Intercultural global health assessment and reflection framework for teaching study abroad courses

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ABSTRACT

Objective: In this paper we describe the development and use of the Intercultural Global Health Assessment and Reflection (IGHAR) Framework. The framework is based on dimensions of Leininger’s Sunrise Model and a structured reflection process to guide student journaling.

Methods: The framework was tested in a cross-cultural comparison course in China that included didactic and experiential learning components about Chinese healthcare practices and the healthcare system. The course included nursing, social work and public health students and included a three week immersion component in Beijing. Healthcare issues studies were cancer, mental health and migrant health. Student reflection journals were analyzed using NVivo software.

Results: Students demonstrated an increased understanding of similarities and differences in each of the dimensions. In addition, key global perspective taking outcomes were evident.

Conclusions: We found that a systematic approach to using the dimensions of the Sunrise Model helped students demonstrate understanding of contextual factors related to healthcare. Interprofessional students learned to use a conceptual intercultural model and reflective learning process for exploring a new culture and healthcare system they can use in the future in both local and global settings. At the school level, the IGHAR framework can be used across disciplines to demonstrate changes in student global perspectives.

Key Words: Sunrise model, Social determinants of health, Interculture, International health, Study abroad, Global learning, Reflection, Nursing and social service professions

1. INTRODUCTION

American students are increasingly studying abroad, with almost 290,000 doing so in 2013/14, a doubling over the past 15 years.[1] In parallel, universities are increasingly developing mission statements that encourage international education experiences to create world citizens.[2,3] Recent research has shown that global experiences increase students’ sense of social responsibility, global competence, and global civic engagement,[4] as well as cognitive, interpersonal, and intrapersonal abilities.[5]

When nursing schools provide study abroad experiences they can meet national nursing accreditation goals of providing a liberal arts education, meet university international mission goals, and prepare their students for living in a global community. A useful definition of global learning, developed by the Association of American Colleges and Universities (AACU), is “a critical analysis of and an engagement with complex, interdependent global systems and legacies (such

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as natural, physical, social, cultural, economic, and political) and their implications for people’s lives and the earth’s sustainability.”[5]

To support university assessment of learning, the AACU convened faculty teams to develop learning rubrics. The Global Learning VALUE Rubric and the Intercultural Knowledge and Competence VALUE Rubric together provide useful indicators of the level of academic learning in study abroad programs. Key outcomes in the Global Learning VALUE Rubric include: global self-awareness, perspective taking, cultural diversity, personal and social responsibility, understanding global systems, and applying knowledge to contemporary global contexts.[6]

The AACU adopted Bennett’s[7] definition of intercultural knowledge and competence, “a set of cognitive, affective, and behavioral skills and characteristics that support effective and appropriate interaction in a variety of cultural contexts.” AACU’s Intercultural Knowledge and Competence VALUE Rubric outcomes include; development of knowledge related to both cultural awareness and cultural worldview frameworks, development of skills in the areas of empathy and verbal and nonverbal communication, and attitude outcomes associated with curiosity and openness.

Several outcomes of a liberal arts education identified by the American Association of Colleges of Nursing (AACN) can be met through global health experiences. Two of these include “applying knowledge of social and cultural factors to the care of diverse populations” and “demonstrate tolerance for the ambiguity and unpredictability of the world and its effect on the healthcare system”.[8]

Nursing faculty who lead study abroad programs can use these education markers in designing high quality study abroad programs. They can be integrated into course goals, provide the basis for designing learning experiences, and used in assessing learning. Faculty need well developed curriculum and conceptual models for use in courses to prepare students for global study abroad experiences, help students make sense of their experiences while onsite, and provide structure for student reflection of their learning and growth.[9, 10]

In this study, we tested the author-developed Intercultural Global Health Assessment and Reflection (IGHAR) framework. The framework was based on the dimensions of the Sunrise Model[11] and used concepts from the social determinants of health (SDH) to provide specificity to the dimensions. We anticipated that this specificity, along with a structured reflection process, would promote student articulation of significant learning about healthcare in China, our teaching focus, and allow them to contrast it with their knowledge of American healthcare.

### Literature review of the sunrise model and social determinants of health

The Sunrise Model[11] was chosen as the conceptual basis for this study because it provides a broad population-level view of cultural and social dimensions that influence care patterns and expressions of individuals, families, groups, and institutions. When the Sunrise Model was first published in 1988, the understanding of SDH was not widespread within the academic and healthcare communities. Yet, many parallels can be found in the factors included in the Sunrise Model and those identified as SDH.

