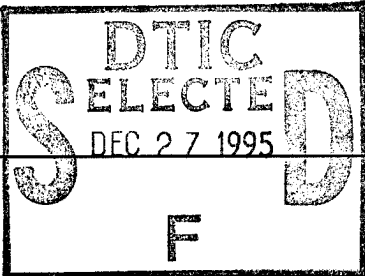


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**MEETING THE VOCATIONAL EDUCATION NEEDS
OF NATIVE AMERICANS**

*Paper submitted by the
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PREFACE

This research paper explores the role and nature of vocational education in the Native American population and the role of the federal government in supporting education--vocational education in particular--for this population. A wide selection of published data from journals, monographs, and government and university reports was used in preparing the report. Government officials, scholars, and research librarians were consulted as well.

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Introduction

The human mosaic represented in the Native American population is complex, and generalizations can be made only with discretion. Yet, this mosaic of diverse peoples--a fast growing ethnic minority--can reliably be said to be in a period of troubled and profound change. The role played by education, both academic and vocational, will be crucial in determining whether or not this segment of the U.S. population participates fully and productively in society. The historical relationship of the Native American with the federal government and the social and cultural barriers between minority and majority perspectives are factors that demand sensitivity and increased understanding in educational planning for tribal populations.

The Native American Population Profile

According to the 1990 census, Native Americans number approximately 1,959,000, or 0.8 percent, of the total U.S. population. Native Americans include American Indians (1,878,000), Eskimos (57,000), and Aleuts (24,000). The number of American Indians was derived from the count of all 542 tribes.¹ Of these, only 314 tribes are federally recognized. Tribal populations range from the Cherokee with 308,132 people, to the Siuslaw with only 44 persons. Table 1 lists the ten largest tribes, each including 44,000 or more American Indians (see table 1, Appendix).

Native Americans experienced a tremendous population growth between 1950 and 1990, with an annual average growth rate of 4.2

percent. Before 1950, their average annual growth rate was less than 0.5 percent. The rate peaked during the 1970-80 period to 5.6 percent and then dropped to 3.3 in the 1980-90 period of the 1980 and 1990 censuses. Even the latter rate exceeded that of the national average, which was less than 1 percent for the same period (see table 2, Appendix). The unusually high growth rates were caused neither by large natural increases nor immigration but rather by increased propensity to change ethnic identification in combination with improved census counts on reservations, trust lands, and in native villages in Alaska. In 1990, the Census Bureau made greater efforts than in the past to increase the participation of Native Americans through stepped-up publicity campaigns, through more direct involvement with tribal groups, and by paying increased attention to covering the geographic areas where Native Americans reside.² In addition, within the past four census counts, especially during the 1970-80 period, an increasing number of individuals with mixed Indian or non-Indian parentage identified themselves as American Indians, whereas earlier they had professed to be white or some other ethnic group.³

Linguistic and Cultural Diversity

In his book The Demographics of the American Indian, H.L. Hodgkinson reports that currently over 200 languages and dialects are spoken in Native American communities out of a total of about 400 languages spoken in the United States. He postulates that because language is a mirror of culture, the relatively small but

linguistically enriched Native American population captures about half the cultural diversity in the United States. The degree of language's contribution to the cultural matrix of society can be debated, but Hodgkinson's message is clear--that the Native American population should not be seen in stereotypical terms. Native American peoples (nations) are distinct, each having traditionally followed its own unique pattern of life. The Native American population is also well dispersed. Approximately 23.3 percent of Native Americans live on reservation and trust lands. An additional 10.7 percent of the total Native American population lives in Oklahoma service areas--tribal Jurisdiction Statistical Areas--non-reservation areas where federally recognized tribes exercise tribal jurisdiction over land. Almost 66 percent of Native Americans live off the reservation and trust lands, dispersed within the larger communities of the country. This is especially true of members of the eastern tribes.

Socioeconomic Background and Employment History

When evaluated carefully, the statistical data on Native Americans yield a number of disturbing social indicators of a people disenfranchised from the "American Dream." Chronic social ills such as rampant alcoholism, unemployment, and indifference to the educational system have their roots in years of a system tailor made for abuse--a system that regarded the Native American as more of an obstacle than a participant in the nation's development. This legacy has been hard to overcome. It is widely recognized that a vigorous nationwide endeavor is necessary to

address the serious problems facing the Native American today.

The extremely high poverty rate for the Native American population is confirmed by the U.S. Bureau of the Census's Statistical Abstracts of the U.S., 1990 and the Indian Health Service's Trends in Indian Health, 1990. In 1990, the median family income for Native Americans was \$21,700 compared with \$35,225 for the national average. In 1989, 59.5 percent of all Native American households earned less than \$25,000 (see table 3, Appendix). About 30.8 percent of Native Americans were living below the poverty level; of this number 43.2 percent were under 17 years of age (see table 4, Appendix). By contrast, the figure for the U.S. population as a whole was about 13 percent, at or below the poverty level in 1990.⁴ Poverty rates were higher on reservations and trust lands than among the Native American population in general. On the ten largest reservations and trust lands, the highest poverty rate was at the Pine Ridge Reservation in Nebraska/South Dakota, where 66 percent of the population lived at or below the poverty level, and the lowest at the Hopi reservation in Arizona, with 49.1 percent at or below this level (see table 5, Appendix). A visible reminder of the poverty on reservations and trust lands is the lack of adequate housing. Sixteen percent of Native American homes lack electricity as opposed to 0.1 percent of homes in the United States overall. In addition, more than 20 percent of Indian housing units on reservations and trust lands lack adequate plumbing compared with 6 percent of all Native American households nationally.⁵

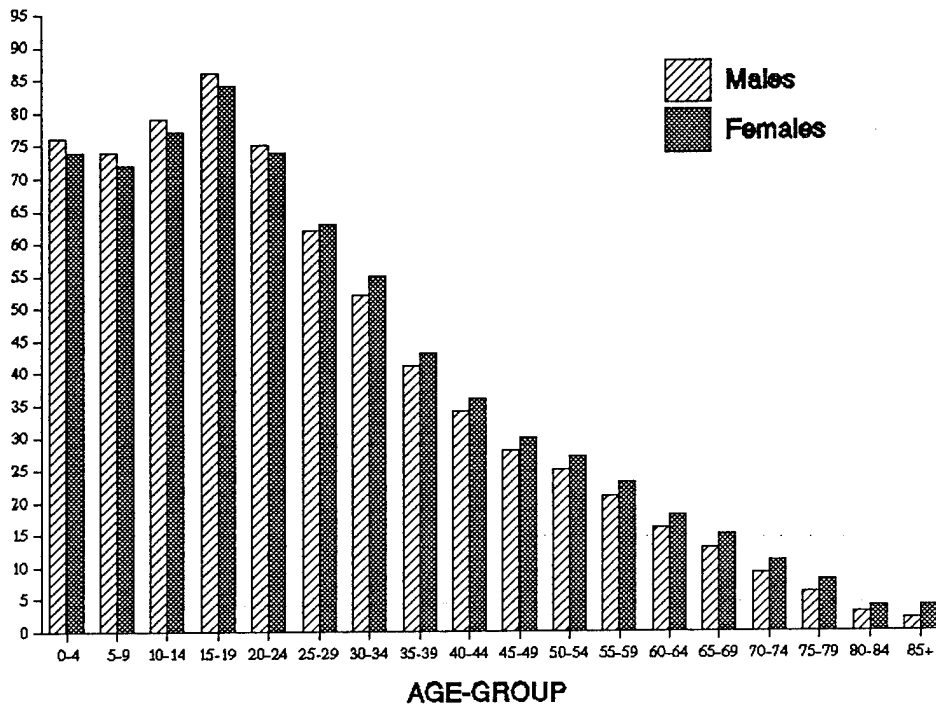
Native Americans have the shortest life expectancy, highest infant mortality rate, and the greatest health problems of all U.S. ethnic groups.⁶ According to the Indian Health Service, the Native American suicide rate during 1986-88 was 17.9 deaths per 100,000 versus 11.7 per 100,000 for all other Americans. Between 1987 and 1989, the birth rate was 28.8 per 1,000, death rate 6.0 per 1,000, and infant mortality rate 11.0 per 1,000. Excluding three regional administrative areas where families of deceased Native Americans failed to identify their ethnic backgrounds in death certificates (which resulted in underreporting), the mortality rates were higher than the national average, ranging from 9.3 to 18.1 per 1,000.⁷ These statistics are pertinent only to the 12 regional administrative areas served by the Indian Health Service; Native Americans residing in these areas accounted for only 57 percent of the total. The corresponding birth, death, and infant mortality rates for all other U.S. residents in 1988 were 15.9 per 1,000, 5.4 per 1,000, and 10.0 per 1,000, respectively.⁸

Based on the 1987-89 rates, the Indian Health Service estimated the 1993-94 growth rate for Native Americans at 2.35 percent. Using this same rate and assuming that the tendency for ethnic identification change continues to drop, Native Americans are expected to number 2.15 million in 1994. By the year 2050, this number is projected to double to 4.6 million.⁹

The Native American population was older in 1990 than in 1980. In 1990, the median age was 26 years for males and 27 for

females. In 1980, median ages were 22 and 23 years, respectively (see Figure 1). The younger age-group (ages 5-24) constituted

Figure 1. Native Americans by Sex and by Age-Group, 1980 (in thousands)



Source: Based on information from U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, 1980 Census of Population: General Population Characteristics, PC80-1-81, Washington, May 1983, 1-32.

