Creating Collaborative Learning Opportunities for Indigenous Youth with Archaeology-Based Environmental Education

Elizabeth Reetz and William Quackenbush

Most Cultural Resource Management (CRM) archaeologists do not perceive themselves to be educators. However, CRM has an ethical imperative to make the past accessible to the public. Beyond issues with education and outreach are matters of consultation and collaboration with tribal communities.

ABSTRACT

Archaeologists are in a unique position to promote heritage and preservation through environmental education, the fundamentals of which have overlapping and parallel themes in archaeology education and outreach. Recently, successful community-based collaborative research and archaeology fieldwork initiatives between archaeologists and Native American/First Nations communities have prompted tribal leaders to pursue ways for youth in their communities to engage in contemporary cultural and natural resources work, thus inspiring future stewardship and introducing youth to professional pathways. With the guidance of archaeologists and tribal community educators, youth can participate in authentic, hands-on archaeological activities that place them into the roles of scientists and researchers and allow them to interpret their own archaeological heritage. A July 2015 partnership between archaeologists and the Ho-Chunk Nation in Wisconsin provided a place-based archaeological learning experience at a site area that was personally relevant to the student participants. A solid and collaborative planning process between archaeologists and tribal staff contributed to a successful workshop where all parties met their goals of strengthening partnerships and providing an enriching experience for the students. The integration of science-based archaeology with a traditional cultural learning environment provided a comfortable setting that resulted in noticeable engagement and enthusiasm.

Los arqueólogos están en una posición única para promover patrimonio cultural y preservación a través de la educación ambiental, cuyos fundamentos tienen temas superpuestos y paralelos a la educación y extensión a la comunidad en arqueología. Recientemente, iniciativas exitosas de investigación y trabajo de campo arqueológico, basadas en colaboración entre arqueólogos y comunidades de indígenas americanos y pueblos indígenas de Canadá, han motivado a líderes tribales a perseguir oportunidades para los jóvenes en sus comunidades que les permitan implicarse en trabajos contemporáneos sobre recursos naturales y culturales, y así inspirar futuras administraciones y abrirles caminos profesionales. Con el consejo de arqueólogos y educadores de la comunidad, los jóvenes pueden participar en actividades arqueológicas auténticas y prácticas que les colocan en el lugar de científicos e investigadores y que les permiten interpretar su propio patrimonio arqueológico. Una colaboración en julio de 2015 entre arqueólogos y el Nación Ho-Chunk en Wisconsin proporcionó una experiencia de aprendizaje arqueológico en un yacimiento que fue personalmente relevante para los estudiantes que participaron. Un proceso sólido y colaborativo entre arqueólogos y los empleados tribales aportó un taller exitoso donde todos los involucrados lograron las metas de fortificar colaboraciones, proveyendo una experiencia enriquecedora para los estudiantes. La integración de arqueología basada en la ciencia, con un ambiente tradicional de aprendizaje cultural, proveyó un entorno cómodo que facilitó una notable participación y entusiasmo.
Communities. Both federal and tribal personnel have found themselves discouraged and wondering how it is possible to work through the all-too-frequent political, institutional, and cultural barriers that impede communication and collaboration and that hinder the building of trust between tribes and federal agencies (TallBear 2001). This article does not intend to overcome these barriers but rather presents a recent partnership between archaeologists and the Ho-Chunk Nation (HCN) in Wisconsin in which an informal assessment revealed that successful communication and collaboration resulted in an enriching summer workshop for HCN youth. An examination of this project also allows for a discussion of theoretical and methodological frameworks, including environmental education (EE), multicultural education, and Native American learning styles. While these educational theories did not motivate the HCN workshop, they can be applied to the project design and should be considered by archaeologists for future collaborative projects with tribal communities.

Despite some continuing wariness toward archaeology, with good reason on the part of tribes, there have been a number of successful collaborations in indigenous archaeology by indigenous peoples and through collaborative community endeavors. They show that local and indigenous knowledge, when applied to archaeology, helps enrich the understanding of past cultures and helps protect and sustain these histories for future generations (Atalay 2012; Nicholas 2011; Silliman 2008). Successful collaborations such as the Pecos Pathways program (Phillips Academy 2016) have inspired more tribal historic preservation professionals to explore the outcomes of introducing archaeology to school-age children, with the ultimate goal of inspiring youth in tribal communities to pursue professional pathways in natural and cultural resources (William Quackenbush, personal communication 2015; Figure 1). With this goal in mind, a two-day archaeology workshop sponsored by the HCN in 2015 served as a pilot for HCN staff and archaeologists to explore outcomes of tribal youth participation in limited archaeological fieldwork at a location within their community.

