## Creating a Post-Colonial Elementary Education Program

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In 1999, the Montana legislature passed House Bill 528 into law - MCA 20-1-501 - that has become known as Indian Education for All:

It is the intent of the legislature . . . that every Montanan, whether Indian or non-Indian, be encouraged to learn about the distinct and unique heritage of American Indians in a culturally responsive manner . . . all school personnel should have an understanding and awareness of Indian tribes to help them relate effectively with Indian students and parents . . . Every educational agency and all educational personnel will work cooperatively with Montana tribes . . . when providing instruction and implementing an educational goal (MCA 20-1-501).

The IEFA act is the most significant curricular policy decision ever made by the Montana legislature. It has helped to ensure that Native American Studies (NAS) becomes a focal point of our Office of Public Instruction. Tribal Colleges throughout the state, via an initiative entitled the "Montana Tribal History Project," have seen an increase in funding to build departments that focus on their respective traditions, grants have been distributed to help implement culturally response curricula for K-12 settings both on and off reservations, and multipronged efforts have been initiated to support the growth of NAS throughout Montana's university system. This paper will focus on the how the elementary education program in the College of Education and Human Sciences (COEHS) at the University of Montana prepares future teachers to implement post-colonial curricula enriched by NAS.

Prior to the implementation of the IEFA, the College of Education at the University of Montana required all undergraduates who sought licensure to take a general education course in NAS. This enabled aspiring educators to gain insight into Native cultures and issues, which is an important first step in assuring that future educators who graduate from our program will be aware of and sensitive to some of the concerns of our native populations. Unfortunately, prior to the implementation of the IEFA, this single required course was usually the only sustained exposure to the NAS aspiring elementary students experienced during their general education coursework.

As teacher educators, our own dedication to the IEFA within our classes and our own commitment to research in Native American Studies is critical for making the policy meaningful and engaging for our students. Moreover, the general education course requirement mentioned previously is not meant to prepare future educators to teach their own students about Native Americans. Issues of pedagogy and curricula are addressed in courses that are specific to the College of Education, where our students learn how to implement much of what they learn in their general education courses. The amount of energy we spend on IEFA is of critical importance for its successful implementation in K-12 settings.

In the first semester of their senior year in the College of Education all aspiring elementary teachers complete a capstone experience comprised of an integrated block of methods courses: science, social studies and math. Faculty that teach these courses have collaborated to ensure that the fundamental values of the IEFA are addressed in a systematic, authentic manner within this block.

When considering how to approach IEFA legislation, the elementary faculty consulted a document entitled "Essential Understandings of Native Americans," published by Montana's Office of Public Instruction. This document, which can be viewed at http://opi.mt.gov/, highlights seven important understandings, including issues of tribal and individual history, sovereignty, and federal policy, that are essential for effective instruction in NAS. In the following three sections of this paper, we will highlight the ways that our methods courses support these Essential Understandings and model transformative, multicultural education practices for preservice educators.

# **Science Methods**

One of the many challenges with the IEFA legislation is how to develop curricula and pedagogical frameworks that appropriately incorporate tribal history, diversity, and ways of knowing into a formal educational system that was founded on Western principles of education.

In science methods, we advocate the use of a "critical pedagogy of place" to help preservice teachers integrate tribal understandings into their science teaching. Embedded in a critical pedagogy of place is a commitment to culturally responsive teaching - to redress the legacy of colonization, to identify contentious issues of sovereignty, and to learn how to live well together. This requires that students be conscious not only of their place, but that of others' places, and the relationship of these places to their identity and others' sense of being.

Because The University of Montana was constructed on the traditional homelands of the Bitterrroot Salish, students in science methods are introduced to an integrated, place-based educational curriculum known as the "PlaceNames Project." Working with elders from the tribe, we seek to build cross-cultural relationships between traditional Bitterroot Salish ~ Pend d'Oreille worldviews and science using Google Earth and tribal culture. Students explore their "sense of place" and come to know the seasonal round that frames a Salish ~ Pend d'Oreille worldview. For more information, please visit: http://www.spatialsci.com/PlaceNames/

The four primary themes of history, culture, diversity, and sovereignty identified in The Essential Understandings of Montana Indians resonate throughout the Place Names curriculum. Students read the Hellgate Treaty and explore the history of the Kerr Dam and the National Bison Range to appreciate both historical and contemporary sovereignty concerns. They become experts in plant and animal life cycles central to the Salish and Pend d'Oreille seasonal round and they listen to tribal narratives about the place known as The University of Montana, gaining an

appreciation for the "different layers of information that represent the history of the people that came before us" (Tony Incashola, personal correspondence).