37.4 percent of the total in 1990, a decrease of 6.3 percent from the 43.7 percent of the total in 1980 (see table 6, Appendix). This decrease was partially caused by the high suicide rate of this age-group, especially among those ages 15-19. During the past 30 years, the suicide rate among Native Americans has

increased 425 percent. On some reservations, suicide rates were ten times the rates of other Americans.¹⁰

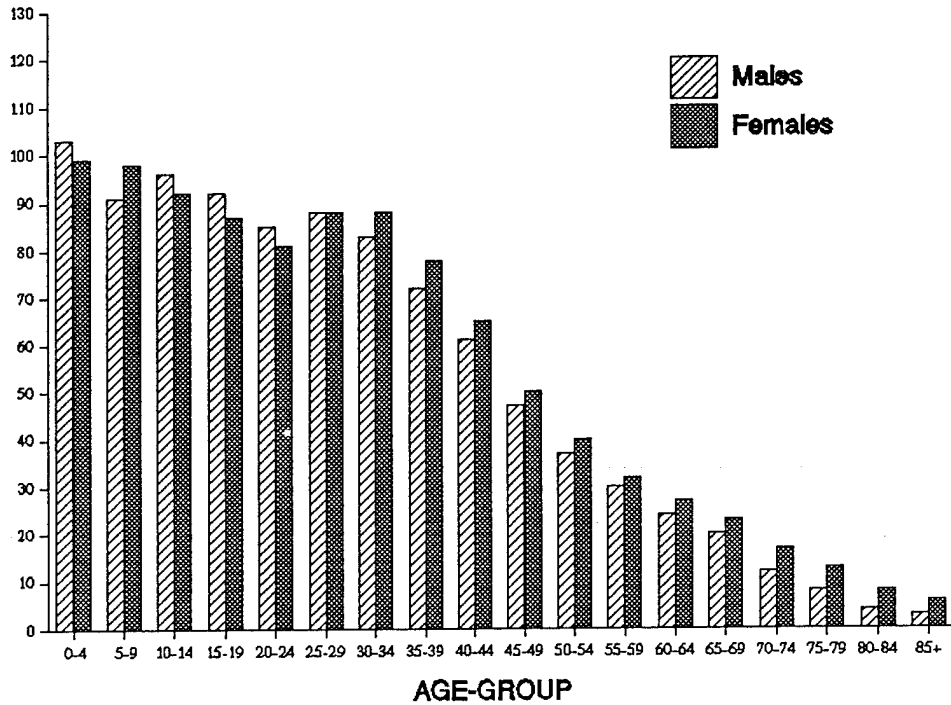
Compared with the total U.S. population, in 1990 the proportion of Native Americans under 20 years of age was much higher. The higher rate can be attributed partially to the higher fertility rates of Native Americans, 39.3 percent as opposed to the national rate of 28.7 percent.¹¹ The older-age group (ages 25-64) increased 6.0 percent from the 40.4 percent of 1980 to 46.4 percent in 1990. This increase reflected the number of the many "new Native Americans," especially in the age-group between 25 and 44 (see table 6, Appendix). In both the 1980 and the 1990 censuses, females outnumbered males by a ratio of 102.6 to 100 (see Figure 1 and Figure 2). Overall life expectancy in 1987-88 was 71, below the national average, which in 1988 was 75.¹²

A statistical analysis of Native American employment provides yet another social indicator. In 1990, 62.1 percent of the 1,395,000 Native Americans 16 years old and over participated in the labor force, about 3 percentage points below the 65.3 percent for the national population. Female Native Americans mirrored the national trend of increasing labor participation by women. Their participation rate of 48.0 percent in 1980 increased to 55.1 percent in 1990 (see table 7, Appendix). The number of women economically inactive outnumbered men by 54.3 percent (see table 8, Appendix).

The employment rate of Native Americans in the civilian labor force in 1990 was 85.7 percent. Unemployment among Native

Americans was 14.3 percent; for the general U.S. population it was 6.3 percent. Native American employment was lower on the ten largest reservations and trust lands, where it averaged 74.4 percent. Zuni Pueblo, with 86.2 percent, had the highest

Figure 2. Native Americans by Sex and by Age-Group, 1990 (in thousands)



Source: Based on information from U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, 1990 Census of Population: General Population Characteristics, CP-1-1, Washington, November 1992, 31.

proportion of employed Native Americans; Fort Apache residents had the lowest, with 64.7 percent (see table 9, Appendix).

The educational attainment levels of Native Americans improved considerably during the 1980-90 period but continued well below those of the national population. In 1990, 65.5 percent of the 1,080,000 Native Americans aged 25 and over had attained either high school diplomas or higher degrees, an increase of 9.8 percent over 1980 (see table 10, Appendix). They lagged behind the national population in attaining a baccalaureate degree or higher. Native Americans accounted for 9.3 percent, whereas the national population rate was 20 percent.¹³

On reservations and trust lands, the attainment rates for high school diplomas ranged from 37 to 66 percent; the overall average was 54 percent. Blackfeet had the highest proportion with 66.3 percent, followed by Hopi, 62.6 percent. On the lower side, Navajos had 41.1 percent; the Gila River tribe had the lowest proportion, 37.3 percent (see table 11, Appendix).

Most observers believe that upgrading of overall quality of life for Native Americans depends on changes in the quality of Native American education. According to most studies, this goal will not be possible until special requirements that consider both the historical and cultural legacies of the Native American are met. These requirements would specifically include coursework that both analyzes the history of Native Americans and acknowledges their cultural contributions to society. Such coursework would perhaps help alleviate the low self-esteem found among Native American students in mainstream schools, a factor

that contributes directly to academic failure. The Navajo Curriculum Center at the Rough Rock Demonstration School in Arizona--one of the most successful experimental reservation high schools--has addressed the issue of low self-esteem. It publishes a two-volume Teaching Guide for Indian Literature, which it recommends for Native American students who are searching for meaningful identity as members of a significant minority group.

Regional Distribution

In 1990 about 62.3 percent of Native Americans were concentrated in urban areas while the remainder resided in rural areas or on farms. In 1980 the urban rate was slightly less than that of 1990 and the rural rate was higher (see table 12, Appendix). Rural areas include reservations and trust lands, tribal jurisdictions, and Alaska native village statistical areas. The two largest rural concentrations of Native Americans are found on the Navajo Reservation in New Mexico and Arizona and the Pine Ridge Sioux Reservation in South Dakota.¹⁴

In 1990 some 402,900 Native Americans, or 33.0 percent of the total urban population, lived in 10 major metropolitan areas. Los Angeles-Anaheim-Riverside had the largest number of Native Americans (see table 13, Appendix). Of the total rural population, more than 437,000, or 50.9 percent, lived on 314 reservations and trust lands. These areas vary in size, ranging from 10 acres to 22,000 square miles. In 1990 over 218,000 Native Americans resided on the 10 largest reservations and trust lands. The Navajo reservation, the largest, straddles three states--New

Mexico, Arizona, and Utah--and was inhabited by more than 143,400 persons. Pine Ridge, located between Nebraska and South Dakota, is the next largest; it houses about 11,200 Native Americans (see table 14, Appendix).