THE HO-CHUNK NATION YOUTH ARCHAEOLOGY WORKSHOP

In July 2015, archaeologists Christopher Veit and Kurt Sampson from Gathering Waters Archaeology, LLC, conducted a two-day archaeology and geology workshop in partnership with the HCN Department of Heritage Preservation Cultural Resources Division and the Social Services Department, Youth Services Division (Youth Services). The workshop reached approximately 30 youth participants in grades 3–5, as well as summer youth program and Cultural Resources staff, in District 1 of the HCN’s five districts. Afterward, three adult participants responded to a survey that examined their motivations for the partnership, the level of preparation and communication involved in the project, perceptions of successes and challenges, future improvements, and observations of youth outcomes.

Motivations

HCN Tribal Historic Preservation Officer (THPO) William Quackenbush approached the archaeologists regarding the partnership. This project was not required as mitigation for a federal project under Section 106. The project was fully funded by the HCN through a Tribal Historic Preservation Grant awarded by the National Park Service. The THPO’s motivation was the Nation’s desire to assist their children in making informed decisions regarding education and career making—especially in the field of preservation. Ultimately, the THPO hopes that such activities will inspire an interest in heritage preservation earlier in life, with an acknowledgment that there are currently few people within the HCN to whom he can pass along heritage preservation practices. The THPO desires that members of the HCN better educate themselves by becoming knowledgeable about state and federal regulations that act as guidelines for preservation processes, including Section 106 of the National Historic Preservation Act (NHPA), the Archaeological Resources Protection Act (ARPA), and the Native American Graves Protection and Repatriation Act (NAGPRA), among others, and it behooves tribal members to learn these processes earlier in life. A greater familiarity with historic preservation practices could also help tribal members understand that archaeology can be done without seeking and destroying cultural resources, as many in

FIGURE 1. A Ho-Chunk student practices pottery making after an archaeology lesson in 2012 (photograph by William Quackenbush).
the field of tribal preservation have historically viewed archaeology as a destructive process and feel that there is little to be gained from this continued practice. Archaeological activities, in particular noninvasive ones, can assist the HCN with deepening their understanding of historic preservation laws and practices that impact their lands.

Gathering Waters Archaeology, LLC, eagerly agreed to the collaboration as a way to form a stronger relationship with the HCN. The project also afforded the archaeologists an opportunity to work with youth. Both archaeologists acknowledged a desire to make a difference in the future of heritage preservation by working with young people and inspiring a passion for archaeology at an early age. When asked about individual motivation to pursue this partnership, Kurt Sampson responded, “By sharing my passion for Wisconsin’s archaeology and geology in a fun way, I ultimately hope to kindle a love for archaeology, ecology, land stewardship, and related subjects in these children, providing them a lifetime of opportunities to do good works in these fields.”

Preparation and Communication

Developing strong partnerships is an important prerequisite not only for archaeologists wishing to work with a tribal community but, most importantly, for those wishing to work with tribal youth. In this case, the archaeologists at Gathering Waters Archaeology, LLC, and the HCN Cultural Resources Division staff had a well-established working relationship that allowed the rapid development of this collaborative project. For reference, a collaborative relationship, as adapted from Barbara Grey in Atalay (2012:55), includes “(1) pooling of appreciations and/or tangible resources, e.g., information, money, labor, etc., (2) by two or more stakeholders, (3) to solve a set of problems which neither can solve individually.” Those seeking such relationships should recognize that they take extended time and effort to develop. Regarding the workshop, preliminary discussions between the HCN and archaeologists occurred over several weeks, with all preparations completed about one month in advance of the fieldwork. As CRM archaeologists, allowing enough time for preparation for these activities was crucial, and they balanced all preparation with the day-to-day tasks of their profession. The archaeologists acknowledged that the amount of preparation required for the workshop was intimidating. They also reported that it required a lot of time to gain the trust and friendship of their tribal collaborators, as they needed to expand their partnership beyond the tribal Historic Preservation staff to Youth Services staff.

The archaeology activities occurred on tribal trust property located in Jackson County, Wisconsin, which the HCN wishes to continue to use for educational purposes. This particular parcel was one of the first allotments the HCN has owned continuously as a result of the Dawes Act of 1887. The property included an old homestead where many generations of Ho-Chunk have lived, and many Ho-Chunk continue to use the property today.

