presence, reflection, consequence). Under Problem-Solving Style, (R) = reverse score.*
Section IV Respondent Background Items Remaining After Questionnaire 2

<table>
<thead>
<tr>
<th>Respondent Background</th>
<th>Panelist % Agreement on Item Inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Please indicate the location that you identify as your home in the space below. (Open Response [OR])</td>
<td>90%</td>
</tr>
<tr>
<td>2. Have you traveled outside the country that you consider as your home? If so, please list the country (countries) to which you have traveled in the space below. If you have not traveled outside your home country, please mark as N/A. (OR)</td>
<td>90%</td>
</tr>
<tr>
<td>3. Have you stayed in a country, other than your home country, for over three months or visited one region repeatedly (over three times)? (Response Choices [RC]: Yes or No)</td>
<td>100%</td>
</tr>
<tr>
<td>4. Do you often expose yourself to cultures that differ from your own in ways such as language, beliefs, and/or ways of life? (RC: Yes or No)</td>
<td>100%</td>
</tr>
<tr>
<td>5. (If &quot;Yes&quot; selected above) What are your sources of exposure? You may select more than one. (RC: Books, dramas, movies, music, etc., generated from cultures different from your own; Contact with people from cultures different from your own outside your home country; and/or Contact with people from cultures different from your own in your home country)</td>
<td>90%</td>
</tr>
<tr>
<td>6. If selected above, how often do you expose yourself to books, dramas, movies, music, etc., generated from cultures different from your own? (RC: 1=Once a month; 2=2-3 times a month; 3=1-2 times a week; 4=Over 3 times a week; 5=Everyday)</td>
<td>100%</td>
</tr>
<tr>
<td>7. If selected above, how often do you have contact with people from cultures different from your own outside your home country? (RC: 1=Once a month; 2=2-3 times a month; 3=1-2 times a week; 4=Over 3 times a week; 5=Everyday)</td>
<td>100%</td>
</tr>
<tr>
<td>8. (Follow-Up) What is your means of communication (e.g., by telephone, email, social media, Skype, etc.)? Please answer in the space below. (OR)</td>
<td>90%</td>
</tr>
<tr>
<td>9. If selected above, how often do you have contact with people from cultures different from your own in your home country? (RC: 1=Once a month; 2=2-3 times a month; 3=1-2 times a week; 4=Over 3 times a week; 5=Everyday)</td>
<td>100%</td>
</tr>
<tr>
<td>10. (Follow-up) What is your means of communication (e.g., face-to-face, by telephone, social media, etc.)? Please answer in the space below. (OR)</td>
<td>90%</td>
</tr>
<tr>
<td>11. If you selected more than one source of exposure, which source do you prefer the most? (RC: Books, dramas, movies, music, etc., generated from cultures different from your own; Contact with people from cultures different from our own outside your home country; or Contact with people from cultures different from your own in your home country)</td>
<td>100%</td>
</tr>
<tr>
<td>12. (If respondents mark &quot;no&quot; to &quot;Do you often expose yourself to cultures that differ from your own in ways such as language, beliefs, and/or ways of life?&quot; then they are directed to this question) Why do you think you have had little to no exposure to cultures that differ from your own? Please answer in the space below. (OR)</td>
<td>90%</td>
</tr>
<tr>
<td>13. Have you taken academic courses related to global/international studies? (RC: Yes or No)</td>
<td>100%</td>
</tr>
<tr>
<td>14. (Definition presented in Background Statement from Round One) Considering the global competence definition presented, do you think that you are globally competent? [RC: Yes or No]</td>
<td>80%</td>
</tr>
<tr>
<td>15. (Follow-Up) Please briefly explain your reasoning for your answer in the space below. (OR)</td>
<td>80%</td>
</tr>
<tr>
<td>16. Please identify your gender in the space below. (OR)</td>
<td>100%</td>
</tr>
<tr>
<td>17. Please indicate your ethnic identity in the space below. (OR)</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note. The panelists received a background statement about my research prior to taking Questionnaire 1. This statement included the global competence definition, to which I referred in Item 14 in this table. The definition read: Global competence is one's embodiment of four elements: A disposition and affect toward culturally diverse peoples set into motion by open-mindedness; a body of knowledge founded on an understanding of one's own cultural background, globalization, world languages, and current events; a set of skills such as the abilities to collaborate, investigate globally pressing issues, and communicate effectively, with these three elements uniting for the purpose of taking action for the global good, thus rendering the globally competent individual a cosmopolitan.
Round 3 (Chapter 4, p. 147)

Panelist 1 full quote: “Again, although I think these questions are generally good for determining interest, they may confuse lack of opportunity for lack of interest in some cases.”

Panelist 8 full quote: “I am not sure how you will use the open response questions. #1, home is a tricky question for many people. You may need to clarify how you define home. Global nomads may have a passport home different from their primary home culture.”

Panelist 10 full quote: “I fully agree with the inclusion of the elements listed. My additional comments deal, as with the previous round, with the semantic issues related to the World Language Knowledge questions. I realize that the introduction addressed the semantic issues and stated that original language remained intact for the purpose of this round. However, I feel it pertinent to reiterate the multifaceted ways by which World Languages can be acquired.”

Proposal 1:

Panelist 3 full quote: “I think curiosity about the world we live in, curiosity about the unknown, are the necessary driving force. These sub-elements [global literacy, world languages, current events] help, but I don’t think they are necessary. I fully agree that a reflective nature (knowledge of self) is critical. If you are reflective, you cannot help wanting to understand the unknown.”

Proposal 2:

Panelist 2 full quote: “I strongly agree that open mindedness is ESSENTIAL for one to be a globally competent global citizen...Unfortunately, I believe that the root of many of our global problems is the failure to be open to considering other views and perspectives.”

Proposal 3:

Panelist 5 full quote: “Good question. How much time [do] they have to respond? How do [you] evaluate the response? Is [there] not a possibility that a very glib response will be seen as more correct? Does this question penalize the deeper thinker, with a slower response?”

Proposals 5 and 6:

Panelist 10 full quote: “Although I agree with the second Open Response statement, I feel that it should be clarified. Years learning a language is a highly subjective concept. For instance, is this 2 years in an immersion program or 2 years using Rosetta Stone in your free time? I would suggest either using hours and giving examples of conversions
(e.g., two years of Spanish in high school would be 240 hours) or having respondents reference…[proficiency] charts….Alternatively, the respondents could reply with how comfortable they feel using their additional language to interact with speakers/users of that language. Also, should the verb "studied" be used instead of the verb "learned"? Perhaps a third question should be added asking about interaction with native speakers.”

**Panelist 1 full quote:** “[I]t is a little odd for some of us who speak two languages more or less fluently to say how long we have been learning them. In a sense, we are all learning our second language (or even first) for the rest of our lives even if we are very fluent. Maybe it is better to say how long we took classes in them or something.”

**Proposal 9:**

**Panelist 4 full quote:** “I have some concerns that this will exclude certain people who have not had the opportunity (due to finances) to travel many places. I realize that is just part of the deal but it seems like a person could grow up as part of a marginalized group in the US (and not have done much travel, if any) yet still have a good understanding of how cultural difference works and that people have different backgrounds and beliefs. Their experience as a subjugated group might infuse them with conceptual understanding of this even though they haven't had the opportunity to experience it firsthand.”
Table D6

Descriptive Statistics for Questionnaire 3: Proposals for Consideration

<table>
<thead>
<tr>
<th>Proposal</th>
<th>M</th>
<th>Median</th>
<th>Mode</th>
<th>SD</th>
<th>Range</th>
<th>Min.</th>
<th>Max.</th>
<th>Panelist Score</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposal 1</td>
<td>3.40</td>
<td>4.00</td>
<td>4</td>
<td>.84</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2 → 2 panelists</td>
<td>3 → 2 panelists</td>
</tr>
<tr>
<td>Proposal 6</td>
<td>3.40</td>
<td>3.50</td>
<td>4</td>
<td>.70</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2 → 1 panelist</td>
<td>3 → 4 panelists</td>
</tr>
<tr>
<td>Proposal 5</td>
<td>3.30</td>
<td>3.00</td>
<td>3</td>
<td>.48</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>3 → 7 panelists</td>
<td>4 → 3 panelists</td>
</tr>
<tr>
<td>Proposal 4</td>
<td>3.30</td>
<td>3.00</td>
<td>3</td>
<td>.68</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2 → 1 panelist</td>
<td>3 → 5 panelists</td>
</tr>
<tr>
<td>Proposal 7</td>
<td>3.30</td>
<td>3.00</td>
<td>3</td>
<td>.68</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4 → 4 panelists</td>
<td>4 → 4 panelists</td>
</tr>
<tr>
<td>Proposal 8</td>
<td>3.30</td>
<td>3.00</td>
<td>3</td>
<td>.68</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2 → 1 panelist</td>
<td>4 → 4 panelists</td>
</tr>
<tr>
<td>Proposal 3</td>
<td>3.10</td>
<td>4.00</td>
<td>4</td>
<td>1.29</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>1 → 2 panelists</td>
<td>2 → 1 panelist</td>
</tr>
<tr>
<td>Proposal 2</td>
<td>3.10</td>
<td>3.00</td>
<td>3</td>
<td>.32</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>3 → 9 panelists</td>
<td>4 → 1 panelists</td>
</tr>
<tr>
<td>Proposal 9</td>
<td>2.90</td>
<td>3.00</td>
<td>3</td>
<td>.88</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>1 → 1 panelist</td>
<td>3 → 6 panelists</td>
</tr>
</tbody>
</table>

Note. N = 10. Proposal 1 = Add *curiosity* items…; Proposal 2 = Add respondent *engagement* items…; Proposal 3 = Remove *defining globalization and international current event* items…; Proposal 4 = Add items measuring *knowledge of one’s own cultural background*…; Proposal 5 = Include revised set of *language-related* items; Proposal 6 = Move *language-related* items…; Proposal 7 = Replace *communication capacity* and *problem-solving style* items with *intercultural communication effectiveness*…; Proposal 8 = Definition of *effective intercultural communication*…; Proposal 9 = Remove *travel-related* items….

