

# Archived Information

## American Indian/Alaska Native Education: An Overview

Jon Reyhner, Northern Arizona University

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### Introduction

After four centuries of precipitous population decline to a low of about 237,000 in 1900, American Indian and Alaska Native populations in the United States began to increase at the turn of the century. That increase now is accelerating. According to the United States Census, the Native population of the United States more than doubled between 1970 and 2000, from one million to almost two and half million. Half of this population lives in urban areas and less than a third on Reservations.

The 2,476,000 Native Americans represent some 500 different tribes, each with its own unique culture, and 200 surviving languages. But as population increases, American Indian languages and cultures are being lost, partly as a result of federal and state education policies over most of the last two centuries that called for the "Americanization" of Indian students.

A note on terminology is necessary here. I will follow terminology chosen by the Indian Nations at Risk Task Force. They preferred to use the term *American Indian/Alaska Native* for the initial reference to the indigenous people of North America and to thereafter use the short form *Native*. However, because of the historical use of terms such as *Indian* and *Native American*, I will use the terms somewhat interchangeably, especially the term *American Indian* or the short form *Indian* when it is clear that Alaska Natives are not being included for geographical reasons.

In the early 1970s Indian activism, part of the Civil Rights Movement, created an atmosphere that led to the passage of the 1972 Indian Education Act and the 1975 Indian Self-Determination and Education Assistance Act. Self-determination is the idea that Indian people, not the U.S. government, should decide what is best for Indian America. This concept survived the subsequent decline in federal funding, but Native Americans are still uncertain what self-determination will ultimately mean for Indian people and Indian education.

In the early 1990s there was a revival of interest in Indian education that matched the interest shown in the late 1960s and early 1970s. Evidence of this revival included the [Native American Languages Act](#) in 1990, the release of the final report of the U.S. Secretary of Education's Indian Nations at Risk Task Force in 1991, and the White House Conference on Indian Education in 1992. This revival of

interest was part of a recurring historical cycle. However, in the last few decades, in contrast to past episodes of concern, Indian people, rather than non-Indian missionaries and government officials, are taking the lead in lobbying for new laws, serving on Task Forces, and attending Indian education conferences.

Poverty and other social problems have plagued American Indians. They want political and economic equality, and they want to regain their Native identities, including their languages and traditions that historically were suppressed in schools. By recovering the past through a strong sense of identity and by using culturally appropriate curriculum and instruction, some Indian and Alaska Native students are achieving educational success that heretofore proved elusive.

In the 1990s, about 40,000 Native students (10% of the total) attended some 170 Bureau of Indian Affairs (BIA) funded schools, about 10,000 (3%) attended private schools, and over 300,000 (87%) attended public schools. In these schools, a disproportionate number of Native students achieve below national averages. For example, a 1991 *Audit Report* of the U.S. Department of the Interior's Office of Inspector General showed students in BIA schools achieving on average far below non-Native students and "generally not receiving quality educations." On the 2000 National Assessment of Educational Progress reading assessment, 40% of white fourth graders scored at or above proficient, compared to only 17% of Native American students. In math, 34% of white fourth graders scored at or above proficient, while just 14% of Native Americans scored as high.

This article will examine the current issues in American Indian and Alaska Native education, the status of Indian education today, and the work that Native leaders and others are doing to improve Native education.

### **Historical Overview**

Before Columbus and the invasion of Europeans, North American Indian education was geared to teaching children how to survive. Social education taught children their responsibilities to their extended family and the group, the clan, band, or tribe. Vocational education taught children about child rearing, home management, farming, hunting, gathering, fishing, and so forth. Each tribe had its own religion that told the children their place in the cosmos through stories and ceremonies. Members of the extended family taught their children by example, and children copied adult activities as they played.

The European invasion that began in the 15<sup>th</sup> century brought tremendous changes to the life of Indians. Even more damaging than the aggressive warfare of the Europeans was the introduction of new diseases, such as smallpox and measles, for which the indigenous Americans had no immunities. Another element of the invasion was the missionary impulse of both Catholic and Protestant Christians. Missionaries did not recognize Indian beliefs and cast the Indian religions as the work of the Christian devil. Thus early efforts by

Europeans at Native education by Europeans focused on converting Indians to Christianity.