Prior to the workshop, a ground penetrating radar (GPR) survey was conducted to limit the potential for the inadvertent discovery of human burials. Tribal elders made decisions in advance of the workshop regarding what areas of this property should or should not be used. For example, a feast lodge existed on the property in the late 1800s to early 1900s, and the workshop participants stayed away from this area as required by the elders. The particular location where excavations units were placed was not known as an archaeological site, and the archaeologists did not expect to find anything. The emphasis was about the process of archaeology and not about potential finds.

A traditional Ho-Chunk ciporoke (chee-poe-doe-kay) lodge was built by tribal members on the property for educational purposes. The ciporoke is viewed as a traditional learning structure, and the young students followed the expectations of their community to be attentive and respectful while attending lectures and discussions in the lodge. The archaeologists understood the need to develop activities and information that were both appropriate for teaching archaeological science and respectful of tribal beliefs and customs. Signed waivers allowed the students to participate in all activities and permitted the use of photos for education and social media, and no negative feedback regarding archaeology activities was expressed by parents or guardians. Youth Services also provided lunches and transportation for student participants. A Wisconsin videographer, Todd Rongstad, documented the events of the two-day workshop as part of the Sacred Ground Documentary Series (Figure 2).

Field Activities

The students who attended the two-day archaeology workshop were enrolled in the District 1 HCN Youth Services summer program. Summer program activities are chosen by Youth Services staff, and they often partner with different departments within the tribe. Partnering with the Department of Heritage Preservation Cultural Resources Division for activities with youth provided an opportunity for Youth Services staff to teach the students about the importance of Ho-Chunk culture including their connection to the land and its environmental importance to their tribe.

The primary goal of the workshop was to introduce students to the science of archaeology and geology and the process of archaeological fieldwork and excavation. The first day of the two-day workshop involved introductions, PowerPoint presentations, hands-on examination of artifacts and geological specimens, and the setup of two 1-x-2-m test units (Figure 3). The PowerPoints focused on Wisconsin archaeology, its history, and its history in relation to the Ho-Chunk. Archaeologists also presented basics on the science of archaeology and a primer on Wisconsin geology. Day two began with a brief overview before the application of lessons from the previous day and the excavation of test units (Figure 4). Each archaeologist supervised one half of the students, and three to four students actively excavated at a time, including shovel skimming and troweling, while other students screened soil or observed the excavations. This workshop did not involve laboratory work.

Youth Services staff provided additional oversight of students and were on hand to address potential classroom management issues. If students needed a break, they were permitted to walk with Youth Services and Cultural Resources staff along an educational trail that exists throughout the property. This archaeology workshop, like all other activities conducted by Youth Services...
Creating Collaborative Learning Opportunities for Indigenous Youth (cont.)

staff, also focused on traditional roles for HCN children and the incorporation of the HCN language. Girls are taught how they can help out and serve others, which was expressed by serving lunch, picking up garbage throughout the day, and helping to clean up at the end of the day. Boys are taught how to be quiet and respectful, with an emphasis on learning to listen versus hearing someone speak. Sharing stories and eating as a group occurred both days.

Assessment

The primary author of this article, Elizabeth Reetz, Director of Strategic Initiatives at the University of Iowa Office of the State Archaeologist, did not participate in the 2015 workshop but learned about the partnership through other collaborations with the HCN THPO. To learn more about the project logistics, motivations behind the partnerships, challenges and successes at the workshop, and learning outcomes of participants, she conducted an informal qualitative assessment of the pilot workshop in the form of online surveys in November 2015. She administered two surveys, one directed at HCN staff and one directed at the archaeologists. The two participating archaeologists responded to the survey and follow-up questions. William Quackenbush, HCN THPO, was available for extensive discussions and clarifications regarding this article and anecdotally spoke for HCN Youth Services staff based on extensive conversations with them following the workshop. The authors invited other HCN staff to respond to the survey but did not receive any additional responses. Therefore, although much of this assessment is based on the three surveys or anecdotal information, it does lay groundwork for a more in-depth assessment of future projects to reveal further insights.

