POSTSECONDARY SUCCESS FOR NATIVE AMERICAN STUDENTS: A BRIEF SUMMARY OF RESEARCH, PROGRAMS, AND PRACTICES

SHORT TURNAROUND REPORT #0094-2011-2
FEBRUARY 3, 2011 (REVISED SEPTEMBER 28, 2011)

Introduction
Overview of Issues

Native American, Alaska Native, and Native Hawaiian children and youth comprise an important and growing portion of students in classrooms in the United States. As with all students, it is expected that this population will benefit from a quality elementary and secondary education and achieve success in adulthood. Success at the postsecondary level for Native American, Alaska Native, and Native Hawaiian youth is a goal shared by tribal leaders, teachers, and state and federal officials, along with family and community members.

This document provides a brief overview of the issues affecting postsecondary success for Native American, Alaska Native, and Native Hawaiian students, including a summary of current research and practices; some relevant data; and a definition of related terms. The summary of research is divided into two areas: education programs that prepare students for successful postsecondary experiences and successful postsecondary models, including higher education and employment.

Definition of Terms
Native American

There are a number of terms that refer to the indigenous peoples of the North American continent and islands. "Indian" is a term that has been used since the days of Christopher Columbus to name the original inhabitants of the "New World." While there have been attempts to use other terms—the use of "Native American" and "American Indian" has grown—"Indian" still is used, as evidenced in state and federal policy and legislation, such as the "Indian Education for All" program in Montana. Indigenous peoples of the state of Alaska often are termed "Alaska Natives." Likewise, those in Hawaii are referred to as "Native Hawaiians." All these terms will be found in the literature. For the sake of conciseness, "Native American" is used in this report to refer to all three peoples.

Success

Success means different things for different cultures. For the purposes of this document, postsecondary success will be defined in terms of mainstream expectations for employment, advanced degrees, and/or training leading to employment. In an effort to honor the integrity of the literature, however, an awareness that cultural perspectives may influence an understanding of success has informed this document as well.

Summary of Research and Issues:
Preparation for Postsecondary Success

Individuals who have experienced challenges, failures, and struggles early on can turn their lives around and experience success at a later point. Still, a high-quality elementary and secondary education can and should prepare a young person for success in adulthood.

An analysis of the literature shows that many factors can be significant in a Native American youth's successful transition to postsecondary life, whether that entails further education or employment. Part I of this report summarizes educational research and practices that prepare students for this transition.

Data and Demographics: Indicators of Postsecondary Success
High School Graduation Rates

Graduating from high school is one indicator that students will succeed in their pursuit of postsecondary options. The lack of a diploma is a barrier to advanced education, well-paying jobs, and satisfying careers. There is a large gap between the graduation rates of Native American students and "all" students in states with high numbers of Native American students. On average, less than 50% of Native American students in states with large Native American populations graduate each year.

Overall graduation rates, and Native American (NA) graduation rates, 2007

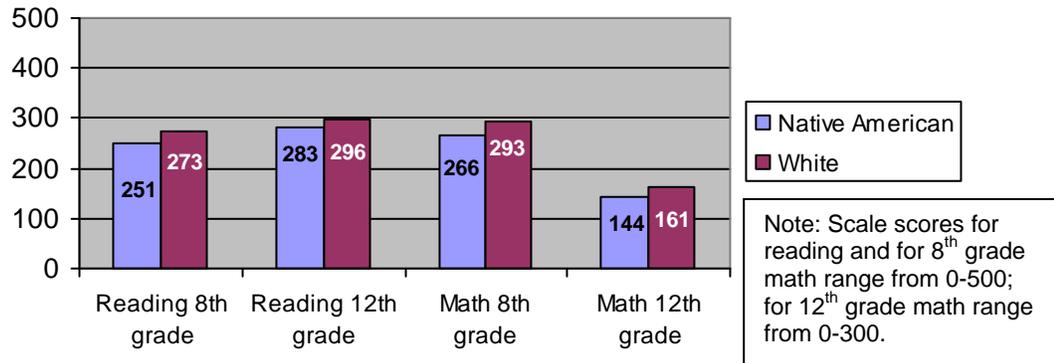| State	Percentage NA students in population	Overall graduation rates	NA graduation rate	Graduation Gap
Alaska	26.3%	67.6%	46.8%	-20.8%
Arizona	6.2%	73.4%	52.4%	-21.0%
California	0.8%	70.1%	52.4%	-17.7%
Idaho	1.6%	76.6%	48.4%	-28.2%
Montana	11.3%	75.7%	50.0%	-25.7%
New Mexico	11.1%	54.1%	45.3%	-8.8%
North Dakota	8.3%	79.2%	37.9%	-41.3%
Oklahoma	18.0%	70.8%	63.8%	-7.0%
Oregon	2.3%	70.4%	42.7%	-27.7%
South Dakota	11.0%	75.6%	30.4%	-45.2%
Washington	2.7%	68.8%	42.7%	-26.1%
Wyoming	3.4%	74.2%	**	**

