The purpose of my project was to identify the developmental stages related to a child’s ability to understand concepts in geography and create a collection of appropriate lesson plans to distribute to teachers in Cambodia. I developed two research questions that guided the development of my project: (1) What developmental levels correlate with how students learn geography concepts? and (2) How does the history of Cambodia shape the way in which schools are operated?

BACKGROUND AND LITERATURE REVIEW
In educational psychology, cognitive psychologists look at how students construct meaning and fit it into what they already know.

The work of Jean Piaget and Lev Vygotsky, both developmental psychologists, provides useful insight into the relationship between educational practices and children’s cognitive development. Piaget suggested four stages of cognitive development, each of which correlate with a specific age range and set of tasks that a child in that stage should be able to accomplish. The stages are sensorimotor stage (birth to 2 years), preoperational stage (2 to 7 years), concrete operational stage (7-11 years), and formal operational (11 years through adulthood) (Santrock, 2004). In the sensorimotor stage, children use their senses to explore the world around them. By the end of this stage, children should achieve object permanence, or the ability to understand that an object exists even though the child is unable to see or otherwise sense it. The preoperational stage is characterized by egocentric and intuitive thought (Santrock, 2004). At this stage, children enter the symbolic function substage, where they “gain the ability to represent mentally an object that is not present” (Santrock, 2004). In the concrete operational stage, children’s thought processes change from intuitive to logical. They are able to focus on several characteristics of an object and can begin to create classifications for it. (Santrock, 2004). Piaget’s fourth and final stage is the formal operational stage, which is characterized by abstract thought.

Vygotsky’s theory does not include specific levels of development, but it does make three basic claims: 1) Children’s cognitive skills can be understood only when they are developmentally analyzed and interpreted. 2) Cognitive skills are mediated by words, language, and forms of discourse, which serve
as psychological tools for facilitating and transforming mental activity. 3) Cognitive skills have their origins in social relations and are embedded in a socio-cultural backdrop (Santrock, 2004).

The zone of proximal development (ZPD) is another important aspect of Vygotsky’s theory. ZPD refers to the range of tasks that a child needs help to develop. The tasks can be mastered by the child with the help of a more-skilled peer or adult using scaffolding, a system of altering levels of support for different tasks (Santrock, 2004).

It is important for educators to understand how students learn and how they develop psychologically and intellectually. The work of Piaget and Vygotsky provided the theoretical grounding of the geography manual that was developed for this project.

A BRIEF HISTORY OF EDUCATION IN CAMBODIA
Prior to the French occupation of what is now Cambodia, education in Cambodia was limited to boys and took place in Wat schools. Wat schools were also known as temple schools and provided a form of religious education. Wat-school curriculum usually included “reading and writing Khmer (Cambodian language), principals of Buddhism, rules of propriety, and some arithmetic” (Gyallay-Pap, 1989). In 1955, Bilodeau wrote about the educational outcomes from Wat schools.

[Boys] learnt to read the sacred texts . . . and copied out the written characters. In actual fact, the texts were learnt by heart, as a result of endless repetition, and pupils were quite incapable of reading the words separately. A Cambodian boy leaving the school had his memory stocked with edifying passages, but could neither read [nor] write.

In 1863, King Norodom sought protection from France. With this action, Cambodia became part of French Indochina. The first Franco-Cambodian school was developed in Phnom Penh in 1873. By 1902, there were four Franco-Cambodian schools in Cambodia and by 1916 there were 29. Franco-Cambodian education emerged simultaneously with a large influx of Vietnamese immigrants into the country, who viewed education and serving the colonial government as a way to better themselves in the Cambodian system (Clayton, 1995). Franco-Cambodian schools tended to be dominated by Vietnamese immigrants. In 1883, only eight of more than 100 students at the School of the Protectorate were Cambodian (Forest, 1980). A document concerning the School of the Protectorate stated, “sadly . . . the idea of
creating a school for Cambodians has not been realized, since we have so few Cambodian students” (Forest, 1980).

Although the French took measures to increase Cambodian education and build more schools, they were lacking in available teachers. French teachers in Cambodia declined from 40 in 1912 to 34 in 1931 and to 28 in 1939 (Clayton, 1995). As the numbers of French teachers declined, undertrained Cambodians were left to do the work. Eventually Vietnamese teachers became the norm even though few Cambodians trusted their children with Vietnamese (Clayton, 1995). Many upset Cambodian parents and students soon “deserted French schools” (Forest, 1980). In some schools, there were no Cambodians attending, and lessons were taught in Vietnamese (Forest, 1980).