Both surveys addressed questions regarding logistics, motivation, preparation, and potential improvements, with the intention that this information could both guide the organization of their future workshops and provide insights for others contemplating similar endeavors. HCN staff specifically commented on their experiences communicating with the archaeologists and what they thought was challenging or successful about working with the archaeologists. Similarly, the archaeologists commented on their preparation and communication with HCN staff. The archaeologists were asked to provide their background in education and outreach and to elaborate on training that might enrich both their experience and the students’ experience at such events. It was not possible to gather data or information directly from the student participants due to Institutional Review Board (IRB) restrictions and deadlines. Instead, the adult participants were asked to recall observations, anecdotes, and quotations from students during their participation in the workshop.

Archaeologists and HCN staff alike felt that the partnership experience was rewarding. The archaeologists felt very welcomed by their HCN partners. HCN staff appreciated the fact that the archaeologists were excited about working with the

FIGURE 2. The July 2015 archaeology workshop with the Ho-Chunk Nation was documented by Todd Rongstad as part of the Sacred Ground Documentary Series (https://youtu.be/FY6uqlFlEyg).
people who are indigenous to the region. Additionally, the archaeologists were perceived by HCN staff to be very attentive toward the children and sensitive to their varied learning levels. It was noted that the archaeologists were able to quickly adapt to the way in which each of the two days unfolded, including working with students with short attention spans. One of the archaeologists, Christopher Veit, had graduate-level coursework in formal education, which no doubt contributed to the positive flow of the workshop.

HCN staff had initial concerns about whether the younger students would grasp the concept of dating time through depth, which is standard in archaeology and geology, yet an abstract concept typically beyond the thinking skills of third graders. The students did not have difficulty with this concept, as it was clearly explained by the archaeologists in their initial presentations and reiterated throughout fieldwork. However, the students were not familiar with the terms that archaeologists used to describe periods of time and ancient people, e.g., Paleoindian. The children had heard only about their ancestors living in the region through their creation stories as being referred to as Ho-Chunk. Regardless, the THPO felt that the archaeologists presented the science and history of archaeology in a way that did not misalign with traditional Ho-Chunk beliefs, in that the physical evidence the archaeologists were examining served to support the HCN's oral history of long-term connection to the region.

When asked what they would change or improve about the workshop, HCN staff recognized that the students would have benefited from smaller group work during the hands-on activities. Initial preparations planned for one more archaeologist to oversee a third excavation unit, which would have decreased the student excavation group size in the two-day time frame, thus enriching engagement. The adult participants also commented on increasing the amount of time in the field from two days to four days to allow for thorough scientific processes, given the quantity and richness of the ideas covered. The workshop primarily focused on allowing the students to gain knowledge and awareness of the field of archaeology. Due to time constraints, the archaeologists expedited many archaeological concepts, but increasing the number of days at future workshops could allow for both an expansion of archaeological survey, including noninvasive field techniques, and visits to other sites with different qualities of archaeology (e.g., petroglyphs). Both archaeologists agreed that they would improve the workshop by using less technical information, which was in agreement with feedback from HCN staff.

One other improvement would be to have the students create something they could take home to remember the workshop. HCN staff are planning workshops on pottery making, which would allow the youth to both learn about and create a traditional cultural item. Another potential make-and-takeaway item proposed by the THPO is an atlatl. Hands-on projects elicit creativity and allow flexibility for different learning levels and learning styles.

HCN Department of Heritage Preservation Cultural Resources Division staff, with verbal agreement from Youth Services staff, estimate that at least 90 percent of student participants would eagerly and happily participate in future archaeology workshops. This is based on informal assessment and feedback in the form of comments and observation. Observations from adult staff surmised that the students were enthusiastically engaged in the workshop, and all follow-up discussions with parents revealed overwhelmingly positive feedback.

Overall, all agreed that the students’ participation and enthusiasm was spectacular (Figure 5). The archaeologists found the workshop enriching and fulfilling. Both remarked that they will remember the experience for the rest of their lives, and one
acknowledged that it has impacted the course of his career. Most importantly, HCN staff are all on board to invite the archaeologists back for future workshops and continued collaboration, which is a measureable indicator of success.

Future Work

William Quackenbush expressed a desire to hold similar workshops in each of the Nation’s five districts. Ideally, these workshops would occur as a legacy program, with the same group of students repeating the workshop over several years to explore different archaeological topics. Future workshops will also focus on the students who expressed marked interest and enthusiasm at the summer 2015 workshop, with these students participating every summer through middle school and into high school. The goal of this legacy program is to further the students’ education in fields that will assist the Nation’s preservation programs. The HCN will pursue grants to assist with this endeavor, in order to assure that funding is not an issue that causes students to potentially pull away from the program. The archaeologists were in agreement that future work should occur and are on board to assist (Figure 6).