*a1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree*
**Findings: Using the Revised Survey as a Guide to Describe the Field-Test Sample**  
(Chapter 4, p. 163)

**Table D7**

*Field-Test Sample Respondent Background Answers in Draft Survey 1*

<table>
<thead>
<tr>
<th>Item</th>
<th>Yes (Y) / No (N) = # of Respondents</th>
<th>Details for Yes Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Language</td>
<td>Y = 10</td>
<td>• Sp. (4 yrs.) = 2 respondents</td>
</tr>
<tr>
<td></td>
<td>N = 9</td>
<td>• Sp. (2 yrs.) = 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sp. (6 yrs.) = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sp. (13 yrs.) = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Fr. (4 yrs.) = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sp. (8 yrs.) &amp; Gr. (2 mos.) = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Fr. (2 yrs.) &amp; Sp. (2 yrs.) = 1</td>
</tr>
<tr>
<td>Travel</td>
<td>Y = 10</td>
<td>• Mexico = 2 respondents</td>
</tr>
<tr>
<td></td>
<td>N = 9</td>
<td>• Canada = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Caribbean Islands (CI) = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Mexico &amp; CI = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• China, Japan, Thailand, Mexico, Canada, CI = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• England, Ireland, Scotland, Wales, France = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sweden, Czech Republic, Canada, Mexico, Jamaica = 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• France, Germany, England, Austria, Italy = 1</td>
</tr>
<tr>
<td>Foreign Country Stay</td>
<td>Y = 1</td>
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<td>N = 18</td>
<td>******</td>
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<td>• Type 2: 2-3x/mo. By text, Facebook, &amp; email;</td>
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<td></td>
<td>N = 15</td>
<td>Type 3: 1-2x/week face-to-face, Prefers Type 3</td>
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<td></td>
<td></td>
<td>• Type 3: 1x/mo. By text, email or face-to-face</td>
</tr>
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<td></td>
<td>• Type 2: 1x/mo. By phone or Internet;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Type 3: 1-2x/week by Internet or face-to-face, Prefers Type 3</td>
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<td></td>
<td>• Type 1; Type 2: 1-2x/week by Facebook &amp; Instagram;</td>
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*Note. For Additional Language, Sp. = Spanish, Fr. = French, Gr. = German. For Exposure variable, Type 1 = Foreign books, dramas, movies, music, etc., Type 2 = Contact with international people outside of the US, Type 3 = Contact with international people in the US*
Appendix E

Delphi Questionnaire 1

Instructions: Thank you for your willingness to participate as a Delphi panelist. Prior to reviewing the summaries of the four Global Competence Survey sections in this questionnaire, please read the Background Statement included in the same email as the Survey Monkey link. After reading each section summary, please do the following:

1. Indicate your level of agreement/disagreement on including the given section in the Global Competence Survey using the response categories provided
2. Provide reasoning for your response in the text box
3. Give any additional feedback you desire in the "Additional Feedback" text box appearing at the end of this questionnaire

Please enter your ID number, from the email containing the Survey Monkey link, in the space below so that I can identify panelists' individual responses. All results, however, will be reported in a de-identified format. You may exit the questionnaire by closing the browser and then re-enter using the emailed Survey Monkey link until the deadline for this round. Your work will be saved while offline, but please re-enter the questionnaire using the same computer. You may submit your responses any time prior to the deadline.

1. Please enter your ID number below. (Open Response - OR)

**Disposition/Affective Realm Section**

This section measures the DISPOSITION/AFFECTIVE REALM's essential sub-element of open-mindedness, defined as a characteristic of one who "...[has a certain] mindset...[is] globally minded...[is] open to the possibility that there is more than one answer to a question...[is] open to listening" (Todd, 2013, p. 24). In the context of my study, an open-minded person would be "relatively free of obstructions to sight, movement, or internal arrangement: an open floor plan" (Open, 2015). Open-mindedness is a key ingredient to cosmopolitanism, which motivates an individual to take action for the benefit of others whom he or she may never meet. Appiah (2006) explains that cosmopolitans can still converse, or meaningfully interact, and reach agreement on an issue with individuals who have cultural norms and values with which they may disagree. This section, therefore, probes an individual's perspectives on such topics as his or her belief malleability, openness to new evidence, and feelings toward individuals who hold different beliefs from him or herself.

1. Please indicate your level of agreement or disagreement on including the DISPOSITION/AFFECTIVE REALM Section, as defined above, in the Global Competence Survey. Strongly Disagree Disagree Agree Strongly Agree

2. Please provide reasoning for your level of agreement/disagree in the text box below. (OR)
**KNOWLEDGE Section**

This section measures survey respondents' 1) knowledge of self (i.e., these items query whether or not a respondent self reflects and understands his or her behaviors, attitudes, thoughts, and situational reactions); 2) understanding of the meaning of the term "globalization"; 3) global literacy (i.e., the accuracy of a respondent's worldview with regards to knowledge of global trends); 4) knowledge of world languages (i.e., including native language(s), world language(s) learned and length of time studied); and 5) knowledge of national and international current events.

Note: In my global competence definition, I list "an understanding of one's own cultural background" as a sub-element of KNOWLEDGE. To develop this survey, however, I narrowed this sub-element to "an understanding of one's self." I then added the sub-element of "global literacy" to KNOWLEDGE as a natural extension of "an understanding of globalization." This is because measurement of global literacy could provide insight into the extent of respondents' understanding of globalization.

Appiah (2006) explains that "cosmopolitanism is about intelligence and curiosity as well as engagement" (p. 168). This suggests that one needs a foundation of knowledge, such as the five areas mentioned above, to make informed actions as a globally competent individual.

4. Please indicate your level of agreement or disagreement on including the KNOWLEDGE Section, as defined above, in the Global Competence Survey.

   | Strongly Disagree | Disagree | Agree | Strongly Agree |
---|-------------------|---------|------|---------------|
   |                   |         |      |               |

5. Please provide reasoning for your level of agreement/disagree in the text box below. (OR)

**SKILL Section**

This section measures survey respondents' communication capacity (e.g., do respondents consider to whom they are or will be speaking, how others perceive what they say while in conversation, and the consequences of what they say?) and problem-solving style (i.e., independent or collaborative).

Note [To Panelists]: I shifted the "ability to investigate" sub-element to the "ability to problem-solve," since the latter represents the intended outcome of a globally competent individual's investigations (Appiah, 2006; Boix-Mansilla, Jackson, Asia Society & Council of Chief State School Officers, 2011). Global competence and, thus, cosmopolitanism involve "engagement" to solve global problems (Appiah, 2006, p. 168). Boix-Mansilla et al. (2011) write, "More than ever people, cultures, and nations are interdependent, requiring the preparation of students capable and disposed to solve problems on a global scale and participate effectively in a global economic and civic environment" (p. 97). The word "engagement" naturally suggests involvement of more than one person. Engagement to solve global issues frequently requires collaboration, such as in a work environment (e.g., Adler & Bartholomew, 1992) or in a community setting (e.g., Harris, 2013). Given this connection, therefore, between the sub-elements of the "ability to problem-solve" and the "ability to collaborate," I combined the two, resulting in a survey section that measures...
problem-solving style and communication capacity, both of which are beneficial in the navigation of everyday life in diverse communities.

6. Please indicate your level of agreement or disagreement on including the SKILL Section, as defined above, in the Global Competence Survey.
   Strongly Disagree  Disagree  Agree  Strongly Agree

7. Please provide reasoning for your level of agreement/disagreement in the text box below. (OR)

**Respondent Background Section**

This section includes items that probe survey respondents' backgrounds such as where they are from, their travel experience, their frequency and types of exposure to cultures different from their own, whether or not they have completed academic courses related to foreign studies, their own perspective on whether or not they think they are globally competent according to my definition (provided in the survey), and their demographic information (i.e., gender and ethnic identity). Several learning theories connect with global competence development [e.g., Bandura's (1977) social learning theory; Kolb's (e.g., Kolb, Boyatzis, & Mainemelis, 1999) experiential learning theory, Lave's (1993) situated learning theory, and Vygotsky's (1986) social development theory]. These theories suggest that one's personal experiences and background can influence this development. A respondent's information from this section, thus, provides context to his or her answers given in the other survey sections.