Note: ** indicates insufficient data available

Retrieved February 2, 2011 from: http://civilrightsproject.ucla.edu/research/k-12-education/school-dropouts/the-dropout-graduation-crisis-among-american-indian-and-alaska-native-students-failure-to-respond-places-the-future-of-native-peoples-at-risk/faircloth-tippeconnic-native-american-dropouts.pdf.

Academic Achievement Rates

Academic achievement rates in elementary and secondary education also indicate postsecondary success. Native American students tend to lag behind their peers in academic achievement, as demonstrated by data from the National Assessment of Educational Progress (NAEP) data from 2009.

2009 NAEP Achievement Scale Scores

Note: Scale scores for reading and for 8th grade math range from 0-500; for 12th grade math range from 0-300.

College Preparatory Coursework

Students often do not achieve academic goals because they have not received the instruction necessary to score well on the assessments. Mathematics, as an example, tends to serve not only as a gatekeeper for success in higher education, but also as a predictor of such success. Looking at the NAEP Long-Term Trend Assessment, ethnic minority groups were found to be taking lower-level mathematics courses than their age peers at age 13. At age 17, those students who had taken higher-level mathematics courses were found to score higher on the NAEP mathematics test.[1] According to the 2009 *National Indian Education Study*, over half of 8th grade students indicate that they plan to go to college – thus college preparatory work is becoming ever more important.

Resources

Faircloth, S.C., & Tippeconnic, III, J.W. (2010). *The Dropout/Graduation Rate Crisis Among American Indian and Alaska Native Students: Failure to Respond Places the Future of Native Peoples at Risk*. Los Angeles, CA: The Civil Rights Project/Proyecto Derechos Civiles at UCLA. Retrieved February 2, 2011, from www.civilrightsproject.ucla.edu.

Mead, N., Grigg, W., Moran, R., and Kuang, M. (2010). *National Indian Education Study 2009 - Part II: The Educational Experiences of American Indian and Alaska Native Students in Grades 4 and 8* (NCES 2010–463). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, D.C. Retrieved September 28, 2011 from http://nces.ed.gov/nationsreportcard/pdf/studies/2010463.pdf

National Assessment of Educational Progress (NAEP) (2009). National Center for Educational Statistics. Retrieved February 3, 2011, from http://nces.ed.gov/nationsreportcard/nies/.

Swisher, K. & Hoisch, M. (1992). Dropping out among American Indians and Alaska Natives: A review of studies. *Journal of American Indian Education, 31*(2), 3–23. Retrieved August 20, 2009, from http://jaie.asu.edu/v31/V31S2dro.htm.
.Reyhner, J. (1992). American Indians out of school: A review of school-based causes and solutions. *Journal of American Indian Education, 31*(3), 37–56. Retrieved August 20, 2009, from http://jaie.asu.edu/v31/V31S3ind.htm.

---

[1]   There were too few Native American students in the NAEP sample to analyze them separately, but they were included in the study as part of the "ethnic minority" group.

Successful Elementary and Secondary Educational Programs and Strategies

There are many successful educational programs, and strategies that contribute to postsecondary success of Native American students. In recent years, both quantitative and qualitative research studies have documented factors that contribute to academic achievement, lower dropout rates, and greater success in postsecondary education. These studies document

- the success in academic achievement of Native American children whose native language and culture are included in the curriculum,
- higher proficiency in English of those students who are also proficient in their native language, and
- lower dropout rates for students in schools that include Native language and culture.

The research studies also found evidence that, as early as the elementary grades, heritage language and culture programs in the schools build strong relationships between home and school, which is an important factor in academic success and graduation rates. Teaching that affirms the background culture of the students and draws on their knowledge and experiences is also more successful than methods that rely on mass-produced instructional materials designed for mainstream students.

