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Culturally Appropriate Environmental Education: An Example of a Partnership with the Hmong American Community

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A partnership with the Hmong American community produced "The Wildlife and Wilderness Exploration Show," a DVD that puts a modern twist on traditional Hmong storytelling. Key educational messages in the DVD were identified through interviews with Hmong natural resource professionals. The messages are delivered in entertaining segments in the DVD, which was created through collaboration with the Hmong arts and theater community. In contemporary Hmong American culture, DVDs are a popular form of entertainment and cultural learning, making the format appropriate for new refugees and elders with limited English proficiency, as well as the broader and multigenerational Hmong community.

Society's increasing diversity poses many challenges to environmental educators. Numerous barriers and constraints to ethnic minority communities' environmental literacy and engagement in nature-based activities have been identified, including lack of outreach, discrimination or the perceived potential for discrimination, cultural differences, economic factors, and the need for cultural diversity training among environmental educators (e.g., Allison & Schneider, 2008; Edmondson, 2006; Galván & LaRocque, 2010; Hong & Anderson, 2006; Jackson, 2005). A barrier that is seldom discussed is a lack of culturally appropriate approaches to environmental education and outreach. Environmental educators and professionals have often identified the need for reaching out to ethnic minorities and other

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underrepresented groups and discussed creative approaches to multicultural environmental education (e.g., Agyeman, 2003; Madfes, 2004; Marouli, 2002; Silka 2002), but there are relatively few examples of culturally appropriate approaches to environmental education.

This article describes a project to develop culturally appropriate environmental education materials for Hmong Americans, including new refugees and elders with little proficiency in English as well as the broader, multigenerational Hmong community. Our approach involved two parts. First, interviews with Hmong natural resource professionals from across the United States revealed key conservation education messages specifically for the Hmong community. Second, partnering with the Hmong arts and theater community, we created a DVD with a variety of entertaining and educational segments to convey the conservation education messages. This approach was a modern twist on Hmong cultural traditions: The Hmong have a strong oral tradition in which storytelling and folktales are used to entertain and teach about social values and end with a practical lesson or moral (Schermann et al., 2008). In contemporary Hmong American culture, DVDs have become a popular form of entertainment and cultural learning as the practice of traditional storytelling has declined.

The following section provides a brief introduction to Hmong Americans and their unique history and culture. This is followed by a description of the key informant interviews used in this study to identify the most important conservation education messages for the Hmong American community, and a synopsis of the DVD that was produced based on these messages. A final section presents lessons learned about culturally appropriate conservation education.

BACKGROUND ON HMONG AMERICANS

The Hmong are an ethnic group from Southeast Asia and China who traditionally practiced shifting agriculture and subsistence hunting, fishing, and gathering (Quincy, 1995). The U.S. CIA secretly recruited and armed Hmong who lived in the mountains of Laos in the early 1960s to aid the United States by fighting the communist Pathet Lao and their North Vietnamese allies (Hamilton-Meritt, 1993; Warner, 1995). When the Americans withdrew from Vietnam and Laos and the pro-American Royal Laotian government collapsed in 1975, the Hmong fled persecution and annihilation from the new communist regime. Laotian Hmong refugees first arrived in the United States in the years following the war in Vietnam and Laos. According to the U.S. Census Bureau, about 200,000 Hmong lived in the United States in 2000, although the number is believed to be closer to 300,000 by Hmong leaders (Hmong National Development, Inc., 2004).

Unlike most ethnic groups in the United States, the Hmong are heavily involved in nature-based activities. Hmong participation in hunting, fishing, and gathering non-timber forest products (NTFPs) is disproportionately high relative to their share of the U.S. population (Hutchison, 1993; Price, 1995). For example, although less than 5% of the U.S. population 16 years of age and older hunted in 2006 (USFWS, 2007), almost half of recent adult Hmong immigrants are expected to hunt ("Aiming for acceptance: Southeast Asian program helps hunters find common ground," 2005). The Hmong have strong cultural and personal connections with the natural world. Hunting, fishing, and gathering activities have high subsistence value to many, but perhaps of deeper significance is that participating in these activities gives many Hmong a sense that they are preserving their culture by connecting with aspects of their traditional way of life and the values associated with it (Koltyk, 1998).

Tensions and occasional clashes with non-Hmong hunters and anglers, property owners, and conservation officers have occurred due to a variety of factors, including language barriers among elders and new refugees, a lack of knowledge of recreation norms and hunting and fishing regulations among a minority of Hmong hunters and anglers, traditional

Hmong practices such as hunting in large groups, and widespread harassment of and discrimination against Hmong hunters and anglers (Price, 1995). Bengston, Schermann, Moua, and Lee (2008) found that new refugees have a variety of unique needs related to conservation education and their use of public lands. These and other challenges suggest that there is an ongoing need for innovative and culturally appropriate approaches to conservation education in the Hmong American community.