In 1990 almost 50 percent of Native Americans lived in the West, 29 percent lived in the South, 17 percent in the Midwest, and 6 percent in the Northeast. In 1990, Oklahoma had the largest number of Native Americans (252,000), followed by California, Arizona, and New Mexico (see table 15, Appendix). In 1980, California headed the list, followed by Oklahoma. Arizona and New Mexico remained at the same level in the census years of 1980 and 1990. South Dakota dropped from the top ten in 1990 and was replaced by New York, which had ranked 11th in 1980.

Trends

The Native American population in the United States has been increasing at a high rate. Social indicators suggest that this population is not expected to substantially improve its poor economic situation in the foreseeable future and that Native Americans face serious social, economic, and psychological obstacles both on and off the reservations. The steady out-migration from the reservations of Native Americans who are in their productive years highlights the poor economic situation on the reservations and the problems. There is no inducement to remain on the reservations because well paying jobs that offer advancement and security are rarely found there. This fact is not surprising because, with few exceptions, reservations have weak

economic bases; they are remote from significant markets, contain few natural resources, and are supplied with only rudimentary transportation systems. These reservations cannot support an undereducated and undertrained work force--much less a dynamic and competitive one. On many reservations, as many as half of all full-time jobs are federally funded.¹⁵

Educational Background

Barriers to Effective Education

Native Americans constitute a population with pressing special needs. Poverty and lack of appropriate education have resulted in social, economic, and psychological needs. Joblessness, drug abuse, widespread depression, high suicide rates, and other byproducts of poverty are both a cause and an effect of inadequate education.

Native Americans suffer a disproportionately high rate of learning disabilities. The prevalence of fetal alcohol and substance abuse in some tribal populations is especially alarming and contributes directly to the problem. In 1987, the Bureau of Indian Affairs and the Department of Education estimated that the total number of Native American children with learning disabilities was 44,752--the vast majority of whom lived on reservations; more than 50 percent of these children were classified as learning disabled. The Bureau of Indian Affairs estimated that between 2,000 to 3,000 children with special education needs living on reservations were not receiving any special services at all because of lack of access to facilities.

The question of how to evaluate whether Native American students need special education is problematic. Evaluation is complicated by the fact that Native American children may not test accurately according to the standards of Anglo-centric aptitude tests. Pluralistic assessment techniques such as Mercer's Pluralistic Assessment (SOMPA) provide more accurate testing. Such tests will perhaps reveal whether or not Native Americans are over-represented in special education classes and, if so, why.

Geographic and cultural isolation also serves as a barrier to effective learning. The geographic isolation of reservations and their lack of economic infrastructure have prevented them from attracting any significant investment, whether economic or educational. Physical isolation is often compounded by tribal and clan pressure to keep youths on the reservations in order to insulate them from outside influences, which can be perceived as threats to traditional ways of living. Youths thus are sometimes inhibited from taking advantage of educational opportunities outside the reservation.

In its effect on Native Americans both on and off the reservation, cultural isolation has proven to be a far more complicated and pervasive problem than geographic isolation. An effective educational system could serve as a bridge between Native American and Anglo-centric value systems. However, Native Americans perceive the Anglo-dominated educational system as alien, if not hostile, to their cultural values. These values,

especially how one interacts with authority and with one's elders and contemporaries, are a product of the socialization process. These values directly affect the learning process. Karen Swisher and Donna Deyhte, in an examination of various Native American value systems and their impact on respective styles of learning, studied a sample of Native Americans students who were academically successful. The study isolated some strategies that promote Native American academic success. In traditional Native American cultures, for example, the learning pattern can often be described as listen-then-do, or think then-do. This approach requires a student to think thoroughly about a response before speaking.¹⁶ This approach is very different from the trial-and-error learning system of mainstream education in which a student tries out a solution verbally and then refines the answer after getting feedback from a teacher or other students. A Native American regards this approach as aggressive and subject to ridicule.¹⁷

Two models--the Dunn Learning Style Inventory and the Productivity Environment Preference Survey--were developed in the late 1970s to study how Native American values and perceptions might differ from those of non-Native Americans. Like the Swisher and Deyhte study, the testing, which was done only on a limited scale, suggested that there were important differences between the two groups. Research on the relationship of a group's value system to its learning system is relatively new and technically unrefined; nonetheless, such research has raised important

considerations about the relationship of culture, perception, and learning patterns.¹⁸

Educators have long noted a pattern of "bicultural ambivalence"--conflicting feelings about their own culture and its relationship with the dominant culture--among Native American students. Ironically, feelings of low esteem and alienation among Native American have long been reinforced by an educational system that is now tasked with bridging the psychological divide between Native Americans and the rest of society. Much work remains to be done in education to promote mutual appreciation of Native American and mainstream value systems; it is essential that this sensitive task be handled by educators who have cross-cultural training.

Educators with cross cultural training can be especially helpful in vocational education. By presenting such education in a new light, educators could appeal to Native Americans, who often have a negative opinion of "Voc Ed." In the past, vocational education was "low tech" and geared toward students who were considered "good with their hands" and not thought to be college material. Because many Native Americans were steered in this direction, it is not surprising that vocational education is widely regarded as discriminatory. As vocational and apprentice programs become more "high tech" and integrated with academic curricula, it is possible that the stigma of vocational education will recede.

Educational Participation and Delivery Systems

Native Americans represent about 1 percent of the total (K-12) school population in the United States. There are between 300,000 and 400,000 Native Americans of school age (K-12); of these, about 85 to 90 percent are in public schools. Approximately 50,000 Native Americans attend Bureau of Indian Affairs schools, Indian contract schools, or private schools. In addition to funding and/or administering a large number of elementary and secondary schools, the Bureau of Indian Affairs also administers two two-year colleges--Southwestern Indian Polytechnic Institute and Haskell Indian Junior College. Twenty-four tribally controlled colleges receive federal and state funding. In 1991, 13,800 students were enrolled in the 23 tribally controlled two-year community colleges and three four-year tribally controlled colleges. This figure made up 14 percent of Native American higher education enrollment.¹⁹ In January 1994, according to the American Indian Higher Education Consortium, 24 of the tribally controlled colleges were accredited; the remaining colleges were either candidates or applicants for accreditation. With the exception of four institutions, all tribally controlled colleges are located on reservations. The four tribally controlled colleges located off-reservation are D-Q University at Davis, California; Haskell Indian Jr. College in Lawrence, Kansas; Southwestern Indian Polytechnic Institute in Albuquerque, New Mexico; and the United Tribes Technical College in Bismarck, South Dakota.

Native Americans have had a notoriously high dropout rate

from school. As measured by national comprehension tests, educational achievement has been consistently lower for American Indians than for the national average; Native American students who remain in the educational system fall behind. The Bureau of Indian Affairs, in its Final Review Draft, "Report on BIA Education, Excellence in Indian Education Through the Effective School Process," published in 1988, estimated that twelfth grade students attending BIA schools were performing somewhere between 7th and 9th grade level.²⁰ Improvement has been slow. The 1990 study, Towards the Year 2000: Listening to the Voice of Native America, by the National Advisory Council on Indian Education's gives comparative and statistics for mean 1990 SAT scores in verbal and mathematical aptitude. The national average was 424 for verbal and 476 for math; the average for Native Americans was 388 verbal and 447 math.

The total number of Native Americans attending post-secondary schools is increasing, however. Between 1978 and 1990, female enrollment in post-secondary schools rose sharply, from 41,000 students to 60,000 students. Male participation in post-secondary school lagged behind, with enrollment increasing by only 6,000 during the same period, from 37,000 to 43,000. In 1990, there were 103,000 Native American students enrolled in post-secondary institutions. Of this number, 60,000 were females and 43,000 were males. Forty-seven percent of the students were enrolled in four-year colleges; the remainder in two-year colleges. Ten percent of Native Americans 25 years or older had

finished 16 years or more of education compared with 20.3 percent of the total population. In postgraduate education in 1988, 1,233 Native Americans were awarded master's degrees, and 84 received doctorates.²¹

By the early 1970s, the government had concluded that profound changes had to be made in the education system serving Native Americans. It was acknowledged that flawed education policies had contributed to reservation poverty and tribal inability to gain self-sufficiency. Over the next two decades, a number of educational innovations were tried that affected all levels of education. These included increased, although not complete, tribal control of federally funded educational facilities on reservations and the introduction of curriculum specifically designed to increase Native American cultural appreciation and self-awareness.

