ADVANCING HUMANITY in CAMBODIA

2012 - 2013 Learning Community
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CAMBODIA AND DISABILITY
Jo Ann Burkhardt, McMaster Fellow, 2012-2014

Introduction
Cambodia has experienced decades of unrest as a result of the bombing by the United States of America during the Vietnam War, genocide committed by the Khmer Rouge, a period of occupation by the Vietnamese, and civil war. The genocide by the Khmer Rouge (1975-79) left this Southeast Asian country with a destroyed infrastructure and a dearth of professionals in the areas of healthcare and education (Chandler, 2007). The Vietnamese occupation of Cambodia began in 1979 lasting until 1989 (Tan, 2007, pp. 15-16). During the occupation the rebuilding process of the education system began, but civil unrest continued until 1991 when The Paris Peace Accords was signed (ld., p. 16). By this time, lack of trained teachers, teaching materials and a systematic plan for rebuilding resulted in a struggling school system. The first comprehensive, educational, development international assistance was provided after the UN-sanctioned elections in 1993. Millions of dollars from international donors entered the country to assist with the rebuilding of the education system (Id.). Due to political instability however, the majority of educational reform initiatives were halted in 1997 and not restored until after the 1998 elections (Thomas, 2002). In 2000, the education system was "still ranked among the weakest in the world." (Id.).

The history of conflict and the resulting poverty has left large numbers of Cambodians with at least one type of disability (Connelly, 2009, pp. 125-26). Additionally, Cambodia is said to have one of the highest rates of disability in the world (Mak & Nordveit, 2011).

The United Nations and its Convention of the Rights of Persons with Disabilities was signed by Cambodia in 2007, ratified in 2012, and is considered one of the contributing factors which prompted the Kingdom of Cambodia to begin focusing attention on individuals with disabilities. Cambodia's national disability law was ratified in 2009 as The Law on the Protection and Promotion of the Rights of People with Disabilities. This law provides a framework for a Disability Action Council to begin addressing issues of human rights, education, and employment of individuals with disabilities in Cambodia. Currently, many barriers exist which impede full implementation of the 2009 disability law. These barriers include a lack of commitment and accountability on the part of the Cambodian government; social discrimination and stigma; limited access to financial resources; and lack of personal capable of training teachers, rehabilitation specialists, counselors, and medical personal regarding the definitions, causes, and interventions for individuals with disabilities (Mak & Nordveit, 2011).

Context
During the 2011-12 academic year, I conducted interviews with three governmental officials, three administrators from non-governmental organizations (NGOs), and two building level administrators (Directors) from two public high schools in Cambodia. In addition, the staff from three NGOs, 15 in total, were asked to discuss their understanding of autism and disability as it is understood within the kingdom of Cambodia. Semi-structured interviews were conducted with these organizations in order to determine the level of understanding of disability. Each group or individual was asked three questions. These questions were: (1) What disabilities are present within the population of Cambodia? (2) What is autism? and (3) What is the relationship between Buddhist practice and beliefs and disabilities?

During these semi-structured interviews, follow-up questions were asked throughout the interviews to clarify points or to request further information on a topic. All of the participants spoke English so the use of a Khmer translator was not necessary. The researcher recorded responses in writing in the form of field notes.

Interviews: May and June 2012
Two governmental officials within the Ministry of Social Affairs, Veterans and Youth Rehabilitation provided information pertaining to the Disability Action Council (DAC) and 2009 Hagar Study (Carter, 2009). This study was conducted by Carter for Hagar International with the support from UNICEF and the kingdom of Cambodia (ld.). The findings from this study suggested that community leaders, individuals within communities, and NGOs lack a clear understanding of disability. The directors agree with the findings of the study and indicated that they, however, had a clear understanding that disability includes both physical and intellectual disabilities. Directors indicated that they were familiar with the term autism, but considered it to be solely another type of intellectual disability. Directors indicated that they viewed the role of the ministry as one of endorsing the work of various NGOs and their work with disabilities.

The directors stated that Theravada Buddhism plays an important role when discussing disability within Cambodia, and they believed that it impacts the view of most Cambodians in their understanding of disability. The Directors explained that, it was their view, that most Cambodians view disability as a result of evil in a past life. They indicated that Buddhism is a major influence in all aspects of a Cambodian's life, and although they cannot change the teachings of this religion, they were optimistic that the
Cambodian view of disability could be changed. During the interview, the directors offered that building the capacities of individuals with disability was the most important mission of their governmental ministry.

One of the four NGO directors provided information pertaining to disability in Cambodia. He indicated that he understood disability to include many areas including hearing and vision impairments, physical disabilities, and intellectual disabilities. He stated that he was familiar with the word autism, but defined it as a type of intellectual disability. In addition, he and his staff indicated that building the capacity of individuals with disabilities was the primary function of his NGO. He indicated that Buddhist beliefs, more often than not, influenced community views toward disability. Members of his staff provided several client cases pertaining to individuals with disabilities and their families. They stressed that the main function of their NGO was to develop the capacities of individuals with disabilities. Various staff members indicated that the definition of disability included physical and intellectual disabilities, but appeared unfamiliar with the term autism.

The director of another prominent NGO and his twelve staff members indicated that disability included physical, intellectual, and hearing impairments. This NGO is involved primarily with the care and education of children who have been orphaned or abandoned. In addition, the organization had founded and continues to manage several schools for children who are deaf or have been identified as having a hearing impairment. Similar to other NGOs, the staff agreed that they were familiar with the term autism, but were unable to define the term. The staff indicated that Buddhist beliefs strongly influence how disability is viewed in Cambodia.

The director of the third NGO indicated that the needs of children with disabilities had only recently been an item of discussion amongst their directors and ministry officials. She stated that she understood disability to include both physical and intellectual disabilities. This director, like other officials in Cambodia, was familiar with the term autism, but considered it an intellectual disability. Her organization works with women and children who are victims of sex trafficking and domestic violence. The NGO however, does not offer programs or assistance to individuals with disabilities except for assisting families seeking to gain access to
medical care for family members of clients. Her staff indicated that lack of services for individuals with disabilities was a problem in Cambodia. They also offered that public schools did not have programs for children with disabilities. This staff mainly discussed disability as being a physical disability, but included “mentally sick” as also part of the definition.

The director for the fourth NGO indicated that the needs of individuals with disabilities, and their families, were often a topic of concern among the leadership groups in communes throughout the country. She offered a definition of disability that included physical, hearing, vision, and intellectual disabilities. She was familiar with the term autism, but was unable to provide a definition. She stated that she had read about autism and attended conferences where the topic was addressed. In response to a question about disability and Buddhist beliefs, she commented that Buddhist beliefs and practice are related to all things in Cambodia.

A director of a secondary school in Phnom Penh, and a director of a secondary school in a district outside of Phnom Penh, responded to interview questions. The directors oversaw public secondary schools and were responsible for over 500 students split among morning and afternoon sessions. The directors stated that children with disabilities are not permitted to attend the public schools. They defined disability as physical disability, but did not initially associate intellectual disabilities with their understanding of disability in general. The directors disclosed that they had relatives with physical disabilities, and noted that these relatives received “learning from the families.” According to the directors most students with disabilities could not learn, and students with disabilities would frighten the high school students. These participants did not recognize the term autism, and could not provide a definition of autism.

The notes from the interviews were reviewed and several themes emerged. The findings suggest that the participants have an emerging understanding of disability and primarily define disability as a physical disability. The data suggest that the construct of autism was unfamiliar to the participants. In analyzing the field notes from the interviews, it became apparent that the participants had not begun to develop an understanding of autism and were clearly focused on developing an understanding of intellectual disabilities.

Training Sessions May-June 2013
In 2008, the Kingdom of Cambodia, specifically the Ministry of Social Affairs, Veterans and Rehabilitation, with funding from UNICEF and HAGGAR International, publish findings pertaining to a study on intellectual disabilities in Cambodia (Carter, 2009). This study is considered the first study focused on intellectual disabilities emerging from the kingdom. A copy of the completed study was presented to me during an interview session with government officials in May, 2012.

In the spring of 2012, I met with directors from several schools and NGOs. It was during these meetings that the community need for training pertaining to intellectual disabilities was communicated to me. Prior to arriving in Cambodia in spring of 2013, I prepared a two-hour presentation on the definition, causes, and interventions for individuals with intellectual disabilities. Accompanying training materials were developed and translated into Khmer.

While in Cambodia for approximately one month, during the spring of 2013, I conducted four training sessions with teachers and administrators at three public schools; three training session with counselors and directors at two NGOs; and, three training sessions with faculty and students at Mancheay University. The training sessions were conducted in both rural and urban locations. I required a translator for nine of ten sessions.