Additionally, the THPO expressed the idea that a more programmatic structure, rather than an event-type structure, would benefit this collaboration. The 2015 workshop was essentially a pilot. Further establishing the workshop as a program involves reflecting on the 2015 work, delineating clear goals and objectives for activities and outcomes, and evaluating criteria and indicators of success that relate to those goals and objectives.

Initial plans for future assessment and evaluation include oral interviews and pre- and post-activity surveys of youth participants and staff. Formalizing the workshop as a program also allows for different grant opportunities to supplement the THPO grant dollars.

Another future goal expressed by the HCN THPO that aligns with this workshop and addresses the bigger picture of collaboration would be the development and implementation of workshops in which archaeologists and tribal members participate to talk about education. Many archaeologists have little, if any, formal training in educational methodology. Continued professional development in education and outreach methods will allow for more enriching engagement based on audience type and learning styles, a better capacity for conducting assessment and evaluation of outreach, and more efficient communication regarding the significance of historic preservation (see also King 2016). Arguably, this goes beyond the typical professional duties of an archaeologist; however, if archaeologists cannot efficiently engage their publics and communicate the importance of the discipline, the profession stands to lose support. If such professional development workshops are done in collaboration with tribal communities, both parties stand to learn from the knowledge base of each other. According to the THPO, archaeologists should go “above and beyond” to learn about the individual tribe they are working with before they participate in educating tribal members about their archaeological past. The emphasis here is that no two tribes are alike. Archaeologists should also recognize that they do not know more about the tribe than the tribe does.

FIGURE 5. Participants of the 2015 Ho-Chunk Nation Youth Archaeology Workshop, including William Quackenbush (front, center), Youth Services staff, Gathering Waters Archaeology, LLC, archaeologists, and youth attendees (photograph by William Quackenbush).

FIGURE 6. Gathering Waters Archaeology, LLC, archaeologists Christopher Veit (left) and Kurt Sampson (right) and Ho-Chunk National Tribal Historic Preservation Officer William Quackenbush initiated a partnership to conduct the 2015 archaeology workshop with Ho-Chunk Nation youth (photograph by Ho-Chunk Nation Youth Services staff).
INTEGRATING EDUCATIONAL AND ARCHAEOLOGICAL PROGRAM DESIGN

An assessment of 2015 HCN workshop offers new perspectives toward the organization and assessment of their future workshops. In the following section, we explore theoretical and methodological frameworks useful in understanding why the HCN workshop was successful. The frameworks of EE, place-based education, and multicultural and Native American learning styles provide a theoretical grounding for future archaeological projects and collaborations of all kinds.

The U.S. Department of the Interior (DOI), U.S. Department of Agriculture (USDA), and the Advisory Council on Historic Preservation (ACHP) are aware of the need to connect youth with conservation and heritage preservation through initiatives such as the DOI Youth in the Great Outdoors campaign, the USDA Forest Service (USFS) Conservation Education Program, and the ACHP's Youth & Historic Preservation service learning project. The future protection and wise use of natural and cultural resources, in part, hinges on the ability to inspire a stewardship ethic in the next generation. Additionally, much of that generation will not be of European American descent, and we need to enlist both peoples whose lands are directly affected and those from different cultural backgrounds (see also King 2016). One way to do this is through education and outreach. Many archaeologists may not be aware of the unique and powerful contributions they can make not only to heritage education but also to conservation education, particularly through education that is grounded in local places.

What many public archaeology programs lack, and where the HCN pilot workshop succeeded, is a focus on partnering with both school-age children and indigenous populations. The potential educational benefits of such hands-on programs for school-age indigenous children are immense, but they are typically outweighed by the challenges and logistics of working with younger participants. Experiential learning opportunities can enhance education of indigenous youth by connecting academic subjects to the real world, increasing motivation and make decisions that both directly and indirectly affected their environment. CRM programs can benefit by expanding their public outreach without substantially increasing costs, creating new partnerships and resources, and welcoming new energy, ideas, and enthusiasm from youth participants (ETR Associates 2012).

