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An Anthropological Approach to Teaching Health Sciences Students Cultural Competency in a Field School Program

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Abstract

International immersion experiences do not, in themselves, provide students with the opportunity to develop cultural competence. However, using an anthropological lens to educate students allows them to learn how to negotiate cultural differences by removing their own cultural filters and seeing events through the eyes of those who are culturally different. Faculty at the University of Wisconsin-Madison's Global Health Institute believed that an embedded experience, in which students engaged with local communities, would encourage them to adopt this cultural competency 2.0 position. With this goal in mind, they started the Field School for the Study of Language, Culture, and Community Health in Ecuador in 2003 to teach cultural competency to medical, veterinary, pharmacy, and nursing students. The program was rooted in medical anthropology and embraced the One Health initiative, which is a collaborative effort of multiple disciplines working locally, nationally, and globally to obtain optimal health for people, animals, and the environment.

In this article, the authors identify effective practices and challenges for using a bio-cultural approach to educating students. In a semester-long preparatory class, students study the Spanish language, region-specific topics, and community engagement principles. While in Ecuador for five weeks, students apply their knowledge during community visits that involve homestays and service learning projects, for which they partner with local communities to meet their health needs. This combination of language and anthropological course work and community based service learning has led to positive outcomes for the local communities as well as professional development for students and faculty. [end of abstract]

Scholars agree that place and culture matter in physicians' experience of, and response to, mental and physical illness, and that cultural competence is fundamentally important in health sciences education.¹ Preparing health sciences students with the skills they need to engage diverse populations in the United States and abroad requires that we provide opportunities for them to immerse themselves in settings that are culturally, ethically, and materially diverse. International immersion experiences through global exchanges or medical missions do not, in themselves, provide students with the opportunity to develop these competencies. Students may be overwhelmed and discouraged by exposure to the combination of suffering, resource shortages, and ineffective systems.² These experiences often fail to highlight for students the local assets and the richness of cultural differences. In such cases, students may adopt attitudes that impede rather than enhance their future capacity for effective cross-cultural communication and care.² At the University of Wisconsin (UW)-Madison, we developed a health sciences field school with a bio-cultural approach to educating students, examining human biological functions and needs from an anthropological perspective. This approach incorporates a three-pronged pedagogy--study, respectful engagement with communities, and the opportunity for reflection--which has proven to be an effective tool for teaching future physicians, veterinarians, pharmacists, and nurses.

In the field school, we use ideas from the fields of medical anthropology, medical geography, and applied anthropology to help students understand the health sciences from multiple points of view. Ultimately, we believe that an "embedded" experience, in which students engage with local communities, encourages them to adopt a "Cultural Competency 2.0" position, which builds on the traditional approach to cultural competency (learning about "the other") by

encouraging students to reflect on their own ethnic, religious, class, and gender identities, and how these identities influence their understanding of the world.³ We agree with Lahey's belief that "face-to-face contact with real-world and tractable injustice can stoke the desire to serve and can allow a student to gain skills to have a very real and personal impact on health disparities, whether near home or abroad."² Thus, we believe that a field school experience has the potential to teach students about social justice and health issues.

In addition, Kumagai and Lyson argue that cultural competency in health education should go beyond simple relativism to include the development of a "critical consciousness," one that "places medicine in a social, cultural, and historical context, and which is coupled with an active recognition of societal problems and a search for appropriate solutions."⁴ Their approach, which is based on the consciousness-raising insights of Paulo Freire⁵, encourages both students and faculty to account for myriad power structures and the reality of inequality. An effective field school thus draws back the curtain on such issues, which often are obscured by rhetoric, distance, and the simple fact that the scope of inequity can affect our understanding of it.

As longtime members of the UW field school team, we reflect in this article on the trajectory of the program as it has evolved from a primarily classroom-based experience to one that now includes projects and long-term partnerships with communities in Ecuador. Our efforts, are one response to the recent call by the National Institutes of Health for an interdisciplinary approach to the cultural and social complexity of health-related issues.⁶ Specifically, the field school addresses the "growing acceptance of qualitative and social science research, the formation of interdisciplinary research teams, and use of multi-level approaches to investigate complicated

health problems, such as the patient's point of view and cultural and social models of illness and health."⁶ We argue in this article that the influences shared by the human biology and social/cultural contexts must be made transparent for broadly targeted health initiatives, such as One Health, to be successful. We then suggest that field experiences in culturally diverse settings can help students better understand the One Health concept in a truly holistic sense. Finally, we share findings from a decade of students' reflections and survey data that we hope will prove useful for institutions trying to introduce cultural and social elements into the health sciences curricula.