The World Health Organization (WHO) describes SHD as the conditions in which people are born, grow, live, work, and age. These circumstances are shaped by the distribution of money, power, and resources at global, national, and local levels.[12] According to Dean & Fenton[13] SDH factors represent structural factors influencing health. Structural factors include those physical, social, cultural, organizational, community, economic, legal, and policy aspects of the environment that impede or facilitate efforts to avoid disease transmission. Research has found that part of the effects of each socioeconomic indicator on health is either explained by or mediated through other socioeconomic indicators.[14]

The descriptions below provide a basic linkage of the connections between the Sunrise Model dimensions and health and healthcare. When descriptions of the dimensions were found in Leininger’s work, they are included in the IGHAR framework and we provide operational definitions of each dimension (see Table 1).

Education Dimension: Education is considered an important social determinant of health globally. It has been tied to access to health care services, health care outcomes, and disparities in health status based on both individual and parental levels of educational attainment.[14, 15] Research at the National Bureau of Economics shows that the more educated report having lower morbidity from the most common acute and chronic diseases, are less likely to be hypertensive or to suffer from emphysema or diabetes, and have better physical and mental functioning.[16]

Technological Dimension: Technology is increasingly important in healthcare. Technologies are being used to prevent diseases (e.g., immunization), to screen diseases in asymptomatic people (e.g., mammography, colonoscopy), to diagnose (e.g., electrocardiogram), to treat diseases (e.g., chemotherapy), to rehabilitate (e.g., physical therapy) and to reduce errors (electronic medical records).[17, 18]
Religious and Philosophical Dimension: Culture or worldview refers to the way people tend to look upon the world or universe to form a picture or value stance about their life and the world about them. In addition, religion is viewed as an assemblage of beliefs, cultures, and views that relate humanity to spirituality and moral values.

Cultural Values, Beliefs, and Lifeway Dimension: According to Leininger cultural is the learned, shared, and transmitted values, beliefs, norms, and life practices of a particular group, and it guides thinking, decisions, and actions in patterned ways. Cultural care refers to the cognitively known values, beliefs, and patterned expressions that assist, support, or enable another individual or group to maintain well-being, improve a human condition or lifeway, or face death and disabilities.

Kinship and Social Dimension: The social support available to an individual through family, long-term friendships, and other types of social networks was linked as early as 1978 to health maintenance and identified as a mediating factor in the consequences of illness. Umberson suggested that one possible mechanism for this is that the social integration offered through family relationships may provide external regulation that facilitates internal self-regulation of health-related behaviors. For example, being married provides health protection, and research in the U.S. has found that married people enjoy better physical and mental health than those who are not married.

Political and Legal Dimension: There are numerous ways in which the politics and political philosophy of a country can influence the cultural meaning of care and the design of a health care system. Frequently, political philosophy becomes encoded in laws and regulations that become accepted practices, including healthcare. An example of a common issue that differentiates national healthcare systems is the debate about universal healthcare versus private healthcare.

Economic Dimension: Socioeconomic status underlies three major determinants of health: health care, environmental exposure, and health behavior. Better health is associated with having more income, more years of education, and a more prestigious job, as well as living in neighborhoods where a higher percentage of residents have higher incomes and more education.

In summary, the dimensions of the Sunrise Model published by Leininger, who was a nurse and an anthropologist, are well connected to current knowledge about social determinants of health. These dimensions can serve as an organizing framework as students develop knowledge about an unfamiliar culture and healthcare system abroad.

2. **INTERPROFESSIONAL HEALTHCARE COMPARISON COURSE**

Based on student demand for experiential learning about the cultural and healthcare system in China, a study abroad program was developed to provide system and population-level learning experiences. In order to offer students an experiential learning opportunity, an interdisciplinary course was developed for health and humanities students. The expected student outcomes included to: (1) understand the basic concepts of health care and medical social work; (2) understand the current services for patients with cancer, mental problems, and rural health care in China; (3) make comparisons between the health care services in China and the U.S. and understand the pros and cons of each system; and (4) understand cultural and ethical issues in health care.

The pre-departure sessions occurred over three weeks, with...
once-a-week day-long sessions on campus. The sessions integrated a wide range of learning experiences, including cultural and survival Mandarin language orientation and practice sessions, peer activities focused on getting to know one another, discussions of reading about the IGHAR framework and how it would be used for journaling, discussion of readings about key healthcare issues, logistics, and health and safety briefings.