Also important is the training in science that archaeology involves. The Tribal Youth Media project in Wisconsin notes that Native Americans represent the lowest percentage of professional scientists in the United States, but tribal lands across the continent face a growing number of science issues: environmental, health, engineering, and energy (Tribal Youth Media 2011), and historic preservation can certainly be added to this list. Because there are currently few Native Americans trained in science, including natural resources and cultural resources, there is a growing dependence on outside expertise to address tribal issues. Experts with the successful Tribal Youth Media project have also found that research suggests that a strong hybridization of modern practices, combined with Traditional Ecological Knowledge, is not only achievable but necessary if Native students are to accept science as a field worth entering.

ARCHAEOLOGY AND ENVIRONMENTAL EDUCATION

Throughout this issue, the reader is presented with multiple examples of how archaeology is an effective learning tool that can be tailored to a range of audiences and experiences and provide the public with the means for constructing their own past. Therefore, this article will not discuss the benefits of archaeology education but focus instead on summarizing EE, place-based education, and cultural landscapes as learning tools, as well as on Native American and multicultural learning styles.

What Is Environmental Education?

The field of EE is relatively young. The modern EE movement began in the late 1960s in response to the public’s concerns regarding complex local and global environmental problems. William B. Stapp, the first director of environmental education for UNESCO, and others were concerned that the shifting of U.S. communities from predominantly rural to urban would continue to reduce the amount of time citizens spent interacting with the basic natural resources in their immediate environment, while at the same time citizens were increasingly being asked to make decisions that both directly and indirectly affected their environment (Stapp 1969). A committee from the Department of Resource Planning and Conservation, School of Natural Resources, at the University of Michigan created a definition and major objectives for EE: “EE is aimed at producing a citizenry that is knowledgeable concerning the biophysical environment and its associated problems, aware of how to help solve these problems, and motivated to work toward their solution” (Stapp 1969:34).

Stemming from this movement, representatives from the United Nations met in the former Yugoslavia in 1975 to draft the Belgrade Charter, which further defined EE and established its basic objectives. The world’s first intergovernmental conference on EE, in Tbilisi (in the former Soviet Republic of Georgia) in 1977, built on the Belgrade Charter and released an official statement on EE known as the Tbilisi Declaration. Part of this declaration outlined five objectives of EE (Table 1). As the field evolved, these goals have been researched, critiqued, revisited, and expanded. They still stand as a strong foundation for an internationally shared view of the core concepts and skills that environmentally literate citizens need (NAAEE 2009).

Although it has taken decades, EE has now created a small foothold in the educational policies of most U.S. states and the federal government. EE in schools is supported by the No Child Left Inside Act, enacted in 2013. This act amended the Elementary and Secondary Education Act of 1965 to increase environmental literacy among elementary and secondary students by encouraging and providing assistance to states for the development and implementation of environmental literacy plans and
Place-based education often involves a strong field-based component, which integrates well with using cultural landscapes as a learning tool. There are also numerous benefits of place-based instruction and active field-based learning. Place-based education

- fosters comprehension and retention of course content and an increased motivation to learn;
- promotes self-confidence, critical thinking, self-motivation, and socialization skills; and
- improves environmental stewardship (Sheppard et al. 2010; Sobel 2004; van der Hoeven Kraft et al. 2011).

Place-based education also fosters a sense of place, which is the set of all meanings and attachments affixed to a location by an individual or group that encapsulate cognitive and affective connections between people and places (Gruenewald 2003; Sobel 2004). Place-based teaching is conscious of, and intentionally leverages, both students’ and instructors’ sense of place; this enhancement of a student’s sense of place is an authentic and assessable learning outcome of place-based teaching. Outcomes are met when students are enabled to find personally relevant meanings and develop attachments to the places they study (Semken and Butler Freeman 2008).

Multicultural and Native American Learning Styles in Environmental Education

Attention to multicultural and Native American learning styles has been gaining traction recently as educators struggle to make school material accessible to increasingly varied learners. Beyond the classroom, informal educators including archaeologists and environmental educators also need to be cognizant of these varied learning styles. This is particularly important for those doing place-based or community-based outreach. The following is a basic introduction to multicultural and Native American learning styles as applied in EE to serve as guidance for archaeologists who do not have a background in education to work with an audience of indigenous youth.

There are some subtle differences between the concepts of multicultural learning styles and Native American learning styles. Multicultural learning styles generally refer to broad cultural classifications of students from various ethnic and cultural groups, but with a strong emphasis against overgeneralizations about individuals. It is based on the concept that cultural factors appear to influence learning, i.e., childhood socialization, sociocultural tightness, ecological adaptation, biological effects, and language (Irvine and York 1995). The concept of Native American learning styles falls under the umbrella of multicultural learning styles, but it acknowledges tendencies or preferences that do not typically apply to students from other cultural backgrounds.