About the UW Health Sciences Field School Program

Program overview

Started in 2003 as a two-year pilot, the UW Field School for the Study of Language, Culture, and Community Health in Ecuador exposes students to the realities of illness and healing in a developing country, while also teaching them the Spanish language. The structure for the program grew out of conversations between the participating health sciences schools (medicine, veterinary, pharmacy, nursing) and the UW Latin American, Caribbean, and Iberian Studies program. Andean Health and Development, a health nongovernmental organization founded by Dr. David Gaus, partnered with the university to establish teaching and field sites in Ecuador. Several university sources, including the Latin American, Caribbean, and Iberian Studies program, provided financial support.

Today, the university's International Academic Programs (IAP) promotes the field school and provides administrative support. Each year, the IAP announces the program, collects applications

and other student documents, and works with the Global Health Institute (GHI) to orient and teach students. That year's faculty team reviews all applications, including an essay and academic records, to accept students into the program.

Since its inception in 2003, 133 students have participated in the program. Approximately 35% have been medical students, 20% veterinary students, 20% pharmacy students, and 25% students in either nursing or another health-related program. In 2013, participation in the program cost each student \$4,400, not including airfare and some personal expenses. Since the program is more than four weeks long, it meets the minimum federal guidelines that allow students to use financial aid to pay for some expenses.

The field school program is led by one of us (F.T.H.), who, as an anthropologist, has been engaged in South America for over 20 years. From the start, the curriculum has used medical anthropology as the principal lens for learning and has focused on the practice of traditional or indigenous medicine. The GHI provides students who participate in the field school program with a multidisciplinary foundation in the health sciences (medicine, veterinary, pharmacy, public health, and nursing). Gradually, the field school program expanded beyond teaching just the health sciences to teaching students about food and nutrition, water and sanitation, gender, and poverty.

Program structure

While specific program content and field school sites have varied over the 11-year history of the program, the basic structure has remained the same. First, students participate in a semester-long

preparatory course focusing on interdisciplinary, region-specific topics. During didactic lectures students learn from experts in the health and social sciences, addressing topics such as nutrition, water and sanitation, environmental health, poverty, and Latin American history and politics. Students also are exposed to community engagement strategies and principles. Second, a spring orientation with the course director prepares students for the anthropological lens they will use while in Ecuador, as well as for the planned community engagement activities. Next, students spend 5 weeks in Ecuador. They take language classes in the mornings followed by afternoon anthropology seminars, which include study, discussion, field observations, and community visits. Near the end of the program, students divide into groups to participate in community engagement activities tailored to their specific interests. Throughout the program, students participate in reflection (oral and written) activities. At a reunion meeting at the UW campus two months after completion of the program, students again reflect on their experiences.

While in Ecuador, students apply their knowledge during community visits that involve homestays and hands-on activities under the direct supervision of UW faculty and local collaborating health practitioners. The program focuses on the indigenous communities around Otavalo, with trips to the Amazon and to rural communities on the coast of Ecuador. Students learn how various groups understand and respond to illness, interact with animals, and employ local plants for both food and medicinal purposes. They also have an opportunity to critique western medical missions, discussing both the benefits and harms of these practices.

These field activities expose students to the realities of life in relatively poor communities. Students not only confront disparities but also learn alternative ways of healing the sick,

maintaining good health, and bringing new life into the world. Students write two “critical linkage” papers, which assess their classroom knowledge and their ethnographic insights. The goal of these papers is for students to reflect on the connections between health and social, political, economic, and cultural issues that they see during their field activities.

Faculty members from the GHI and the participating health sciences schools join the program at various points, offering lectures, guiding field activities, and mentoring students. Such faculty mentorship is crucial to helping students recognize salient social and cultural issues and addressing ethical questions related to poverty, racism, and gender. In addition, partners from each community in Ecuador visited by students now help guide the program by suggesting service learning opportunities that meet both the students’ and the community’s needs.