During the onsite component students spent three weeks in Beijing at a major health science university, during which they learned about cancer care, mental health, and migrant health in China. These topics had been negotiated in advance with our faculty counterparts in the medical humanities program at the host university. Learning experiences during the morning classroom sessions included lectures by American and Chinese faculty, student presentations, small group discussions, and skits. In the afternoons American and Chinese students toured local agencies, including teaching hospitals, cancer treatment centers, and elementary schools.

A particularly rich component of the program was the intentional incorporation of student-to-student interaction. American and Chinese students in the same discipline were paired and worked in small groups for some activities in the morning classes. This encouraged students to develop relationships in which they could discuss what they were learning and get to know each other personally.

This course integrated a wide range of strategies to prepare students for the study abroad program and to maximize their learning while onsite and in class with Chinese student peers. Students were oriented to the IGHAR framework as a journal assignment.

Reflection assignment

In experiential education, reflection can provide a transformative link between experience and understanding of learning that occurs. Eyler and Giles found that the more rigorous the reflection in experiential learning, the better the learning, including academic outcomes; deeper understanding and better application of subject matter; increased complexity of problem and solution analysis; and openness to new ideas, problem-solving, and critical thinking skills. Effectively designed reflection assignments are based on clearly defined learning goals, reflection prompts, and feedback to students that assists them in furthering their critical thinking about their learning.

We adapted a structured process of Describe, Explain, Articulate Learning (DEAL) reflection that is widely used at our university and was developed by Ash and Clayton for experiential journaling. The assignment was based on the premise that reflection plays a key role in facilitating students’ capacity to articulate the academic learning, personal growth, and global engagement that occur from experiential learning.

Students were asked to keep daily journals and to record observations, ideas, and questions generated from class discussion, agency visits, and reading assignments. They were also asked to explore what they had learned about how care is understood and provided in China and how that is different or similar to the United States. For each dimension of the Sunrise Model, students responded to three prompts:

- Describe in detail your learning experience about health care in relation to the health care system, including the professional and folk systems; care patterns of individuals, families, and groups; and how culture and social dimensions influence care.
- Examine what is important about this experience (for example, cross-cultural comparisons of similarities and differences in behaviors, values, etc.) and how you learned it.
- Articulate your learning by describing why this matters and what you will do in light of this learning.

3. Results

3.1 Analysis

The study was approved by the university institutional review board. Students voluntarily submitted journals using the IGHAR components to articulate their learning. The student group included 10 undergraduate and nine graduate students. Eleven were in social work with 5 graduate students, four were undergraduates in nursing, and four were undergraduates in public health or other health sciences.

To explore themes in the student journal entries, we used a qualitative approach to identify reflections linked to the Sunrise Model dimensions. For each dimension we explored what and how students described their learning.

Student comments were linked to the dimension categories by two of the authors independently using NVivo qualitative data analysis software. When there were differences in classification, a third author participated in an analysis session until agreement was reached. Due to provision for anonymity, we did not know the identity or discipline of the students participating. We were particularly interested in comments that were reflective in nature, rather than those simply narrating what had occurred.

Trustworthiness of the data was addressed through various strategies. Credibility of the data was enhanced through the inclusion of students from multiple disciplines, assuring
students that their journals would be anonymously used for the study after the class was completed, and multiple journal entries where students responded to the same generic prompts. Transferability issues related to the setting and participants. In this study both universities were urban health science campuses and included undergraduate and graduate students. Dependability was addressed through the use of a well-developed learning tool, the DEAL model, and through operationalizing the dimensions of the Sunrise Model. Confirmability issues were addressed through having all three investigators involved in data analysis and development of the themes.

3.2 Findings

Student reflections demonstrated their understanding of how cultural constructs and social context permeate components of a health care system. For some dimensions, subcategories were used because the student reflections clustered into more than one topic. Representative student comments are shown in Table 2.

Students made connections between education and, respectively, access to care, income, employment, rural vs. urban dwelling, and ability to access the healthcare system. Typical comments included, “People who receive an education have access to better care” and “Education plays an important role in occupational opportunities, and these opportunities affect economic status”.

The kinship and social dimension was particularly interesting because it reflected a major difference in how health professionals in China communicate serious new diagnoses with patients versus families. Several students also commented on the fine balance between the individual as a member of the family and the family acting as a unit and on how younger Chinese show great respect to their elderly. Several students journaled about a story told by one of their Chinese classmates of his role in helping his grandmother. “He spent many hours very early in the morning to wait in a line (to get herbal medicine) for his grandmother.”

Culture was viewed as playing a significant role in how individuals in China identified and discussed health conditions such as mental illness. Following a debriefing session about mental illness, students’ journal comments showed that they had developed comparative skills. “The Chinese family plays a much larger role in health decision-making and care than the American family and families in China represent the main support system for patients while in the US social workers are an alternative resource”.