8. Please indicate your level of agreement or disagreement on including the RESPONDENT BACKGROUND Section, as defined above, in the Global Competence Survey.
   Strongly Disagree  Disagree  Agree  Strongly Agree

9. Please provide reasoning for your level of agreement/disagreement in the text box below. (OR)

**Additional Feedback**

10. Please feel free to provide any additional feedback or comments in the text box below. (OR)
Appendix F

Delphi Questionnaire 2/Draft Survey 2

Questionnaire #2 includes four sections: Disposition/Affective Realm (Section I), Knowledge (Section II), Skill (Section III), and Respondent Background (Section IV). The organization of these sections and their subsections is described in the Intro Global Competence Survey attachment to the Round Two email. Each subsection includes instructions to survey respondents (i.e., individuals who will eventually complete this survey) and survey item response choices, some of which appear at the top of a subsection or are included within survey items. For each Global Competence Survey item presented in the four sections...

Please respond with either "Disagree" or "Agree" to denote whether or not you think a given item should be retained in the Global Competence Survey.

After each survey item or set of items for a subsection, you will find two additional items to answer, as appropriate:

- The first asks you to provide reasoning for any survey items for which you selected "Disagree."
- The second provides space for any additional comments about a survey item or set of items.

Note: The format of Questionnaire #2 was designed for this Delphi study, specifically to facilitate panelists' review of all section/subsection content. The actual Global Competence Survey, which will also be in an online format, will include skip logic so that survey items follow respondents' answers (e.g., those who have not traveled abroad will not receive further questions on this topic). Also, additional information for panelists about survey items and functionality appears in brackets [...] throughout this questionnaire.

Please enter your ID number, included within your Round 2 email, in the space below (all results will still be de-identified). You may exit the questionnaire by closing the browser and re-enter using the emailed Survey Monkey link. Your work will be saved while offline, but please re-enter the questionnaire using the same computer. You may submit your responses any time prior to the deadline. Most importantly, thank you for participating!

Please enter your ID number below. (Open Response - OR)

(NOTE: For each survey item, Delphi panelists selected either disagree or agree to indicate whether or not a given item should be kept in or discarded from the instrument.)
Section I: DISPOSITION/AFFECTIVE REALM

Instructions to Survey Respondents: For each of the statements below, please mark the alternative that best describes your opinion. [Response Choices: (1) Strongly Disagree, (2) Disagree, (3) Agree, (4) Strongly Agree]

1. I tend to classify people as either for me or against me. (Reverse Scored - R)
2. A person should always consider new possibilities.
3. Changing your mind is a sign of weakness. (R)
4. I believe we should look to our religious authorities for decisions on moral issues. (R)
5. I think there are many wrong ways, but only one right way, to almost anything. (R)
6. Basically, I know everything I need to know about the important things in life. (R)
7. Considering too many different opinions often leads to bad decisions. (R)
8. There are basically two kinds of people in this world, good and bad. (R)
9. I consider myself broad-minded and tolerant of other people’s lifestyles.
10. Coming to decisions quickly is a sign of wisdom. (R)
11. I believe that loyalty to one’s ideals and principles is more important than “open-mindedness.” (R)
12. If I think longer about a problem I will be more likely to solve it.
13. I believe that the different ideas of right and wrong that people in other societies have may be valid for them.
14. There is nothing wrong with being undecided about many issues.
15. I believe that laws and social policies should change to reflect the needs of a changing world.
16. I believe that the morality of permissiveness is no morality at all. (R)
17. I think that if people don’t know what they believe in by the time they’re 25, there’s something wrong with them. (R)
18. I believe letting students hear controversial speakers can only confuse and mislead them. (R)
19. Intuition is the best guide in making decisions. (R)
20. People should take into consideration evidence that goes against their beliefs.

(NOTE: For each survey item, Delphi panelists selected either disagree or agree to indicate whether or not a given item should be kept in or discarded from the instrument.)

[To panelists] For any items with which you selected “disagree,” please explain your reasoning. For example, “Q# - I disagreed with including this item because…, etc. [OR]

[To panelists] For any additional comments regarding this section, please use the space below. [OR]
Section II: KNOWLEDGE

Subsection A – Self-Knowledge: Instructions to Survey Respondents – For each of the statements below, please mark the alternative that best describes your opinion. [Response Choices: (1) Strongly Disagree, (2) Disagree, (3) Agree, (4) Strongly Agree]

1. Often, I am unaware of my thoughts and feelings as they are happening, and only later get some idea about what I may really have been experiencing. (Reverse Scored - R)
2. During a demanding experience, I don’t even try to understand the thoughts and feelings that are flowing through me because it is all too confusing. (R)
3. When I get upset, I immediately react without any clear awareness of what I am doing. (R)
4. While I am in the middle of a personal problem, I get so involved that I just can’t at the same time rise above the situation to clearly examine what I am thinking and feeling. (R)
5. By thinking deeply about myself, I can discover what I really want in life.
6. In some situations, I can’t understand why I have behaved in particular ways, so I usually don’t even try. (R)
7. What I have learned about myself in the past has helped me to respond better to difficult situations.
8. Anytime I try to analyze my contributions to a problem, I get confused. (R)
9. If I need to, I can reflect about myself to understand the feelings and attitudes behind my past behaviors.
10. Most of the time, I get so involved in what is going on that I really can’t see how I am responding to a situation. (R)
11. Often my feelings about an experience are so complex that I don’t even try to understand them as they are going on. (R)
12. Spending time to understand my thoughts and feelings has not usually helped me to know myself better. (R)

(NOTE: For each survey item, Delphi panelists selected either disagree or agree to indicate whether or not a given item should be kept in or discarded from the instrument.)

[To panelists] For any items with which you selected “disagree,” please explain your reasoning. For example, “Q# - I disagree with including this item in the survey because…; Q# - I disagree with including this item because…, etc.” (OR)

[To panelists] For any additional comments regarding this section, please use the space below. (OR)
Subsection B (KNOWLEDGE) – Defining “Globalization”:

[To survey respondents] In your own words, please define the term “globalization.” (OR)

(NOTE: For each survey item, Delphi panelists selected either disagree or agree to indicate whether or not a given item should be kept in or discarded from the instrument.)

[To panelists] If you selected “disagree,” please explain your reasoning. (OR)

[To panelists] For any additional comments regarding this section, please use the space below. (OR)

Subsection C (KNOWLEDGE) – Global Literacy: Instructions to Survey Respondents – Please mark your answer for each of the following nine questions. [Answers with two asterisks (**) denote the correct choice.]

1. In 1950 there were fewer than one billion children (aged 0-14) in the world. By 2000 there were almost two billion. How many do UN experts think there will be in 2100? (See Q1 Graph below). [Response Choices: 4 billion, 3 billion, 2 billion**]

2. There are 7 billion people in the world today. Of the Q2 Maps below, which one do you think shows best where they live in the Americas, Europe, Africa and Asia? [Response Choices: A**, B, or C]

3. What do you think is the life expectancy in the world as a whole today? [Response Choices: 70 years**, 60 years, or 50 years]

4. What percentage of adults in the world today are literate – can read and write? [Response Choices: 80%**, 60%, or 40%]

5. On average, in the world as a whole today, men aged 25-34 have spent 8 years in school. How many years on average have women in the same age group spent in school? [Response Choices: 3 years, 5 years, or 7 years**]

6. What percentage of the world’s one-year old children in vaccinated against measles? [Response Choices: 20%, 50%, 80%**]

7. In the last 20 years the proportion of the world population living in extreme poverty has... [Response Choices: Almost doubled, Remained more or less the same, or Almost halved**]

8. What percentage – approximately – of total world energy generated, comes from solar and wind power? [Response Choices: 1%**, 5%, or 10%]

9. In 1965, the number of babies born per woman in the world, on average, was 5. What do you think the number is today? (Please see Q9 Graph below). [Response Choices: 4.5 babies, 3.5 babies, or 2.5 babies**]
NOTE: For each survey item, Delphi panelists selected either disagree or agree to indicate whether or not a given item should be kept in or discarded from the instrument.

[To panelists] For any items with which you selected “disagree,” please explain your reasoning. For example, “Q# - I disagree with including this item in the survey because…; Q# - I disagree with including this item because…, etc.” (OR)

[To panelists] For any additional comments regarding this section, please use the space below. (OR)

Subsection D (KNOWLEDGE): World Language Knowledge

1. Please state your native (first) language(s) in the space below. (OR)

2. Please list any additional language(s) learned and how long you have been learning each language (Example – 6 months, Spanish – 2 years). Please type N/A if you have not learned additional languages. (OR)

NOTE: For each survey item, Delphi panelists selected either disagree or agree to indicate whether or not a given item should be kept in or discarded from the instrument.