KEY INFORMANT INTERVIEWS

Semistructured interviews were conducted with seven Hmong natural resource professionals and three non-Hmong natural resource professionals who have extensive experience working with the Hmong community (Rubin & Rubin, 1990). Hmong natural resource professionals included a park naturalist, a conservation law enforcement officer, a park ranger, two Hmong community liaisons with state departments of natural resources, an Asian community liaison, and a former fire prevention technician who recently became a Hmong community liaison. These seven individuals represent all of the Hmong natural resource professionals in the United States we were able to identify. Interviews were conducted in California, Minnesota, and Wisconsin by a trained and experienced Hmong interviewer. These three states account for about 80% of the Hmong American population (Hmong National Development, Inc., 2004).

The interviews were structured around a set of questions designed to elicit key conservation education needs in the Hmong community and explore cultural characteristics that would aid in the design of culturally appropriate educational approaches.[1] The ten interviews were all recorded for analysis and the interviews conducted in Hmong were translated and summarized in English. The research team used open coding to identify ideas and themes expressed by participants (Strauss & Corbin, 1998). This involved repeated and careful reading of the text by multiple coders, with each coder separately developing an outline of important and recurring themes, reconciling differences between the outlines, and cross-referencing each theme back to the original text. Analysis was facilitated with ATLAS.ti qualitative text analysis software.

[1]Contact the authors for the complete set of interview questions.

CONSERVATION EDUCATION MESSAGES

Our key informants shared their wealth of information about the Hmong American community and its conservation education needs. In this section, we describe the broad themes and specific educational messages related to each theme (in italics) that were identified through the interviews (Table 1).

Table 1
Conservation education messages identified by key informants

Fire safety and prevention:
Potentially disastrous consequences of wildfire
Fire danger levels and fire restrictions
Campfire safety
Hunting fire safety
Hunting and fishing rules, hunting safety:
Know the current hunting and fishing regulations
Firearms safety
Don't trespass; ask permission
"Leave no trace" camping and sanitation principles:
Pack it in, pack it out
Dispose of solid human waste properly
Restrictions on transporting firewood
Gathering non-timber forest products:
Know the rules for gathering
Safety of foods gathered
Responsible use of public lands:
Public land is there for your use
Take care of what you own
Respect those who were there first
Parents are responsible for their children

Fire Safety and Prevention

Key informants from California were unanimous in the view that education about wildland fire safety and prevention is an important need for the Hmong community, and this view was shared by several from Minnesota and Wisconsin. One of our California informants stated "Most problems with the [Hmong] community are with fires." Four specific educational messages were identified. First, the *potentially disastrous consequences of wildfire* were mentioned by several interviewees. The moist climate in Laos and Thailand, where most elders and new refugees grew up, made wildfire a low threat. Many do not fully understand the likelihood of fire spreading, the speed with which it can spread, and its destructive potential in a dry climate such as most of California.

Second, signs indicating *fire danger levels and fire restrictions* need to be explained and the messages should be expressed in pictures or easy to understand symbols rather than only in words. The colors corresponding to different fire threats (green: low, blue: moderate, yellow: high, orange: very high, red: extreme) may be confusing and may not effectively communicate to most Hmong visitors to public lands.

Third, all of our key informants mentioned the importance of teaching *campfire safety*, including communicating that campfires are not allowed in unapproved or undesignated campsites, the need for campfire permits in some circumstances, and the need to keep fire inside the fire ring or fire pit. Although Smokey Bear represents one of the most successful public information campaigns of all time (Rice & Atkin, 2001), several of our Hmong informants mentioned that Smokey and his messages are not widely known or understood in the Hmong community.

Finally, a subset of campfire safety is *hunting fire safety*. This is especially a concern during squirrel hunting season, because many Hmong hunters prefer to burn the fur off squirrels with a small fire or a propane torch immediately after killing them.

Hunting and Fishing Rules, Hunting Safety

There were no fish or game regulations in the remote mountains of Laos, and in their homeland Hmong they were free to catch as many fish or take as many animals as they needed to feed their families. Our informants identified three educational messages related to hunting and fishing. First was to *know the current hunting and fishing regulations* and know where to go to find this information. Because hunting and fishing rules vary by state and may change from year to year, our informants stressed the need for ongoing educational efforts. They also mentioned that some new refugees may not understand that regulations vary from state to state. Special areas of concern related to regulations are bag limits, the distinction between possession of game and daily limits, and the rules regarding game refuge areas.