4. DISCUSSION

In this study we developed and tested the IGHAR framework for promoting student articulation of learning during a study abroad course. The IGHAR framework was based on the DEAL Model and Leininger’s Sunrise Model. Instead of looking primarily at the elements of a health care system or how systems are structured and funded, the IGHAR framework encouraged students to understand the differences and similarities between the American and Chinese healthcare systems from a cultural perspective. Students articulated culturally based knowledge of the healthcare system in all six dimensions of the Sunrise Model, including education; technology; religious and philosophical beliefs; cultural values, beliefs, and lifeway; kinship and social; political and legal; and economic.

Universities are increasingly supporting international education experiences as a way to promote global citizenship. Study abroad is an experiential pedagogy that can be used to increase students’ cultural awareness and competence.\(^{[34,35]}\) We found the IGHAR framework useful for American health professions students to articulate what and how they learned about key aspects of the Chinese culture and healthcare system. Student reflections were strengthened by using a defined structure to collect and organize their thoughts\(^{[29]}\) that helped students to see connections among the experiences, their current education, and their future professional development.\(^{[36]}\) Dewey\(^{[37]}\) often cited as a leader in the community-engaged education movement, suggested that reflection is the means by which students integrate learning into their existing frameworks and life experiences.

Our findings demonstrate the usefulness of the IGHAR framework as a strategy for interdisciplinary students to articulate their learning about the healthcare system and social context of another country. This finding is supported by others using the Sunrise Model in teaching study abroad courses.\(^{[38,39]}\)

Student outcomes can also be linked to nationally identified learning goals associated with global learning and citizenship. In viewing the student reflections using the AACU’s Global Learning Value Rubric, it is clear that students achieved specific knowledge that can be used as they graduate and enter a health profession. Students demonstrated greater global self-awareness by articulating their personal areas of comfort and discomfort with differences. One student embraced the integration of mind-body-spirit demonstrated in the traditional medicine clinic. Students developed their perspective-taking skills as they sought to understand the practice of sharing serious health diagnosis with family members rather than the patient.
The following is a student's reflection on their experience working in China and the United States. The student discusses various aspects of healthcare, including economic, political, and philosophical factors, as well as cultural and social considerations. The text is extracted from a journal article and presents a table summarizing the student's reflections across different domains.