[To panelists] For any items with which you selected “disagree,” please explain your reasoning. For example, “Q# - I disagree with including this item in the survey because…; Q# - I disagree with including this item because…, etc.” (OR)

[To panelists] For any additional comments regarding this section, please use the space below. (OR)

Subsection E (KNOWLEDGE) – Knowledge of Current Events

1. Please name two examples of national (within your home country) events from the past two months. (OR)
2. Please name two examples of international (outside your home country) events from the past two months. (OR)

(NOTE: For each survey item, Delphi panelists selected either disagree or agree to indicate whether or not a given item should be kept in or discarded from the instrument.)

[To panelists] For any items with which you selected “disagree,” please explain your reasoning. For example, Q# - I disagree with including this item in the survey because…; Q# - I disagree with including this item because…, etc." (OR)

[To panelists] For any additional comments regarding this section, please use the space below. (OR)

**Section III: SKILL**

Subsection A – Communication Capacity: Instructions to Survey Respondents --
For each of the statements below, please mark the alternative that best describes your opinion. [Response Choices: (1) Strongly Disagree, (2) Disagree, (3) Agree, (4) Strongly Agree]

1. After a conversation I think about what I said.
2. During a conversation I pay attention to how others are reacting to what I am saying.
3. Generally, I think about how what I say may affect others.
4. Before a conversation, when possible, I think about what I am going to say.
5. Generally, I think about the consequences of what I say.
6. During a conversation I think about what topic to discuss next.
7. Generally, I think about how others might interpret what I say.
8. Generally, I am aware of people’s interests.
9. During a conversation I know if I have said something rude or inappropriate.
10. When I first enter a new situation I watch who is talking to whom.
11. When I first enter a new situation I think about what I am going to talk about.
12. When I first enter a new situation I try to “size up” the event.
13. After a conversation I think about what I said in order to improve for the next conversation.
14. During a conversation I am aware of when a topic is “going nowhere.”
15. Generally, I study people.
16. Before a conversation, when possible, I think about the topics that people might be talking about.
17. After a conversation I think about what the other person thought of me.
18. Generally, I think about the effects of my communication.
19. During a conversation I am aware of when it is time to change the topic.
20. Before a conversation, when possible, I mentally practice what I am going to say.
22. After a conversation I think about what I could have said differently.

(NOTE: For each survey item, Delphi panelists selected either disagree or agree to indicate whether or not a given item should be kept in or discarded from the instrument.)
Subsection B (SKILL) – Problem-Solving Style: Instructions to Survey Respondents – For each of the statements below, please mark the alternative that best describes your opinion. [Response Choices: (1) Strongly Disagree, (2) Disagree, (3) Agree, (4) Strongly Agree]

1. When faced with a difficult personal problem, it is better to decide yourself how to solve it rather than to follow the advice of others. (Reverse Scored – R)
2. I value other people’s advice when making important decisions.
3. In general, I do not like to ask other people to help me to solve problems. (R)
4. I prefer to make decisions on my own, rather than with other people. (R)
5. I like to get advice from my friends or family when deciding how to solve my personal problems.
6. I prefer to consult with others before making important decisions.
7. I usually find other people’s advice to be the most helpful source of information for solving my problems.
8. I would rather struggle through a personal problem by myself than discuss it with a friend. (R)
9. I do not like to depend on other people to help me to solve my problems. (R)
10. I usually prefer to ask other people for help rather than to try to solve problems on my own.

(NOTE: For each survey item, Delphi panelists selected either disagree or agree to indicate whether or not a given item should be kept in or discarded from the instrument.)

[To panelists] For any items with which you selected “disagree,” please explain your reasoning. For example, “Q# - I disagree with including this item in the survey because…; Q# - I disagree with including this item because…, etc.” (OR)

[To panelists] For any additional comments regarding this section, please use the space below. (OR)
**Section IV: RESPONDENT BACKGROUND**

1. Please indicate the location that you identify as your home in the space below. (OR)

2. Have you traveled outside the country that you consider as your home? If so, please list the country (countries) to which you have traveled in the space below. If you have not traveled outside your home country, please mark as N/A. (OR)

3. Have you stayed in a country, other than your home country, for over three months or visited one region repeatedly (over three times)? [Response Choices: Yes or No]

4. Do you often expose yourself to cultures that differ from your own in ways such as language, beliefs, and/or ways of life? [Response Choices: Yes or No]

5. [If “Yes” selected above] What are your sources of exposure? You may select more than one. [Respondent Choices: Books, dramas, movies, music, etc., generated from cultures different from your own; Contact with people from cultures different from your own outside your home country; and/or Contact with people from cultures different from your own in your home country]

6. If selected above, how often do you expose yourself to books, dramas, movies, music, etc., generated from cultures different from your own? [Response Choices: 1=Once a month; 2=2-3 times a month; 3=1-2 times a week; 4=Over 3 times a week; 5=Everyday]

7. If selected above, how often do you have contact with people from cultures different from your own outside your home country? [Response Choices: 1=Once a month; 2=2-3 times a month; 3=1-2 times a week; 4=Over 3 times a week; 5=Everyday]

8. [Follow-Up] What is your means of communications (e.g., by telephone, email, social media, Skype, etc.)? Please answer in the space below. (OR)

9. If selected above, how often do you have contact with people from different cultures from your own in your own country? [Response Choices: 1=Once a month; 2=2-3 times a month; 3=1-2 times a week; 4=Over 3 times a week; 5=Everyday]

10. [Follow-Up] What is your means of communications (e.g., face-to-face, telephone, social media, etc.). Please answer in the space below. (OR)

11. If you selected more than one source of exposure, which do you prefer the most? [Response Choices: Books, dramas, music, movies, etc., generated from cultures different from your own; Contact with people from cultures different from your own outside your own country; or Contact with people from cultures different from your own in your home country]

12. [If respondents marked “no” to “Do you often expose yourself to cultures that differ from your own in ways such as language, beliefs and/or ways of life?,” then they are directed to this question.] Why do you think you have had little to no exposure to cultures that differ from your own? Please answer in the space below. (OR)

13. Have you taken academic courses related to global international studies? [Response Choices: Yes or No]
14. [Definition presented in Background Statement for Round One]* Considering the global competence definition presented, do you think that you are globally competent? [Response Choices: Yes or No]

15. [Follow-Up] Please briefly explain your reasoning for your answer in the space below. (OR)

16. Please identify your gender in the space below. (OR)

17. Please identify your ethnic identity in the space below. (OR)

(NOTE: For each survey item, Delphi panelists selected either disagree or agree to indicate whether or not a given item should be kept in or discarded from the instrument.)

[To panelists] For any items with which you selected “disagree,” please explain your reasoning. For example, “Q# - I disagree with including this item in the survey because…; Q# - I disagree with including this item because…, etc.” (OR)

[To panelists] For any additional comments regarding this section, please use the space below. (OR)

(*The definition presented in the Background Statement sent to panelists for Round One read as follows: Global competence is one's embodiment of four elements: A disposition and affect toward culturally diverse peoples set into motion by open-mindedness; a body of knowledge founded on an understanding of one's own cultural background, globalization, world languages, and current events; a set of skills such as the abilities to collaborate, investigate globally pressing issues, and communicate effectively, with these three elements uniting for the purpose of taking action for the global good, thus rendering the globally competent individual a cosmopolitan.)
Appendix G

Delphi Questionnaire 3

Instructions: Based upon panelist responses to Questionnaire #2, I removed survey items from the pool of questions presented in each of the four Global Competence Survey sections: Disposition/Affective Realm, Knowledge, Skill, and Respondent Background. Questionnaire #3 comprises five parts following the Introduction: One part for each of the four survey sections displaying the remaining survey items and asking your level of agreement or disagreement with those remaining items, and a fifth part that includes Proposals for Consideration based on panelist comments in Rounds 1 and 2. Instructions for Questionnaire #3 are as follows:

- Please review the remaining items for each of the four survey sections and indicate your level of agreement/disagreement with those items.
- Please review the Proposals for Consideration and indicate your level of agreement/disagreement with each proposal presented.
- Please give any additional comments you may have in the spaces provided throughout this questionnaire.

Again, thank you for your time to participate!

Please enter your ID number: (Open Response - OR)

Introduction

A cutoff point of 75% agreement amongst panelists – set prior to receiving panelist responses – was used to determine whether an item was retained or removed from the Global Competence Survey. I selected this percentage since it signals a tendency toward agreement by the panel. Using a percentage cutoff point provided a means of analysis for items accidentally skipped by respondents. All 10 panelists responded to Questionnaire #2 (i.e., N = 10); however, four respondents each skipped one item when completing the questionnaire, for a total of four skipped items. Three of these items reached the 75% cutoff point and appear in Questionnaire #3 and they are #8 in the Disposition/Affective Realm section, #10 in the Self-Knowledge subsection, and #18 in the Communication Capacity subsection. For these items, the percent agreement was calculated out of nine total panelists’ responses. The fourth skipped item #15 in the Communication Capacity subsection – did not reach the 75% agreement amongst the nine panelists who answered and is, thus, not included in this questionnaire.