The missionaries' demand for total rejection of traditional practices was too much for most Indians to accept unless disease and war shattered their traditional lifeways. In addition, the Europeans' racism and ethnocentrism were too ingrained for them to accept the Indians as equals, even if the Indians spoke, dressed, and acted like European colonists. Thus one answer to the "Indian" problem was to eradicate them through wars and to push any survivors westward.

With the establishment of the United States, the federal government was faced with the "Indian problem." To deal with Indians, the government established the Indian Bureau in the War Department in 1824. This office was moved to the newly established Department of Interior in 1849 where it continues today.

Because most pioneers saw Indians as an impediment to progress, the Bureau of Indian Affairs (BIA) became a tool to allow more rapid westward expansion. For example, under President Andrew Jackson, the government established the Indian Territory in present-day Oklahoma. Through what is now being called "ethnic cleansing," the federal government forced the Cherokee and other southeastern tribes to leave their ancestral homes and to walk a "Trail of Tears" to a new homeland that they were promised they could have forever. However the westward movement of settlers quickly ended this "final solution" of the Indian problem.

If Indians could not be eradicated or isolated in an Indian Territory, then they would have to be civilized. Of some 400 treaties negotiated between tribes and the government before such treaty-making ended in 1871, 120 contained educational provisions to move Indians towards "civilization." Many of those provisions focused on making them farmers. Article 7 of the 1868 Treaty of Fort Laramie with the Sioux and their allies was typical of the provisions in later treaties:

In order to insure the civilization of the Indians entering into this treaty, the necessity of education is admitted, especially of such of them as are or may be settled on said agricultural reservations, and they pledge themselves to compel their children, male and female, between the ages of six and sixteen years, to attend school; and it is hereby made the duty of the agent for said Indians to see that this stipulation is strictly complied with; and for every thirty children between said ages who can be induced or compelled to attend school, a house shall be provided and a teacher competent to teach the elementary branches of an English education shall be furnished, who will reside among said Indians, and faithfully discharge his or her duties as a teacher.

Schools promised by treaties were often slow in coming, and the quality of those schools that were established was poor. Indians sometimes argued that the schools were only set up to tap into their treaty money. The spoils system of the time led teachers to being hired for their partisan political connections rather than their educational qualifications. Even after Civil Service reforms in 1892, hiring officials did not see that any knowledge about Indians was important, since BIA schools were designed to perform cultural genocide. In the words of Carlisle Indian School founder Captain Richard Pratt, such schools were to "kill the Indian and save the man."

There was a naive belief in the late 19th Century that if Indian youth were removed for just a few years from their parents and placed in boarding schools, they could be assimilated into white society, thus solving "the Indian problem." Indian Commissioner Thomas Jefferson Morgan wrote in his 1889 annual report to the Secretary of the Interior that "the Indian must conform 'to the white man's way,' peaceably if they will, forcibly if they must."

Initially the U.S. government funded missionaries to educate Indians, mostly using funds promised by treaty to Indians for land cessions. After the Civil War the Catholic Church developed the largest number of mission schools by using government funding. Protestants saw the Catholic effort as anti-democratic and they fought successfully to end all government funding of mission schools by 1900.

The federal government developed its own, Protestant-influenced school system of day and boarding schools. An off-reservation boarding school system was also started 1879 with the famous Carlisle Indian School in Pennsylvania. The education program in boarding schools consisted of one-half day vocational instruction and one-half day academic instruction in English and the "three R's." The vocational instruction involved the students growing their own food, making their own clothes, and generally maintaining the boarding schools. The goal of Carlisle was for students to permanently leave their reservations and assimilate into white society. However, instead of melting into white society, most Indians left from boarding school ill-prepared to live in either white or Indian society.

A government-commissioned study in the late 1920s, the Meriam Report, found many problems with the government's handling of its "wards" and concluded:

The philosophy underlying the establishment of Indian boarding schools, that the way to "civilize" the Indian is to take Indian children, even very young children, as completely as possible away from their home and family life, is a variance with modern views of education and social work, which regard the home and family as essential social institutions from which it is generally undesirable to uproot children.

The inauguration of Franklin Roosevelt in 1933 ushered in an era of change. President Roosevelt appointed the BIA's most vocal critic, John Collier, as Commissioner of Indian Affairs. Collier questioned the materialism of modern American society and valued Indian traditional religions to the chagrin of Christian missionaries. Collier battled BIA bureaucracy and his critics for 12 years with modest success. Unfortunately, after his departure toward the end of World War II, a conservative reaction set in and the federal government tried to terminate Indian reservations and finalize the cultural assimilation of Indians. Many were relocated to cities on the assumption that jobs were available. But, like the students of earlier generations sent off to boarding schools, many of these Indian workers later returned to their reservations.