### Place-Based Education

Place-based education is a cornerstone of EE, community-based learning, and service learning. Place-based teaching and learning are cross-disciplinary and intercultural, informed, and contextualized by the natural, cultural, and socioeconomic attributes of the places studied (Semken 2012). It is not simply a way to integrate the curriculum around the study of a place but a means of inspiring stewardship and an authentic renewal and revitalization of civic life (Sobel 2004). Cultural landscapes can serve as a canvas for place-based education. As defined by UNESCO World Heritage Center (2015), cultural landscapes can essentially be summarized as outdoor settings that combine works of nature and humankind to express a long and intimate relationship between peoples and their natural environment, and they can be used as a learning tool to encourage place attachment and environmental stewardship.

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<th>TABLE 1. The Categories of Environmental Education Objectives, as Outlined in the Tbilisi Declaration (UNESCO 1978).</th>
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<td><strong>Foundational Objectives of Environmental Education</strong></td>
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<tr>
<td>AWARENESS—to acquire an awareness of, and sensitivity to, the total environment and its allied problems;</td>
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<tr>
<td>KNOWLEDGE—to gain a variety of experiences in, and acquire a basic understanding of, the environment and its associated problems;</td>
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<tr>
<td>ATTITUDES—to acquire a set of values and feelings of concern for the environment and motivation for actively participating in environmental improvement and protection;</td>
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<tr>
<td>SKILLS—to acquire the skills for identifying and solving environmental problems; and</td>
</tr>
<tr>
<td>PARTICIPATION—to encourage citizens to be actively involved at all levels in working toward resolution of environmental problems.</td>
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Archaeologists, in particular those who are involved in land stewardship activities, are in a unique position not only to promote outdoor education regarding heritage and preservation but also to engage in natural resources and conservation education that may foster an increased connectedness between youth and nature. In the field of EE, archaeology can be an educational tool used to inspire children to spend more time in the outdoors, participate in experiential outdoor activities, and interpret their own archaeological heritage. Archaeologists are keenly aware of learning in and through the environment, as it is the nature of the discipline. Although archaeologists may not have realized it before, this is actually a form of EE. It teaches children and adults how to learn about and investigate their environment, and to make intelligent, informed decisions about its care (North American Association for Environmental Education [NAAEE] 2015).
Native American learning styles are best expressed as a collection of tendencies among the general population, and it is noted that it does not apply equally to all tribal groups or individuals. In general, research based on a variety of theoretical frameworks and using a variety of methodologies suggests that among American Indian and Alaska Native students, there is some tendency toward

- a global, or holistic, style of organizing information,
- a visual style of mentally representing information in thinking,
- a well-formed spatial ability,
- a preference for a more reflective style in processing information,
- a preference for a collaborative approach to task completion,
- a watching and then doing rather than employing trial and error,
- learning experientially and in natural settings, and
- learning best from nonverbal mechanisms rather than verbal ones (adapted from Hilberg and Tharp 2002).

Both EE and multicultural education aim to empower people to take action for a better future. The individuality of students is deeply entwined with their ethnic identity and cultural socialization, and that identity may be strongly bound to a place, a certain environment, or a landscape (Nordström 2008). Strengthening identity will contribute to building sufficient self-esteem, which is essential as only people who trust in their skills and abilities are able to effect change in a society. EE and multicultural education seek to empower people to take action for a better future, and both aim to reorient education. They both find common ground in treasuring diversity, creating a sense of connectedness to their natural and social environments, emphasizing respect and compassion, promoting equity and social justice among all individuals, and building strong global perspectives. Through holistic learning, they strive to facilitate social change to reach a sustainable society.

Archaeology as Environmental Education

Archaeology has a rich knowledge base pertaining to environmental research and education. However, archaeologists, including those who are active in public archaeology, have largely ignored the growing movement of EE (Berkson 2009). Similarly, the field of EE acknowledges the influence of culture and society concerning the environment, but environmental educators are often not equipped with a solid background in sociology or cultural history. Archaeology readily emphasizes the connection between cultural history and natural history, and EE provides first-hand experiences in the out-of-doors so learners gain an appreciation for the environment, an understanding of environmental issues, and additional insight into their role within the environment. As archaeologists, we are uniquely positioned to use our field not only as a way to encourage youth to be outdoors and be active, but also as an avenue for them to interpret their own archaeological heritage and gain a deep time-informed understanding of the natural and cultural stewardship needs in their own local landscapes.