As I conducted the training session, it became apparent that additional time should have been allocated for the session to accommodate the overwhelming response to the material presented. Indeed, I received many questions and requests for clarification. Many of the questions appeared to focus on the distinction between mental illness and intellectual disability. In addition, it appeared that many participants were constructing their own understanding of intellectual disabilities through the use of personal narratives and anecdotes, which they shared during the sessions. At the conclusion of the sessions, I asked participants for suggestions for future training presentations. The most common request was for more detailed information on the subject of educational interventions and vocational training. Professionals working with individuals with disabilities in Cambodia appear to have an emerging understanding of intellectual disabilities. The participants in the training sessions appeared to be willing to learn, and motivated to help their organization begin to address the needs of, and the issues surrounding individuals with intellectual disabilities.

Data Collection May-June 2014
The data collected during May and June of 2012, suggested that an emerging understanding of disability was in the process of being acquired. Furthermore, the participants indicated, although some students with physical disabilities did attend public schools, students with intellectual disabilities were excluded. Also, it was clearly evident from comments and questions following the training sessions conducted in May and June of 2013, that students with intellectual disabilities were not part of the public school population in Cambodia.
During the months of May and June of 2014, I conducted small group interviews with 14 teachers, 55 Buddhist nuns, and 12 NGO staff members. The purpose of these interviews was to gather data and understand the rationales for the exclusion of students with intellectual disabilities from public school settings in Cambodia.

The small group interviews were conducted in both urban and rural areas of Cambodia. The interviews were conducted with assistance of a translator. I asked questions in English, and the questions were verbally translated into Khmer, the national language of Cambodia. I inquired as to why students with intellectual disabilities don’t attend public schools. Follow-up questions were asked to clarify responses. The translator immediately translated participants’ responses from Khmer to English. Scribes were utilized to record participant responses to the interview questions as the responses were translated verbally from Khmer to English. McMaster scholars engaging in community-based research in Cambodia were trained to function as scribes.

**Results and Discussion**

Upon initial review of the data, it appears that three themes within the participant responses have emerged as to why students with intellectual disabilities are excluded from public school. These themes are: (1) fear; (2) embarrassment; (3) discrimination; and (4) lack of teacher training. Responses from the interviews have been tentatively organized under these 4 themes.

Responses under the theme of fear consistently reflected the opinion of the participants that these students would frighten the other students and cause them not to want to go to school. A response of teacher fear was absent. Under the theme of embarrassment, participants indicated that students with intellectual disabilities would feel embarrassed because they were different, acted in strange ways, or could not learn. Further prompting during the interviews revealed that teachers would not feel embarrassed or uncomfortable. Responses sorted under the theme of discrimination uniformly cited concerns that non-disabled students would act out against students with disabilities. Upon prompting, the participants indicated that teachers would not discriminate against students with intellectual disabilities. Finally, participants indicated that due to lack of teacher training, teachers in Cambodia are ill-prepared to teach students with intellectual disabilities. Consistently, participants stated that due to the lack of training, no one in Cambodia expects teachers to work with students with intellectual disabilities.

Data suggests that the participants in this study indicated four reasons to explain the exclusion of students with intellectual disabilities from attending the public schools in Cambodia. These four reasons were fear, embarrassment, discrimination, and lack of teacher training. I plan on conducting small group interviews with stakeholders in Cambodia during the 2014-15 academic year. At that time I will explore what the participants mean by “lack of teacher training.” Furthermore I intend to identify what knowledge, skills, and dispositions these stakeholders believe that teachers must possess in order to include students with intellectual disabilities in public school classrooms in Cambodia.

**REFERENCE**


AN EXPLORATORY SURVEY OF AVAILABLE TECHNOLOGY FOR PROFESSIONAL DEVELOPMENT IN CAMBODIA

Fred W. Coulter, McMaster Fellow, 2012-2013

Literature Review:
During the rule of the Khmer Rouge from 1975-79, an estimated 1.7 million were killed in a genocide in an attempt to rid Cambodia of perceived corrupting outside influences, and return the country to an earlier prosperous time. In his article, Sokhom wrote, "[t]he Khmer Rouge not only ended virtually all forms of formal education, it also actively sought out and killed the educated population. . ." (2004, p. 141). In the ensuing years after the ouster of the Khmer Rouge by the Vietnamese, the interim government, supported by the United Nations and the subsequent governance by Hun Sen as an elected prime minister, the ranks of educated professionals has struggled to reestablish itself. One of the restraints on the emergence of well-equipped professionals was the lack of educational and training materials (Duggan, 1996).

The project for 2012-13 expanded upon the McMasters Fellows' 2011-12 project of exploring the possibilities of connecting teachers in Cambodia with education majors at Defiance College to include other professionals as well. In May of 2012, while the Learning Community was in the country, professionals at other project sites asked for more information and materials pertaining to their disciplines. Such professionals included staff at the Cambodian Women's Crisis Center (CWCC shelters in Phnom Penh, Banteay Meanchey, and Siam Reap), doctors at a military hospital in Battanbang asked for current literature on best practices in their professions, and faculty at Mean Chey University want training in research design. The question was how to deliver such trainings and materials in formats other than face-to-face.

Cambodia is a rapidly developing country, especially in the area of technology. Although, Shatkin made note that Cambodia and other developing counties were far behind in their development (1998). Since the publication of that article, rapid advances in technology have come to Cambodia, to the point that scholars are researching methods to deliver information and training to professionals in that country (Collins, 2011; Elwood & McClean, 2009; Richardson, 2011). While barriers still persist, consistent electrical service being one, progress is being made.

The purpose of the project was to explore ways that professionals (e.g., teachers, human service workers, medical personnel, and faculty) could receive current information and best practices for their professions. The goal was to develop a plan for gathering what information professionals needed and then disseminating that information to them in Cambodia.
Methodology:
To gather the needed data two methods were implemented; interviews and observations. Professionals in Cambodia were interviewed to find out what information they needed. The information from the interviews was analyzed for themes (e.g., peer reviewed articles, training videos, and discussion forums). Secondly, observations were made as to the organizations’ technology capacity (e.g., computers, internet connections, and telephone lines).

Interviews about materials that were needed by professionals were conducted at six locations, the first three of which are located in Phnom Penh: (1) Heifer International’s office, (2) CWCC’s office, (3) a Hun Sen High School, (4) a military hospital in Battambang, (5) Mean Chey University in Sisophon, and (6) the CWCC shelter in Siem Reap. Observations about the proliferation of technology were conducted at the same locations.

Results:
The interviews regarding materials and observations yielded the following results:

1. That the community partners appreciated presentations and materials based in theories that could be applied to their organizations. These included:
   a. Piaget’s Theory of Cognitive Development for teachers
   b. Leadership Styles for organization professionals and faculty
   c. The Baum Test of Emotional State for human service professionals
   d. Erikson’s Theory of Psychosocial Development for teachers and faculty
   e. Findings on medical issues, such as Hand, Foot, and Mouth disease

2. That five of the six locations had Internet service with wireless connections. These included:
   a. Heifer International
   b. CWCC office in Phnom Penh
   c. Hun Sen High School
   d. The military hospital in Battambang
   e. Mean Chey University

Discussion:
The implications of the results are that professionals across multiple disciplines are interested in information that is based on theoretical concepts that can be applied to their practices. This means that they do not want just techniques on how to complete a task, but the theory and underlying principles about how a strategy works. For example, teachers do not want readymade lesson plans because they already know how to teach. What they need are educational theories and principles of best practices that can help them to understand how their students learn. Doctors and medical staff wanted up to date information about how to treat their patients. Human service workers needed tools to diagnose their clients’ emotional states in order to develop an effective plan of action. In other words, professionals want to learn the why as well as the how of best practices.

In regards to technology, only two of the locations had projectors to show presentations to large audiences (Heifer International and Mean Chey University). Neither location however, was equipped with cameras and microphones for videoconferencing purposes. Other community partners had laptop computers available for the participants. It was observed that professionals were using laptop computers with wireless connections in Cambodia. In addition, smart phones seem to be proliferating all over the country. Professionals, teachers, faculty, and students were observed using their smart phones before, during, and after scholars’ presentations. It appears Cambodians are becoming more connected to the Internet through personal devices (e.g., laptops, tablets, and smart phones) than through group settings such as a conference room with a projector.

With the desire for information and materials shown by the professionals, the question remains how to deliver it. From observations about use of technology in Cambodia, the following three recommendations can be made:

1. That instead of trying to Skype to a large audience, perhaps an interactive session with individuals or very small groups gathered around a laptop would be the best way to communicate.

2. That presentations by scholars be recorded here in Defiance using an interpreter and then uploaded to a site on the Internet. Professionals in Cambodia can access the presentations at their convenience.

3. That Discussion Boards on these presentations be opened and scholars can respond to the professionals’ questions.
Conclusion:
Professionals in Cambodia still need access to information and materials relevant to their disciplines. Using McMaster Scholars’ projects is a very effective way to help community partners to build their capacity for knowledge and implementing best practices in their organizations. The use of technology is shifting from large groups presentation techniques, such as conference rooms and computer labs, to individualized means where users log on to the internet wirelessly through personal devices such as laptops, tablets, and smart phones. The greatest potential for development would be to connect personally with individual professionals in organizations in order to provide them with the information and materials they need to help Cambodia continue to develop.