Some of those who stayed in cities, as well as some who returned to the reservations, were radicalized in the urban experience. The

American Indian Movement began in the 1960s in an effort to stop police brutality in Minneapolis and other cities. An Indian takeover of Alcatraz Island in 1969, a march on Washington and takeover of the BIA headquarters building in 1972, and a 71-day stand-off and shoot-out with the Federal Bureau of Investigation at Wounded Knee in 1973, were all part of the radical Indian movement before it subsided in the mid-1970s. The end of the radical period was brought about partly through the concerted and sometimes legally questionable efforts of law enforcement agencies to subvert or imprison the movement's leaders.

### **Self-Determination**

Despite reform efforts, the National Study of Indian Education in the late 1960s and the 1969 Senate subcommittee report *Indian Education: A National Tragedy, a National Challenge* documented the continued failures of Indian education. Civil rights activists and Indians put forward the idea that since the BIA had not been able to solve the "Indian problem" after more than a century of effort, the government should back off and offer assistance to tribes who would work to solve their own problems. In a special message on Indian affairs delivered on 8 July 1970 to Congress, President Richard Nixon declared:

the story of the Indian in America is something more than the record of the white man's frequent aggression, broken agreements, intermittent remorse and prolonged failure. It is a record also of endurance, of survival, of adaptation and creativity in the face of overwhelming obstacles. It is a record of enormous contributions to this country--to its art and culture, to its strength and spirit, to its sense of history and its sense of purpose.

It is long past time that the Indian policies of the Federal government began to recognize and build upon the capacities and insights of the Indian people. Both as a matter of justice and as a matter of enlightened social policy, we must begin to act on the basis of what the Indians themselves have long been telling us. The time has come to break decisively with the past and to create the conditions for a new era in which the Indian future is determined by Indian acts and Indian decisions.

In this message, Nixon recognized the Native aspirations for self-government that had led to the founding of Rough Rock Demonstration School in 1966, the first Native controlled school in modern times, and Navajo Community College (now Diné College) in 1968, the first tribal college. Self-determination was further operationalized with regard to education by the passage of the Indian Education Act in 1972 and the Indian Self-Determination and Education Assistance Act in 1975.

The Indian Education Act provides money for special programs for Indian children on and off reservations, while the Self-Determination Act allows tribes and Indian organizations to take over and run BIA programs, including BIA schools. Despite seriously inadequate funding, by 1992 the BIA was supporting 22 tribally controlled community colleges and 84 elementary and secondary schools operated

by Indian tribes and tribal organizations. Canada has even more schools operated by "First Nations."

### **Indian Nations at Risk Task Force**

Despite the changes brought about by the Self-Determination Act, testimony gathered at the U.S. Secretary of Education's Indian Nations at Risk Task Force hearings in 1990 and 1991 indicated that many Native students still attended schools with "an unfriendly school climate that fails to promote appropriate academic, social, cultural, and spiritual development among many Native students." Such schools also tended to exhibit a Eurocentric curriculum, low teacher expectations, "a lack of Native educators as role models," and "overt and subtle racism." These factors contributed to Native students having the highest high school dropout rate (36%) of any minority group in the United States.

On the brighter side, the Task Force found that "schools that respect and support a student's language and culture are significantly more successful in educating those students." In the process of gathering information,

The Task Force learned that there is a direct relationship between students' understanding of their culture and role in society and their ability to function comfortably in society and to achieve academic success. When students' relationships with the larger society are strained, their chances for academic success appear to diminish. . . .

Often schools have failed to make clear to students the connection between what they learn in school and what they must know to live comfortably and contribute to society.

The task force recommended "establishing the promotion of students' tribal language and culture as a responsibility of the school" and "training of Native teachers to increase the number of Indian educators and other professionals." Furthermore, they recommended that school officials and educators "integrate the contemporary, historical, and cultural perspectives of American Indians" and "give education a multicultural focus to eliminate racism and promote understanding among all races."