Access to colleges has always been problematic for reservation residents. The establishment of tribally controlled colleges has solved some of these hurdles. Although underfunded, tribally controlled colleges have become accessible to Native Americans isolated on remote reservations and have served as a bridge between traditional native ways of learning and the more conventional and mainstream educational system.

Access to special education programs has also been problematic. Federal attention to the special education needs of Native Americans increased after the passage of the 1978 amendment to the Rehabilitation Act of 1973. This act established

the Indian Vocational Rehabilitation Services to administer grants to tribes for up to 90 percent of the cost of providing vocational services to the disabled. The Branch of Exceptional Education of the Bureau of Indian Affairs' Office of Indian Education Programs (OIEP) has as its mandate that Native Americans between the ages of 5-22 who are enrolled in Bureau of Indian Affairs schools have, if needed, access to special education through an Individual Education Program (IEP), which can be tailored to provide special education. In 1993, approximately 7,000 students with disabilities who lived on reservations had access to IEPs.

The 1970s also witnessed major changes in vocational education programs for Native Americans as these programs began to factor in the local economic structures of particular communities. A number of creative programs with well designed applications were introduced. These took into consideration factors such as supply and demand requisites for small-scale rural economies and reservation transportation--that is, logistics and basic marketing skills. By the 1980s, Native-American-owned businesses proliferated. Between 1982 and 1987, these business increased 64 percent, but most of the potential of this sector remains unrealized--especially on the reservations. Steven Stallings of the National Center for American Indian Enterprise Development in Mesa, Arizona has estimated that as much as 85 cents on the dollar generated on-reservation is spent outside of the reservation; he notes that there is a need to

create a "revolving economy" on the reservation. Until more opportunities and industry are created on the reservation, money will be spent elsewhere and a quasi-welfare system economy will persist.

Vocational education funds specifically targeted for reservations must have applications that augment community development. The control and management of reservation lands by Native Americans has been especially problematic. According to the American Council on Education, one out of every four jobs on reservations is held by a non-Native American. Vocational education, for example, training in specific trades, will help, but more general goals such as the attainment of basic skills in reading and math must also be met. Especially successful initiatives that perhaps could be used as models for vocational training on reservations are the math and science summer camps sponsored by the American Indian Science and Engineering Society. These camps have enabled numerous Native Americans to learn the skills necessary not only for college admission but also, more immediately, for reservation resource management.

A Library of Congress Congressional Research Service study of federal spending on Native American education between FY 1975 and FY 1994 shows an annual increase in terms of current dollars. However, in terms of constant 1990 dollar--factoring in inflation--federal funding for Native American education declined and lagged considerably behind that of federal funding for education in general. Bureau of Indian Affairs education funding,

for example, increased an average of \$11.1 million annually during this time. In constant 1990 dollars adjusted for inflation, however, the trend is negative inasmuch as funding has actually declined \$6.8 million a year. The Office of Indian Education in the Department of Education averaged \$91.5 million a year in constant dollars, but had a negative change ratio, annually falling by \$3.0 million. The Department of Education, in contrast to the Bureau of Indian Affairs and the Office of Indian Education (OIE), has grown at a constant and positive change rate of \$396.1 million a year between FY 1975-94. The overall trend indicates a fairly steady and upward trend in constant dollar funding for the Department of Education; a long downward trend in funding, with a late recovery beginning in 1990 for the Bureau of Indian Affairs; and a long-term downward trend in funding for the Office of Indian Education in the Department of Education.

The Educational System

History of U.S. Involvement in Educational Services for the Native American

The first federal involvement with Native American education had an inauspicious beginning. The driving force behind Native American education was to "civilize" and assimilate Native Americans into the mainstream of the dominant culture brought from Europe. School attendance by Native American children was coercive and harshly enforced; tribal customs were discouraged as the "enemies of progress." In 1849, the Bureau of Indian Affairs was transferred from the War Department--where it was initially

placed in 1824--to the Department of the Interior. This move, however, did not signal significant changes in federal policy toward Native Americans. The first government off-reservation school was established in Carlisle, Pennsylvania in 1879, on the principle of taking the "Indian out of the Indians."

Federal attempts at control over Indian education led to the passing by Congress in 1887 of the General Allotment (Dawes Act). The Dawes Act was written in part to help Native Americans attain self-sufficiency on reservations; it also mandated increased government efforts to educate Indians. Much of this federal effort went to support missionary education, which sought to radically alter Native American culture.

By the early twentieth century, anthropologists and reformers, through their writings and efforts, were illuminating the cultural contributions of Native America. This new interest, which was national in scope, brought about changes in education policy.

In 1924, the Secretary of the Interior called for a "Committee of One Hundred Citizens" to discuss how Native American education could be improve. The committee recommended a number of measures to remedy the unfortunate state of Native American education. These included better school facilities, better trained personnel for Native American students, and scholarships for high school and college. The committee's recommendations for a critical reevaluation of educational policy added to the impetus for change.

Increasing criticism of the Bureau of Indian Affairs's treatment of Native Americans led to a new study in 1928 headed by Lewis Meriam. The Meriam report was another watershed for Native American education because it recommended that Native Americans have more freedom to manage their affairs. In particular, the report attacked the philosophy of taking Native children away from their home and family life and transplanting them in boarding schools. When Franklin D. Roosevelt became president in 1933, John Collier, a passionate critic of the Bureau of Indian Affairs, became commissioner of Indian Affairs and immediately enforced the education reforms he had earlier championed in the Meriam Report.²²

The federal government launched its first effort to promote vocational education with the passage of the Smith-Hughes Act in 1917. In 1921, the Snyder Act was passed; this act specifically provided for Native American vocational and technical education. Congressional reporting of the deplorable living conditions on Indian reservations in 1928 led to the 1934 Indian Reorganization Act. The act provided for increased tribal self-government; increased freedom to pursue traditional, non-Christian religious practices; preference given to Native Americans in the hiring of Bureau of Indian Affairs employees; and increased say for Native Americans in educational affairs. Many boarding schools, which were widely criticized as poorly run, were closed and replaced by day schools. The day schools, unlike boarding schools, allowed Native American children to maintain their residence with their

families, thus preserving important cultural values. Several Native American language textbooks were published at this time, and Bureau of Indian Affairs schools placed a greater emphasis on Native American culture. This new attitude, combined with innovations in education and in labor and job training practices--the "Indian New Deal"--became part of Roosevelt's larger "New Deal" employment practices and introduced many Native Americans to wage labor and the cash economy for the first time.

In 1953, Congress abruptly reoriented its Native American policy to one of active assimilation. It was thought prudent and in the interests of minority assimilation into the wider society that Native Americans have their "special treatment" terminated. Financial support, including set-asides, were abruptly cut off for 100 tribes, and no alternative forms of assistance were offered. During the 1950s and 1960s, the so-called "Termination Era," a series of bills were passed in Congress that eliminated a number of reservations. Those Native Americans who suddenly found themselves no longer part of the reservation system were forced to participate in the state public education system.

Termination Era policies placed a considerable burden on the states. Because reservations do not have a tax base and can not support an adequate educational system on their own, state governments were forced to absorb much of the cost of Native American education. Some of these costs, however, were defrayed by the Johnson-O'Malley Act, originally passed in 1934; the act permitted the Secretary of the Department of the Interior to

contract with state governments to provide educational services to Native Americans. Today, the Johnson-O'Malley Act funds supplemental educational programs such as tutoring, counseling, and native culture programs rather than core curricula. Impact Aid, specifically PL 874 and PL 815 funds, also defrays some of the burden imposed on states to educate Native Americans. This aid, first authorized in 1950, authorizes funds for students living on tax-exempt federal land such as military bases, reservations, or trust land. PL 815 funds have been used for the construction of many reservation schools, and PL 874 funds still provide a substantial part of the operating expenses of these schools.

An important trend in migration patterns of Native America, both as regards leaving and returning to the reservation, first became noticeable during the termination policy years. The majority of Native Americans who left the reservations became part of the undereducated, working class poor--those engaged in part-time or lower paid manual labor. Many of these people, initially encouraged by federal support for relocation to metropolitan areas and promises of job placement, left the reservations but returned, unable to cope with urban life. The failure of so many Native Americans to adapt outside the reservation hastened the end of the termination policy. The trend of partial assimilation, frustration, and return to the reservations has continued.