The remaining items presented for each of the four Global Competence Survey sections contain the same wording as used in Questionnaire #2. Panelists offered a number of helpful suggestions of how to potentially reword survey items. Following the Delphi study, I will certainly return to these suggestions and make additional changes to remaining items. But for purposes of consistency in displaying results from Questionnaire #2, I retain the same wording in the present questionnaire.

Based on the qualitative and quantitative results from Rounds 1 and 2, the Global Competence Survey is moving toward a stronger focus on the Disposition/Affective Realm, self-knowledge, and skills related to effective intercultural communication, and
moving away from the need for fact-based knowledge. Evidence of this narrowed focus can be seen across the remaining survey items and in the proposals for Consideration presented in this questionnaire. Regarding insight gained on item formatting from analysis of Questionnaire #2, several panelist comments articulated concern over the inclusion of open-ended items in the survey. The Proposals for Consideration section, therefore, presents potential alternatives to address these concerns, which parallel the goal for this survey to require only 15 minutes or less for completion. While a survey cannot fully capture the nuance behind respondents’ answers, especially in the absence of open-ended items, it can provide a snapshot of certain tendencies in thinking and behavior for the survey administrator to then more fully explore when teaching and assessing for global competence. Following analysis of responses to this questionnaire, I will develop an outline of the revised Global Competence Survey to present in the Round 3 results.

On the following page [of Delphi Questionnaire 3 in SurveyMonkey], I provide an overview of panelist responses across Rounds 1 and 2 to help display any fluctuations in individual panelist opinions, since the information presented for each of the four survey sections is primarily drawn from analysis of the panel’s (group) opinion.

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<th>Round 2</th>
<th>KNOW</th>
<th>Round 1</th>
<th>Round 2</th>
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<th>Round 1</th>
<th>Round 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=20 items</td>
<td>n=26 items</td>
<td></td>
<td>n=26 items</td>
<td></td>
<td></td>
<td>n=32 items</td>
<td></td>
<td>n=17 items</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA → 4</td>
<td>90%</td>
<td>SA → 4</td>
<td>96.15%</td>
<td>SA → 4</td>
<td>87.5%</td>
<td>SA → 4</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA → 4</td>
<td>100%</td>
<td>A → 3</td>
<td>48.15%</td>
<td>A → 3</td>
<td>90.83%</td>
<td>SA → 4</td>
<td>88.24%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA → 4</td>
<td>70%</td>
<td>D → 2</td>
<td>44%</td>
<td>A → 3</td>
<td>68.76%</td>
<td>SA → 4</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A → 3</td>
<td>78.95%</td>
<td>A → 3</td>
<td>80.77%</td>
<td>SA → 4</td>
<td>96.66%</td>
<td>A → 3</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A → 3</td>
<td>100%</td>
<td>SA → 4</td>
<td>100%</td>
<td>SA → 4</td>
<td>100%</td>
<td>SA → 4</td>
<td>100%</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>SA → 4</td>
<td>100%</td>
<td>A → 3</td>
<td>92.31%</td>
<td>A → 3</td>
<td>80.65%</td>
<td>SA → 4</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA → 4</td>
<td>85%</td>
<td>SA → 4</td>
<td>68.23%</td>
<td>SA → 4</td>
<td>71.88%</td>
<td>SA → 4</td>
<td>94.12%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A → 3</td>
<td>50%</td>
<td>A → 3</td>
<td>26.32%</td>
<td>A → 3</td>
<td>76%</td>
<td>A → 3</td>
<td>84.71%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA → 4</td>
<td>95%</td>
<td>SA → 4</td>
<td>96.15%</td>
<td>SA → 4</td>
<td>93.76%</td>
<td>SA → 4</td>
<td>100%</td>
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</tr>
<tr>
<td>SA → 4</td>
<td>95%</td>
<td>SA → 4</td>
<td>96.15%</td>
<td>SA → 4</td>
<td>100%</td>
<td>SA → 4</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

The above table shows panelists' individual scores [i.e., Strongly Disagree (SD) = 1, Disagree (D) = 2, Agree (A) = 3, Strongly Agree (SA) = 4] for retaining each of the four sections in the Global Competence Survey as queried in Round 1, and his or her percent agreement with inclusion of the items presented for each of the four sections as queried in Round 2 [e.g., (Number of DISP items marked “Agree”/Total number of DISP items) * 100].

While a direct comparison cannot be made between the two rounds' scores, since a score of “Strongly Agree” in Round 1 does not necessarily equal 100% agreement, it is interesting to highlight some of the differences in scores between Rounds 1 and 2 for a number of panelists. For example, Panelist 16’s opinion seemed to make a positive “jump” (font appears in green) from “Agreeing” with the inclusion of the DISP section as defined in Round 1, to 100% agreement with the DISP items in Round 2. Similarly, Panelist 13’s opinion also seemed to jump from “Agreeing” with the inclusion of the RESP BKGR section in Round 1, to 100% agreement with the RESP BKGR items in Round 2. On the other hand, Panelist 7’s opinion seemed to “drop” (font appears in red) from “Agreeing” with the inclusion of the KNOW section as defined in Round 1 to 46.15% agreement with the KNOW items presented in Round 2. A drop in opinion is also apparent for Panelist 10 (“SA” for the DISP section in Round 1 to 70% agreement with DISP items in Round 2), Panelist 26 (“SA” for the DISP section in Round 1 to 65% agreement with DISP items in Round 2, “SA” for the KNOW section in Round 1 to 69.23% agreement with KNOW items in Round 2, and “SA” for the SKILL section in
Round 1 to 71.88% agreement with SKILL items in Round 2), and Panelist 32 ("A" for the DISP section in Round 1 to 50% agreement with DISP items in Round 2, and "A" for the KNOW section in Round 1 to 26.92% agreement with KNOW items in Round 2).

Despite the numerous instances of panelist agreement with items (both highlighted and not highlighted) evidenced in the table above, it is the opinion “drops” that illuminate areas of needed survey attention. These drops from Round 1 to Round 2 demonstrate that while people may agree (i.e., A or SA) with inclusion of a given section in the Global Competence Survey, they take issue with the types of items used to measure the sub-elements of that section. Round 3 results will include a similar table showing panelists’ level of agreement with the remaining items in each survey section as queried in this questionnaire using the SD-D-A-SA response categories.

**Part I: Section I: Disposition/Affective Realm**

This section measures Open-Mindedness with items adapted from the Actively Open-Minded Thinking (AOT) Scale (Stanovich & West, 1997, 2007).

<table>
<thead>
<tr>
<th>Open-Mindedness</th>
<th>% Agreement Amongst Panelists on Item Inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. A person should always consider new possibilities.</td>
<td>100%</td>
</tr>
<tr>
<td>3. Changing your mind is a sign of weakness. (R)</td>
<td>90%</td>
</tr>
<tr>
<td>4. I believe we should seek our religious authorities for decisions on moral issues. (R)</td>
<td>90%</td>
</tr>
<tr>
<td>5. I think there are many wrong ways, but only one right way, to almost anything. (R)</td>
<td>80%</td>
</tr>
<tr>
<td>7. Considering too many different opinions often leads to bad decisions. (R)</td>
<td>90%</td>
</tr>
<tr>
<td>8. There are basically two kinds of people in this world, good and bad. (R)</td>
<td>100%</td>
</tr>
<tr>
<td>9. I consider myself broad-minded and tolerant of other people's lifestyles.</td>
<td>90%</td>
</tr>
<tr>
<td>10. Coming to decisions quickly is a sign of wisdom. (R)</td>
<td>80%</td>
</tr>
<tr>
<td>11. I believe that loyalty to one's ideas and principles is more important than &quot;open-mindedness.&quot; (R)</td>
<td>100%</td>
</tr>
<tr>
<td>12. If I think longer about a problem I will be more likely to solve it.</td>
<td>80%</td>
</tr>
<tr>
<td>13. I believe that the different ideas of right and wrong that people in other societies have may be valid for them.</td>
<td>90%</td>
</tr>
<tr>
<td>14. There is nothing wrong with being undecided about many issues.</td>
<td>80%</td>
</tr>
<tr>
<td>15. I believe that laws and social policies should change to reflect the needs of a changing world.</td>
<td>100%</td>
</tr>
<tr>
<td>18. I believe letting students hear controversial speakers can only confuse and mislead them. (R)</td>
<td>90%</td>
</tr>
<tr>
<td>19. Intuition is the best guide in making decisions. (R)</td>
<td>90%</td>
</tr>
<tr>
<td>20. People should take into consideration evidence that goes against their beliefs.</td>
<td>100%</td>
</tr>
</tbody>
</table>

The original Disposition/Affective Realm section included 20 items, but is now reduced to 16 items. Original item numbering was maintained above for continuity and analysis purposes across Questionnaires #2 and #3. A cutoff score of 75% agreement amongst panelists was used to determined whether an item was retained or removed from the survey.

1. Please indicate your level of agreement or disagreement with these 16 remaining survey items.

   Strongly Disagree  Disagree  Agree  Strongly Agree

2. For any additional comments, please use the space below. (OR)
**Part II: Section II: Knowledge**

This section now measures Self-Knowledge using items adapted from the *Integrative Self Knowledge Scale* (Ghorbani, Watson, & Hargis, 2008), Understanding of Globalization (original item), World Language Knowledge (original items), and Knowledge of Current Events (original item).