State governments were encouraged to "allocate specific funding for schools serving Native children to develop and use linguistically, culturally, and developmentally appropriate curricula," and the federal government was asked to "seek legislation to authorize the establishment of a national research and school improvement center for Native education." In addition, colleges and universities needed to "encourage scholarly work on curricula and textbook development that incorporates Native perspectives."

## **Schools**

The task force looked at a variety of schools serving Native students American Indians. There were BIA boarding and day schools, increasingly under local control but still tied up with myriad government regulations; tribally controlled schools operated under contract and grants with the Bureau of Indian Affairs; and mission schools operated by various churches. Public schools served the largest number of Native students and tended to look like public schools anywhere, even when they were located on Indian reservations. While Indians have taken over reservation boards of education and established cultural centers and Native studies programs, these changes tend to be peripheral to basic state-mandated curricula.

The Indian Nations at Risk Task Force declared four national priorities: 1) Developing parent-based and culturally, linguistically, and developmentally appropriate early childhood education, 2) Making the promotion of students' tribal language and culture a responsibility of the school, 3) Training more Native teachers, and 4) Strengthening tribal and Bureau of Indian Affairs colleges. In addition, they adapted the six national goals from President Bush's America 2000 program into [10 national Indian education goals](#).

## **Tribal Colleges**

One of the most promising trends in Indian education today is the growth of the tribal college movement since Navajo Community College (now Diné College) opened its doors in 1969. While this college and others were started because of the low success rate of Native students in mainstream colleges, they also began developing unique tribally-specific curriculum. Lionel Bordeaux, president of one of the oldest tribal colleges declares "cultural preservation is really the foundation of the tribal colleges."

Tribal colleges today are serving student who never would have had a chance to go on to college. Not only are they teaching students, they are in the vanguard of improving the quality of life on their reservations. A two-year study of tribal colleges by the Carnegie Foundation concluded, "the idea of Indian-controlled colleges offers great hope to the Native American community and the nation as a whole." Most of these colleges have either received regional accreditation or on working on getting accredited. Interestingly, the BIA did not initially support the growth of independent tribal colleges.

Tribal colleges are moving to become more than just community colleges. In South Dakota, Sinte Gleska University and Oglala Lakota College developed four-year teacher preparation programs. Both Diné College in Arizona and Haskell Indian Nations University in Kansas have also developed teacher education programs.

## Validating Native Culture

In *Light of the Feather: Pathways Through Contemporary Indian America*, author Mick Fedullo tells of his experiences as an educational consultant in Indian schools. He gives examples of American Indian resistance and intercultural differences. He quotes an Apache elder who says that the students' parents,

had been to school in their day, and what that usually meant was a bad BIA boarding school. And all they remember about school is that there were all these Anglos [white people] trying to make them forget they were Apaches; trying to make them turn against their parents, telling them that Indian ways were evil.

Well, a lot of those kids came to believe that their teachers were the evil ones, and so anything that had to do with "education" was also evil--like books. Those kids came back to the reservation, got married, and had their own kids. And now they don't want anything to do with the white man's education. The only reason they send their kids to school is because it's the law. But they tell their kids not to take school seriously.

The cost to the student of rejecting the school's language and culture is a serious loss of future academic and occupational opportunities. However, the alternative of rejecting one's home language and culture can lead to tragic consequences as students become increasingly unable to communicate with their parents and other extended family members. University of California Professor Lilly Wong Fillmore writes,

What is lost is no less than the means by which parents socialize their children: When parents are unable to talk to their children, they cannot easily convey to them their values, beliefs, understandings, or wisdom about how to cope with their experiences.

They cannot teach them about the meaning of work, or about personal responsibility, or what it means to be a moral or ethical person in a world with too many choices and too few guideposts to follow.

Another tragic consequence of the failure of educators to appreciate Indian languages and cultures is the well documented over-identification of Indian children as learning disabled and mentally retarded. These labels usually are based on assessments by monolingual, monocultural school psychologists using "intelligence" and other tests that measure "Standard" English language ability and familiarity with mainstream American culture.

Native students today vary from traditional to assimilated. Some are bicultural, capable of moving back and forth from white to traditional Indian culture. Because of the tremendous variation among Indians of different tribes and different degrees of assimilation, it is impossible to study "the Indian" and determine what is the best instructional approach for them. The many variations among Indian students point to the conclusion that a variety of methods should be employed.