By the 1970s, the federal government was forced to

acknowledge that past federal deliberations had not appreciably improved social conditions for Native Americans and had, in fact, often directly contributed to the increasingly deplorable conditions on the reservations. In 1970, the Nixon Administration abandoned the termination policy begun in the 1950s and once again changed federal strategy. The credo espoused by the Nixon Administration was "self-determination." In a 1970 message to Congress, Nixon stated that the time had arrived "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 decision." These words had some teeth to them: important legislation affecting Native Americans soon followed. The 1972 Indian Education Act was enacted to provide funds for integrating Indian history and culturally relevant programs into educational curricula. This legislation was followed in 1975 by the Indian Self-Determination and Education Assistance Act--the first of several laws that sought to promote tribal self-determination.²³ This act shifted a number of federal administrative responsibilities to tribal leaders. The legacy of this act remains in force. About 40 percent of Bureau of Indian Affairs funds, for example, are now contracted out to tribes.

The Indian Self-Determination and Education Assistance Act considered tribally operated colleges an alternative to schools administered by state or federal governments. In 1978 these schools received federal funding. Also in 1978, the Bilingual Education Act was amended to include specific funding programs

for Native American children with limited English language proficiency. The Bilingual Education Act was reauthorized for five years as Title VII of the Elementary and Secondary Education Act of 1988. In 1989, \$200 million was appropriated by Congress for Title VII programs considered "transitional" and designed to teach English to minority students as quickly as possible.

Yet, despite some new successes in federal policy toward Native American education, the legacy of misguidance has continued. In 1989, a U.S. Senate Special Committee on Investigations concluded that paternalistic federal control over Native Americans continued and that bureaucratic initiatives continued to be characterized by red tape and mismanagement. Supporting this view was the 1991 audit of Bureau of Indian Affairs schools by the Department of the Interior's Office of the Inspector General. The audit, entitled "Implementation of the Education Amendments of 1978," concluded that the physical conditions of a number of the schools inspected was "so deplorable as to impede the education process."

Major Federal Programs

The Bureau of Indian Affairs and the Department of Education are the leading sources of federal funding of education for Native Americans (see table 16, Appendix). These two agencies have a huge impact on almost all aspects of Native American education.²⁴ The two agencies allocated \$827.3 million in fiscal year (FY) 1992 for educating Native Americans. The Bureau of Indian Affairs spent \$420.4 million and the Department of

Education \$406.9 million. Most of the funding was for Native Americans who lived on or near reservations.

In 1992, the Bureau of Indian Affairs funded 166 elementary and secondary reservation schools, 2 postsecondary schools, and 22 tribally controlled community colleges. It also was responsible for educating 41,000 students, about 17,000 of whom lived at reservation boarding schools. Seventy-four of the 166 schools were operated by and managed by tribes under contract.

The Department of Education subsidizes state, local, and tribal educational programs. In 1972, Congress authorized the Department of Education to provide ongoing grants to local educational agencies serving Native Americans and tribal administered schools to fund programs for Native American students and adults. The Department of Education estimates that 17,500 Native American students participated in these programs in 1992.

The Department of Education also funds several other programs targeting Native Americans. Under Chapter 1, the Department of Education can transfer funds to the Bureau of Indian Affairs for use in Bureau of Indian Affairs programs and in tribally operated schools. Impact aid grants for the construction and maintenance of school facilities on reservations are also funded by the Department of Education.²⁵ The federal government also sponsors a number of vocational education programs, some of which are not specifically targeted to the needs of Native Americans but which have a great impact on them

(see Federal Legislation Affecting Vocational Educational Programs for Native Americans).

Effectiveness of Programs

In order to evaluate the effectiveness of educational programs offered to Native Americans, two current trends must be noted. First, young Native Americans are out-migrating at an increasing rate from reservations. At present, although about 90 percent of Native Americans are educated in public schools, only 25 percent of federal educational assistance for Native Americans is earmarked for off-reservation students. Second, tribal governments have increased their role in the education of reservation children. This control now ranges from tribal involvement with on-reservation early childhood development education to the running of tribally controlled colleges.

Assessment of the effectiveness of federally sponsored vocational programs has been inconclusive, and the mechanisms for data evaluation have been repeatedly questioned. The Vocational Education Act of 1963 authorized the Vocational Education Data System (VEDS). In 1983, the Office of Management and Budget and the Department of Education suspended the VEDS on the basis that it was severely inaccurate. The Department of Education then instituted the Data on Vocational Education system (DOVE) to analyze vocational data; the success of the system is open to debate. In testimony on February 27, 1990, before the House Appropriations Subcommittee of the Department of Labor, Health, and Human Services, the Department of Education, and Related

Agencies, the Assistant Secretary of Education for Vocational and Adult Education lamented that the quality of vocational educational data was "a serious concern."²⁶

The Perkins Act of 1990 mandated that the Department of Education's Office of Education Research and Improvement undertake the National Assessment for Vocational Education (NAVE) specifically to evaluate for reauthorization vocational programs funded by the Perkins Act, including programs run by the tribal agencies. An independent advisory panel of "vocational educational administrators, educators, researchers, representatives of business, industry, labor and other relevant groups" was mandated to study a variety of issues pertinent to the Perkins Act. These included:

- ° the effect of the Perkins Act on state and tribal administration of vocational education programs or local vocational education practices;
- ° expenditures at the federal, state, tribal, and local levels to address program improvement in vocational education;
- ° participation in and academic and employment outcomes of vocational education;
- ° the effect of federal requirements regarding criteria for services to special populations, participatory planning in the states, and articulation between secondary and postsecondary programs;
- ° coordination of services under the Perkins Act, the Adult Education Act, the Job Training Partnership Act, the National

Apprenticeship Act, the Rehabilitation Act of 1973, and the Wagner-Peyser Act; and

° the degree to which minority students are involved in vocational student organizations.

Problems of Implementation

Setting up effective educational programs for Native Americans has been difficult because federal policies toward Native American populations have often changed. In the late 1960s, the balance of power between the federal government and the tribes changed more to the latter's benefit. Tribal control of Native American resources, increased Native American administration of social programs, expanding areas of Native American self-governance--all contributed to hopes for innovative and effective Native American education. However, problems with bureaucratic fragmentation of programs persisted, as did problems with the changing statistical models, evaluative techniques, and goals promoted by various government agencies.

Federal programs devoted to vocational education have undergone several transformations since the federal government first began to promote vocational education through passage of Smith-Hughes Act in 1917. Because funds allocated for vocational education have been small compared to the total amount of federal money spent on education, vocational education legislation has used federal funding primarily as seed money to develop vocational programs. The Perkins Act, in particular, specifies that its funds be used to shape the direction of vocational

education.

Federal Legislation Affecting Vocational Education Programs for Native Americans

State and local expenditures provide the majority of funding for vocational education. The federal government allocates less than 10 percent of overall expenditures for vocational education. The Carl D. Perkins Vocational Education Act (P.L. 98-524), which went into effect in 1990, is the largest federal funding authorization for vocational education. The Perkins Act was amended and extended through FY 1995 by P.L. 101-392, the Carl D. Perkins Vocational Education Act Amendments of 1990. Federal appropriations for the Perkins Act for FY 1991 were approximately \$1 billion; the funds contributed to a number of vocational programs for "special populations"--including handicapped students, economically disadvantaged students, single parents, and foster children. The law requires that 1.25 percent, or 12.3 million, of federal vocational educational appropriations administered by the Department of Education be set aside as grants to Native American tribes and their organizations. The Department of Education grants an additional \$2.5 million to tribally controlled colleges.