REFERENCES


BLOOD PRESSURE AND CPR TRAINING IN CAMBODIA

Kari Baumgartner, McMaster Scholar, 2012-2013

The purpose of my project was to provide training and informative materials regarding taking and monitoring blood pressure. Furthermore, I sought to educate about the risks of hypertension. Finally, I provided training materials regarding how to perform Hands-Only Cardiopulmonary resuscitation (CPR) based on the American Heart Association's (AHA) guidelines and instructions.

In my review of literature, I found that four percent of deaths in Cambodia are related to hypertension. Using that information, I developed my trainings in accordance with the AHA guidelines. The training manuals I created were translated into Khmer. During my trainings, I provided facts about blood pressure and hypertension. Additionally, I gave instructions on how to take blood pressure. In Cambodia, I observed that many people are aware of the risk regarding high blood pressure, but oftentimes they fail to recognize the relationship between high blood pressure and the Khmer high sodium and carbohydrate diet.

Furthermore, in my research I found that according to the AHA, nearly 400,000 out-of-hospital cardiac arrests occur every year in the United States and 89 percent of those people pass away because they do not receive chest compressions immediately. Accordingly, I developed CPR trainings based on the instructions and guidelines provided by the AHA. After my trainings were developed, they were translated into Khmer. During my training sessions, I introduced the AHA and provided instruction on proper technique and performance.

I conducted the aforementioned training sessions at six urban and rural locations in Cambodia. Participants included teachers, health care providers, social service providers, midwifery instructors and students, and Buddhist nuns. Additionally, I provided training manuals and supplies to the participants. I observed that the participants in Cambodia were receptive to learning how to perform these life-saving techniques. The importance of this project cannot be overstated as it allows our community partners to increase their ability to monitor their health and well-being, and it has the potential to result in a net increase in overall life expectancies and quality-of-living. Accordingly, this project should continue in future McMaster initiatives.

EDUCATION REGARDING HAND, FOOT, AND MOUTH DISEASE, AND THE DISTRIBUTION OF MICROSCOPES

Lynn Beining, McMaster Scholar, 2012-2013

The purpose of my project was to educate citizens of Cambodia about the risks associated with hand, foot, and mouth disease. Furthermore, I distributed microscopes, supplies needed to keep the microscopes running properly, and Khmer translated materials on how to use the microscopes to hospitals, clinics, and schools in Cambodia.

Education regarding hand, foot, and mouth disease was necessitated by the fact that in June of 2012, there was an epidemic of that disease that killed at least 60 children in Cambodia. I conducted research on hand, foot, and mouth disease, and created educational materials, that were translated into Khmer, to provide information to the people of Cambodia about the disease and how to protect their children from succumbing to the disease.
The reason children throughout Southeast Asia are dying from a very mild childhood illness is due to the Enterovirus 71, a virus that causes hand, foot, and mouth disease along with neurological complications. I presented the information to hospital workers, facilities working with children, and schools throughout Cambodia. It appeared that training participants had an interest in the topic and accordingly asked many questions about the disease. Indeed, it was clear that parents, teachers, and medical staff want to be able to protect their children and keep them healthy by knowing as much information as possible about hand, foot, and mouth disease, and other childhood diseases.

Additionally, my distribution of microscopes, and translated educational and informational materials regarding microscopes, was necessitated by the fact that malaria is still the leading cause of deaths in Cambodia despite the decrease throughout the years. This project was especially important because in Cambodia, there is a resistance that occurs along the Thai-Cambodian border. Indeed, there are studies confirming the first signs of Artemisinin resistance malaria, making it even more important for proper diagnosis. The distribution of microscopes and educational materials the equipment will better enable Cambodians to combat the threat posed by malaria.

To mitigate the threat posed by malaria, I distributed microscopes to schools in hopes of increasing interest within the science field. Additionally I distributed microscopes to hospitals and clinics so they could use them to diagnosis malaria. Furthermore, I conducted training at two hospitals, one university, three public schools, and one clinic. I conducted trainings in both the urban and rural areas in Cambodia. Most of the laboratory technicians with which I worked had mastered use of the microscopes, and one even showed me how he used it to diagnosis malaria. There is still, however, a need for lab quality microscopes in these areas. Teachers at the schools had never used a microscope and were extremely excited to learn about them.

This project will better enable our community partners in Cambodia to combat the threats posed by hand, foot, and mouth, disease, as well as threats posed by the omnipresent and increasingly resistant threat of malaria.

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ORGANIZATIONAL LEADERSHIP TRAINING IN CAMBODIA

Ian Fasnacht, McMaster Scholar, 2012-2013

The purpose of my project was to provide training and training materials on organizational leadership to Cambodian professionals. Using the research of Dr. Gary Yukl, I developed a presentation on identifying leadership styles within an organization. The presentation and printed materials were translated into Khmer and presented to three non-governmental organizations, three public schools, and two Buddhist monasteries. These trainings took place in rural and urban settings. It appeared to me that organizations in Cambodia are interested in leadership training and have a desire to continue learning about Western leaders and leadership styles.
PSYCHOSOCIAL DEVELOPMENT TRAINING IN CAMBODIA
Cali Hazel, McMaster Scholar, 2012-2013

The purpose of my project was to train professionals in Cambodia about Erik Erikson's theory of psychosocial development. For professionals who work directly with children and adults, it is important for professionals to be aware of how their clients develop physiologically and socially. In my review of literature, I found that Erikson theorized that each person goes through eight stages in life marked by a specific challenge that they must overcome starting at birth with Trust versus Mistrust and ending at the time of death with Integrity versus Despair.

The content of the training sessions was translated and printed in Khmer for the Cambodians. Training sessions varied in length from a half hour to two hours depending on the audience. Furthermore, I adapted the sessions based on where I was presenting. The training booklets were distributed to 50 participants including clients and staff at the Cambodian Women's Crisis Center (CWCC) in Phnom Penh, the CWCC in Siem Reap, and teachers at several high schools in the rural areas of Cambodia. This project was imperative due to the lack in resources and trainings for professionals in Cambodia regarding this subject. In Cambodia, participants in my training sessions stated that they found this information interesting and potentially useful due to the lack of information available to them on human development as well as on emotional well-being and social functioning. Finally, this experience helped my professional and personal development, as it enabled me to learn about cultural differences in how professionals view human development.

ADMINISTRATION OF PSYCHOLOGICAL ASSESSMENT TESTS IN CAMBODIA
Lindsay Kasmer, McMaster Scholar, 2012-2013

The purpose of my project was to train people to administer and analyze the Baum Test for psychological assessment. The Baum Test is a psychological assessment used to better understand a person's emotional well-being via the analysis of a tree drawn by a client. In my literature review, I found a study of the Baum Test that had been conducted in Southeast Asia, which proved to be beneficial in Cambodian culture. This study, and Charles Koch's original research, led me to develop training materials. Once the training materials were developed, they were translated and printed into Khmer.

During my training sessions, I gave background information on projective assessments and the Baum Test itself. I also explained how to administer this test and how to analyze a client's drawing. My training materials included a copy of my presentation in writing and a laminated set of five case studies. These materials were left at each location at which I administered a training session. I held training sessions at a clinic in Orangwa, Mean Chey University, the Cambodian Women's Crisis Center (CWCC) in Phnom Penh, and the CWCC in Siem Reap, to a total of approximately 120 people.

This project will better enable our community partners in Cambodia to accurately administer this psychological assessment and thus better allow our community partners to serve their clients. Furthermore, this experience has contributed to my personal and professional development by allowing me to observe cultural differences that are often quite drastic.
TEACHING PIAGET’S THEORY OF COGNITIVE DEVELOPMENT IN CAMBODIA

Melissa Russell, McMaster Scholar, 2012-2013

The purpose of this project was to provide training and training materials for Cambodian teachers, social workers, parents, and other professionals who work with children regarding Piaget’s Theory of Cognitive Development.

Piaget theorized that children develop cognitively in four different stages; namely sensorimotor, preoperational, concrete operational, and the formal operational stage. During each stage, Piaget points out different actions that will be noticed in a child due to the cognitive level at which they are. Also, this theory highlights educational interventions that would be appropriate at each stage. After I had done my research on the Cambodian education system and acquired a fuller understanding of Piaget’s theory, I sought to present this information in a way that would ensure its effectiveness in Cambodia. In preparation, all of my training materials were translated into Khmer to ensure that the Cambodian people had copies of the training that they would be able to use even after I left.

During my training sessions, I started by introducing my project. I highlighted the importance my project had to me as an emerging teacher and also how effective it could be for them. All of my training manuals consisted of printed copies of the different cognitive stages. I also conducted demonstrations to illustrate some of the more complex concepts that are involved in the theory. One of the most important things that I aimed to convey to our community partners in Cambodia during these training sessions was an understanding that not every child will develop at the same rate. I presented my project in urban and rural areas of Cambodia. In total my training was presented to over 60 teachers and social service workers.