RISE OF POL POT
From the ninth century to the fifteenth century, the Khmer Empire enjoyed extensive trading networks, profitable farming, and cities that contained elaborate temples and large populations (Waller, 2002). In the twentieth century, one man had a vision of returning Cambodia to the greatness of the Khmer Empire. Pol Pot believed that in order for Cambodia to return to greatness, all people not considered borisot, or pure, had to be removed from the country. Individuals who were not considered borisot included educated people, Vietnamese, and other minorities (Waller, 2002).

Pol Pot used extremist ideas and actions as a means of reaching his goal. On April 17, 1975, Pol Pot effectively overthrew the regime of General Lon Nol and immediately began evacuating 2 million people from the capital Phnom Penh (Waller, 2002). During and immediately after the evacuation, hospitals and schools were closed, libraries were destroyed, thousands of teachers were executed, and those who escaped execution had to hide their identities. During the Khmer Rouge (KR) reign, it is estimated that between 75% and 80% of Cambodian teachers were “killed, died of overwork, or left the country” (Clayton, 1995). The KR destroyed an estimated 90% of the school buildings in the country (Clayton, 1999). The purpose of education became to teach revolutionary ideas to the children (Clayton, 1999). Pol Pot’s regime created the Alliance of Democratic Khmer Youth, which later changed its name to the Alliance of Communist Youth of Kampuchea (Clayton, 1999). These children were used as spies, guards, and were encouraged to kill their parents and torture animals. These crimes against humanity left the country with few educated individuals and a generation of children that were trained to create violence. Pol Pot and the Khmer Rouge were overthrown by the Vietnamese army in 1979.
**Education Under Vietnamese Occupation**

When the Vietnamese took control of Cambodia, they were faced with the daunting task of rebuilding a devastated nation, along with their own nation after the Vietnamese-American war. The government put into place by the Vietnamese was the Peoples Republic of Kampuchea (PRK). The PRK and Vietnamese encouraged former teachers and professors to come forth and help with the task of rebuilding the education system, but eventually had to use any available resources that remained within the country. The slogan for the years of rebuilding became, “those who know more teach those who know less.” New teachers were given two weeks to one month of training before being placed in a teaching position. With as much as 90% of the school buildings destroyed in Cambodia, classes had to be taught in shacks made of leaves or outside under trees (Ledgerwood, N.d.).

The first teacher training college was organized in July of 1980. By 1987, all Vietnamese professors had been replaced by Cambodian professors in the teacher-training program (Clayton, 1999). Clayton asserts that all education in Cambodia during the 1980s served the Vietnamese purpose of creating a like-minded population to be an ally of Vietnam. He explains that from primary school through higher education, Marxist-Leninist philosophy was intertwined within the curriculum. The following is a quote from Vietnamese advisors for the Cambodian Ministry of Education that Clayton (1999) referenced:

> The main objective of higher and technical education is to provide good political training and good technical training. Political training for all the staff should promote an ideology concerned with objectives of socialism. [We] need to recognize that the most important thing pertains to political training and ideology of students.

All tertiary students were required to complete five courses in socialism (Clayton, 1999). Views are mixed as to the number of students that actually bought into their socialist training. A former Ministry of Education official that worked with the Vietnamese confided to Clayton that “we were interested in rebuilding the country, not in serving a foreign ideology.” He explained that they accepted the Vietnamese ideology for the fact that “... we were unable to connect with the countries of the West at that time due to the embargo [and there] simply was no other possibility of assistance for us with which to rebuild the country” (Clayton, 1999).
E D U C A T I O N  T O D A Y

In 2000, writing tests were administered in order to determine literacy rates in Cambodia. Previously, results only reflected self-identifying readers, which inflated the numbers. The Ministry of Education, Youth, and Sport (MEYS) divided the population into three categories: complete illiterate, semi-literate, and literate. The findings show that 36.3% fell into the complete illiterate category, 26.6% in the semi-literate category, and 37.1% in the literate category. Overall, women fell below these numbers, with 45.1% in the complete illiterate category (Whitaker et al, 2005).

The shortage of teachers was most acute in rural or remote areas, where MEYS found that each teacher had nearly 60 students. Urban areas fared better at a still high ratio of 40 students per teacher. MEYS reports that “the most affected areas are Kampong Cham, Siem Reap, Battambang, Kampong Speu, and Otdar Meancheay provinces” (Whitaker et al, 2005).

MEYS identified incomplete schools as those that do not go to grade six. One goal of MEYS is to have complete schools available to all students (Whitaker et al, 2005). The following is the percentage of incomplete schools that MEYS recognized.