Resources

Demmert, W., & Towner, J. (2003). *A review of the research literature on the influences of culturally based education on the academic performance of Native American students.* Portland, OR: Northwest Regional Educational Laboratory.
Retrieved February 2, 2011, from http://www.nwrel.org/indianed/cbe.pdf.
Demmert and Towner provided a review of the research literature on the influences of culturally based education (CBE) on the academic performance of Native American students, with a focus on qualitative and select qualitative research. The review includes an analysis of theories underlying CBE, the challenges of conducting research in this area, a summary of the issues, and recommendations. Research findings include documented success in academic achievement of Native American children whose native language and culture are included in the curriculum, higher proficiency in English of those students who are also proficient in their native language, and lower dropout rates for students in schools that include native language and culture. The research studies found evidence that heritage language and culture programs build strong relationships between home and school, which is an important factor in academic success and graduation rates.

Fayden, T. (2005). *How Children Learn: Getting Beyond the Deficit Myth.* Boulder, CO: Paradigm.
Fayden draws from her experience teaching Native American and Hispanic students to develop a model of educating minority students that recognizes their strengths and the information they bring to the classroom. Fayden uses Social Constructive theory and provides examples from her own classroom to explain her methods. Her students do not always excel on traditional pencil and paper tests, she explains, but through her use of cultural learning patterns and recognition of the students' background knowledge, they are able to produce high quality work.

McCarty, T. L. (2009). *The Role of Native Languages and Cultures in American Indian, Alaska Native, and Native Hawaiian Student Achievement.* Policy Paper Prepared for The Promising Practices and Partnerships in Indian Education Working Group and the U. S. Department of Education Office of Indian Education Programs.
McCarty provides a summary of promising practices in educational programs that use native and home languages in the curriculum. She finds evidence that academically rigorous Native language and cultural programs have positive effects on academic achievement. Time spent on Native language is not time lost; it enhances student motivation and can be a determining factor in future success.

Oakes, A. (2009; August 30). Engaging Native American Learners with Rigor and Cultural Relevance. Issue Brief. The Center for Comprehensive School Reform and Improvement.
In this brief, the Center for Comprehensive School Reform and Improvement identifies strategies that foster Native American student engagement and improve academic achievement.

They examine the distribution of Native students and explore three areas that, if properly addressed, can improve educational outcomes for Native students, including instructional practices, curriculum content, and school climate. They find that instruction in Native culture and language and high-quality instruction in other content areas are not mutually exclusive, but rather complementary and equal contributors to the success of Native American students. Retrieved February 2, 2011, from http://www.centerforcsri.org/files/CenterIssueBriefAug09_NAmerican.pdf.

Romero-Little, M. E. (2010). Best Practices for Native American Language Learners. In Li, G. & Edwards, P. A. (Eds.) *Best Practices in ELL Instruction.* (pp. 273 – 298). New York: Guilford.
Romero-Little provides an overview of the issues surrounding the identification and instruction Native American ELs. She discusses background, legislation, and research, along with providing a comparison of methods of instruction. Effective programs for Native American ELs involve incorporating heritage language instruction into the curriculum, involving the community, and teaching educators about the students' culture. Romero-Little also explains that though the students may be limited in English, educators need to know that the students do come to school with ways of communicating and forms of knowing and learning.

Romero-Little, M. E. & McCarty, T. L. (2006). Language Planning Challenges and Prospects in Native American Communities and Schools. Tempe, AZ: Arizona State University.
Little and McCarty review four educational programs, two of them school-based and two community-based, that incorporate students' heritage language and culture, and find that the programs have a positive effect on both language revitalization efforts and academic achievement. The authors also report that (1) heritage language is a viable alternative to English-only instruction; (2) time spent learning a heritage language is not lost but contributes to a positive child-adult interaction, restoring community ties; (3) literacy skills first developed in a heritage language transfer to English; and (4) language preservation efforts are fundamental to tribal sovereignty and local education choice.

Swisher, G. T. & Tippeconnic, III, J. W. (Ed.) (1999). *Next Steps: Research and Practice to Advance Indian Education.* Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools.
Next Steps includes 13 chapters on various aspects of Indian Education. Part I provides a background for the next chapters, covering some of the history of American Indian and Alaska Native education. Part II covers curriculum issues, such as the role of language and culture, culturally appropriate curriculum materials, and other aspects of education for Native American students. Part III covers higher education, including tribal colleges. In the final chapter, Swisher and Tippeconnic III summarize the issues, make recommendations for practice, and advocate for more research. They recommend including language and culture in the curriculum, eliminating stereotypes, strengthening community ties, and developing connections between K-12 education and higher education. They also advocate the importance of Native communities and individuals taking a greater responsibility in the education of tribal youth.