When I developed my project, I was unsure how it would be received in Cambodia. I have learned, however, that when planning presentations, I have to be prepared to be flexible and make adjustments when things go unexpectedly. Indeed, I had to alter my presentation everywhere that I presented to ensure that it was suitable for my audience. The information that I presented was well received and I was able to see that people understood and were excited to learn about the content that I presented. This was evidenced by the vast amount of questions and even examples that my audience could observe from their own lives. Although I realize that individually, my project made important but a relatively small impact on our community partners, I also realize that the work of the McMaster School, in the aggregate, is making enormous strides advancing humanity in Cambodia.

TEACHING THE IMPORTANCE OF HAND SANITATION IN CAMBODIA

Abby Taylor, McMaster Scholar, 2012-2013

The purpose of this hand sanitation project was to raise awareness of the importance of hand washing to reduce and prevent illness. In my review of literature, I discovered that the increasing rate of diarrheal illnesses in developing countries kills 3.5 million children each year. I also learned that hand washing could prevent diarrheal illness in 1.2 million of those children. Accordingly, I created training materials based on this information. After I developed training materials, they were translated into Khmer and printed to give to our community partners.

During the training sessions that I conducted, I explained the importance of safely washing hands with clean water and soap. Furthermore, I demonstrated proper hand washing technique, and provided hands-on experience for our community partners. At the end of the session, I demonstrated the proper hand washing technique with a Tippy Tap, which I built on-site. A Tippy Tap is a hands-free hand washing station for areas without running water that can easily be assembled, oftentimes with salvaged materials.
I successfully built three Tippy Tap hand washing stations. The hand washing stations were located at the Cambodian Women's Crisis Centers (CWCC) in Phnom Penh and Siem Reap, and at a school in Phnom Penh. While building the Tippy Taps, I learned that the Cambodian rainy season involves high flooding, which would put the hand washing stations under water for six months out of the year. In order to provide year-round access to these hand washing stations, I adjusted the Tippy Tap structural design so it was easily portable.

I also completed two training sessions at Mean Chey University and CWCC in Siem Reap. During these trainings, I found that there was poor hand sanitation due to poor water quality, limited access to soap, improper hand washing techniques, and that people lacked an understanding of the risks and possible illness associated with poor sanitation. My project allowed our community partners to have access to a Tippy Tap hand washing station so they could begin practicing proper hand washing techniques to reduce and prevent illness.

**WATER TESTING IN CAMBODIA**

_Dakota Keller & Taylor Tuttle, McMaster Scholars, 2012-2013_

The purpose of this project was to gauge the water quality in Cambodia by conducting testing for ammonia, phosphates, chlorine, arsenic, nitrifying bacteria, and giardia. Water quality information attained from the aforementioned tests is essential for preventing waterborne illnesses and will assist our community partners in decreasing infant mortality rates in Cambodia. In addition to testing the water ourselves, we held demonstrations for professionals throughout the country so that they would be able to replicate these tests after my departure.

We tested water sources in various sites throughout Cambodia including: Phnom Penh, Battambong, Batey Mean Chey, Sissiphon, and Siem Riep. Schools, hospitals, monasteries, and shelters were the main focus of testing due to the vulnerability of the population residing there. My testing revealed three positive bacteria tests, and increased levels of ammonia in some places. Although these positive tests are concerning, the water quality standards in Cambodia seem to be rising. This is evidenced by the increasing number of water quality plants and with the increased number of residents with city water. Our community partners also seem to have an increased interest of obtaining their own water testing kits and having more control over testing their water.

While we are encouraged by the increased interest and action taken to ensure the safety of water in Cambodia, the positive tests we observe still indicate that continued efforts are needed to ensure the safety of our community partners’ water. These continued efforts will likely help reduce the prevalence of waterborne illness and help curb the infant mortality rates in Cambodia.
MEASURING THE IMPACT OF TRAINING SESSIONS FOR TEACHERS IN CAMBODIA
Fred W. Coulter, McMaster Fellow, 2013-2014

Introduction
The purpose of this project was to measure the impact of training projects for teachers in Cambodia. In previous McMaster initiatives, teacher training in-services were conducted by McMaster scholars in the cities of Phnom Penh, Battambang, Tekeo, and several rural school districts. The reason for conducting in-services for teachers was that the Ministry of Education, Youth, and Sport (MoEYS), does not have a systematic professional development program for teachers (Courtney, 2007). Teachers tend to be under trained from the beginning of their teaching careers, and there are insufficient means to attain continuing education (id.). Scholar projects for the 2013-2014 Cambodian Learning Community included in-depth and detailed training in-services on the topics of physical disabilities, mental health, hygiene, and information technologies. During previous initiatives, only informal evaluation of the trainings was conducted. This research project sought to attain a fuller understanding of the effectiveness of the McMaster School's work by asking teachers to respond to prompts on the content and application of the training sessions.

The genesis of teachers' educational deficiencies stems from the rule of the Khmer Rouge in Cambodia from 1975-1979. During that regime, an estimated 1.7 million people were killed in a genocidal attempt to rid Cambodia of perceived corrupting outside influences, and return the country to an earlier prosperous time. In his article, Sokhom wrote that "[t]he Khmer Rouge regime not only ended virtually all forms of formal education, it also actively sought out and killed the educated population, particularly teachers" (2004, p. 141). In the ensuing years after the ouster of the Khmer Rouge by the Vietnamese the country's population of educated professional has struggled to reestablish itself. Such efforts however, have been supported by the interim government endorsed by the United Nations, and the subsequent governance by Hun Sen as an elected prime minister. One of the restraints on the emergence of well-equipped professionals was the lack of educational and training materials (Duggan, 1996).

Review of the Literature

A. Teacher Training
Under the auspices of the MoEYS, a plan has been proposed to build the capacity of the country's teachers (Courtney, 2007). This planned capacity building is linked to the Education For All initiative, whose goal is universal primary school for all Cambodia's children to be completed by 2015 (Marshall, et al., 2009). In order to improve the quality of teaching, teachers must be offered opportunities for professional development. Accordingly, the need for teacher in-services on educational concepts has been identified by McMaster Fellows after interviewing teachers and school administrators on what educators need to learn in order to make a larger impact in their students' learning. This research project proposes to implement an evaluation process that will measure the impact of the in-service trainings on teachers' professional practice.

B. Bloom's Taxonomy
Benjamin Bloom, in conjunction with a group of educational psychologists, developed a taxonomy of thinking that is structured from recitation of facts to using critical thinking to evaluate a concept. The six levels of thinking from most basic to abstract are: (1) knowledge, the ability to "[r]ecognize and recall facts in a form close to the way they were first presented;" (2) comprehension, the ability to "[g]rasp the meaning and intent of information [or] tell in your own words;" (3) application, "[t]he ability to apply learning to new situations and real life circumstances;" (4) analysis, "[r]easoning [in order] to break down information to component parts and to see relationships to the whole;" (5) synthesis, "[o]riginality and creativity. The ability to assemble parts to form a new whole;" and (6) evaluation, "[t]he ability to make judgments based on your stated criteria or standards." (Bloom, 1984) (BYU Idaho). This taxonomy is helpful not only when planning instruction, such as what basic facts and terminology do students need to know in order to understand and think about more complex concepts, but how to ask questions that address a particular level of thinking.

Questions or question stems can be developed for each level of the taxonomy, for example: (1) Knowledge: What are the names of the planets in the solar system? (2) Comprehension: In your own words, what was the main idea of the story? (3) Application: From the information given, can you develop a set of instructions about …? (4) Analysis: What does the author believe or assume about the reader's understanding of the story? (5) Synthesis: Originality and creativity. The ability to assemble parts to form a new whole." What would be different if …? and (6) Evaluation: What are the pros and cons of …?

By asking questions in accordance with the aforementioned principles, students' learning can be categorized not only in the traditional two categories, namely either Lower Order Thinking (LOT) or Higher Order Thinking (HOT), but also at levels three through six. A premise of teaching using Bloom's Taxonomy is that students will have learned, or know enough information, at the
first two levels in order to learn and think at higher levels. Accordingly, it is important for educators to make sure that students have sufficient knowledge to think at the desired level (Churches, 2007).

C. Kirkpatrick Evaluation Model

The Kirkpatrick Evaluation Model was developed by Donald L. Kirkpatrick over 50 years ago as part of his doctoral work and dissertation at the University of Wisconsin. Since then he, and his son James, have revised and refined the model that has been used extensively by businesses, non-profit organizations, and educational agencies to evaluate their training programs. They state, [t]here are three reasons for evaluating training programs. The most common reason is that evaluation can tell us how to improve future programs. The second reason is to determine whether a program should be continued or dropped. The third reason is to justify the existence of the training department and its budget. (Kirkpatrick, 2012, p. 19)(internal citation omitted). The Kirkpatricks' evaluation model consists of four levels, (1) reaction; (2) learning; (3) behavior; and (4) results (Id.). Each level provides specific information about the training session. The authors' definition for each level reflects the specificity of the evaluation process.