<table>
<thead>
<tr>
<th>Self-Knowledge</th>
<th>% Agreement Amongst Panelists on Item Inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Often, I am unaware of my thoughts and feelings as they are happening, and only later get some idea about what I may really have been experiencing. (R)</td>
<td>80%</td>
</tr>
<tr>
<td>2. During a demanding experience, I don't even try to understand the thoughts and feelings that are flowing through me because it is all too confusing. (R)</td>
<td>80%</td>
</tr>
<tr>
<td>5. By thinking deeply about myself, I can discover what I really want in life.</td>
<td>80%</td>
</tr>
<tr>
<td>7. What I have learned about myself in the past has helped me to respond better to difficult situations.</td>
<td>100%</td>
</tr>
<tr>
<td>9. If I need to, I can reflect about myself to understand the feelings and attitudes behind my past behaviors.</td>
<td>80%</td>
</tr>
<tr>
<td>10. Most of the time, I get so involved in what is going on that I really can't see how I am responding to a situation. (R)</td>
<td>77.78%</td>
</tr>
<tr>
<td>12. Spending time to understand my thoughts and feelings has not usually helped me to know myself better. (R)</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Defining Globalization**

1. In your own words, please define the term "globalization." [Open Response] 80%

**World Language Knowledge**

1. Please state your native (first) language(s) in the space below. [Open Response] 100%

2. Please list any additional language(s) learned and how long you have been learning each language. [Example: 6 months, Spanish - 2 years]. Please type N/A if you have not learned additional languages. [Open Response] 80%

**Knowledge of Current Events**

1. Please name two examples of international (outside your home country) events from the past two months. [Open Response] 80%

The original Knowledge section included 26 items, but is now reduced to 11 items. Original item numbering was maintained above for continuity and analysis purposes across Questionnaires #2 and #3. A cutoff score of 75% agreement amongst panelists was used to determine whether an item was retained or removed from the survey. Even though one global literacy (i.e., Gapminder Foundation, 2013) item reached 80% agreement amongst panelists, I removed that item in addition to the eight other global literacy items that did not reach the 75% agreement threshold.

1. Please indicate your level of agreement or disagreement with these 11 remaining survey items.

   Strongly Disagree  Disagree  Agree  Strongly Agree

2. For any additional comments, please use the space below. (OR)
Part III: Section III: Skill

This section measures Communication Capacity and Problem-Solving Style using items adapted from the Cognitive Communicative Competence Scale (Duran & Spitzberg, 1995) and the Independent-Interdependent Problem-Solving Scale (Rubin, Watt, & Ramelli, 2012), respectively.

The original Skill section included 32 items, but is now reduced to 25 items. Original item numbering was maintained above for continuity and analysis purposes across Questionnaires #2 and #3. A cutoff score of 75% agreement amongst panelists was used to determine whether an item was retained or removed from the survey.

1. Please indicate your level of agreement or disagreement with these 25 remaining survey items.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

2. For any additional comments, please use the space below. (OR)
**Part IV: Section IV: Respondent Background**

This section queries respondents’ Home Location (original item), Travel Experience (original item), Exposure to Cultures that Differ from One’s Own (items adapted from Jeon & Lee, 2012), Academic Coursework in Global/International Studies (original item), Self-Perception of Global Competence (original items), and Gender and Ethnic Identity (original items).

<table>
<thead>
<tr>
<th>Respondent Background</th>
<th>% Agreement Amongst Panelists on Item Inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Please indicate the location that you identify as your home in the space below. [Open Response]</td>
<td>90%</td>
</tr>
<tr>
<td>2. Have you traveled outside the country that you consider as your home? If so, please list the country(ies) to which you have traveled in the space below. If you have not traveled outside your home country, please mark as N/A. [Open Response]</td>
<td>90%</td>
</tr>
<tr>
<td>3. Have you stayed in a country, other than your home country, for over three months or visited one region repeatedly (over three times)? [Response Choices: Yes or No]</td>
<td>100%</td>
</tr>
<tr>
<td>4. Do you often expose yourself to cultures that differ from your own in ways such as language, beliefs, and/or ways of life? [Response Choices: Yes or No]</td>
<td>100%</td>
</tr>
<tr>
<td>5. If &quot;Yes&quot; selected above. What are your sources of exposure? You may select more than one. [Response Choices: Books, dramas, movies, music, etc., generated from cultures different from your own; Contact with people from cultures different from your own outside your home country; and/or Contact with people from cultures different from your own in your home country]</td>
<td>90%</td>
</tr>
<tr>
<td>6. If selected above, how often do you expose yourself to books, dramas, movies, music, etc., generated from cultures different from your own? [Response Choices: 1=Once a month; 2=2-3 times a month; 3=1-2 times a week; 4=Over 3 times a week; 5=Everyday]</td>
<td>100%</td>
</tr>
<tr>
<td>7. If selected above, how often do you have contact with people from cultures different from your own outside your home country? [Response Choices: 1=Once a month; 2=2-3 times a month; 3=1-2 times a week; 4=Over 3 times a week; 5=Everyday]</td>
<td>100%</td>
</tr>
<tr>
<td>8. [Follow-Up] What is your means of communication (e.g., by telephone, email, social media, Skype, etc.)? Please answer in the space below. [Open Response]</td>
<td>90%</td>
</tr>
<tr>
<td>9. If selected above, how often do you have contact with people from cultures different from your own in your home country? [Response Choices: 1=Once a month; 2=2-3 times a month; 3=1-2 times a week; 4=Over 3 times a week; or 5=Everyday]</td>
<td>100%</td>
</tr>
<tr>
<td>10. [Follow-Up] What is your means of communication (e.g., face-to-face, by telephone, social media, etc.)? Please answer in the space below. [Open Response]</td>
<td>90%</td>
</tr>
<tr>
<td>11. If you selected more than one source of exposure, which source do you prefer the most? [Response Choices: Books, dramas, movies, music, etc., generated from cultures different from your own; Contact with people from cultures different from your own outside your home country; Contact with people from cultures different from your own in your home country]</td>
<td>100%</td>
</tr>
<tr>
<td>12. [If respondents mark &quot;No&quot; to &quot;Do you often expose yourself to cultures that differ from your own in ways such as language, beliefs, and/or ways of life,&quot; then they are directed to this question] Why do you think you have had little to no exposure to cultures that differ from your own? Please answer in the space below. [Open Response]</td>
<td>90%</td>
</tr>
<tr>
<td>13. Have you taken academic courses related to global/international studies? [Response Choices: Yes or No]</td>
<td>100%</td>
</tr>
<tr>
<td>14. [Definition presented in Background Statement from Round One] Considering the global competence definition presented, do you think that you are globally competent? [Response Choices: Yes or No]</td>
<td>80%</td>
</tr>
<tr>
<td>15. [Follow-Up] Please briefly explain your reasoning for your answer in the space below. [Open Response]</td>
<td>90%</td>
</tr>
<tr>
<td>16. Please identify your gender in the space below. [Open Response]</td>
<td>100%</td>
</tr>
<tr>
<td>17. Please indicate your ethnic identity in the space below. [Open Response]</td>
<td>100%</td>
</tr>
</tbody>
</table>

The original Respondent Background section included 17 items, and following analysis of Questionnaire #2 all these items remain. Original item numbering was maintained above for continuity and analysis purposes across Questionnaires #2 and #3. Response choices were included in the above table since a number of these items are interconnected. A cutoff score of 75% agreement amongst panelists was used to determine whether an item was retained or removed from the survey.
1. Please indicate your level of agreement or disagreement with these 17 remaining survey items.

Strongly Disagree  Disagree  Agree  Strongly Agree

2. For any additional comments, please use the space below. (OR)

**Part V: Proposals for Consideration**

Please review the following proposals and indicate your level of agreement/disagreement with each, irrespective of the responses you selected in the previous four sections of this questionnaire regarding the remaining survey items.

1. In Round 1, a panelist commented, “I think curiosity about the world we live in, curiosity about the unknown, are the necessary driving force.” Even though I connect the concept of curiosity with the Disposition/Affective Realm element and this panelist connects it with the Knowledge element, this comment correlates with a number of remarks from panelists in Round 2, especially in regards to the fact based global literacy and current event items and whether or not a need exists for such items. Ten or less non open-ended items measuring curiosity could demonstrate a respondent’s willingness to seek new information, ideas, experiences, etc., rather than measuring existing knowledge on finite subjects (e.g., world trends and current events). I define curiosity as “a strong desire to know, learn, or experience something” (adapted from Curiosity, 2016). Any added items measuring curiosity would be field-tested to remove extraneous items.

Given this information, please indicate your level of agreement or disagreement on the proposal to add non open-ended items measuring curiosity in the Global Competence Survey.