In addition to experiencing a place-based curriculum model, students are challenged to consider an indigenous worldview when teaching science. The students read *Indigenous Knowledge Systems/Alaska Native Ways of Knowing* by Barnhardt & Kawagley (1999). The class is presented with three teaching scenarios developed by Barden (1998) which encourage them to think about indigenous knowledge in the elementary science curricula:

In a classroom along the Missouri River, children study a unit about the river, learning how to analyze water quality. They also learn that the river is mni wiconi, the water of life.

In a second classroom children learn that a root, tribal people have used for centuries as a curative, contains chemicals that are actually doing the healing.

In a third classroom, the configuration of tepee poles is used to teach students how structures use tension to make them strong.

After experiencing the three classroom scenarios, students are challenged to identify the following:

Which approach used cultural knowledge as a vehicle to teach Western science?

Which approach used Western science to validate things that Native people have known for a long time?

Which approach shows children that both the Native and Western cultures have something to offer?

This leads to a comparative discussion of Western science and traditional ways of knowing and how various curricula can be adapted to strengthen opportunities for students to understand Western science and at the same time understand tribal ways of handling information. As Barden (1998) relates, "Perhaps the biggest challenge of all is helping children to know that the two ways of knowing are equally valid and equally useful. The operative word is different, not better or worse. Both knowledge systems make observations about natural phenomena and ask questions, the answers to these questions vary based on the assumptions of the cultures and the kinds of input that can be called data" (pg.30).

**SOCIAL STUDIES METHODS** There are three main areas where the IEFA is directly supported in elementary social studies methods at the College of Education and Human Sciences at the University of Montana. The traditional adherence to holiday curricula is problematized using children's literature from Native perspectives, students conduct anthropological research and build a database which highlights culturally specific information about various tribes, and the class utilizes primary sources to learn how an archeologist and/or historian would study Native peoples. In addition to these three approaches, students

are encouraged to deepen their understanding of Native American cultures while creating their interdisciplinary unit plans that are taught during the block semester.

Of primary importance is addressing the tradition of teaching a holiday curriculum to elementary students, wherein the ideals of colonialism are reified through fictitious myths about Columbus and Thanksgiving. The first reading assignment in our course is an excerpt from Loewen's Lies My Teacher Told Me (1996). Chapters two and three from this text complicate the ideas of "discovery" and "giving thanks." When we meet to discuss the reading the opening question, "What is history?" encourages students to contemplate the stories they were told as children and to demythologize the founding of the Americas. In the second chapter, which focuses on Columbus, Loewen (1996) supplies primary source evidence to support his curricular critique, quoting Pedro de Cordoba's description of the horrendous conditions of gold mining on Hispanola and Columbus's own diary that shows his support for selling Arawak children into sexual slavery. In the chapter, Loewen complicates both the idea of discovery itself, and the tendency for traditional curricula to focus on discovery and not the conquest which follows. The third chapter examines the origin of the Thanksgiving holiday and looks at the spread of various plagues, with a particular focus on the effects of the smallpox epidemics throughout the colonial period. These chapters are not utilized to make future elementary teachers feel guilty or to present a revisionist approach to the teaching of history. They are chosen to break the cycle of colonial mythology, highlight the exploitation of native cultures, and present tools of the historian's craft, namely primary text analysis. The Essential Understandings explicitly advocate for this approach to the teaching of history, which for Native Americans, predates the written word long before any "discovery."

However, it is insufficient to supply future elementary teachers with a critique of history without addressing curricula in the classroom. For the second half of this preliminary class we analyze children's literature focusing on Columbus. We read Peter Sis's *Follow the Dream: The Story of Christopher Columbus*, which details Columbus's quest for funding and the initial voyage. This notable book contains beautiful maps and charts that are historically accurate. While the book has its merits, it doesn't complexify the idea of discovery or its effects on the Taino people. Sis's book is compared to Jane Yolen's *Encounter*, which highlights Columbus's landing on Hispanola from the perspective of a young Taino boy. Both books become a focus of discussion for curricular decision making at the elementary level.

