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Teaching Environmental Education to Native American and Alaska Native Students: A Case Study in Interdisciplinary Teaching in Higher Education

Cover Page Footnote

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Introduction

Teaching Native American and Alaska Native students can be a challenge to individuals who do not have the experience in working with Indigenous communities or do not have an understanding of the colonial relationship between Indigenous peoples and the United States federal government. Because a primary objective of education is to “create citizens,” an additional goal in teaching Indigenous students is to create citizens of tribal nations (Champagne, 2010, p. 32). To do this effectively, educators must be aware of proper teaching techniques designed to reach Indigenous students in culturally relevant ways. For instance, there is a wealth of research available to explore culturally relevant curriculum and instruction, along with databases such as the Alaska Native Knowledge Network (ANKN). There is less information available for teaching science to Indigenous students. The purpose of this article is to better understand how teaching Indigenous students through an integrated perspective (also known as a multi- or interdisciplinary approach) may promote a more culturally relevant way to instruct Indigenous students in environmental learning.

It is well understood that Indigenous peoples sustain a close relationship with the land and natural resources (Basso, 1996; Kawagley, 1995; Pickering Sherman, Van Lanen, & Sherman, 2010). Little research has been conducted to better understand what this relationship means in a practical sense, but some emphasis has been placed upon economic development, cultural revitalization, and natural resource stewardship (Champagne, 2010; Emmons, 2012; Kawagley & Barnhardt, 1999). It is important to recognize that this intimate relationship to the natural environment may provide a unique forum for teaching environmental education to Indigenous students. Through an integrated teaching approach that highlights a holistic indigenous worldview, sovereignty may be upheld and sustained, as tribal citizens are better able to merge western and indigenous worldviews to operate within a traditional and contemporary context (Kawagley & Barnhardt, 1999).

Background

In many Native cultures and languages, the concept of “education” is much more holistic than the definition used by dominant society (Kawagley & Barnhardt, 1999). The purpose of education in Native communities serves to strengthen the personal and cultural bond to the natural environment in addition to learning essential technical skills for living within dominant

society (Barnhardt & Kawagley, 2005). For educators in higher education, understanding how this close environmental relationship works may prove to be an effective tool in teaching Native students a wide range of disciplines. Specifically, this research investigates environmental education and hopes to serve as a foundational basis for exploring effective pedagogy for other academic fields of study.

Research indicates that Native students perform better in natural and physical science-based fields of study than members of other ethnic and racial minorities (Hardin, 2012; National Center for Education Statistics, 2012). Additionally, popular fields of study for Native students in higher education are the biological and physical sciences, including environmental science and studies. Methods that have been useful in teaching science and science-related disciplines to Indigenous students include active, experiential, and hands-on learning; another perspective is integrated, or interdisciplinary, instruction (Gilliland, 1992; Ovando, 1992). Integrated teaching complements the more holistic worldview that Indigenous peoples share, thereby making it more culturally relevant (Cajete, 1994). This method of instruction can be effective in teaching a variety of subjects and especially as it concerns environmental education.

Description of Courses

During the 2012-2013 academic year, the authors taught at Fort Lewis College, a small public liberal arts college with a Native American and Alaska Native student population of about 22% (Fort Lewis College Institutional Research). At this time, Nicholas Emmons taught three courses that were uniquely Native/environment focused: Native Americans and Native Lands, Native American Forestry, and Ecological Perspectives of Native Americans. In each course, Emmons designed assignments to encourage students to explore environmental issues through personal reflections (including poetry, short story, or critical analysis), a variety of hands-on activities, and through interdisciplinary teaching. Specifically, students in each of these courses were taught practical skills in working with Native communities. These courses were housed in the Department of Native American and Indigenous Studies at Fort Lewis College, but they also were able to count for degree electives for students majoring in Environmental Studies.

In Native Americans and Native Lands, the content focused heavily on policy, the trustee relationship, and indigenous environmental activism on Native lands. The capstone project for this course was a land acquisition and

management plan for the Miami Nation of Indiana. The students worked in small groups, established by the instructor, to develop each component of the proposal. As a semester-long project, the students were to develop a better understanding of the challenges in land acquisition and management by an unrecognized Indigenous community. There were 23 students enrolled in this course, of which 18 were enrolled in a federally recognized Native American or Alaska Native community.

In Native American Forestry, course content consisted of basic forestry principles and indigenous forest stewardship. The two main case studies in the course were the Menominee and the Klamath. The students developed a mock forestry management proposal for the Keeweenaw Bay Indian Community. This proposal for a management plan served as the capstone project for the course. Each student group, established by the instructor, contributed different components to the proposal. There were 31 students enrolled in this course, of which 22 were enrolled in a federally recognized Native American or Alaska Native community.

In Ecological Perspectives of Native Americans, content material focused on the historical and contemporary relationships between Indigenous peoples and the natural environment. The reading material included a diverse array of information from across North America, from the American Northeast to Alaska. In this way, students better understood how the Indigenous cultures across the continent sustain a close environmental relationship. The capstone project for the course was an environmental history for three Native communities that shared traditional lands in the southern Great Lakes: the Miami, the Potawatomi, and the Shawnee. Students were divided into three groups, randomly assigned by the instructor. There were 25 students enrolled in this course, of which 19 were enrolled in a federally recognized Native American or Alaska Native community.

Discussion/Outcomes

The capstone projects mentioned in the previous section required high student activity and promoted essential team-building skills. Students in public institutions of higher education consistently are interested in courses that teach practical and technical skills. In this context, the three projects promoted a number of learning opportunities to students to more fully understand how to work with sovereign tribal nations. Although these projects were conducted and completed from a distance, it was necessary for students to become much more creative in collecting information for the assignment. These assignments also were culturally and ethnically specific,

which afforded the students a more diverse learning experience. Finally, these courses and assignments built capacity within students that tribes may harness to achieve more autonomy.

These service projects were interdisciplinary by design. To complete the assignments successfully, the students had to become engaged and immerse themselves in a diverse array of disciplines and understandings to create a final product that could be implemented by the tribal nation. The issues discussed, from the development of a land acquisition and management plan to a proposal for a forest management plan, cannot be discussed and explored through a narrow lens. The interdisciplinary approach to teaching can be effective pedagogy because it includes the considerations of culture and history (Kawagley & Barnhardt, 1999).

Conclusion

The development of class projects that seek a more integrated teaching and learning approach promotes capacity building through more holistic education. The interdisciplinary nature of the projects integrated many disciplines as befit the very nature of the issues. These assignments taught practical skills through traditional and contemporary technical knowledge and allowed students access to worldviews that are different from their own. From a critical pedagogical approach, the course requirements encouraged activism through an acknowledgement of historical context and promoted nation building. Finally, the capstone projects recognized and incorporated a land-based ethic by providing connection to the spiritual and cultural relationship to land and the environment.

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