Strongly Disagree  Disagree  Agree  Strongly Agree

2. In Round 1, a panelist commented, “…it seems like there might be a bit of a gulf between the idea that someone is open to other views in general and that they might take action…” and that the “…idea of taking action suggests stronger commitment than just basic open-mindedness.” I propose including 10 or less non open-ended items in the Respondent Background section that measure types and frequency of respondent engagement in activities such as service-learning, community service, or international aid participation. Responses to these items could then serve as points of correlation to responses provided in the Disposition/Affective Realm section. These engagement items would be field-tested to remove any extraneous items.

Given this information, please indicate your level of agreement or disagreement on the proposal to add non open-ended items measuring respondent engagement in the Respondent Background section.

Strongly Disagree  Disagree  Agree  Strongly Agree
3. In Round 2, several panelists questioned how the open-ended items (i.e., the defining globalization and current event items) in the Knowledge section would be scored. Even though this has been considered and researched, this is an important point to consider especially with regards to consistency in scoring the items across different survey administrators.

Although the globalization and international current event items reached 75% agreement amongst panelists, I propose removing both of these items. Not only do these open-ended items (i.e., defining globalization and current events) pose potential scoring difficulties, theoretically they may also be unnecessary given the survey’s shift away from the fact-based, finite knowledge items.

Please indicate your level of agreement or disagreement on the proposal to remove the Defining Globalization and International Current Event items from the Knowledge section.

Strongly Disagree          Disagree          Agree          Strongly Agree

4. In Round 1, a panelist commented, “I strongly agree that knowledge of self is another fundamental element in determining Global Competence….Other sub-elements of KNOWLEDGE stand out as important, but not imperative.” A second panelist noted the following in Round 1 in regards to the Knowledge section, “….I think there is a difference between knowledge of self and knowledge of one’s own cultural background.” This person suggested that it should be made clear or at least considered in some way that a person should be able to demonstrate knowledge of the difficulties they might experience in understanding others because of the particular cultural milieu that shaped their worldview.

I propose adding non open-ended items (10 or less) measuring knowledge of one’s own cultural background to the self-knowledge items that remain after analysis of Questionnaire 2 responses. These newly added items would be field-tested to remove any extraneous items.

Please indicate your level of agreement or disagreement on the proposal to add non open-ended items measuring knowledge of one’s own cultural background to the Knowledge section.

Strongly Disagree          Disagree          Agree          Strongly Agree

5. In Round 2, a panelist questioned the scoring of the world language item, explaining “Although I agree with the second Open Response statement, I feel that it should be clarified. Years learning a language is a highly subjective concept. For instance, is this 2 years in an immersion program or 2 years using Rosetta Stone in your free time?...Alternatively, the respondents could reply with how comfortable they feel using their additional language to interact with speakers/users of that language….Perhaps a third question should be added asking about interaction with native speakers....” A second panelist made a similar comment: “A better measure of global interaction is whether or not they use the language on a regular basis....”

Based on these suggestions, I propose to 1) keep the native language item, 2) adjust the world language item to simply ask respondents to enter any additional language(s) they
speak (but not ask about length of time spoken), and 3) add a group of items surveying the frequency of and setting for use of the additional language(s). These items on native language, additional language(s) spoken, and frequency and setting of use would serve as a set of non open-ended items (except for asking respondents to name their native and additional languages spoken) and would be field-tested to remove any extraneous items.

Please indicate your level of agreement or disagreement on the proposal to include this revised set of language-related items.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

6. As a follow-up to the above question, I propose moving the language-related items to the Respondent Background section for use as points of correlation to other answers respondents provide in the survey.

Please indicate your level of agreement or disagreement on the proposal to move the language related items to the Respondent Background section.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

7. In Round 1, a panelist noted with regards to the SKILL section, “Communication is the very essence of society; communication skills (including expression of empathy) pave the way for and are honed by global competence. I am less sure about ‘problem-solving style’ [than communication skills]. It seems like you are leading up to a single answer to this sub-element (collaborative). If you are not collaborative, can you engage effectively in global action?” In Round 2, a panelist noted, “What about some assessment of communication effectiveness,” while another panelist commented about the Communication Capacity subsection that, “Too many questions are similar….Maybe some statements about how one understands their own barriers in effective intercultural communication.” Two other panelist comments from Round 2 noted, “…in this [problem-solving style subsection], it seems like the items are measuring collaboration tendency rather than problem solving style,” and “I don’t see the ‘global’ relevance of these [problem solving style] questions. They look more like general decision making or problem solving questions.”

If an individual can communicate well with people who culturally differ from him/herself (i.e., effective intercultural communication), then this could provide insight into whether or not he/she could collaborate well with others whose ideas and beliefs fundamentally differ from his/her own. For the purposes of this survey, the foundation of the “skill” element seems to be, from panelist comments, one’s ability to communicate well with culturally different individuals, whereas the problem-solving style piece seems peripheral in comparison.

Given these comments and the overall shift toward a stronger survey focus on the Disposition/Affective Realm, Self-Knowledge, and a move away from the need for fact-based knowledge, as noted in the Introduction, I propose replacing the Communication Capacity and Problem-Solving Style items with items measuring intercultural communication effectiveness. These newly added items would be field-tested to remove any extraneous items.
Please indicate your level of agreement or disagreement on the proposal to replace the Communication Capacity and Problem-Solving Style items with items measuring intercultural communication effectiveness in the Skill section.

Strongly Disagree    Disagree    Agree    Strongly Agree

8. As a follow-up to the above question, it is necessary to define what is meant by effective intercultural communication. I define this phrase as follows:

“The ability to respectfully exchange thoughts and ideas with individuals who culturally contrast from one’s self, using appropriate verbal and body language tailored to those present in the conversation, for the purpose of gaining mutual understanding of the various points of view offered despite any differences in personal, fundamental beliefs.”

Please indicate your level of agreement or disagreement with this definition of effective intercultural communication.

Strongly Disagree    Disagree    Agree    Strongly Agree

If you Strongly Disagree or Disagree with the effective intercultural communication definition presented, please revise as needed or define as you see appropriate in the space below. (OR)

9. In Round 1, a panelist commented, “Travel does not have to be international. I grew up in a Jewish section of Pittsburgh. I learned Jewish religion and customs in class and as a member of a school council. I was surrounded by signs in Yiddish and Hebrew; Jewish houses of worship; restaurants and bakeries; and businesses. My interest in travel came in large part [due] to that exposure.” A second panelist remarked in Round 1 with regards to the Respondent Background section, “I have some concerns that this will exclude certain people who have not had the opportunity (due to finances) to travel many places. I realize that is just part of the deal but it seems like a person could grow up as part of a marginalized group in the US (and not have done much travel, if any) yet still have a good understanding of how cultural difference works and that people have different backgrounds and beliefs. Their experience as a subjugated group might infuse them with conceptual understandings of this even though they haven’t had the opportunity to experiences it firsthand…”

In additional to these comments, it is challenging to meaningfully capture one’s travel experiences [e.g., has he/she traveled abroad? If so, what was the reason? Was the purpose of the travel for service-learning or for vacation? Even if it was for vacation, what did he/she do with that time (spend time getting to know the people local to the destination or stay in a resort?). From a formatting perspective, querying one’s travel experience requires a number of open-ended items and time for the respondent to feel like they’ve adequately answered the question. From a theoretical standpoint, as the two panelists noted, experiencing cultural difference can happen in one’s local community.

I propose, therefore, to remove the travel-related questions from the Global Competence Survey [i.e., Have you traveled outside the country that you consider as your home? And have you stayed in a country, other than your home country, for over three months or visited one region repeatedly (over three times)?]. Instead, an external measure of travel could be administered in conjunction with the Global Competence Survey during a field
test to understand if a relationship exists between global competence and travel experience. If such a relationship is confirmed, then appropriate items querying travel background can be added back in to the Global Competence Survey.

Please indicate your level of agreement or disagreement on the proposal to remove the travel related items from the Global Competence Survey.

Strongly Disagree  Disagree  Agree  Strongly Agree

10. For any additional comments, or suggestions regarding existing tools measuring curiosity, engagement, knowledge of one’s own cultural background, frequency and setting of world language use, and/or intercultural communication effectiveness, please use the space below. (OR)
Appendix H

Revised Survey

(Section I: Disposition/Affective Realm – open-mindedness scale; Section II: Knowledge – self-knowledge scale; Section III: Skill – communication capacity scale and problem-solving scale; Section IV: Respondent Background. As in Draft Survey 1, the first three sections would not be labeled to reduce any effect that such labels would have on participant responses.)

**Section I**

For each of the statements below, please mark the alternative that best describes your opinion.

(1) Strongly Disagree  (2) Disagree  (3) Agree  (4) Strongly Agree

1. A person should always consider new possibilities.
2. Changing your mind is a sign of weakness. (R)
3. I believe we should look to our religions authorities for decisions on moral issues. (R)
4. I think there are many wrong ways, but only one right way, to almost anything. (R)
5. Considering too many different opinions often leads to bad decisions. (R)
6. There are basically two kinds of people in this world, good and bad. (R)
7. I consider myself broad-minded and tolerant of other people’s lifestyles.
8. Coming to decisions quickly is a sign of wisdom. (R)
9. I believe that loyalty to one’s ideals and principles is more important than “open-mindedness.” (R)
10. If I think longer about a problem I will be more likely to solve it.
11. I believe that the different ideas of right and wrong that people in other societies have may be valid for them.
12. There is nothing wrong with being undecided about many issues.
13. I believe that laws and social policies should change to reflect the needs of a changing world.
14. I believe letting students hear controversial speakers can only confuse and mislead them. (R)
15. Intuition is the best guide in making decisions. (R)
16. People should take into consideration evidence that goes against their beliefs.