While this focus on curricular choice is important, it tells us little about the indigenous people of the Americas or how to teach Native American Studies in the elementary classroom. It is critical for aspiring teachers to understand our rich diversity of Native cultures and nations as well as how to teach about them in meaningful and engaging ways. Throughout the semester cultural universals are utilized in elementary social studies to help students go beyond post-colonial critique. Using a series of anthropological questions taken from Brophy and Alleman, each of the students researches a distinct Native American tribe. While answering the following questions, they also come up with plans for curricular implementation at the K-8 level. They then submit a Power Point presentation and accompanying notes to a digital dropbox so that their fellow classmates will have access to a large database of information on each tribe. Here are the questions they address in their research:

Who were the people being studied? Where did they live? What did they leave behind to tell us something about them? What kinds of work did they do? What did they produce or create (food, shelter, clothing)?

What did they do for recreation?
How did they transport goods and people?
What family patterns did they develop?
How did they educate their young?
How did they govern and control their society?
What customs and beliefs did they hold?
What events, individuals, or ideas are they especially known for, and how did those affect their lives?
What problems did they have? How did they deal with those problems?

(Brophy and Alleman, 2006)

These questions serve as the basis for understanding a given culture while simultaneously providing ideas for curricular implementation. When presenting their research to each other, students are able to engage in a comparative study of tribal traditions while discussing ways in which specific universals, such as "customs and beliefs," can be thematically approached in a cross-cultural manner. While being conscious of cultural comparisons is important, it is also important for future teachers to realize that there is no universal Indian. This assignment shows students the rich diversity of cultures that exist in the Americas and provides a gateway for the further exploration of specific tribal customs and knowledge.

In addition to anthropological inquiry, it is important for elementary social studies educators to learn how to utilize different primary sources materials. Our students analyze artifacts from indigenous peoples so the practice of archeology can support Native American studies. Students are also presented with a series of historical images from the Carlisle Indian School so that they can learn how to analyze photographs while learning about Pratt's efforts at cultural genocide. As part of a long-term assignment the students themselves accrue a thematic series of historical photographs and/or pictures. They are encouraged to pick themes which support the teaching of Native American Studies. Recent examples included the American Indian Movement, buffalo hunters of the plains, the Iroquois tribes and the reservations of Montana. While these efforts help future teachers practice social science research, they also honor the cultural richness of Native Americans and remind educators of indigenous struggles over sovereignty, history and identity.

**MATHEMATICS** Mathematics is said to be a universal language that is cross-culturally applicable. However, when math is taught without regards to culture, we run the risk of losing knowledge of various number systems and mathematical phenomena that are culturally specific. In our math methods class, students are introduced to the term "ethnomathematics." This field explores culture, mathematics and classroom activities simultaneously (Van De Walle, 2007). Students study a Native American probability game and often utilize games and counting systems utilize in their own lesson plans. In addition, we utilize both spatial and sociological data from the Montana Indian Reservations to teach key mathematical processes that these aspiring teachers can then utilize.

During a probability and data analysis lesson, students utilize statistics about Montana tribes. In this activity, students compare the population of the seven Montana Indian Reservations to the size (in acres) of the reservations through two separate graphs. One graph illustrates the acreage of each of the seven reservations while the second graph portrays the population of each reservation and the one landless tribe. Questions include basic ones about the graphs themselves: Is it the correct graph for the data? Are the graphs done well with appropriate titles and keys? Then our students analyze the data. Which is the largest reservation, by population and/or acreage? Is there a correlation between the size of the tribe to the size of the reservation? This enables the students to learn specific key information about the tribes and

tribal sovereignty. Most of the time, our students are neither aware of the location nor the names of all the Native nations that call Montana home.