Teachers can demonstrate that they care about student's background and support family values through modeling learning for their students. They can learn about the home culture of their students through home and community visits and by reading relevant ethnographic literature. They then can use this knowledge to change their teaching methods and to use classroom activities that will better motivate their students. On reservations this has been called "crossing the cattle guard," referring to leaving the fenced compounds that teachers live in next to the schools. Native families see teachers' participation in such Native activities as powwows as affirming the teachers' respect and concern for their students.

To be successful, educators must overcome their students' resistance to education and master the art of intercultural communication. To overcome that resistance Jim Cummins of the Ontario Institute for Educational Studies found that:

1. Educators must involve parents in the running of the school.
2. School curriculum needs to reflect the cultural background of the student.
3. Experiential and interactive teaching methods need to be used.
4. Testing must be used to help students learn effectively, rather than to sort and label students.

If teachers take this approach, they will employ a bilingual-additive, "English Plus" approach, which contrasts dramatically with the traditional assimilationist approach.

### **Teacher Training**

Special training to teach Native students is often considered unimportant. When I started teaching Navajo sixth graders in 1971, state certification requirements did not, and still do not today, mandate any training in Native education. I was lucky enough to start teaching near the first tribal college, which had recently opened its doors. Thus I was able to learn about Navajos and the unique requirements of cross-cultural education.

Culture determines our understanding of the world, patterns our social interactions, and shapes our tastes in food, music, clothing, color, and other matters. Furthermore, we take most of this cultural knowledge for granted. When students behave in terms of the cultural knowledge we acquired growing up, then we consider it normal behavior. However, if students act differently because they grew up in a different culture, we consider their behavior abnormal or bad. Teachers need to understand the dynamics of how children are socialized both into their home culture and into the school culture. And teachers need to be able to get students to think about culture and how it shapes their lives.

## **Sociocultural and Historical Foundations**

First, teachers of Native students need an understanding of the findings of anthropology, sociology, and history. Those who have carefully studied Indian education have long recognized this need. For example, Robert Havighurst, who directed the National Study of Indian Education from 1967 to 1971, found evidence to suggest that "teachers of Indian children should be systematically trained to take account of the sociocultural processes operating in the communities and classrooms where they work." Teachers of Native students must appreciate the influence of culture in and out of the classroom. This includes the background and meaning of concepts such as ethnocentrism, cultural relativism, assimilation, and acculturation. This foundation also allows Native teachers to explain the non-Native world to their students.

Teachers of Native students also need to know the historical background of Native education. Most often they will not get this in standard educational histories. In fact, it is not unusual in those histories to find no mention at all of Native education. Many different approaches to Native education have been tried through history. The knowledge of past successes and mistakes will help the new teacher with ideas about what will and will not work. In addition, knowing the history of Native education will help the new teacher to sort through the maze of federal Indian education programs they may encounter in their work and to understand the intent of those programs.

## **Instructional Methods**

Teachers need to be responsive to Native students, their cultures, and how they "learn to learn" at home. Through this sensitivity teachers can help make their classroom activities reinforce the child raising patterns of the Native children's extended families.

One approach is to use the experiential and interactive methods. Teachers need to get students out of lecture halls and textbooks and get them involved in "real" experiences--especially hands-on activities. These kinds of activities correspond to "learning from the land." The interactive component refers to how teachers must listen and respond to the concerns of their students. Many Native Americans tend to be global or holistic learners who think reflectively and respond to visual and tactile stimuli. They learn more effectively through cooperation rather than competition. Traditional curricula and textbooks that approach learning as sequential, linear, and literary or auditory unfortunately focus on Native students' weaknesses instead of their strengths.

Native students who appear to be proficient in English may have only conversational proficiency rather than the cognitive/academic proficiency required for successful schoolwork. Students with a conversational proficiency can use English in "context-embedded" situations on the playground and in the classroom. In such situations there are many clues that the student can rely on to provide meaning. However, in "context-reduced" situations (whether it be textbook work, teacher lectures, or other classroom activities requiring

higher order, abstract language skills) the conversation-only proficient student is Limited English Proficient (LEP) and at a disadvantage.

Students who speak a Native language well but who are LEP can obviously benefit from teachers trained in bilingual and ESL teaching methodologies. In particular, teachers of Native students need a knowledge of both first and second language acquisition theories and practices such as Steven Krashen and Tracy Terrell's Natural Approach and James Asher's Total Physical Response.