Evaluation [at the Reaction level] measures how those who participate in the program react to it. I call it a measure of customer satisfaction. . . . Learning can be defined as the extent to which participants change attitudes, improve knowledge, and/or increase skill as a result of attending the program. . . . Behavior can be defined as the extent to which change in behavior has occurred because the participant attended the training program. . . . Results can be defined as the final results that occurred because the participants attended the program. . . .

(Id., pp. 21-23, 25).

The Kirkpatricks emphasize that completely implementing the four levels of the evaluation model can be time consuming and expensive (Id.). They suggest that the evaluation process should be focused, concise, and evaluate essential components of the training program. Ideally, a training program will be repeated so that what was learned from the evaluation process can be applied to the next round of training programs.
Methodology

A. Participants
The participants in the research project were selected using the convenience sample method. Four teachers at Hun Sen High School in Phnom Penh participated in the research project. In addition, eleven teachers in Kep (a small city in the south of Cambodia on the Gulf of Thailand) completed the survey.

B. Instruments
Two prompts were developed based on Bloom's Taxonomy (Bloom, 1984). The prompts aligned with the first three levels of the taxonomy: understanding, comprehension and application. The first prompt was “In your own words, what have you learned from today's training sessions?” (understanding and comprehension). The second prompt was “How would you apply what you have learned today to your teaching practice?” (application).

C. Procedures
Permission to administer the two prompts was acquired from the Institutional Review Board at Defiance College on May 3, 2014. Participants were advised in their language, Khmer, that participation was voluntary and that they should not make any identifying marks on the plain paper that was given to them. These measures kept their responses as confidential as possible. The teachers were given plain pieces of white paper and given the prompts verbally by the Cambodian translator. Teachers were given as much time as needed to complete writing the prompts. When completed, the teachers placed their papers in a pile on a table as they left the room after the training session was over. After all the papers had been collected, they were placed in a large envelope.

D. Data Analysis
The teachers' responses were assessed using the Kirkpatrick's Four-Level Evaluation Training Model (Kirkpatrick, 2012). Due to the time it takes to present and translate the substantive content of each scholar's training session, only the second and third levels of the model were to be used to assess the effectiveness of the training sessions. The teachers needed time to write their responses so the time spent in presenting the information was much greater compared to the time spent evaluating what they have learned and how it influenced their teaching practice.

After the training sessions were completed, the Cambodian translator read the teachers' responses aloud in English. The verbal translation was written down to be analyzed using two levels of the Kirkpatrick model. The guiding questions for the analysis will be for Level 2 - evaluate if the teachers' knowledge about the topics increased as a result of the training. For Level 3 - evaluate how the teachers state they would apply the knowledge they have acquired to their teaching practice.
Results and Discussion

Overall, the results of the training sessions were positive in that teachers reported that they had learned from the sessions and were able to apply what they learned to their teaching practice. The following are examples of their responses.

1. WHAT DID THE TEACHERS LEARN FROM THE TRAINING SESSIONS?

**Physical Disabilities:**
- Learned about people with disabilities and how it affects them.
- Learned about big muscle movement, small muscle movement, and spina bifida.
- Ideas on the biology of disabilities, how people grow and what they become disabled.

**Depression, anxiety and mental illness:**
- Knowledge about psychology, diagnosis of people with anxiety and depression.
- Important research from presenters that in the school and community to cut down on mental illness.

**Hygiene:**
- That using bad water you will get sick and a technique to keep from getting sick.
- How important is hygiene. How to clean dirty water and know about something in the water that is dangerous. Hand washing with soap.

**Google Drive:**
- Learned how to log on to Google Drive.
- Learned how to create and share documents on Google Drive.

2. HOW WOULD YOU APPLY WHAT YOU LEARNED TO YOUR TEACHING PRACTICE?

**Physical Disabilities:**
- Share the information I learned today not only with my students, but with the whole community about people with physical disabilities.

**Depression, anxiety and mental illness:**
- Tell students how to protect themselves from anxiety and depression.

**Hygiene:**
- Use the training to spread the knowledge to the next generation to the same experience as we had today, because it will help the next generation to be healthy.

By assessing the teachers’ examples using Kirkpatrick and Kirkpatrick’s two levels, the responses show that the teachers learned the information presented (Id.). The teachers’ ability to learn the material was certainly enhanced by presentation method. All the teachers we given a printed copy of the presentation in Khmer, and the oral presentation was translated from English to Khmer by a Cambodian translator. In addition, at the end of each presentation, teachers were encouraged to ask questions to elaborate on what they had read and heard. Many teachers took advantage of that opportunity and fielded thoughtful questions for the presenter to answer.

Recommendations for future research would be to expand the evaluation of the training sessions to all sites, such as Mean Chey University and non-governmental organizations. McMaster Scholars would continue to participate in the year-long Cambodian Learning Community. Participation in the learning community is imperative to ensure scholars thoroughly research their topic, prepare a complete presentation in English, and work with the McMaster Fellows to revise and edit the presentation. Then in Cambodia, work with the Fellows to incorporate feedback to tailor each presentation to the participants (e.g., teachers, faculty, administrators, or case workers), their particular site (such as urban or rural), and the amount of time allocated for the presentation (this can range from 45 minutes to 2 hours). In order for the scholars to make these necessary adjustments, they must have a demonstrated mastery of their particular topic. Not only do the participants benefit from the scholars’ presentations by learning about new topics and how to apply them to their practices, but students learn by having to internalize the knowledge so that they can teach it to others.
REFERENCES


UNDERSTANDING THE IMPORTANCE OF HAND SANITATION AND BUILDING TIPPY TAP HAND WASHING STATIONS

Abby Taylor, McMaster Scholar, 2013-2014

A Tippy Tap is a hands-free hand washing station for areas without running water that can easily be assembled, oftentimes with salvaged materials. Before leaving for Cambodia, I reviewed literature pertaining to hand sanitation in Cambodia and Tippy Tap hand washing stations. I used resources from the Center for Disease Control and Prevention, tippytap.org, UNICEF, WaterStep, and the World Health Organization to compose a training manual that focused on stressing the importance of hand washing with soap before and after a bacteria-causing activities in order to prevent infections and diseases. I then compiled my research into a manual which entailed a list of various bacteria-causing activities and multiple diagrams indicating when hand washing is necessary, how to properly wash hands, and how to build a Tippy Tap. The manual was then translated into Khmer. To complete my pre-trip preparation, I bought supplies for the Tippy Tap hand washing stations and collected soap donations.

While in Cambodia, I conducted five hand sanitation trainings in front of 467 participants, and I built three Tippy Tap stations in three different locations. Each Tippy Tap took two hours to construct; which included thirty minutes to locate the location for an acceptable building site, one hour to build the structure, and thirty minutes to demonstrate how to use it and answer any questions. Hand sanitation trainings lasted thirty minutes. The first Tippy Tap built was on May 19, 2014, with 24 participants at the Association of Nuns at Oudon, a monastery outside of Phnom Penh. On May 20, 2014, we returned to the monastery where I conducted hand sanitation training for 23 participants. On May 23, 2014, there were 20 participants present when I conducted my second training at Krousar Youeng Association in Phnom Penh. On May 24 2014, we traveled to the Kep Association of Nun, village, and school where I built my second Tippy Tap station and conducted my third training for 100 participants. On May 26, 2014, I conducted my fourth training at Srey’s District School for 50 participants. I built my third and final Tippy Tap at Mean Chey University where there were 250 participants present. I also conducted my fifth and final training the same day.

The feedback that I received in regard to this project was generally positive. There may, however, be barriers to the sustainability of my project in Cambodia. The first barrier is the limited access to clean water. Though water filters and boiling their water for two minutes could alleviate this problem, community partners may not have the necessary resources to take these extra precautions. The second barrier is the lack of soap available to our community partners. The third barrier is cultural in regards to continuing proper hand sanitation practices. Without appreciating the correlation between poor hand sanitation and illness, Cambodians tend to mitigate the importance of hand washing. This cultural barrier will be an ongoing challenge into the future.

In Cambodia, there are significant cultural differences such as language, food, and mannerisms. In order to respect and adapt to the Cambodian culture, I learned basic words in Khmer and ate traditional Khmer meals. For example, I had to make a conscious effort to avoid pointing towards people and objects, as it is seen as rude in the Cambodian culture. One of the biggest encounters with cultural differences was with the education system. I learned about basic hand washing practices in primary school, but trained Cambodian professionals with advanced degrees who were unaware of such practices. The professionals who I trained, however, were responsive to my project and generally appreciated the connection between hand washing and illnesses.
UNDERSTANDING SOCIAL DEVIANCE IN CAMBODIA
Alex Smith, McMaster Scholar, 2013-2014

The purpose of my project was to educate communities in Cambodia about theories of social deviance. Preparation for my project involved two semesters of creating and translating a training manual on social deviance, drafting a literature review, and understanding cultural differences. The training manual discussed six main theories of social deviance that were derived from the literature review. This training was presented to Cambodian Women’s Crisis Center (CWCC) in Phnom Penh on May 16, 2014, to 20 people. The next time the training was presented was on May 19, 2014, at the Association of Nuns at Oudon to 24 nuns. On May 23, 2014, the training was given at the Krousar Youeng Association to 20 people. The next training was at Kep Association of Nuns (KEP) and my audience consisted of approximately 100 villagers, school teachers, and students. The last training session was at the CECC in Siem Reap on May 30, 2014, to seven people. Overall I taught approximately 171 people about theories of social deviance.