State and Federal Policies

The federal and state governments have had policies regarding the education of Native American children since the country began taking over Indian lands during its westward expansion. While many of the policies included goals of self-sufficiency, the strategies and educational models used were not always effective in supporting these goals. Few Native Americans received high school diplomas. Academic achievement rates were poor. Motivated by such reports as *Indian Nations at Risk*, policies were changed to mandate educational programs that would contribute to postsecondary success.

Resources

Elser, T. (2010) *The Framework: A Practical guide for Montana Teachers and Administrators Implementing Indian Education for All.* Helena, MT: Office of Public Instruction.
This framework provides an overview of the Indian Education for All Program in Montana. This state-funded program for developing understandings of the Native tribes and cultures of Montana for students in the K-12 school system in Montana is based on seven "Essential Under-

standings." These understandings encompass cultural knowledge, history, and educational theory and practice.

Elser, T. & Magone, M. (2009). Indian Education for All: A Change of Heart and Mind. *International Journal of Educational Management*, *23* (4), 314-325.

This paper analyzes the historical foundation, current status, and practical implications of Indian Education for All, a statewide multicultural education initiative in Montana. This study's findings have implications for anyone engaged in the creation, organization, and implementation of a multiculturally literate and responsive education system.

Fox, S. J. (2000). Standards-Based Reform and American Indian/Alaska Native Education. Charleston, WV: ERIC Clearinghouse on Rural Education. Retrieved February 2, 2011, from http://www.ericdigests.org/2002-3/indian.htm.

Fox summarizes the impact of standards-based reform efforts on Indian Education. Standards-based reform can help improve Indian education, she says, but schools and states must see themselves as accountable. She cites past research and reports, such as the Indian Nations At Risk Task Force, in identifying four factors needed to improve the education of Native students: the incorporation of language and culture into the curriculum, community involvement, culturally appropriate instruction, and assessment.

Indian Nations At Risk Task Force. (1991). *Indian nations at risk: An educational strategy for action.* Washington, DC: U.S. Department of Education. Retrieved August 20, 2009, from http://www2.ed.gov/rschstat/research/pubs/oieresearch/research/natatrisk/report.pdf.

Provides a summary of the status of Indian Education at the time, along with a review of risk factors and recommendations for improvement.

Smiley, R., & Sather, S. (2009). *Indian education policies in five Northwest Region states* (Issues & Answers Report, REL 2009 No.081).Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest. Retrieved February 2, 2011, from www.ies.ed.gov/ncee/edlabs.

This report examines state policies related to the education of American Indian and Alaska Native (referred to collectively as Native American) students, focusing on commonalities among the states and specific mechanisms used to develop policies. The study finds that states have adopted different policies, but all five states have put into practice academic standards addressing Native American language, culture, and history; have included the Native American community on advisory boards; have increased options for licensing teachers of Native American languages, and have established college tuition assistance programs for Native American students.

Student Voices

The voices of students themselves are seldom heard in the research on Native education. A number of researchers have surveyed or interviewed Native American students on issues of motivation, interests, and goals. The stories are varied, but do support the research findings that children and youth benefit from family and community support systems, educational programs that are connected with their culture and community, and activities that allow them to experience affirmation, success, and a say in their own future. Students frequently express a desire to maintain an identity as a Native American. Postsecondary success for one first grader on Fort Berthold Reservation in North Dakota is very much related to her cultural identity. According to her Arikara language and culture teacher, she wants to be "an Indian when I grow up."

About 12,000 Native American and Alaska Native 4th grade students and 10,000 8th grade students participated in the 2009 National Indian Education Study survey. Their responses provide information about students' exposure to Native American and Alaska Native culture and language, sources of help with schoolwork, and plans for their future. Overall the report provides information about how the students view themselves, their families and communities, and their school experiences.

Resources
Bergstrom, A., Cleary, L. M. & Peacock, T. D. (2003). *The Seventh Generation: Native Students Speak About Finding the Good Path.* Charleston, WV. ERIC Clearinghouse on Rural Education and Small Schools.

Cleary and Peacock traveled to public, tribal, federal, and alternative schools on and off reservations to collect the stories of Native American youth. They summarize the stories and group them by themes, including identity, life challenges, using gifts, and making it in school. In the final, summary chapter, Cleary and Peacock review the research, relate it to the students' voices, and summarize some of the students' recommendations. The stories include students who have been successful, as well as those who have dropped out of school and have not been successful. Many of the students express how their traditional values, culture, and community have helped them achieve success in school.