Program outcomes

The results of a 2012 survey reveal the impact of the program on 35 students. A majority of respondents (63%) indicated that they use their Spanish language skills in their primary employment, and 91% reported using the cross-cultural skills they acquired in the program. Half work with Latino populations and 84% with populations from other cultures. Eighty-seven percent agreed or strongly agreed that the program had a major impact on their lives, and 81% responded that such immersive cross-cultural experiences should be required for all students in their profession.

The Argument for Anthropology

Across the educational spectrum, educators are encouraging students to weave together a broader understanding of the natural and social sciences in real life settings. For example, a 2010 report by The Carnegie Foundation for the Advancement of Teaching called for more experiential and interdisciplinary learning in medical education.⁷ A 2012 article in the *New York Times* outlined changes to the MCAT, including a much greater focus on the humanities and social sciences.⁸ In addition, “ethnoveterinary” medicine is now discussed on websites and in journals. For example, the website for the World Veterinary Association prominently mentions the “one world-one health” concept as the “unified approach between veterinary and human medicine to improve global health for people and animals.”⁹ Finally, growing interest in ethnopharmacy and ethnobotany highlight the cultural aspects of plant-based medicines, while cultural competence appears in numerous articles on the American Association of Colleges of Pharmacy website.¹⁰

The social sciences can play an important, complementary role as health sciences students struggle to gain a wider breadth of competence. Foucault made the argument that the human body is worth studying beyond its biological structure.^{11,12} In addition, Scheper-Hughes and Lock argued that the biological human body is also a social and political entity that symbolizes, and is affected by, the inequalities and power structures of larger society.¹³ In his critical discussions of medical anthropology, Paul Farmer reflects on political economy and health, and “biosocial bodies” emerge as entities made of and altered by multiple forces.¹⁴ Finally, Abedini and colleagues suggested that firsthand experiences on short-term international service learning trips “may engender implicit insights and lessons regarding ethical and societal issues involved with global health and may stimulate the development of critical reflection on current and future professional roles for student participants.”¹⁵

A significant step in individuals being able to negotiate cultural difference comes from repositioning their perspective. Removing, as best we can, our own cultural filters and seeing events through the eyes of someone who is culturally different from ourselves, leads to what anthropologists call the emic perspective. The emic perspective (in contrast to the etic, or outsider, perspective) is what the world looks like from an insider's point of view, reflecting subjective evaluation of opportunities and barriers, and personal experiences of race, gender, and class. This repositioning can produce a profoundly new way of understanding why "they" eat, worship, dance, or heal differently than "we" do.¹⁶

The linkage papers written by the students who participated in the field school program in 2012 offered examples of how students' learning evolved in the field school setting. One medical student, for example, looked at research on ethnogynecology, supplemented by interviews and observations from community visits. She contrasted the cultural notion of *debilidad*, or the weakness and vulnerability associated with women's bodies, with the observations that indigenous women often worked long hours in the home and in the fields. Her reflections led to interesting conclusions about why some women still prefer to give birth in the home, despite the fact that hospitals may be nearby and offer virtually free maternal health care. A veterinary student observed that the *mestizo* and the indigenous people relate differently to animals, which affected their treatment of those animals. She also linked animal health care to structural issues in Ecuador, particularly the fact that veterinarians tended to be geographically and financially inaccessible. Finally, a pharmacy student wrote about the connections between race/ethnicity,

economic inequalities, and the lack of access to western medicine. Importantly, he recognized the ways that traditional indigenous medicine often helped meet health needs in such situations.

A One Health Framework

For centuries, scientists have recognized the intimate relationship between human, animal, and environmental health. For example, physicians and veterinarians collaborated on scientific discoveries and in education in the late 19th century.¹⁷ However, in the recent past, human and animal health practitioners have held distinct roles in education, research, and clinical practice. However, the globalization of our economies and emerging infectious and zoonotic diseases suggests that we, as health professionals, should rebuild these collaborative relationships. This is the idea behind the One Health Initiative, launched by the American Veterinary Medical Association and the American Medical Association in 2008 to promote increased communication and collaboration to improve health.¹⁸ One Health is defined as the collaborative effort of multiple disciplines working locally, nationally, and globally to obtain optimal health for people, animals, and our environment. One Health discussions include topics such as agro- and bioterrorism, antimicrobial resistance, global food and water systems, and comparative medicine.¹⁹