The Department of Labor's Jobs Training Partnership Act is another major federal program that offers training for low income, poorly educated, and unskilled people. In FY 1992, approximately 40,000 Native Americans participated in Jobs Training Partnership programs. The act stipulated that 3.3

percent of adult and youth training allocations be set aside for Native Americans (Title IVA). In 1992, this figure amounted to \$63 million. Some 21,900 Native Americans participated in the Title IVA-Native American Programs; 2,000 were in Jobs Corps programs, and 1,100 were in dislocated workers programs. These programs incorporated classroom training, on-the-job-training, work experience, and community service employment into the curriculum.²⁷

In 1993, the Department of Labor launched a new program--the Indian and Native American Program (INAP)--which was specifically designed to give job training assistance to Native Americans. The Bureau of Indian Affairs also operates a \$18.6 million employment assistance program that offers adult vocational training and a direct employment program funded at \$2.4 million. The JOBS program, an outgrowth of the 1988 Welfare Reform Legislation, offers Indians the opportunity to participate in education, training, work experience, and support services. In 1991, 76 tribal organizations operated JOBS projects, working with a \$6.3 million budget.

Funding Through the 1990 Perkins Act: An Overview

The Carl D. Perkins Vocational Education Act was signed into law by President George Bush September 25, 1990. The reauthorized Perkins Act went into effect July 1, 1991. Two types of Perkins funding affect Native Americans: funds directly awarded to tribes or tribal organizations on a competitive basis and funds indirectly dispersed on a formula basis to states to benefit

"special populations."

The Indian Vocational Education Program, Section 103, of the Carl D. Perkins Vocational Education Act of 1990 funds 38 programs (plus one continuation program under the 1984 Perkins Act). These programs run in 16 states. The largest number of programs, over half, are in western or mountain states; only one is located in the northeast. About 60 percent of funded programs are for communities in rural, isolated areas. More than half of the programs are for adult education programs.

The Indian Vocational Education Program (Section 103) offers financial assistance through grants, contracts, or cooperative agreements for projects that are authorized by and consistent with the Perkins Act. Funding is over and above other federal programs and services that are available to Native Americans and is geared to supplement these activities. Support under Section 103 is available both to individual Native Americans in need of vocational education and to Native American tribes functioning as community-based organizations eligible for state vocational education assistance.²⁸

Other Federal Funding Mechanisms

Funding for Native American vocational education programs is complex and fragmented. Many funds are directed from one agency through another. The Department of Education, for example, funds a number of Bureau of Indian Affairs administered programs. In order to increase the control over and flexibility of Native Americans in administering federal funds, the Indian Employment,

Training, and Related Services Demonstration Act was passed in 1992 to authorize tribes to consolidate employment and training funds from federal agencies into a single tribal monitored program.

Educational Models for the Native American

Native American culture has been largely passed down through the ages by means of oral tradition. This culture, along with its wealth of knowledge and truths, is disappearing with the passing of the older generations. Educational instruction specifically designed for Native Americans by Native Americans presents what could be a last chance to preserve traditional knowledge and to integrate it into the knowledge needed in the non-traditional economy. Some programs, for example, the Navajo Cradle Board Model of Education, have tried to synthesize Native American and non-Native American teaching techniques.

Educational programs for Native Americans--whether vocational or non-vocational--are more effective when approached with cultural sensitivity. Some Native American educational programs have been particularly successful.

Navajo Community College, headquartered in Tsaile, Arizona, is the largest tribal college. Centered in an Indian nation of 220,000, it has a student body of 2,000. The first fully accredited tribal controlled college, Navajo Community College is often considered the flagship of Native American higher education. It has set the pace with several of its educational experiments. The college has, for example, attracted scholars

from such diverse fields as veterinary science and internal medicine to study Navajo traditional knowledge in these fields. Navajo Community College has also entered into an agreement with the Lawrence Livermore National Laboratory in California to study solutions to energy management and nature conservation.

Turtle Mountain Community College in Belcourt, North Dakota advances an experimental approach to community development. Classes are taught from a Chippewa perspective: the college attempts to provide a curriculum offering training specifically designed for the particular needs of the community. Projects that affect the Chippewa community are collectively discussed and proceed only with the ritual blessing of tribal leaders.

The Zuni Tribe also provides an example of a program that has worked. The Zuni tribe took over its school system in 1979. Prior to that time, over 40 percent of Zuni children had dropped out of school, and high school graduates had averaged only an eighth grade competence equivalency. Ten years after the tribe had assumed control of the education of their children, the quality of Zuni education had dramatically improved. In 1989, 34 percent of Zuni children were college bound.²⁹

Educational Programs Reevaluated

One of the greatest challenges for Native Americans has been their geographic isolation on reservations. This isolation has contributed directly to the high unemployment rate in tribal communities and has limited educational opportunities. New electronic and computer technologies have tremendous potential

for reaching previously isolated communities, but the cost of such equipment and training will limit their effectiveness. Therefore, it is critical that the Native American community living on reservations network with more affluent schools and seek partnerships with businesses, state, federal, and tribal governments in order to access high technology. Native Americans living outside reservations have easier access to such equipment, but require specialized culture-sensitive training. This is especially true for those who are physically part of mainstream society but emotionally and intellectually alienated from it.

It is likely that vocational education will increasingly be geared toward home-based economic opportunities. The exploration of pertinent home-based industries and services that could link employees with employers in an "electronic marketplace" should be a major focus of vocational training for reservation populations.³⁰

Multicultural education--the attempt to meet the educational needs of diverse students while promoting cultural awareness--has sometimes come under attack as assimilationist. Most national educational organizations, however, encourage multicultural education. The National Council for Accreditation of Teacher Education, which evaluates teacher training institutions, has, since 1980, mandated the inclusion of multicultural education in the training of all new teachers.³¹

The goal of multicultural curricula as it applies to Native American education is to counteract ethnocentrism and ethnic

stereotyping. A well designed multicultural curriculum can lower ethnocentric barriers between Native Americans and mainstream cultures as well as among tribal groups, and could facilitate an understanding of mutual circumstances, needs, and goals. Such curricula might also mitigate some of the prejudices against vocational education held by Native Americans.

Conclusion

Gerald Slater, in considering the principal educational issues regarding Native Americans that he believes should be addressed by the National Assessment of Vocational Education, makes a strong case that, whenever possible, Native Americans should be empowered to design programs that reflect the cultural values of Native Americans as a group.³² Slater also believes that educational programs must be evaluated in the context of their impact on the community they serve. Every reservation is unique. Therefore, each merits a special study. National trends are often misleading because they suggest the existence of consistent patterns, which are sometimes absent on reservations. Most tribes have their own Overall Economic Development Plan (OEDP), which provides a formal guide to that tribe's intentions for economic development. These plans must be studied in conjunction with each tribe's specific vocational education requirements.

In its October 1991 report, the Indian Nations at Risk Task Force sponsored by the U.S. Department of Education recommended a number of measures to improve the lives of Native Americans.

These include the development of partnerships among schools and parents, tribes, business and educational institutions, and health and social organizations; the establishment of priorities, including parent-based early education; the promotion of tribal languages; and the training of increased numbers of tribally teachers.

The study also discussed a number of issues directly related to vocational education, including the necessity for increased parental involvement. The latter is particularly important because many Native American parents are hostile to vocational education; they often perceive it as an Anglo innovation alien to traditional values and culture. Many older Native Americans regard vocational education as a lure that tempts young people to leave the reservations. This view is significant because in tribal culture reservations are often considered bounded and spiritually endowed geographic entities. Actual residence on a reservation enables a person to fulfill tribal, ceremonial, and clan obligations. As a custodian of his tribe's traditional culture, which is acknowledged as weakening over time, an elder is particularly sensitive to the dispersion of tribal youth and its longterm consequences.

The study, along with similar studies, also stresses that funding for vocational training would be more effective if it were used to attract qualified Native American teachers on a long-term basis. If funding were granted on a longer-term basis, then job security would be increased and more Native American

teachers would likely participate in such programs. Attracting such participation is important because qualified Native American teachers are needed to serve as successful role models.

David Beaulieu, in Indian Nations at Risk, states that the basic requirements necessary for the reform of native American education have been ignored. He notes that if traditional accreditation standards such as bicultural and heritage awareness training were established in relation to the needs of Native American students very few public schools would meet even minimal standards for accreditation. He suggests that the public school systems serving Native Americans be reformed to accommodate Native American requirements and that Native American Resource Centers be established within tribal schools to cooperate with public schools in improving Native American education. The adoption of Beaulieu's suggestions would in all likelihood mean developing Native American schools in urban areas. Because each Native American school has a unique setting, developing a successful educational program poses great challenges.

The benefits accrued from alliances among tribally controlled educational institutions and government institutions, colleges, and universities may be substantial for all involved. For example, larger universities could participate in an "adopt a tribally controlled college" program and offer an exchange program for students.