Firearms safety was a second educational message related to hunting and fishing identified by our informants. Firearms safety is particularly important during small game season because the forest is still leafy and hunters sometimes rush to shoot something that is moving. Hunters need to know basic gun safety, such as how to handle their guns, when it is safe to shoot, and not carrying a loaded gun in their car. The state departments of natural resources in California, Minnesota, and Wisconsin offer special classes in hunting and firearms safety for Hmong hunters, but according to our informants, not everyone is aware of these classes.

Finally, *don't trespass; ask permission* from landowners was identified as a key educational message. One interviewee expressed the core idea as "If you don't know, don't go." Confusion and lack of understanding about trespassing is still widespread among relatively recent refugees (Bengston et al., 2008).

"Leave No Trace" Principles

Littering and related problems have sometimes been identified as issues when Hmong

use parks and camping areas, and all of our informants identified "leave no trace" camping and sanitation principles as a key educational need. *Pack it in, pack it out* was the specific "leave no trace" message mentioned most often: collect all garbage, clean up the area, and don't bury trash—pack out all trash, leftover food, and litter. Several of our Hmong informants mentioned that women should be particularly targeted for educational messages of this type, because they often stay at a campsite with children while the men are hunting.

Dispose of solid human waste properly was a second "leave no trace" principle identified in our interviews. A related sanitation issue is to wash yourself and your dishes with water carried 200 feet away from streams and lakes, and to use small amounts of biodegradable soap rather than washing in streams or lakes with nonbiodegradable soap and shampoo.

Finally, although not a traditional "leave no trace" principle, educational messages about *restrictions on transporting firewood* and the importance of buying firewood locally rather than bringing it from home was mentioned due to concerns about spreading the Emerald Ash Borer or other invasive insects.

Gathering Non-timber Forest Products (NTFPs)

A relatively high proportion of Hmong maintain a tradition of gathering a variety of plants for food and medicinal purposes (Koltyk, 1998). But problems have arisen due to widespread confusion about the rules for gathering, which vary widely by land ownership and by state. It is therefore vital for Hmong gatherers to *know the rules for gathering*, which will necessarily involve contacting the land manager for public land and obtaining permission in advance from private landowners.

The need for educational messages about the *safety of foods gathered* was also identified by informants, especially in light of the September 2006 mushroom poisonings in St. Paul, Minnesota (Olson, 2006). Seven Hmong residents were hospitalized and a ten-year-old girl died after eating deadly Destroying Angel mushrooms that had been picked in a St. Paul park.

Responsible Use of Public Lands

Although all of the preceding themes are concerned with responsible use of public lands, the educational messages related to this theme are more fundamental. Community image was mentioned as an important reason to ensure responsible use of public lands because one negative incident can affect the image of the entire Hmong community. The first message is one that may seem too obvious to mention to most Americans, who have lived all their lives with a tradition of enjoying public lands: *Public land is there for your use*. Some new Hmong refugees in urban areas may not know that they can use public lands, and some elders believe it belongs to the government so they cannot go there.

Second, a basic stewardship message identified by most of our informants was that the public—including Hmong—are the owners of public land, and everyone needs to *take care of what you own*. There is a need for a greater sense of stewardship of the land, taking care of the land for future generations, and protection and sustainable use of natural resources. One informant suggested tying this message in with Hmong history by emphasizing that the Hmong depended on a healthy and sustainable natural environment in their traditional way of life, and that the same is true now in the United States.

Third, *respect those who were there first* and give them space. Hmong often hunt, fish, camp, and picnic in large, extended family groups and may not be aware that others feel crowded. Finally, *parents are responsible for their children*, both in terms of supervising them in general and monitoring how many fish the children catch. A citation for exceeding the daily limit will fall on the parent, not the child.

THE DVD PROJECT

Given these five broad themes and 16 specific messages, our challenge was to appropriately and effectively communicate them. The strategy for accomplishing this challenge evolved over time through dialogue and partnership with the Hmong community. Our original plan was to incorporate the messages into traditional Hmong folktales and produce an illustrated, bilingual Hmong-English book that could be read by families and individuals, similar to *Orphan Boy the Farmer* (Schermann et al., 2008; Yang, 2003). But discussions with Hmong community members suggested that a book format would not be consistent with the oral tradition of Hmong culture, and new refugees and elders—important target audiences—have low literacy rates. Hence, the book idea was discarded in favor of an audio CD with the conservation messages integrated into modified folktales and stories read by Hmong actors. A Hmong natural resource professional suggested that an audio CD could be given out at entrance points to public lands and listened to in the car while traveling to campgrounds and hunting areas. In further consultations, this idea evolved into the final format—a DVD with Hmong actors dramatizing the conservation messages in a series of creative and entertaining skits, and musical interludes to reinforce the messages. The DVD could be viewed at home or, like the earlier idea of an audio CD, listened to anywhere. Hmong videos and DVDs are popular, enjoyed by all ages, and a major force in contemporary Hmong culture (Schein, 2002, 2004). The idea was to blend the Hmong storytelling tradition with elements of contemporary Hmong American culture to appeal to all generations, from young children to their grandparents.