Teachers of Native students who have lost their Native language need to be familiar with the international research on language restoration. Joshua Fishman in his 1991 book, *Reversing Language Shift*, points out that language restoration efforts restore culture and a sense of personal identity. This development of identity and reinforcement of traditional family values is probably the most effective way to combat alcohol and drug abuse and other aspects of cultural disintegration.

One promising solution to the problem of family identity loss being pioneered in New Zealand for the past decade by the Maoris, the original inhabitants of New Zealand. It is called the Kohanga Reo or language nest. Language nests are community based day care centers carried on in the Maori language and staffed with Maori elders. Language nests preserve the Maori language, provide a valuable service to working parents, and, most important, strengthen the cultural values associated with the traditional Maori extended family. Language nests also are being successfully pioneered in Hawaii with native Hawaiian children. These programs link elders and children, strengthen family values, and develop language skills. In New Zealand and Hawaii, the preschool immersion programs were first expanded into the elementary and secondary schools and then into the university level.

### **"Nativizing" the Curriculum**

Textbooks dominate American education. While textbooks should less control the education of all students, it is especially critical for cultural minorities that textbook instruction be de-emphasized and supplemented. Commercial curriculum materials are usually irrelevant to minority culture students because these materials are written from a dominant culture point of view. Consequently, such materials do not relate to the students' experiential background. The message to students from teachers who use only commercial materials and who are not responsive to the sociocultural background of their students is that the culture of the school is more important than the culture of the students' homes. This is a form of cultural imperialism.

Teachers need to encourage school librarians, administrators, and school boards to acquire supplemental curriculum material appropriate to their students' background. They need to learn about oral and written Native literature suitable for classroom use, how to integrate Native history and government into social studies curriculum, and how to use ethnically sensitive science and mathematics in their classrooms. For example, at Sinte Gleska University on the Rosebud Reservation in South Dakota students are taught to develop

culturally-relevant thematic and holistic units that address learning styles and cultural values.

Changing the curriculum to reflect their cultures of Native students can help create meaning for students who often do not see school as meaningful. In addition, teachers will have more success if they emphasize comprehension rather than surface forms of language, such as pronunciation and spelling. Of course if the surface forms get in the way of comprehension, they must be addressed, and students should be learning Standard English, including standard grammar, spelling, and pronunciation. Not because it is superior to their Native language or dialect of English, but because it will provide them access to the wider world, including greater access to jobs.

Students need to be able to relate what they are being taught to their prior knowledge and experience. This can be done most successfully when new material is presented in a narrative or story form, as comprehension is impeded when material is disconnected as it often is in textbooks and basal reading stories. In addition, the more senses that can be targeted in presenting the story the more chance the Native student has for comprehension.

### **Whole Language**

A balanced whole-language approach can foster higher-level thinking. For example, students can interview tribal elders, elected officials, and others in their native language. They then can write their own texts. This interviewing and reporting process can produce social studies curriculum material about the community and, at the same time, develop students' speaking and writing skills in tribal languages and English. It can also produce local versions of traditional stories for students to read. Whole-language teachers also can incorporate native language instruction through language experience stories and various student writing activities. Such instruction leads naturally to integrating content areas into holistic and meaningful units of study.

T. L. McCarty of the University of Arizona observed a thematic unit in a classroom on the Navajo Reservation. The students read Scott O'Dell's historical novel about the Navajos, *Sing Down the Moon*. Students responded to the book in journals and then were asked what more they wanted to do to learn about the historical period in which the book was set. Some students chose to interview elders, in Navajo, about the "Long Walk of the Navajos" and compiled a local history of the event. Others researched colonization and why people went to war. Another group rewrote pertinent passages in their history texts to represent the Navajo point of view (McCarty & Schaffer, 1992).

Thematic units like this one provide students real reasons for putting their reading, writing, and other academic skills to work. Students learn about the interesting world they live in and explore their relationship to it in active, participatory ways. The possibilities for developing similar units are limited only by students' interests and teachers' willingness to participate in and facilitate their students'

learning.

### **Whole Mathematics**

"Whole Mathematics" is a language oriented approach to teaching mathematics. Teachers use a variety of methods to help students put mathematical concepts into language. These methods are "direct use, " such as copying information from the board; linguistic/translation, such as translating a mathematical formula into a complete sentence; summarizing/interpreting, such as a student explaining in writing how they solved a problem; applied use, such as a student writing their own story problems; and creative use, such as having students write a report on a math project. As in whole language, writing activities work better if students write for a larger audience than just the teacher. This extended audience can include classmates, younger students, parents, and others.