The trainings were modified at each location. At Kep the training was modified to meet the needs of nuns, teachers, students, and villagers. It was modified by giving examples of how to use the theories to reduce social deviance and crime within their community. At Krousar Youeng, and at both CWCC locations, the training was adapted to cater to the community leaders affiliated with these associations. Approximately 20 copies of the training manual were left at each location including Krousar Youeng, Oudon, and the CWCC in Phnom Penh. The group at Kep however, received around 40 copies, and the CWCC in Siem Reap received 113 copies.

During my presentation, the audiences inquired as to whether crime is a genetic trait. I responded that crime is not genetic, but rather it is a learned behavior. The audiences further inquired about how to stop youth from associating with criminals. I responded that by encouraging youth to be involved in productive activities, such as a sport or an after school activity. Generally, by occupying a youth’s time with productive activities, the less time they have to spend with people that commit crimes. My presentation of social deviance seemed to be received well. By the conclusion of my presentation, I feel that the majority of my audience had a working understanding of the theories of social deviance.

WATER TESTING AND EDUCATION IN CAMBODIA
Dakota Keller & Cormack Lazarus, McMaster Scholars, 2013-2014

Our research commenced in August 2013, regarding the most common contaminants found in water in Cambodia, and how to remove and/or treat these contaminants. Once preliminary research was complete, methods for testing, data analysis, and training was also developed. This information was subsequently translated from English into Khmer, Cambodia’s native language.

On May 16, 2014, we toured the Resource Development International Cambodia facility where the water testing group was trained on the production and use of ceramic filters that the organization produced. Four ceramic filters were purchased at that time for later distribution to community partners. Also that day, we tested the water at the Mittapheap Hotel in Phnom Penh. The 19th and 20th of May we trained over 24 nuns affiliated with the Association of Nuns at Oudong. A ceramic filter was
presented to the nuns, and we held a training session on proper use and maintenance of the filter, as well as how to test water. On May 22 and 23, we gave a presentation to the Krousar Youeng Association in Phnom Penh, which detailed the procedures for water testing. We also discussed the importance of using clean water for bathing, and food preparation. On May 24, we gave a presentation on the importance of using clean water as well as how to properly test water at Kep Association of Nuns to approximately 100 community members. Water was tested on May 26, from a school in a district outside of Phnom Penh, and we gave a presentation on use of safe water practices. On May 28 and 29, water was tested at Meanchey University and we held a training on clean water use for approximately 250 faculty and students. On May 30 and 31 we tested water and conducted a training on using safe water at the Cambodian Women's Crisis Center in Siem Riep.

Overall the results from all the samples tested were in a safe range for nitrates, phosphates, chlorine, pH, and arsenic. One sample tested for a high amount of ammonia (0.7 mg/L), and five samples tested positive for bacteria. Given the high number of positive bacteria tests and the understanding that clean water is needed for drinking, the training was redesigned. Training was designed to instruct community partners that clean water needs to be used for more than just drinking. A positive bacteria sample was used as demonstration and to show that even though water may be clear it is not always clean.

<table>
<thead>
<tr>
<th>Location</th>
<th>Use/Source</th>
<th>Date Collected</th>
<th>Ammonia (mg/L)</th>
<th>Nitrates (mg/L)</th>
<th>Phosphates (mg/L)</th>
<th>Chlorine</th>
<th>pH</th>
<th>Temperature (°C)</th>
<th>Arsenic (ppb)</th>
<th>Bacteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mittapheap Hotel</td>
<td>Bathroom Sink</td>
<td>5/16/2014</td>
<td>0.3</td>
<td>0</td>
<td>0.08</td>
<td>0</td>
<td>6.8</td>
<td>10</td>
<td>10</td>
<td>Negative</td>
</tr>
<tr>
<td>Oudong Mnt. Monastery</td>
<td>Bathroom Sink</td>
<td>5/19/2014</td>
<td>0</td>
<td>0</td>
<td>0.26</td>
<td>0</td>
<td>7.8</td>
<td>4</td>
<td>0-10</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>Kitchen Pump</td>
<td>5/19/2014</td>
<td>0</td>
<td>0</td>
<td>0.08</td>
<td>0</td>
<td>7.8</td>
<td>4</td>
<td>10</td>
<td>Negative</td>
</tr>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>7.2</td>
<td>N/A</td>
<td>0-10</td>
<td>Positive</td>
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<td>Kep School</td>
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<td>5/24/2014</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7.2</td>
<td>N/A</td>
<td>0-10</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>Bathroom</td>
<td>5/24/2014</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>8.4</td>
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<td>0-10</td>
<td>Positive</td>
</tr>
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<td>Drinking water</td>
<td>5/26/2014</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7.8</td>
<td>N/A</td>
<td>0</td>
<td>Negative</td>
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<td></td>
<td>Hand washing station</td>
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<td>0</td>
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<td>5/26/2014</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7.2</td>
<td>N/A</td>
<td>0-10</td>
<td>Positive</td>
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<td>Negative</td>
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<td>0</td>
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<td>6.8</td>
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<td>5/30/2014</td>
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<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Negative</td>
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</tbody>
</table>

From our experience with community partners at the various locations, we observed that the Cambodian people we worked with understand the importance of drinking clean water. We did observe, however, that those we worked with may have a misunderstanding of what water is actually clean. Indeed, just because water looks clean does not mean that it is. Indeed, a majority of the water samples we tested appear to be safe to drink, wash your hands with, and cook with. Further, data suggests that most sources were relatively free of harmful amounts of contaminants. Unfortunately however, five of twelve sources tested had bacteria in the water, and three of those were taken from hand washing stations.

The bacteria test proved to be the most effective illustration to convey the importance of using clean water to our community partners. Indeed, when the water they use to wash their hands, and in some cases drink, had turned black as a result of our testing equipment, our community partners’ understanding of the gravity of this situation was apparent.

Generally, we observed that the culture is a major influence on the understanding of clean water use. In general the culture puts a major emphasis on clean water use only in the context of drinking. Our presentations, however, sought to help our community
partners acquire an appreciation of the risks of unclean water in other contexts. Perhaps this phenomenon is a product of Cambodia's historical past and the suppression of voices capable of addressing these concerns. In any event, our project provided an apt illustration of the importance of clean water in all contexts, and may serve as a catalyst for the broader cultural shift necessary to combat this problem.

UNDERSTANDING THE PRACTICE
OF THERAVADA BUDDHISM IN CAMBODIA

Philip Balla, McMaster Scholar, 2013-2014

The purpose of this project was to collect ethnographic data regarding our community partners’ understanding of Cambodian Buddhist practice. In the year prior to this project, I engaged in a wide variety of activities to prepare both myself and my learning community for an intercultural experience of Buddhism in Cambodia. The primary activity I utilized was a review of literature that allowed me to develop my own religious literacy in Buddhism within the Southeast Asian context. I studied a wide range of topics including the basic history, philosophy, and practices of Buddhists that formed the lens through which I would come to view Theravada Buddhism in Cambodia. This literature also included historical and cultural information specific to Cambodia, and the empire of Angkor which demanded an understanding of Hinduism as well.

As I continued my studies, I worked with my learning community to share information I had discovered about Theravada Buddhism in Cambodia. This included a basic overview of Buddhism as a worldview, discussion of different branches of Buddhism, the discovery of information about tutelary spirits and tribal Gods in rural Cambodian culture, and discussion of the practice of this faith. The discussion of practice included regular meditation sessions that were established within the learning community as an introduction to Buddhist thought and theory. Through these activities and experiences my learning community was introduced on how to interact with practicing Buddhists with increased understanding and compassion.

As I moved my research forward I developed interview questions to use during group and individual interviews in Cambodia. The purpose of these interviews was to collect data on Buddhist practices. In Cambodia, all interviews and informal conversations began with an issued statement of informed consent that was approved by the Defiance College IRB. All participants gave informed consent verbally. Some of the interviews were conducted one on one and had an informal and conversational nature that did not require prompts, they also occurred over a period of days in short time intervals. The rest of the interviews occurred in small to large group settings and varied from 7 to 60 participants. All questions were translated into Khmer by a professional translator, and all responses were given in English by the same translator, and scribed by Defiance College students.

Preliminary results indicate that there is a wide variety of ways in which community leaders and members see Buddhism being observed in Cambodia. I recorded an extensive list of observations. A reoccurring theme, however, was that the younger generation (sometimes defined as under 60 and sometimes defined as under 40) do not actively practice Buddhism. The rationales provided were that they are too busy, too poorly informed, lack of leadership, and that people naturally begin to practice when they are older. I also observed that the younger generation is becoming more open to other types of religion while the older generation was largely Buddhist. The younger generation values tolerance of all religions and are internalizing religious principles based on their intrinsic value to the individual, rather than their extrinsic community value. This appears to be a drastic change of mentality and perspective than from the older generation's approach to religion as a whole.