Our field school program embraces the multidisciplinary, One Health framework for the study of health and wellbeing in the communities we visit. We place students in a new environment in a developing country. During their time there, students rapidly develop an appreciation for the interconnected relationship of people and their animals. For example, students are exposed to two different cultural environments. In larger cities, families keep companion animals, such as

cats and dogs. In small rural communities, families live in close proximity to domesticated food-producing animals (i.e., chickens, pigs, goats, sheep, and cattle). These experiences lead to discussions of how human health and animal health are interdependent. Students learn that this interdependency is not based solely on preventing infectious and zoonotic diseases but also on economic value as healthy animals produce additional income that the family can use to pay for medical care.

Comments on the student survey regularly refer to the unique opportunity students have to work across health sciences disciplines in a field setting. For example, one student noted: “I really loved the multidisciplinary aspect of the course: medicine, veterinary medicine, cultural awareness, Spanish language skills, ecological/environmental awareness all interwoven together in equal importance.”

In addition to the community visits, we hold animal health workshops and clinics in rural communities. In these workshops, we talk about perceived problems, current health issues, and how both affect families and the community. Students form groups with interested members of the community to prepare preventative medications, administer medications, and communicate with the owners of the treated animals. This last step is especially important because students must learn to explain what treatments were given, why they were given, and for what side effects the owners should look. During the clinic, students often are excited about the physical action of treating animals. However, during group discussions afterwards, they exhibit an appreciation for the perceived and actual benefits of improved animal health on the community. During this activity, students also learn how to recognize the needs of the community, develop sustainable

methods to solve medical problems, and communicate in challenging situations, all valuable skills for their future careers.

As part of the field school program, we have developed strong relationships with local veterinarians and university faculty that have resulted in service learning opportunities for students and research projects that rely on students' participation for data collection. Students are able to learn from local veterinarians and compare and contrast veterinary medicine in Ecuador with veterinary medicine in the US. For example, as part of our ongoing project studying *Brucella* prevalence in food animals, students are asked to draw from their medical anthropology training to understand why brucellosis is endemic in countries such as Ecuador. Doing so helps them to understand why the disease also can be a challenge in their home state of Wisconsin. In addition, students gain firsthand experience monitoring and controlling outbreaks of zoonotic infectious diseases that they would otherwise not see in the US.

Experiential Learning and Community Engagement

Experiential learning, including observational visits, clinical shadowing, and cultural activities, is a key component of the field school program. Using quantitative and qualitative data also is an important part of the program, which helps students to reflect and report on their experiences.

The experiential learning activities culminate at the end of the program when students divide into smaller groups for three-day community homestays. During their homestays, students participate in service learning projects that are tailored to their primary career discipline.

The community engagement portion of the field school program is based on the principles of community based participatory research (CBPR), a collaborative approach that involves all partners in the research process and recognizes each partner's unique strengths. CBPR begins with a topic of importance to the community and aims to combine knowledge and action for social change to improve the health of the community and to eliminate health disparities.²⁰

During the preparatory course, students study CBPR. During their time in Ecuador, students are encouraged to engage community members to improve health and quality of life. These partnerships integrate learning and service to solidify long-term relationships, which increasingly are becoming community-led. Students also study a "walk-along" approach to engagement and learning.²¹ This approach encourages students to learn from communities through open and asset-based questions combined with community activities. During the preparatory course, students prepare a walk-along guide (what questions to ask, what to see and experience) on a topic of interest. The project encourages them to use all their senses to explore the community and learn about health and wellbeing.

During their time in Ecuador, students observe the provision of medical care in a variety of places, including traditional healers and herbalists in community settings, as well as western medical practitioners in Ecuadorian hospitals and clinics. Students also have the opportunity to witness traditional practices, for example the use of a guinea pig for diagnosis, and to hear from practitioners and local people about how they perceive these unique practices. Students visit the Jambi Huasi Clinic, which offers traditional and western medicines together.