Utilization of computer and information technology is recognized as a powerful tool for educational advancement. This

is especially true for reservation students, who are geographically isolated. Not only can on-reservation schools augment their curriculum via online programs linked by modems, but these services can help students access vast networks of information located anywhere in the world. The Bureau of Indian Affairs and the Department of Education have already instituted pilot projects to help reservation schools utilize the new technologies. For example, many schools funded by the Bureau of Indian Affairs as well as tribally controlled colleges are already electronically connected to the Educational Native Network (ENAN).³³ Concepts such as the "Global Village" and "Library Without Walls" suggest vast new possibilities for educating the Native American population. Programs especially designed to tap into the extensive literary resources of the Library of Congress and the Smithsonian collections on Native American literature would offer Native Americans a vast amount of information on Native American issues, history, and common cultural characteristics. In addition, as this system expands, it can be used to reduce unemployment by providing, for example, reservation-specific electronic job bulletin boards.

A major impediment to developing employment opportunities for Native Americans is a shortage of business capital. Most federal assistance for reservations is skewed toward basic necessities--food, housing, health care, and education--not the generation of jobs.³⁴ More seed money earmarked for entrepreneurship should go to tribal organizations and vocational

educational programs with a proven track record. The creation of jobs and the nurturing of expanding tribal economies must be a top priority. Federal agencies can provide the technical and financial assistance needed to enable Native American to harness the necessary resources for economic and social advancement. Tribal and individual self-sufficiency, however, should be the overriding goal of the policies. Education and social services as well as resource management need to be overhauled if tribal and individual forays into entrepreneurship are to be successful. These activities should be the centerpiece of joint federal and tribal policies.³⁵ The possibility of inter-tribal grants funded through the profits from on-reservation gambling casinos (authority of the Indian Gaming Regulatory Act of 1988) should also be explored. A study of gambling profits in the state of Minnesota suggests that casino revenues can be wisely spent on public works, development programs, and better educational facilities.³⁶

In conclusion, it is clear that meaningful reform of the educational system serving Native Americans will come only through a partnership of the federal and state governments with the tribes. Self-determination for the tribes is a long drawn-out evolutionary process that requires much planning and coordination. The demands on limited tribal resources are currently too burdensome and are preventing Native Americans from reaching their material, cultural, and educational goals. The federal government can respond to the crisis facing Native

Americans by allocating vocational funds for self-governance training for tribal government. Such training would help provide the critical management skills necessary for effective leadership and for self-determination. This is only a first step--one of many--which must be taken. If the education system, academic and vocational, can respond to the varied and culturally distinct world of Native Americans, and if Native Americans can participate directly in the education system's operation, it is likely that real progress can be made.³⁷

Appendix: Tables

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Table 1. Ten Largest Native American Tribes, 1990

| Tribe | Population (in thousands) | Percentage of Total Native Americans |
|----------|------------------------------|---|
| Cherokee | 308 | 15.7 |
| Navajo | 219 | 11.2 |
| Chippewa | 104 | 5.3 |
| Sioux | 103 | 5.3 |
| Choctaw | 82 | 4.2 |
| Pueblo | 53 | 2.7 |
| Apache | 50 | 2.6 |
| Iroquois | 49 | 2.5 |
| Lumbee | 48 | 2.4 |
| Creek | 44 | 2.2 |
| TOTAL | 1,060 | 54.1 |

Source: Based on information from U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, We the ... First Americans, WE-5, Washington, GPO, September 1993, 2.

Table 2. Total Native American Population and Annual
Average Growth Rate, 1930-90

| Year | Population (in thousands) | Annual Average Growth Rate | |
|------|------------------------------|----------------------------|------------|
| | | Period | Percentage |
| 1930 | 362 | 1920-30 | n.a. |
| 1940 | 366 | 1930-40 | 0.1 |
| 1950 | 377 | 1940-50 | 0.3 |
| 1960 | 552 | 1950-60 | 3.9 |
| 1970 | 827 | 1960-70 | 4.1 |
| 1980 | 1,479 | 1970-80 | 5.6 |
| 1990 | 1,959 | 1980-90 | 3.3 |

n.a.--not available.

Source: Based on information from U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, We the ... First Americans, WE-5, Washington, GPO, September 1993, 2.

Table 3. Households Having a Native American
Householder by Income Level, 1989

| Income Level | Number | Percentage |
|---------------------|----------------|--------------|
| Less than \$5,000 | 78,140 | 12.5 |
| \$5,000 - \$9,999 | 91,731 | 14.7 |
| \$10,000 - \$14,999 | 75,537 | 12.1 |
| \$15,000 - \$24,999 | 126,456 | 20.2 |
| \$25,000 - \$34,999 | 91,267 | 14.6 |
| \$35,000 - \$49,999 | 83,967 | 13.4 |
| \$50,000 - \$74,999 | 54,774 | 8.8 |
| \$75,000 - \$99,999 | 14,595 | 2.3 |
| \$100,000 and over | 8,900 | 1.4 |
| TOTAL | 625,367 | 100.0 |

Source: Based on information from U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, Minority Economic Profiles, 1990, Washington, July 24, 1992, 4.

Table 4. Native Americans below the Poverty Level by Age-Group, 1989

| Age-Group | Number | Percentage |
|-------------|---------|------------|
| Under 5 | 102,229 | 17.0 |
| 6 - 17 | 158,174 | 26.2 |
| 18 - 64 | 309,566 | 51.3 |
| 65 and over | 33,219 | 5.5 |
| TOTAL | 603,188 | 100.0 |

Source: Based on information from U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, Minority Economic Profiles, 1990, Washington, July 24, 1992, 7.

Table 5. Poverty Rate on the Ten Largest Reservations
and Trust Lands, 1989

| Reservations and Trust Lands ¹ | Poverty Rate ² |
|---|---------------------------|
| Pine Ridge | 66.6 |
| Papago | 65.7 |
| Gila River | 64.4 |
| San Carlos | 62.5 |
| Rosebud | 60.4 |
| Navajo | 57.8 |
| Fort Apache | 52.7 |
| Zuni Pueblo | 52.5 |
| Blackfeet | 50.1 |
| Hopi | 49.1 |
| All reservations and trust lands | 50.7 |

¹ Listed in descending order by size of population of reservations and trust lands.

² Percentage living at or below the poverty level.

Source: Based on information from U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, We the ... First Americans, WE-5, Washington, GPO, September 1993, 10.

Table 6. Native Americans by Age-Group, 1980 and 1990
(in thousands)

| Age-Group | 1980 | | 1990 | |
|--------------|--------------|--------------|--------------|--------------|
| | Number | Percentage | Number | Percentage |
| Under 5 | 150 | 10.6 | 202 | 10.3 |
| 5 - 24 | 621 | 43.7 | 733 | 37.4 |
| 25 - 44 | 386 | 27.2 | 623 | 31.8 |
| 45 - 64 | 188 | 13.2 | 287 | 14.6 |
| 65 - 84 | 69 | 4.9 | 105 | 5.4 |
| 85 and over | 6 | 0.4 | 9 | 0.5 |
| TOTAL | 1,420 | 100.0 | 1,959 | 100.0 |

Source: Based on information from U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, 1980 Census of Population: General Population Characteristics, PC80-1-81, Washington, May 1983, 1-32; and U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, 1990 Census of Population: General Population Characteristics, CP-1-1, Washington, November 1992, 31.

Table 7. Native American Participation Rate in Civilian
Labor Force by Sex, 1990

| Labor Force | Males | Females | Both Sexes |
|--------------|-------|---------|------------|
| Employed | 84.6 | 86.9 | 85.7 |
| Unemployed | 15.4 | 13.1 | 14.3 |
| LABOR FORCES | 69.4 | 55.1 | 62.1 |

Source: Based on information from U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, Minority Economic Profiles, 1990, Washington, July 24, 1992, 7, 8.

Table 8. Native American Employment Status by Sex, 1990
(persons age 16 and over)

| Status | Males | Females |
|-------------------------------|----------------|----------------|
| In labor force | 472,266 | 393,437 |
| Not in labor force | <u>208,089</u> | <u>321,217</u> |
| Total | 680,355 | 714,654 |
| Civilian labor force | | |
| Employed | 388,911 | 340,042 |
| Unemployed | <u>70,981</u> | <u>51,378</u> |
| Total civilian labor force | 459,892 | 391,420 |

Source: Based on information from U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, Minority Economic Profiles, 1990, Washington, July 24, 1992, 7, 8.