The last major theme I observed was there are many practices and beliefs that are commonly performed and held by Cambodians that are not strictly Buddhist in origin. A wide selection of these practices and beliefs can be labeled as superstition and appeal to luck. Examples of this include burying pumpkins underneath temples, only using odd numbers of incense sticks, and leaving food out for demons and wandering spirits. Some of these beliefs seem to be more aptly described as Hindu concepts that have been incorporated into Cambodian Buddhist praxis. For example, a belief in atman or soul is widespread in Cambodia, and is a very important part of their spiritual lives. Further, the prevalent belief in hell and heaven also lacks roots in Buddhism. This is not surprising given Cambodia's long history of both Buddhist and Hindu influence, but still essential when considering modern Cambodian religious practice.
My project to better understand Buddhism in Cambodia was received with both great enthusiasm and mild curiosity by those who participated in my interviews. The participants enthusiastically agreed to participate, and some seem honored that I was as interested in learning about them as they were about learning from us. This project represents a deep and intentional step by the Cambodia learning community of Defiance College to bridge a sometimes uncomfortable divide between most DC students and the Cambodian people with knowledge and understanding. It also represents two crucial steps in DC’s value statements; to know and to understand, which are essential before leadership and service can take place.

From this project I have learned a great deal about intercultural competency. Primarily I’ve learned that competency requires a lot of time, effort, and patience. This is because the root of intercultural competency is creating meaningful relationships with others despite cultural differences. The long conversations I had with Cambodians during this trip demanded that I patiently work through misunderstandings and come together for a mutual purpose of understanding in order to make intercultural competency easier for others in the future. Doing this forced me to stop viewing the differences from the perspective of an individual with a difficult goal, and begin viewing the differences as a mutual obstacle to work together to overcome. This trip has also shown me that if one can work through initial misunderstandings, differences in culture can be used to one’s advantage as it provides great topics of conversation; and has the potential to lessen the burdens of class, status, and power differential in relationship formation. Necessity is said to be the mother of all invention, and on this trip necessity increased my intercultural competency and forever colored the lens through which I view the world.

UNDERSTANDING MENTAL ILLNESS, OBSESSIVE COMPULSIVE DISORDER, SCHIZOPHRENIA, AND BIPOLAR DISORDER

Elizabeth Pienoski, McMaster Scholar, 2013-2014

The purpose of this project was to educate community partners in Cambodia regarding three specific types of mental illness; namely, obsessive compulsive disorder, schizophrenia, and bipolar disorder. In preparation for this trip I researched and drafted a literature review regarding mental illness as it is relevant to Cambodia. This review included literature about the culture and status of the country, as well as the knowledge that already existed in the country regarding mental illness. A review of the literature from the American Psychological Association was conducted to help define mental illness as well as a review of literature to define characteristics, diagnostic techniques, and treatment options for the aforementioned mental illnesses.

After thorough research, I drafted a training manual that was written and translated into Khmer and presented to community partners and participants in Cambodia during training sessions. Training was conducted in various locations to many participants. Training secessions were conducted at the following times and locations: May 16, at the Cambodian Women’s Crisis Center (CWCC) in Phnom Penh for 20 participants; May 19, at the Association of Nuns at Oudon with 24 participants; May 22 at the Krousar Youeng Association Phnom Penh with 20 participants; May 26 for 50 participants at a school in a district outside Phnom Penh; May 28 to 250 participants at Meanchey University in Banteay, Meanchey Province; and May 30 at CWCC Siem Reap for 7 participants.

At CWCC in Phnom Penh, I found an understanding of mental illness or what it means to have a mental illness to be lacking. The training was adapted and simpler explanations and definitions were presented in order to help participants better appreciate the material. Accordingly, treatments options were not discussed so that participants could first obtain an understanding of the illnesses and disorders. After conducting the training approximately 20 copies of the manual were left for the participants to use and learn from. Training at the Association of Nun at Oudon required more adaptation of the training to accommodate the reading ability of the Nuns. The material was presented in a manner that could be easily understood by all participants. Approximately 25 copies of the training manual were left at the site. At the CWCC Siem Reap, a brief overview version of the training was presented. This included...
presenting the definitions, characteristics, and examples of each mental illness. There were approximately 40 copies of the manual left at the center for use with clients and for staff.

At Krousar Youeng Association in Phnom Penh, participants were very engaged and asked many questions such as: would a person that acts a certain way have one of the mental illnesses? There were also questions about what caused mental illness to develop in a person, and at what age would an illnesses manifest itself? I responded that mental illness is caused by many factors such as genetics; and other risk factors including environment, nutrition, and prenatal care by the mother. Furthermore, mental illness could start showing as early as childhood, however, they become more severe and prominent in early adulthood, around age 25 or later, if not properly treated. There were approximately 20 copies of the manual left at this site. Furthermore I provided copies of the references used to create the manual so that participants could conduct further independent research.

At a school in a district outside of Phnom Penh, training was presented to a group of students and teachers from the school. The training was adapted and treatment options were briefly discussed regarding the different mental illnesses. One of the students asked the question, "how long does the medicine take to work and how successful is it?" The response to this question was that medication can take up to twelve weeks to begin to work and has to be in the person's system for a period of time before it has a chance to work. I elaborated and said that medication has been found to be very successful for those taking it in the United States if they continue to take the medication long enough to allow it to work. Approximately 15 copies of the training manual were left at the school for further use.

At the University training session, participants included the nursing students, midwife students, and the faculty of the school. I provided specific symptoms, ways to diagnose each illness, and the specific treatment options used in the United States for each of the different illnesses. Many students had questions such as, "how would poverty affect your ability to get a mental illness?" I responded that poverty can increase one's chances due to lack of proper nutrition, lack of safe environment, and resources in general. The students and faculty were very engaged, interactive, and understood the material. Approximately 30 copies of the manual were left at the University for the faculty and students to review and use to expand their knowledge of mental illness and the way it is viewed and treated.

The presentation of this training was received well at each location. Although there was skepticism in the beginning of each presentation, after going through the definition and explanation of mental illness, as well as providing examples of each that could be related to the lives of the professionals and participants of each session, the skepticism lessened and the participants became engaged and seemed to understand the material. Our community partners asked many questions to further their understanding of the training as well as to provide examples that the participants themselves observed within their community. Total immersion in Cambodian culture, including using the native language and trying the traditional Khmer food, helped me better understand and connect with my audiences and adapt the presentation to better serve their needs. Also, presenting the training on mental illnesses to the various professionals and participants helped me recognize the cultural differences between the United States and Cambodia.

PROJECTIVE ASSESSMENT IN CAMBODIA:
THE HOUSE-TREE-PERSON TEST

Lindsay Kasmer, McMaster Scholar, 2013-2014

During the 2013-2014 academic year, I researched the House-Tree-Person test. This is a projective psychological assessment that was created by John Buck in 1948, and updated in 1969. I reviewed literature on projective assessments and their effectiveness. I worked to find research on the House-Tree-Person test to make it applicable and relevant so that it could be used in Southeast Asia. Furthermore, I created a manual and three case studies for training. I had my learning community complete the House-Tree-Person test, so I could work with real-life examples before I trained other professionals. My manual was edited by our Fellows, and the final draft was translated into Khmer.


At the CWCC in Phnom Penh, I used a binder of examples that I had created to showcase the various characteristics the analysis in the manual covered. This helped the professionals better understand certain patterns in drawings and aided in overcoming the
language barrier I encountered last year. I gave them approximately 20 manuals and a set of laminated case studies, with the analysis included in the manual. At the Krousar Youeng Association, some of the professionals were familiar with these types of tests and did not want to go over the entire manual word for word. We found it more effective to have them read a section, then ask questions for clarification. I left about 20 copies of the manual, and a set of laminated case studies.

At Mean Chey University, I used a different presentation technique. I started my training by asking everyone to draw a picture of a house. After they completed their house, we went over what a projective assessment is and why I asked them to draw a picture for me. Once they understood this, I began to help them analyze the houses they drew, along with the house case study I provided. I answered questions at the end of the house section. Then I moved on to the tree, and finally the person. I gave the students about 100 copies of the manual, and gave their professor a copy of the laminated case studies. I replicated this method at the CWCC in Siem Reap. The training had to be broken up into two days due to time constraints. We started with the person on the second day, and I answered any last questions. I left 30 copies of the manual at the CWCC, along with 3 sets of the laminated case studies.

My audience often inquired about specific characteristics regarding the picture analysis. The most difficult question I was asked was, “what if, as a counselor, you suspect that your client has a problem, but the test does not show this?” I told this professional that counselors needed to trust their training, the relationship that they have developed with their clients and themselves in general. It has been a part of my training to develop my instincts, and trust my gut when something does not seem right. This test is just a tool; it cannot show everything that a client has experienced or felt. It is used to help the counselor better understand their client, develop a closer client-worker relationship, and provide the client with a non-threatening way to discuss the issues they are struggling with.