In the early years of the program, students' service projects involved collecting medicines and organizing mobile clinics where clinical faculty provided medical care. Over time, both students and faculty questioned the value of these interventions compared to meeting the health needs of the community in more sustainable ways. Thus, service projects evolved so students now partner with local providers to distribute anti-parasitic medications, lead workshops in health education, and hold dental health clinics. The workshops include information about family planning, blood pressure monitoring, and the dangers of youth substance abuse. In return, members of the communities teach students about local birth practices, the use of locally grown medicinal plants, environmental health problems, and other aspects of traditional medicine.

Most years, students participate in herbal medicinal walks with a local guide who teaches them about specific plants and their uses. Pharmacy students have developed additional medicinal plant activities. For example, one activity was to provide better access to medicine in communities through a community pharmacy effort that involved the development of a first aid kit with traditional and western medicines. More recently, students initiated a systematic study of local plants and their medicinal properties by administering surveys in several indigenous communities.

Access to clean water has been a continual challenge in some of the communities, leading to several service learning projects. Students have assessed the water quality in collaboration with UW-Madison engineering students. One service learning project upgraded a water system, which markedly improved access to water for approximately 2,000 people from a cluster of remote rural communities.

Another service learning project focused on an early childhood care center, which was developed by and for local women. The female community leaders partnered with students on several projects related to the daycare center, including creating a community garden for the children, providing painting, games, and developmental activities, and procuring library resources. More recently, the same women responsible for establishing the daycare center approached us for help with a microenterprise effort to generate resources to invest in health and education for the young children of the community. To date, students have provided support for this endeavor in the form of product development, assistance with managing finances and inventory, and sponsorship of sales to provide income.

These service learning projects allow students to apply the anthropological and One Health concepts discussed in a classroom in the US to a real community in Ecuador. The community engagement activities provide the opportunity for authentic interaction between students, faculty, and community members. We hope that establishing and maintaining this trust and friendship will ultimately lead to improved human and animal health. From a community perspective, we have learned that these projects also have raised the consciousness of the community. For example, women who participated in the daycare center and microenterprise projects have commented that reflecting on their community's needs and ways to meet those needs have given them a deeper sense of understanding and empowerment. Community members now feel comfortable asking us to help them process difficult issues. For example, in summer 2012, they told us about the incipient drug problems with some local youth and asked that we lead discussions on the topic with different age groups. We also have worked with several

communities, at their request, to discuss reproduction options, domestic violence, and specific animal health problems.

Lessons Learned

Over the past decade, we have learned lessons that we hope will help others who are considering new ways to enhance student learning outside the classroom:

- Continuity, particularly regarding community partnerships, helps to build legitimacy for a program and leads to deeper connections between students/faculty and community members.
- The involvement of various health sciences (requiring the commitment of key personnel from each discipline) gives students an opportunity to understand the biological, economic, social, and cultural complexity of health issues, both locally and globally.
- Building trusted networks within the university and host country are essential for assuring a safe and meaningful experience.
- Exposing students to cultural differences is only the first step; meaningful cultural competency also should include engagement and critical reflection to make structures of power and issues of social and economic (in)justice more transparent.
- Community partnerships are fundamental to the program's sustainability and to the quality of students' and faculty members' experiences.

Conclusions

Anthropologists historically have favored a holistic perspective, one that takes a broad theoretical and methodological sweep, as a way of understanding humans' beliefs and practices. No one could account for all the contextual and conditioning factors that influence health and healing. However, in light of globalization, we must gather as much information as possible before diagnosing, prescribing, and making policy. We have found that training students who will be pharmacists, veterinarians, and doctors using an anthropological lens has many benefits. Culturally competent health care professionals, for example, will be better equipped to fight emerging infectious diseases, such as the SARS-like virus, by being able to synthesize social and natural science perspectives. From a One Health perspective, health care teams should include professionals from multiple disciplines, including nursing, pharmacy, and veterinary medicine, so students must learn how to work across disciplines to improve health.

Without the members of the communities where we work, our field school program would not succeed. We are invited into homes, gardens, and farms, and asked to participate in ritual performances, celebratory events, and communal work parties, which suggests a deepening level of trust and engagement. We believe that these growing partnerships have had positive outcomes for human and animal health, as well as have created enduring friendships at a time when "the other" is known too often only through distorting media, religious, economic, and political filters. These relationships are perhaps the most important aspect to consider when developing such an in-country training program.

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