(NOTE: The (R) next to certain items denotes that those given items will be reverse scored. The (R) will not appear in the survey version given to future respondents.)
**Section II**

For each of the statements below, please mark the alternative that best describes your opinion.

(1) Strongly Disagree  (2) Disagree  (3) Agree  (4) Strongly Agree

1. Often, I am unaware of my thoughts and feelings as they are happening, and only later get some idea about what I may really have been experiencing. (R)
2. During a demanding experience, I don’t even try to understand the thoughts and feelings that are flowing through me because it is all too confusing. (R)
3. By thinking deeply about myself, I can discover what I really want in life.
4. What I have learned about myself in the past has helped me to respond better to difficult situations.
5. If I need to, I can reflect about myself to understand the feelings and attitudes behind my past behaviors.
6. Most of the time, I get so involved in what is going on that I really can’t see how I am responding to a situation. (R)
7. Spending time to understand my thoughts and feelings has not usually helped me to know myself better. (R)

(NOTE: The (R) next to certain items denotes that those given items will be reverse scored. The (R) will not appear in the survey version given to future respondents.)

**Section III: Subsection A**

For each of the statements below, please mark the alternative that best describes your opinion.

(1) Strongly Disagree  (2) Disagree  (3) Agree  (4) Strongly Agree

1. After a conversation I think about what I said.
2. During a conversation I pay attention to how others are reacting to what I am saying.
3. Generally, I think about how what I say may affect others.
4. Before a conversation, when possible, I think about what I am going to say.
5. Generally, I think about the consequences of what I say.
6. During a conversation I think about what topic to discuss next.
7. Generally, I think about how others might interpret what I say.
8. During a conversation I know if I have said something rude or inappropriate.
9. When I first enter a new situation I watch who is talking to whom.
10. When I first enter a new situation I think about what I am going to talk about.
11. After a conversation I think about what I said in order to improve for the next conversation.
12. During a conversation I am aware of when a topic is “going nowhere.”
13. Before a conversation, when possible, I think about the topics that people might be talking about.
14. After a conversation I think about what the other person thought of me.
15. Generally, I think about the effects of my communication.
16. During a conversation I am aware of when it is time to change the topic.
17. After a conversation I think about what I could have said differently.
Section III: Subsection B

For each of the statements below, please mark the alternative that best describes your opinion.

(1) Strongly Disagree       (2) Disagree       (3) Agree       (4) Strongly Agree

1. When faced with a difficult personal problem, it is better to decide yourself how to solve it rather than to follow the advice of others. (R)
2. I value other people’s advice when making important decisions.
3. In general, I do not like to ask other people to help me to solve problems. (R)
4. I like to get advice from my friends or family when deciding how to solve my personal problems.
5. I prefer to consult with others before making important decisions.
6. I usually find other people’s advice to be the most helpful source of information for solving my problems.
7. I would rather struggle through a personal problem by myself than discuss it with a friend. (R)
8. I do not like to depend on other people to help me to solve my problems. (R)

(NOTE: The (R) next to certain items denotes that those given items will be reverse scored. The (R) will not appear in the survey version given to future respondents.)

Section IV: Respondent Background Information

1. Please state your native (first) language(s) in the space below. (Open Response-OR)
2. Please list any additional language(s) learned and how long you have been learning each language (Example: French – 6 months, Spanish – 2 years). Please type N/A if you have not learned additional languages. (OR)
3. Please indicate the location that you identify as your home in the space below. (OR)
4. Have you traveled outside the country that you consider as your home? If so, please list the country (countries) to which you have traveled in the space below. If you have not traveled outside your home country, please mark as N/A. (OR)
5. Have you stayed in a country, other than your home country, for over three months or visited one region repeatedly (over three times)?
   Yes ___
   No ___
6. Do you often expose yourself to cultures that differ from your own in ways such as language, beliefs, and/or ways of life?
   Yes ___
   No ___
6 (a). [If "yes" marked] What are your sources of exposure? You may select more than one.

___ Books, dramas, movies, music, etc., generated from cultures different from your own
___ Contact with people from cultures different from your own outside your home country
___ Contact with people from cultures different from your own in your home country

6 (b). [If selected above] How often do you expose yourself to books, dramas, movies, music, etc., generated from cultures different from your own?

___ Once a month
___ 2-3 times a month
___ 1-2 times a week
___ Over 3 times a week
___ Everyday

6 (c). [If selected above] How often do you have contact with people from cultures different from your own outside your home country?

___ Once a month
___ 2-3 times a month
___ 1-2 times a week
___ Over 3 times a week
___ Everyday

6. (d). [Follow-Up] What is your means of communication (e.g., by telephone, email, social media, Skype, etc.)? Please answer in the space below. (OR)

6. (e). [If selected above] how often do you have contact with people from cultures different from your own in your home country?

___ Once a month
___ 2-3 times a month
___ 1-2 times a week
___ Over 3 times a week
___ Everyday

6 (f). [Follow-Up] What is your means of communication (e.g., face-to-face, by telephone, social media, etc.)? Please answer in the space below. (OR)

7. If you selected more than one source of exposure, which source do you prefer the most?

___ Books, dramas, movies, music, etc. generated from cultures different from your own
___ Contact with people from cultures different from your own outside your home country
___ Contact with people from cultures different from your own in your home country
8. [If respondents mark "No" to Item 6.] Why do you think you have had little to no exposure to cultures that differ from your own? Please answer in the space below. (OR)

9. Have you taken academic courses related to global/international studies?
   Yes ___
   No ___

10. Considering the global competence definition presented, do you think that you are globally competent?

   “Global competence is an individual's embodiment of four elements: A disposition and affect toward culturally diverse peoples set into motion by open-mindedness and curiosity; cultural self-knowledge; skills related to intercultural communication effectiveness; and a propensity to continually apply lessons learned to take action on behalf of strangers, thus rendering the globally competent individual a cosmopolitan.”
   Yes ___
   No ___

10 (a). [Follow-Up] Please briefly explain your reasoning for your answer in the space below. (OR)

11. Please identify your gender in the space below. (OR)

12. Please indicate your ethnic identity in the space below. (OR)
Appendix I

Chapter 5 Supplemental Material

Future Research: Conduct Factor Analysis (Chapter 5, p. 217)

Assuming appropriate inter-correlation results among the scales (e.g., no multicollinearity), a factor analysis using each of the eight survey scales as a variable (i.e., the four existing scales in the Revised Survey and the four proposed scales from the Delphi review) could produce up to eight total factors. Using a program such as SPSS, an examination of eigenvalues, variance, a scree plot, and residuals would help determine the number of factors to extract in the analysis (Mertler & Vannatta, 2002, p. 277).

According to the findings from the present work, I posit that it may be possible for several of the eight variables to exhibit high loadings on the same factors:

- **Open-mindedness** and **curiosity** could load onto one factor (disposition/affective realm)
- **Self-knowledge** and **cultural self-knowledge** could load onto a second factor (knowledge)
- **Communication capacity, problem-solving style,** and **intercultural communication effectiveness** could load onto a third factor (skill)
- **Respondent engagement** could load onto a fourth factor (action)

This method of analysis could also indicate if any scales do not belong in the survey or, in other words, exhibit low loadings (i.e., < |.3| for a sample of 300 respondents) on all of the extracted factors (Field, 2009b, p. 644). Examining the eigenvalues for each extracted factor in the analysis would reveal which factor(s) explained the most variance in all of the eight variables. This means, for instance, that if the disposition/affective realm factor displayed the highest eigenvalue, it would be interpreted as the most essential factor to the global competence conceptual framework.

Furthermore, since global competence values are currently unavailable, then using factor scores, or weighted averages, on each extracted factor derived from the scales’ factor loadings and respondents’ mean scale scores, could provide a preliminary method of scoring respondents’ competence characteristics. To use this method, I would continue to employ a four-point response format for all eight scales. While the weighted averages from each factor would likely need to remain separate, given their different eigenvalues (i.e., amount of total variance explained by a factor), using this average could provide a step toward a scoring method for the developing survey (Field, 2009b).

If an initial factor analysis revealed that certain scales (e.g., open-mindedness, curiosity) demonstrated high loadings on the same factor (e.g., disposition/affective realm), the next
step would be to drill down to examine the items of those scales in a separate factor analysis. This would help demonstrate whether or not items could be combined into a single scale. Using scale items as variables in a factor analysis would likely require a much larger sample size. Field (2009b) recommends “10 to 15 participants per variable” (p. 647). Thus, to conduct two factor analyses using 1) respondents’ mean scores on the eight scales and 2) their individual scale item scores for the scales in each survey section would require a much larger sample than if only performing the first of these analyses.
References


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