As expected, there were some professionals who were skeptical of this project. I can understand this, because I was skeptical last year when I first worked with projective assessments. I worked to overcome this by explaining and emphasizing the effectiveness of projective assessments, how they work, and the 65 years of research this particular test has withstood. The majority of my participants were open to this assessment and the analyses that were included. Many counselors explained that they knew that having a client draw a picture for them was supposed to be helpful, but were unsure how to analyze the drawing and how to use it for effective therapy.

My understanding of Cambodian culture is far greater this year than it was last year. There is still however, much for me to learn about this culture. I regularly had to step out of my American cultural values, so that I could better understand their culture. I couldn't judge what they did based on my personal values, because my values didn't match their society. When I learned new facets of the Cambodian culture, for example that pointing is rude; I worked to consciously be aware of it so as not to offend anyone.

**USING GOOGLE DRIVE TO INCREASE PRODUCTIVITY**

_Nick Naylor, McMaster Scholar, 2013-2014_

The purpose of this project was to prepare and conduct trainings in Cambodia pertaining to the use of Google Drive as a tool to increase productivity. I wanted to help professionals increase their productivity by training them regarding proper use of computers and software. This project is necessary, in part, because during the Khmer Rouge (1975-79) many of the educated citizens of the county either fled the country, or were executed. Cambodia is still recovering from this regime, and this project will help Cambodians become more efficient using more advanced technologies. Over the course of the 2013-14 school year, I researched ways to be more efficient with computers. After my research, I decided to educate community partners how to effectively use Google Drive.

I conducted many training sessions while in Cambodia. During my training sessions, I first explained what Google Drive was, and how it could be used to increase productivity. Next, I asked participants if they had a Gmail account; which some of them did. For participants who did not have an account, I showed them how to set up a Gmail account and participate in the training session. Once all participants were logged onto their Gmail accounts, I showed participants how to gain access to Google Drive. Once everyone was logged into Google Drive, I showed the participants how to utilize the many different types of applications Google Drive offers.
I showed participants how documents, presentations, and spreadsheets operated similar to Microsoft’s Word, PowerPoint, and Excel. While using one of the applications, I demonstrated to participants how to name their work, use automatic saving features, and how to share the document. The sharing feature was a significant part of my presentation because it enables multiple users to simultaneously edit a document from different locations. This has perhaps the greatest potential to increase productivity, because it allows people to work on the document simultaneously in different parts of the country.

I modified my presentation every time I presented depending on the availability of electronic devices, the quality of the Internet connection, and time constraints. At the Cambodian Women’s Crisis Center (CWCC) in Phnom Penh everyone was on the Internet except for me. Luckily, I created a PowerPoint with the step by step instructions so they could still follow along with the presentation. At the CWCC I left a copy of my training manual for everyone that attended. At Hun Sen High School in Phnom Penh I gave my presentation to the Information Technology (IT) director so he could hold a training session for the other staff members on how to use the Google software. I left a number of copies of my manual for the High School. At Manchey University in Banteay, Manchey, I gave my presentation to the IT students and teachers in the morning, and then to the rest of the school in the afternoon. In the morning session, IT students understood the Google software and were able to apply the software by creating a presentation in groups and for a final project. During the afternoon session, we had problems with the internet connection. I used my PowerPoint to slowly walk through all the steps it took to set up and use Google Drive. In total, I trained over 300 people on the use of Google Drive while in Cambodia.

All presentations seemed to be very well received. The audiences seemed to realize the potential to increase their efficiency by using Google Drive. Further, I was able to observe audiences’ mastery of this new software. For example, at Manchey University, the IT students assisted the librarian inventory all the books she has in her library using Google Drive; and they did so efficiently in accordance with my trainings. I am confident that my trainings have helped people use computers more effectively. As a Digital Forensic major, I did notice however, that our community partners knew how to use computers but they didn’t necessarily understand the security aspects of computers. Some of the Wi-Fi passwords that were used would take little time to compromise because they are not that complex. This is an area of concern for me because it leaves business and organizations at risk to have their data compromised.

Prior to this project in Cambodia, I was nervous about my adjustment to Cambodian culture. I am grateful however, for the assistance of my learning community and our translator for assistance ranging from language instruction, to other cultural support. I realize that this project would have been much more difficult but for their assistance, and I am grateful to have had this opportunity.

DEPRESSION AND ANXIETY

AWARENESS AND SCREENING IN CAMBODIA

Sarah Westfall, McMaster Scholar, 2013-2014

The purpose of this project was to explain and define depression and anxiety, adapt screening tools that could be used to diagnose these disorders, and explain treatments that are used for both anxiety and depression. During the fall and spring semesters of the 2013-14 academic year, I conducted extensive research on the topics of depression and anxiety. Much of my research was retrieved from the American Psychological Association’s (APA) Diagnostic and Statistical Manual (DSM-5). From the DSM-5, I was able to reference specific definitions and symptoms regarding depression and anxiety, to use in a training manual that I developed. Additionally, I conducted research on different screening tools that could be used to diagnose these disorders. I decided upon using the PHQ-9 (for depression), and the GAD-7 (for anxiety), from the National Institute of Mental Health. I chose these screening tools because they are relatively simple to understand and use. I also included specific treatment options that are used in the United States in my manual. This information came from the APA and the National Alliance of Mental Health. After completing the training manual it was then translated into Khmer so that copies could be distributed at training sessions.
While in Cambodia, I conducted seven trainings for a total of 471 people. The first training was at the Cambodian Women's Crisis Center (CWCC) in Phnom Penh on May 16, 2014, with 20 participants. The second was at the Association of Nuns at Oudon Monastery on May 19, 2014, with 24 participants. The third training was at the Krousar Young Association in Phnom Penh on May 22, 2014, with 20 participants. The fourth training was with teachers and students at the Kep Association of Nuns on May 24, 2014, with approximately 100 participants. The fifth training was at a school in a district outside of Phnom Penh on May 26, 2014, with 50 high school students and teachers. The sixth presentation was at Meanchey University in Banteay, Meanchey Provence, on May 28, 2014, to 250 college students and faculty. The seventh and final presentation was at CWCC in Siem Reap on May 30, 2014, with seven participants.

At every location, copies of the prepared training manual were distributed to the participants. Approximately 350 training manuals were distributed. Each training session was modified to meet the needs of the participants in attendance at the training sessions. When I presented to university students, training focused on awareness of these disorders and, treatments used in regard to these disorders. When presenting to staff at CWCC, the staff at the Krousar Young Association, and the Association of Nuns at Oudon monastery, trainings were focused on awareness, treatments, and how to properly use the provided assessment tools.

During my presentations, participants asked many questions. For example, I was often asked, "how do you treat depression or anxiety?" I responded by referring the audience to the section of my training manual where it covered treatment options, and I elaborated off those materials. Another question was, "how do we prevent depression and anxiety?" I responded by discussing the causes of depression and anxiety, and referred the audience to the area in my training manual that covered these topics. In addition, I discussed relaxation techniques, and how overall awareness and management of symptoms can help prevent these disorders. Furthermore, I was asked, “how do you work with someone who you think may have depression or anxiety? . . . Do you tell them they may have it?” I responded first by saying that when working with clients, it is important to be nonjudgmental, and to express that the contents of a professional's relationship with a client will generally be confidential. Then I explained that it may be appropriate for a counselor to explain to a client what depression and anxiety are, and eloquently explain that you believe they may have a depression or anxiety disorder. I also made participants aware, that if they are going to tell a client that they believe they may be depressed or anxious, express to the client that the symptoms associated with these disorders can be managed via treatment and that they are not alone. Finally, I stressed the importance of assuring the client that you, as the counselor, are willing to work with them in regard to the management and treatment of these disorders.

Cambodian and American cultures are different in many ways. It was important to remember this while conducting trainings so that I could help the people with whom I was working better understand the materials. When working with Cambodian participants, I used simple and easily translatable words. Additionally, I made sure that when describing symptoms, I used several examples that would apply to Cambodian culture for clarification. For example, one of the symptoms for these disorders is “[s]ignificant weight loss or weight gain.” When I received many questions about this symptom, it occurred to me that “significant weight gain” was not relevant in Cambodian culture. In fact, significant weight gain, and being overweight, is seen as being positive because this means that a person is healthy and is usually wealthy in their culture. Therefore, “significant weight gain” would not be applicable as a symptom of these disorders in Cambodian culture.

My presentation on depression and anxiety seemed to be very well received. The audiences were attentive and had many questions. Many of the participants seemed to make connections and identify examples of people in their lives who have manifested symptoms of depression or anxiety. Cambodian culture also appears to differ from American culture in that in Cambodia, conceptions of mental illness as a medical condition seemed to be quite rare. Many participants indicated the only word they had to describe mental illness was “crazy.” Hopefully, as a result of this training, awareness of mental illness and specifically depression will assist our community partners to better understand that mental illness is a medical condition.