Culturally specific math games are promoted for classroom use when future teachers learn a traditional Native American game called the Plum Stone Game. Almost all North American Indians played this game, including tribes in Montana. This is a game of luck and dexterous skill with the tossing and catching of the stones in a woven basket. See Figure 1 for details of the game. Teaching probability and number sense through the Plum Stone game is a fun way to show students about math and games. It is a game that can be played for students of all ages with appropriate mathematical concepts applied according to the level of the student: from just counting points to calculating all the possible combinations of the stones. The Plum Stone game is an manifestation of tribal history as part of the math methods course, highlighting one of the Essential Understandings of the IEFA. Through this game and graphs, students learn about Montana Indians in the math methods class. IEFA is being addressed in this course, however, there is still much to learn about incorporating the appropriate Essential Understandings.

**CONCLUSION**:Elementary Methods at the University of Montana don't just support Native American Studies, it is wholly dependent upon the field. Our students must be ready to teach in the global society we all live in. Ultimately, the pre-service teachers need to be equipped with skills to teach all subjects including a variety of social sciences while making them comfortable with various cultures and places around the globe. Native American Studies provides an ideal way to support this endeavor. Issues of social justice, historical accuracy, anthropological analysis, and community building are important considerations for both native peoples around the globe and elementary teachers everywhere. They need to be aware of their own place and the history surrounding it. Teaching these future teachers this awareness and learning the Essential Understandings, it is our hope they will become the global teacher teaching their students to be keenly aware of their sense of place and understanding the culture surrounding it.

# References

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Two moons, Three Naturals Score: 10 points

Two Stars, Three Blacks Score: 10 points

One Moon, One Star, Three Naturals Score: 1 point

One Moon, One Star, Three Blacks Score: 1 point

Plum Stone Configurations

Figure 1. Plum Stone Scoring Guide

Rules of the Plum Stone Game:

One to two people play against opponents of the same number. Each team faces each other with about 2 feet separating the teams. A basket of plum stones sits between them. The teams can flip a stone to decide who goes first. This basket contains five plum stones (or cut antler buttons). Three buttons are burned black on one side. Two buttons are natural with a star on one side and a moon on the other. The buttons are placed in the basket, tossed in the air and caught in the basket. (See Figure 1 for scoring information.) In addition to just scoring points, a complete data analysis can done by listing all the possible combinations of the stones and the probability of scoring each. (A version of the game can be found at <a href="http://www.scienceviews.com/indian/indiangames11.html#stone">http://www.scienceviews.com/indian/indiangames11.html#stone</a>)

hree Blacks bints

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Scoring Guide

Essential Understandings of Montana's Native Peoples (http://opi.mt.gov/)

1) There is great diversity among the 12 tribal Nations of Montana in their languages, cultures, histories and governments. Each Nation has a distinct and unique cultural heritage that contributes to modern Montana.

2) There is great diversity among individual American Indians as identity is developed, defined and redefined by entities, organizations and people. A continuum of Indian identity, unique to each individual, ranges from assimilated to traditional. There is no generic American Indian.

3) The ideologies of Native traditional beliefs and spirituality persist into modern day life as tribal cultures, traditions, and languages are still practiced by many American Indian people and are incorporated into how tribes govern and manage their affairs.

Additionally, each tribe has its own oral histories, which are as valid as written histories. These histories pre-date the "discovery" of North America.

4) Reservations are lands that have been reserved by the tribes for their own use through treaties, statutes, and executive orders and were not "given" to them. The principle that land should be acquired from the Indians only through their consent with treaties involved three assumptions:

I. Both parties to treaties were sovereign powers.

II. Indian tribes had some form of transferable title to the land. III. Acquisition of Indian lands was solely a government matter not to be left to individual colonists.

5) Federal policies, put into place throughout American history, have affected Indian people and still shape who they are today. Much of Indian history can be related through several major federal policy periods:

Colonization Period 1492 -Treaty Period 1789 - 1871 Allotment Period 1887 - 1934 Boarding School Period 1879 - - -Tribal Reorganization Period 1934 - 1958 Termination Period 1953 - 1988 Self-determination 1975 – current

6) History is a story most often related through the subjective experience of the teller. With the inclusion of more and varied voices, histories are being rediscovered and revised. History told from an Indian perspective frequently conflicts with the stories mainstream historians tell.

7. Under the American legal system, Indian tribes have sovereign powers, separate and independent from the federal and state governments. However, the extent and breadth of tribal sovereignty is not the same for each tribe.