A Hmong playwright and video producer was enlisted to write a script and produce the DVD, titled "The Wildlife and Wilderness Exploration Show" (Yos Hav Zoov–Yeeb Yam Cob Qhia). The goal of the script was to convey the conservation education messages in an entertaining manner that would appeal broadly to the Hmong community. The script was reviewed and revised to ensure that it accurately communicated the educational messages. Music is a central part of Hmong culture, and cultural events and celebrations almost always include vocal or instrumental music. Songs telling stories and conveying messages are common. Therefore, the DVD incorporates traditional and modern Hmong music during or between scenes to reinforce the messages. The final script and DVD included the following five segments.

Introduction/Conserving Public Lands

In the introduction, a host and several guests (animals, a tree, and Smokey Bear) give an overview of the topics to be covered in the rest of the DVD. A spoken word performance highlights the deep connections between Hmong culture and nature. The definition of public land—not a familiar concept in traditional Hmong culture—is explained and the importance and basics of good stewardship are outlined.

Hunting Safety and Rules

This scene is told as a Hmong celestial folktale in which several animals go to the Hmong God Shao and Celestial Shaman Nou Plai to implore them to teach people to hunt responsibly and create rules and regulations to protect wildlife. A demonstration of gun safety is included, along with additional messages such as not leaving trash in the forest and being careful to not wander onto private land without the owner's permission. This segment is followed by a song performed by blowing on a leaf by an internationally known Hmong musician.

Fire Safety and Prevention

This scene begins with Smokey Bear explaining the meaning of a fire danger level sign to a group of animals. Then squirrel ghosts, who died in a forest fire caused by hunters who carelessly tossed away burning cigarette butts, haunt the dreams of those hunters, teaching them fire safety in their dreams. A song reinforces the message of fire safety.

Gathering Wild Plants

A game show format is used in this scene, in which two teams of animal and human characters join to compete to see who is more knowledgeable about gathering wild plants. In the end, the judges decide that the teams have tied and both are experts.

Leave No Trace

A multigenerational, extended family goes camping, and their 12-year-old daughter reads a "leave no trace" pamphlet to everyone. A special message about not transporting firewood to avoid spreading the Emerald Ash Borer is included. The joys of fishing with a friend are extolled in a song. The next day, various family members demonstrate their understanding of leave no trace principles as they clean up their campsite and surrounding area. Finally, during the closing credits, a song reinforces some of the educational messages.

Copies of the DVD have been distributed to Hmong community organizations and schools, Hmong radio programs, and to natural resource management agencies, environmental education organizations, and nature centers in states with large Hmong populations. Initial audience reaction to the DVD and its conservation messages have been overwhelmingly positive, although a formal evaluation of the effectiveness of the DVD in communicating conservation messages has not yet been carried out.

CONCLUSIONS AND LESSONS LEARNED

Throughout the course of this project, we learned several lessons about developing culturally appropriate environmental education approaches. First, environmental educators and researchers from the mainstream culture cannot succeed in developing culturally appropriate environmental education approaches without fully partnering with the target community. The community of interest must be centrally involved every step of the way in designing effective approaches to ensure that the most important messages are identified and that they are communicated in ways that are both memorable and culturally harmonious. The set of conservation education messages identified by Hmong natural resource professionals were different than messages that would have been identified by those outside the Hmong American community. Many of the ways in which these messages were communicated in the DVD were unique to Hmong culture, such as through a Hmong folktale and squirrel ghosts teaching hunters fire safety in their dreams. In addition, the DVD was an all-Hmong production, including an award winning writer and director and an award winning artist who designed the artwork, sets, and costumes. Members of the Hmong arts community are well connected to each other and were able to recruit Hmong actors.

Second, partnerships with ethnic communities should be viewed as long-term efforts that require a substantial investment of time. Our DVD project began with a different output in mind but slowly evolved through frequent dialogue with Hmong natural resource professionals, members of the Hmong arts community, and others. The process of intercultural dialogue and collaboration cannot be rushed.

Third, cultures are constantly changing and adapting, particularly immigrant and refugee communities as they experience acculturation. Therefore, there is a need

to appeal to and communicate with a wide range of community members, adapting and blending traditional elements with modern. Environmental educators should incorporate the dynamics of sociocultural change as they design educational materials and approaches for ethnic communities.

Finally, one size does not fit all. The environmental education needs of the Hmong American population are unique. In contrast to most ethnic groups, the Hmong participate disproportionately in many nature-based activities. The educational need is to help maintain, expand, and inform this participation, which is an important part of maintaining their heritage to many Hmong Americans. Culturally appropriate environmental education must be tailored to specific ethnic communities.

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