American Indian students who do well adding, subtracting, multiplying, and dividing often fail when it comes to solving story problems that add a reading dimension to mathematics. There is a downward trend in Indian student standardized test scores in the upper elementary grades, where solving story problems becomes more important. In the primary grades, students should write story problems relevant to the world around them. That will help them understand what story problems are about, will help develop their language skills, and will give them an understanding of the real world applications of mathematics (Davison & Pearce, 1992; [Reyhner & Davison, 1993](#)).

A coordinated program to lead LEP students to success with story problems should include these activities:

1. Students observe how math is used all around them and discuss and write about the importance of mathematics.
2. Students discuss and write about the meaning of the mathematical process they use in specific cases.
3. Students explain, orally and in writing, their use of manipulatives to solve textbook mathematical problems.
4. Teachers show students a similar problem with just manipulatives and no numbers.
5. Teachers ask students to describe the steps they used to complete the problem.
6. Students make up a problem in which manipulatives can be used.
7. Teachers ask students to make up a story problem that uses the same mathematical operation they have dealt with in the preceding two activities.

Examples of language development activities including journal writing, vocabulary development, writing story problems, letter writing, and mini-mathematical projects. Students can keep mathematics journals in which they write their own definitions of new mathematics terms and communicate with the teacher. An example of a mini-mathematics project is for students to gather public opinion on a particular question and then to graph the responses. Such a project involves students in selecting a topic of interest, developing a questionnaire, interviewing people, and tallying, tabulating, and reporting their results.

## Native Students At Risk

The final report of the Indian Nations at Risk Task Force documented that about one-third of Native students never finish high school. The review of research commissioned by the Task Force identified seven school-based reasons why Native students drop out of school:

1. Large schools that present students with an impersonal education
2. The perception that teachers do not care about Native students
3. Passive, "transmission" teaching methods
4. Inappropriate curriculum designed for mainstream America
5. The use of culturally-biased tests and the flunking of Native students
6. Tracking Native students into low achieving classes and groups
7. Lack of Native parent involvement

The most frequent reason Navajo dropouts gave for leaving school was that they were bored. A 1986 study commissioned by the Navajo Tribe found that the top three reasons dropouts gave for leaving school were: 1) bored with school (20.5%), 2) problems with other students (15.5%), and 3) retained in grade due to absenteeism (14.2%). The same study found that 37% of those who *planned* to drop out of school also reported being bored with school, while 29% planned to drop out because they had flunked classes owing to absenteeism as well as academic failure. Only 8% specifically gave academic failure as a reason ([Brandt, 1992](#)).

A number of studies show that dropouts, Indian and non-Indian alike, perceive their teachers as uncaring. In a recent study of Indian dropouts published in the January 1992 issue of the *Journal of American Indian Education*, [Donna Deyhle](#) quotes a Native student:

The way I see it seems like the whites don't want to get involved with the Indians. They think we're bad. We drink. Our families drink. Dirty. Ugly. And the teachers don't want to help us. They say, "Oh, no, there is another Indian asking a question" because they don't understand. So we stop asking questions.

By interviewing dropouts and observing classrooms, Deyhle found that Navajo and Ute students did not have the academic language skills, specifically reading, to do the required classroom work, such as reading the textbook and answering the questions at the end of the chapter. This common type of classwork bores students when they have the academic language skills to perform it, but it is especially boring when students must sit quietly at their desks doing nothing because they cannot read well enough to do the assignment.

Typically, the type of extra help this type of student gets in special education and Chapter I remedial classrooms breaks the content down into smaller pieces and allows students more time to complete. This form of instruction can increase student boredom. Also, such remediation takes students out of mathematics, science classes, and other classes, causing them to miss valuable instruction.

### **Combating Substance Abuse**

While research does not indicate that alcohol and drug abuse is a major reason for students dropping out of school, alcohol has long disrupted American Indian societies. Most efforts have not been successful, but a few new approaches show promise. The Alkalai Lake Band in British Columbia developed one such approach. Their focus is a community effort that draws on Indian traditional cultures to combat substance abuse.