Table 9. Employment Rate on the Ten Largest Reservations
and Trust Lands, 1990
(in percentages of persons age 16 and over
employed in civilian labor force)

| Reservations and Trust Lands* | Employment Rate |
|----------------------------------|-----------------|
| Pine Ridge | 67.3 |
| Papago | 76.6 |
| Gila River | 69.4 |
| San Carlos | 69.0 |
| Rosebud | 70.5 |
| Navajo | 70.5 |
| Fort Apache | 64.7 |
| Zuni Pueblo | 86.2 |
| Blackfeet | 68.9 |
| Hopi | 73.2 |
| All reservations and trust lands | 74.4 |

* Listed in descending order by size of population of reservations and trust lands.

Source: Based on information from U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, We the ... First Americans, WE-5, Washington, GPO, September 1993, 9.

Table 10. Native Americans by Level of Educational Attainment, 1980 and 1990
(in thousands of persons age 25 and over)

| Level of Educational Attainment | 1980 | | 1990 | |
|---------------------------------|------------|--------------|--------------|--------------|
| | Number | Percentage | Number | Percentage |
| Less than 9th grade | 169 | 24.5 | 151 | 14.0 |
| Some high school | 137 | 19.8 | 221 | 20.5 |
| High school graduate | 217 | 31.4 | 314 | 29.1 |
| One or two years of college | 115 | 16.6 | 293 | 27.1 |
| Bachelor's degree | 53 | 7.7 | 66 | 6.1 |
| Graduate level or professional | 0 | 0 | 53 | 3.2 |
| TOTAL | 691 | 100.0 | 1,080 | 100.0 |

Source: Based on information from U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, Characteristics of American Indians by Tribes and Selected Areas, 1980, PC80-2-1C, Washington, 203; and U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, Minority Economic Profiles, 1990, Washington, July 24, 1992, 6.

Table 11. Native Americans Having at Least a High School Diploma
on the Ten Largest Reservations and Trust Lands, 1990
(in percentages of persons age 25 and over)

| Reservations and Trust Lands* | Percentage |
|----------------------------------|------------|
| Pine Ridge | 55.2 |
| Papago | 47.3 |
| Gila River | 37.3 |
| San Carlos | 49.4 |
| Rosebud | 59.3 |
| Navajo | 41.1 |
| Fort Apache | 48.3 |
| Zuni Pueblo | 55.4 |
| Blackfeet | 66.3 |
| Hopi | 62.6 |
| All reservations and trust lands | 53.8 |

* Listed in descending order by size of population of reservations and trust lands.

Source: Based on information from U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, We the ... First Americans, WE-5, Washington, GPO, September 1993, 9.

Table 12. Urban-Rural Population Distribution of Native Americans, 1980 and 1990
(in thousands)

| Year | Urban | | Rural | |
|------|--------|------------|--------|------------|
| | Number | Percentage | Number | Percentage |
| 1980 | 773 | 54.5 | 646 | 45.5 |
| 1990 | 1,220 | 62.3 | 739 | 37.7 |

Source: Based on information from U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, 1990 Census of Population: General Population Characteristics, CP-1-1, Washington, November 1992, 31; and U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, Characteristics of American Indians by Tribes and Selected Areas, 1980, PC80-2-1C, Washington, 150.

Table 13. Metropolitan Areas Having Largest Native
American Populations, 1990

| Metropolitan Area | Population | Percentage of Total Urban Population |
|--|----------------|--|
| Los Angeles-Anaheim-Riverside | 87,500 | 7.2 |
| Tulsa, Oklahoma | 48,200 | 4.0 |
| New York-Northern New Jersey- Long Island | 46,200 | 3.8 |
| Oklahoma City | 45,700 | 3.7 |
| San Francisco-Oakland-San Jose | 40,800 | 3.3 |
| Phoenix | 38,000 | 3.1 |
| Seattle-Tacoma | 32,100 | 2.6 |
| Minneapolis-St. Paul | 24,000 | 2.0 |
| Tucson | 20,300 | 1.7 |
| San Diego | 20,100 | 1.6 |
| TOTAL | 402,900 | 33.0 |

Source: Based on information from Dan Fost, "American Demographics in the 1990s," American Demographics, December 1991, 34.

Table 14. Ten Reservations and Trust Lands Having
Largest Native American Populations, 1990

| Reservations and Trust Lands* | Population (in thousands) | Percentage of Total Rural Population |
|--|------------------------------|--|
| Navajo (Arizona, New Mexico, and Utah) | 143.4 | 19.4 |
| Pine Ridge (Nebraska and South Dakota) | 11.2 | 1.5 |
| Fort Apache (Arizona) | 9.8 | 1.3 |
| Gila River (Arizona) | 9.1 | 1.2 |
| Papago (Arizona) | 8.5 | 1.2 |
| Rosebud (South Dakota) | 7.1 | 1.1 |
| San Carlos (Arizona) | 7.1 | 1.0 |
| Zuni Pueblo (Arizona and New Mexico) | 7.1 | 1.0 |
| Hopi (Arizona) | 7.1 | 1.0 |
| Blackfeet (Montana) | 7.0 | 0.9 |
| TOTAL | 218.3 | 29.6 |

*Navajo, Pine Ridge, Rosebud, and Hopi are reservations that include trust lands.

Source: Based on information from U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, We the ... First Americans, WE-5, Washington, GPO, September 1993, 7.

Table 15. States Having Largest Native American Populations, 1990

| State | Number (in thousands) | Percentage of Total Native American Population |
|----------------|--------------------------|---|
| Oklahoma | 252 | 12.9 |
| California | 242 | 12.4 |
| Arizona | 204 | 10.4 |
| New Mexico | 134 | 6.8 |
| Alaska | 86 | 4.4 |
| Washington | 81 | 4.1 |
| North Carolina | 80 | 4.1 |
| Texas | 66 | 3.4 |
| New York | 63 | 3.2 |
| Michigan | 56 | 2.9 |

Source: Based on information from U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, We the ... First Americans, WE-5, Washington, GPO, September 1993, 3.

Table 16. Funding of Education for Native Americans
by Major Source, 1992
(in millions of dollars)

| Funding Sources | 1992 |
|--------------------------------|------------|
| Bureau of Indian Affairs | 321.2 |
| School operations | 36.6 |
| Continuing education | 34.4 |
| Tribe/agency operation | 23.6 |
| Johnson O'Malley | 4.4 |
| Program management | <u>4.4</u> |
| Total Bureau of Indian Affairs | 420.4 |
| Department of Education | 258.0 |
| Impact aid | 73.4 |
| Indian Education Act | 35.7 |
| Chapter 1 | 26.5 |
| Special education | 5.7 |
| Drug Free Education | 4.5 |
| Rehabilitative services | 1.8 |
| Library services | 1.3 |
| Science and mathematics | <u>1.3</u> |
| Total Department of Education | 406.9 |

Source: Based on information from Sar A. Levitan and Elizabeth I. Miller, "The Equivocal Prospects for Indian Reservations," Research paper, Washington, Center for Social Policy Studies, George Washington University, May 1993, 48.

Endnotes

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6. Levitan and Miller, 8.
7. U.S. Department of Health and Human Resources, Public Health Service, Indian Health Services, Regional Differences in Indian Health, 1993 (Rockville: GPO, 1993) 4, 5.
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13. We the . . . First Americans, 5.
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25. Levitan and Miller, 51.

26. Richard N. Apling, and Paul M. Irwin, Carl D. Perkins Vocational Act: Issues for Reauthorization (Washington: Library of Congress, Congressional Research Service, July 1991), 12.

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29. Dennis McDonald, "From 'No Power' to Local Power? Education Week--Special Report, August 2, 1989, 8.

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31. Reyhner, 21.

32. Gerald Slater, "Principal Issues Regarding Native Americans to be Addressed by The National Assessment of Vocational Education," In United States, Department of Education, Papers

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34. Ibid., 3-4.

35. Ibid., 2.

36. Minnesota Planning, "High Stakes: Gambling in Minnesota" (St. Paul: March 1992), 32, 40.

37. Ibid., 5.

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