### Table 2. Student reflections

<table>
<thead>
<tr>
<th>Domain</th>
<th>Reflection</th>
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<tr>
<td>Educational</td>
<td>People who receive an education have access to better care. This is typically the result of receiving better pay, which enables them to bear the cost of care. It is also the result of being able to navigate the health care systems in order to find aid when needed. For individuals in rural settings, healthcare affects and is affected by educational opportunities and achievement. Education plays an important role in occupational opportunities, and these opportunities affect economic status. Understanding how multiple factors of the Sunshine Model interact is crucial to determining how best to identify and meet the needs of the patients.</td>
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<tr>
<td>Technical</td>
<td>They have electronic cards for Chinese patients where all their medical information is uploaded and saved then could be transferred between different medical centers. Mind-Body-Spirit Connection</td>
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<tr>
<td>Religious and Philosophical</td>
<td>While Americans also believe the mind, body, spirit connection to a certain degree, the Chinese truly understand the importance of this connection. Illness is approached from all three of these aspects. Much greater emphasis seems to be placed on mind and spirit than the U.S. I think that the incorporation of all three of these areas is vital to treatment of the entire person.</td>
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<tr>
<td>Kinship and Social</td>
<td>Communication: In China, the communication is between the doctor and the patient’s family. The choice to tell the patient or others is decided by the family. Chinese patients may hide their health condition because they are either ashamed of their illness or to prevent family and friends from worrying about them and that this represents a part of their collective culture. The Chinese family plays a much larger role in health decision-making and care than the American family and that families in China represent the main support system for patients while in the US social workers are an alternative resource. Respect for family: He spent many hours very early in the morning to wait in a line (to get herbal medicine) for his grandmother. Family roles: In China, whether the family thinks that the patient is strong or weak will determine if they will inform the patient of their health status while in the US, a patient will determine whether or not his/her family knows what is going on. This may reflect the fact that the Chinese culture focuses on the group rather than the individual and that the process of telling an individual about the diagnosis is an example of this. The decision of telling the individual then rests on the shoulders of the family and not the individual doctor.</td>
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<tr>
<td>Cultural Values, Beliefs and Lifeway</td>
<td>Perception of Illness: We said that depression causes many sleeping issues, eating issues, and thoughts of suicide. However, the Chinese students described depression as a want to be alone, desperate, headaches, tiredness, sleepless, heartbroken, upset, miserable, anxious, bored, and with thoughts of suicide. The main difference that I noticed during the discussion is that the Chinese students agreed that Chinese people describe their feelings related to their body in some way. They do not usually describe feelings emotionally and mentally but rather by the way their body feels. This difference comes from their belief that the body and mind are one, whereas in the United States we express our emotions fairly freely, especially females. The difference of the way in which a depressed person would describe his/her feelings is what really makes mental health different in both countries. The way in which a patient may describe his/her feelings to whomever he/she is seeing will affect and determine the treatment that is received. In China, the doctors may tell the family the diagnosis and all other medical information of the patient and then leave the decision to tell the patient in the family’s hands, this is against the law in the US. For students providing care in the US to Chinese families, it is clear this issue would be challenging at both the personal and institutional levels. In terms of the Sunrise Model, the student would need to work through the issue of cultural care preservation or maintenance, cultural care accommodation or negotiation, cultural care repatterning or restructuring. Several of the Chinese speakers did state that there was an increasing move to be disclosing of serious diagnoses with the patient. In class discussions, US faculty shared that a similar evolution occurred regarding sharing serious health information with patients. Only 5.13% of China’s GDP was set aside for health expenditures in 2009 which is significantly less than the percentage in the US. With less money and resources being devoted to healthcare, there are fewer options for patients in China. She concluded that these economic factors greatly influence the care that is available. “In 2007, there were 40,000 new beds made available, but this created another problem in the form of a staff shortage. We learned last week that China has a tremendous nursing shortage and this increases that problem. A health care in both China and US are complex systems that can be very costly to citizens in need and seeking healthcare ultimately depends on wealth and ability to reach a facility though in both countries. The sheer cost of health care likely prevents many Chinese people from receiving the treatment they need and the exceedingly complicated system in the US prevents people from receiving coverage or being covered for the treatment that they need”. Disparities in Access: This experience was important to me because I learned the differences and similarities between both health care systems. It seems that in both cultures there is that gap between the rich and poor. If an individual in both countries has health insurance they will receive good treatment, and if they don’t they won’t receive the best help. It seems that in both cultures there is that gap between the rich and poor. If an individual in both countries has health insurance they will receive good treatment, and if they don’t they won’t receive the best help. “What I did notice was that there is a bigger gap in China. If a person is from the rural area they receive little to no help or benefits. It was also interesting to know that the issue with migrant workers in the US seems to have many similarities with the ones in China however; the Chinese migrant workers are immigrants in their own country. Even though they are from China they still have to work in jobs that pay very little because they were born in the rural area. I learned that the Chinese migrant workers have a hard life because even in their own country they would be considered outcast because of where they were born.”</td>
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Cultural diversity competence was developed as students adapted their worldview in order to have meaningful conversations with their peer Chinese students. Understanding of differences in cultural attitudes toward personal and social responsibility was gained as students delved into the role of the family in healthcare decision-making. Throughout the experience students increased their understanding of global systems, including the design, financing, and technology used in the Chinese healthcare system, as they constantly contrasted the differences and similarities between the U.S. and Chinese systems.

Student reflections can also be linked to the outcomes of a liberal arts education identified by the American Association of Colleges of Nursing. Students articulated an understanding of the similarities and differences in the human experience in the American and Chinese healthcare cultures; students used inquiry, analysis, and information literacy skills to develop a greater understanding of culturally based practice issues; students engaged in ethical reasoning to understand social justice issues of healthcare in another country; and they demonstrated tolerance for the ambiguities between the U.S. healthcare system and the one they encountered in China.

Future development of the IGHAR framework will include use and further testing of it by more health study abroad programs at the university and nationally. Testing of the framework in courses with different learning objectives and designs will allow further development of its applicability.

5. CONCLUSION
This study extends knowledge about study abroad healthcare comparison programs and how a structured framework can facilitate articulated learning. We found that the IGHAR framework helped students to articulate the multiple contextual factors important in comparing and contrasting the health system they were familiar with in their home country and one about which they had little previous knowledge. We found that the IGHAR framework could be effectively used in an interprofessional course and across undergraduate and graduate programs. To continue building knowledge about best educational practices for study abroad programs, directors are encouraged to use a structured, conceptual approach in planning, providing, and assessing outcomes of these programs.

CONFLICTS OF INTEREST DISCLOSURE
The authors declare that there is no conflict of interest.

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