<table>
<thead>
<tr>
<th>Grade 1</th>
<th>Grade 2</th>
<th>Grade 3</th>
<th>Grade 4</th>
<th>Grade 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.5%</td>
<td>19.8%</td>
<td>21.9%</td>
<td>26.3%</td>
<td>29.6%</td>
</tr>
</tbody>
</table>
MEYS stated that, “The situation with incomplete schools is worse in remote and rural areas with remote areas having 66.0% and rural areas 29.6%.” MEYS identified the following provinces as the most affected by this problem: Rattanakiri: 81.0%, Mondulkiri: 77.1%, Preah Vihear: 61.7%, Steung Treng: 58.4%, Koh Kong: 54.6%, Otdar Mean Chey: 52.2%, Kampong Thom: 51.2%, Kampong Cham: 46.3%, and Kratie: 43.5% (Whitaker et al, 2005).

**PUTTING THE RESEARCH TO USE**

I began my project by looking at Ohio Academic Content Standards for geography because Cambodia does not have national standards for education at this point. I took the standards for kindergarten through fourth grade and made adjustments so that they would be relevant to Cambodia. I then looked for developmentally appropriate lessons to meet each of the benchmarks within the Ohio standards. I also incorporated some of California’s standards from a comprehensive website, which gave many lesson ideas to meet the various standards. Once I compiled in-class activities to meet the benchmarks, I worked on providing materials to assess student learning. I organized the lessons under three subcategories: Materials, Activities, and Assessments. This arrangement provided the teachers with step-by-step strategies to teach the concepts of geography. In some lessons, I provided a background information section to ensure that each teacher had the content knowledge needed to teach the lesson. Once the manual was completed, it was translated and reproduced so each teacher trained could have a copy.

The manual begins with a lesson to help students achieve the grounding they need to understand other objectives of geography. In these lessons, students are taught specific directional terms and language used in geography. These lessons focus on directional terms and having students draw places they are familiar with. Activities also were planned to incorporate a variety of learning styles and types of intelligences.

The second part of my project was to raise the money needed to provide maps and globes for the teachers that would receive the training, which I was able to do before the group left for Cambodia.

**MATERIALS FOR EDUCATORS**

On a hot New Year’s Day, Sophie Leng Stagg, the Cambodian-American founder of Southeast Asian Children’s Mercy Fund, Professor Jo Ann Burkhardt, and I huddled around a small stall in the central market place in Phnom Penh. This stall specialized in educational materials and we were trying to decide the best way to spend the $800 US I had raised in the states.
We were going to train 70 teachers from 14 schools who taught first grade through high school. Ms. Leng Stagg bargained with the saleswoman and was able to get 70 maps, 14 globes, and 7 wooden Khmer alphabet puzzles for $650. The remaining $250 was used to purchase books and desks.

Several days later, we were on our way to Ba Prey, a small rural village in the province of Kampong Cham. After a 45-minute trip on the Mekong River, we arrived at Ba Prey. We unloaded the boats and hiked up a hill to the school. Just inside the gates of the school, the teachers had formed a human tunnel for us to walk through. As we did, we were greeted by signs and cheers from these appreciative educators. To my surprise, of the 68 educators present, only five of them were female. We later found out that many of the people present for the training were principals. The signs they held up read, “Welcome Defiance College, Ohio State, USA.” The whole experience was humbling.

**Reflection**
While remembering the way we were welcomed by the educators and thinking about the MEYS statistics I had found, I began to understand their praise. Ba Prey is in the province of Kampong Cham, and although their
school looked similar to the schools we saw in Phnom Penh, they are quite different. The MEYS 2004-05 report showed that 4% of the teachers in remote areas have had no training. As much as 34.5% of teachers in remote areas have only had a primary education. The percentages in Kampong Cham may actually be higher than the average given. I had been assuming that the teachers we were working with would have at least had high school education followed by some sort of teacher training. The teachers cheered us on the first day because we had more schooling than they did, and we came to help them. They were in a remote area of the jungle, and we were a sign of hope for them. This showed me that schools in Ohio may be underfunded and understaffed, but at least they are filled with educated, qualified instructors.

The education department at Defiance College did help these educators. The system of education in Cambodia was completely destroyed by the Khmer Rouge in a short five-year period. Twenty-seven years after the Khmer Rouge fell to the Vietnamese, the country is still trying to fix the problems and rebuild the education system. The province of Kampong Cham is a high need area that Defiance College has just begun to work with. Defiance College has the human resources needed to make an impact on the province of Kampong Cham, to reach the educators, to in turn help the students. The teachers we worked with were very willing to listen to what we had to say. They were interested in having us come back and continue to work with them. They asked, “How do we make our students as smart as American students?” This open connection between the educators of Kampong Cham and students and
professors at Defiance College has and will continue to serve to improve the education of both.

REFERENCES