Studying human activity from the past through the recovery and analysis of material culture involves looking at both cultural and physical landscapes in and through the environment. To practice archaeology is to study human adaptation to the natural world by using the environment as a vehicle for the development of knowledge. In short, we can learn the story of the land and its use over time through archaeology. Archaeology that focuses on cultural landscapes as tools for learning can immerse a learner in place, and field-based activities that focus on a learner’s local community can foster a sense of place (see also Sgouros and Stirn 2016). This sense of belonging, in other words, people’s feeling of connectedness to their natural and social environment, is central in EE and multicultural education (Nordström 2008).

In addition, place-based learning and place consciousness can be useful frameworks to integrate multicultural and indigenous perspectives in archaeology-based EE (Figure 7). Indigenous students have been shown to benefit from culturally responsive teaching in subjects of science and ecology, particularly through outdoor, hands-on learning. Archaeology, as a multidisciplinary field, can provide an avenue for such beneficial learning. Archaeologists can also be place conscious and take into account the local traditional homelands of the indigenous peoples on which archaeological sites are situated. Working with local indigenous peoples can help maintain the integrity of local knowledge by letting them be the tellers of their own existence, of their past, present, and future (Figure 8).

FIGURE 7. A Venn diagram depicting the relationship between archaeology, environmental education, Native American learning styles, and cultural landscapes. Common among all four concepts is place (illustrated by Elizabeth Reetz; Reetz 2013).
CONCLUSIONS

Although it was not intentionally planned in the curriculum, the HCN workshop integrated elements of place-based education and EE. Like EE, the workshop stimulated conversations about the bigger picture, the interrelationship of culture and nature, and the interpretation of one’s place in the world. The workshop centered on archaeology but immersed students in the study of a heritage landscape and how their ancestors used that landscape throughout time. Both the archaeologists and HCN staff were conscious of the personal relevance the tribal allotment had to students, and they leveraged that connection to promote a deeper engagement.

One participating archaeologist had graduate-level coursework in education, but neither had a background in EE or multicultural education. However, their thorough collaboration with HCN partners and conscientious awareness of the cultural beliefs of indigenous youth allowed them to present science-based archaeology centered on a heritage landscape in a culturally sensitive and well-received manner. Both the archaeologists and HCN staff recognized the need to modify technical language and archaeological terminology to conform to the learning level and traditional background knowledge of the students, and they will be diligent about this in future workshops.

This workshop was essentially a test run on behalf of the HCN and the archaeologists. The success of this partnership is motivating the organization of future workshops. An acknowledgment of the successes and challenges assessed through the interviews allows for modifications to enhance the learning experiences of HCN youth. Additionally, the preparation of a more programmatic structure will allow for the development of in-depth learning outcomes determined by tribal community leaders and archaeologists. Having measurable outcomes will provide a unique opportunity for staff to further assess and evaluate both the learning outcomes of the students and the collaborative research outcomes of the adult participants.

Overall, a solid and collaborative planning process between archaeologists and HCN staff contributed to a successful workshop in which all parties met their goals of strengthening partnerships and providing an enriching learning experience for HCN youth. The archaeologists will be invited back for future workshops and other collaborations. The involvement of HCN Youth Services staff and other community leaders, in a setting that also incorporated a ciporoke as a traditional teaching structure, created a familiar and trusting learning environment. HCN youth were respectful, enthusiastic, and engaged. Through student and parent feedback, HCN staff estimate that more than 90 percent of the student participants will participate in future archaeology workshops. Additionally, the HNC youth who participated in the workshop are aware of archaeology and historic preservation as future careers, both within and beyond their community.

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Data Availability Statement

The data from this assessment can be made available by contacting the Ho-Chunk Nation Department of Heritage Preservation, Cultural Resources Division.

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AUTHOR INFORMATION
Elizabeth Reetz ■ University of Iowa Office of the State Archaeologist, 700 S. Clinton St., Iowa City, IA 52242 (elizabeth-reetz@uiowa.edu)

William Quackenbush ■ Department of Heritage Preservation, Cultural Resources Division, W9035 Highway 54, Black River Falls, WI, 54615 (Bill.Quackenbush@ho-chunk.com)