In another effort, the Confederated Salish and Kootenai Tribes of Montana have established a treatment center at Blue Bay. The center operates on the following healing principles:

1. The solution for the problems with alcohol and substance abuse must come from within the communities.
2. We must discover the life-preserving, life-enhancing values of our traditional culture.
3. An ongoing learning process is required.
4. The well-being of the individual is inseparable from the well-being of the community.

Their treatment program promotes peer support for sobriety, helping other tribes, identifying cultural attributes that may promote drug abuse, and optimism. At Chinle High School on the Navajo Nation, students volunteer to take a class where they learn leadership and peer-counseling skills by helping classmates with drug and alcohol problems.

A key element in all of these programs is peer involvement and cooperation, and attitude that, in itself, reflects traditional Native values.

### **Language Revitalization**

On October 30, 1990, President Bush signed the [Native American Languages Act](#), Title I of Public Law 101-477. Congress found in this Act that "the status of the cultures and languages of Native Americans is unique and the United States has the responsibility to act together with Native Americans to ensure the survival of these unique cultures and languages." Congress made it the policy of the United States to "preserve, protect, and promote the rights and freedom of Native Americans to use, practice, and develop Native

American languages" and recognized "the right of Indian tribes and other Native American governing bodies to use the Native American languages as a medium of instruction in all schools funded by the Secretary of the Interior." Furthermore, the act declared that "the right of Native Americans to express themselves through the use of Native American languages shall not be restricted in any public proceeding, including publicly supported education programs."

The passage of the Native American Languages Act was the fulfillment of Native desires so eloquently in such documents as the 1985 education policies of the U.S.'s largest reservation-based tribe, the Navajo Nation. The Navajo policies call for local control, parental involvement, and Navajo language instruction in the belief that:

The Navajo language is an essential element of the life, culture and identity of the Navajo people. The Navajo Nation recognizes the importance of preserving and perpetuating that language to the survival of the Nation. Instruction in the Navajo language shall be made available for all grade levels in all schools serving the Navajo Nation.

After centuries of minority language repression worldwide, researchers are finding that bilingualism is an asset rather than a handicap. It is not necessary to forget a home language to learn a second "school" language and be academically successful in that second language. However, it does take time--about two years to become conversationally proficient and six to seven years on average to become fully (that is academically) competent in a second language. With well designed bilingual instruction such as has been carried out at [Rock Point Community School](#), students can learn successfully academic subjects such as math and science and literacy in their Native language while developing near-native fluency in English.

### **Conclusion**

Worldwide, the survival of indigenous peoples and their cultures is a compelling political issue. The breakup of the Soviet Union testifies, in part, to the strong claims that minorities make for self-determination. Elsewhere, Kurds, Basques, and other indigenous groups demand independence.

The United Nations recognized both the predicament and aspirations of indigenous minorities by declaring 1993 the "International Year for the World's Indigenous People." The current policy of Indian self-determination in the United States, while not perfect, approaches the ideal of freedom and cultural democracy envisioned in the United Nations' Universal Declaration of Human Rights. Tribal schools and colleges are helping change the negative environment on many reservations to one of hope. And the renewal of traditional Native cultures in and out of school is re-establishing a sense of community and is fighting the materialistic, hedonistic, and individualistic forces of the popular culture.

American Indian and Alaska Native concerns about land, culture, and community are concerns that all Americans need to share if we

are to assure a future for all of our children.

### **For further reading**

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### **Periodicals**

[Journal of American Indian Education](#), Center for Indian Education, College of Education, Arizona State University, Tempe, AZ 85287-1311.

[Tribal College: Journal of American Indian Higher Education](#). P.O. Box 720, Mancos, Colo. 81328.

### **Organizations**

[American Indian Science and Engineering Society](#), P.O. Box 9828 Albuquerque, NM 87119-9828. Has chapters in high schools and colleges to promote math and science achievement among American Indians. Publishes *Winds of Change*.

[National Indian Education Association](#), 700 North Fairfax Street, Suite 210, Alexandria, VA 22314. Lobbies congress on behalf of Indian education and holds annual conferences with Indian education workshops. Has state affiliates.

### **Web Sites**

[Resources for American Indian/Alaska Native Education](#) AEL

[Teaching Indigenous Languages](#)

### **Note**

This paper is updated from the author's now out of print 1994 Phi Delta Kappa fastback #367 titled *American Indian/Alaska Native Education*.