Mead, N., Grigg, W., Moran, R., and Kuang, M. (2010). *National Indian Education Study 2009 - Part II: The Educational Experiences of American Indian and Alaska Native Students in Grades 4 and 8* (NCES 2010–463). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, D.C. Retrieved September 28, 2011 from http://nces.ed.gov/nationsreportcard/pdf/studies/2010463.pdfPenland, J. L. (2010). Voices of Native Resiliency: Educational Experiences from the 1950s and 1960s. *The Qualitative Report*, *15*(2), 430–454. Retrieved February 2, 2011, from http://www.nova.edu/sss/QR/QR15-2/penland.pdf.

This paper explores the experiences of Native Americans who grew up during the 1950s and 1960s, looking at those who attended boarding schools and those who attended traditional public schools, factors that influenced career decisions, and recommendations for culturally responsive teaching. Penland cites the following factors as key to success: support systems, literacy skills, and cultural understanding.

Yellow Bird, D. (2011). When We Grow Up We Want to Be Indians. Unpublished Interview.

Delilah Yellow Bird, an Arikara language teacher, discusses her work teaching in the White Shield Elementary School. She shares the comments from her students when she told them that she was going to the capitol to talk to legislators about funding heritage language programs in the schools. She asked her students what their thoughts were on funding to teach Arikara, along with what their long-term goals were. One first grader told her that when she grows up she wants to be an Indian. Another student said that knowing his Native language helps him to be nice. Yellow Bird says she wants her students to know their language and culture and be productive adult members of their own communities—that is how she defines success.

Summary of Research and Issues: Postsecondary Experiences
Employment Patterns
Although the most recent census data show that unemployment rates among Native Americans have dropped from 70 percent in the mid-1960s to approximately 22 percent more recently, Native Americans still carry the highest unemployment rate in the nation (Wilkinson, 2005, as cited in Hunt, Kerr, Ketcher, & Murphy, 2010). Employment opportunities are scarce in Indian country due to the small size and rural isolation of many reservations. Gaming employment sectors are limited and remain controversial among many tribes: those in favor of this sector cite the job opportunities casinos create, while others counter that these jobs are mostly low wage and dead end. Many of the jobs that do exist are in the public sector. For example, among the major employers are federal and tribal governments, schools, and the U.S. Public Health Service (Houser, 1995, as cited in Hunt, Kerr, Ketcher, & Murphy, 2010).

In their analysis of available data from 1991 through 2005, obtained from biennial reports by the U.S. Equal Employment Opportunity Commission (EEOC) and the U.S. Census Bureau for six states with the highest percentages of Native Americans—Alaska, Arizona, Montana, New Mexico, Oklahoma, and South Dakota—Hunt, Kerr, Ketcher, & Murphy (2010) showed that Native Americans suffer from extensive occupational segregation: although Native American

representation in state- and local-elected bodies has improved in three of the six states over the last couple of decades, the overall increase is not significant, and NA job shares in professional positions remain low. By contrast, in some of the states Native Americans are much better represented in the least desirable positions, like service-maintenance, skilled craft, and administrative support. While these positions offer some job security and benefits, they are also characterized by low pay and few opportunities for growth.

Resource
Hunt, V.H., Kerr, B. Ketcher, L.K. and Murphy, J. (2010). The Forgotten Minority: An Analysis of American Indian Employment Patterns in State and Local Governments, 1991–2005. *American Indian Quarterly, 34* (4).

Higher Education
Current statistics on Native American students in higher education
Postsecondary education can help Native Americans overcome many employment barriers. Yet, although recent data show a significant increase (40%) in the number of Native Americans who earned bachelor's degrees as compared to data from a decade earlier, Native Americans only represent about 1% of all students enrolled in college in 2008 (Czujko, 2010).

Native Americans among bachelor's degree recipient in 2008 and 1998.

	Number of Bachelor's All Fields		Change '98 to '08
	2008	1998	%
All Degree Recipients			
Total	1,579,955	1,198,938	32
Women	906,376	674,036	34
Men	673,579	524,902	28
Native Americans			
Total	10,768	7,693	40
Women	6,546	4,629	41
Men	4,222	3,064	38

http://www.aip.org/statistics

When comparing the number of Native Americans who earned bachelor's degrees in selected fields in academic year 2007-08 to the total number of degrees awarded in those fields, Czujko (2010) found that Native Americans are more likely than other students to major in education and less likely to major in physics and mathematics than any of the other fields studied.

Native Americans among bachelor's degree recipients in selected fields in 2008.

Degree Field	Native Americans	All Students	Native Americans per 1,000 bachelor's
Business & Mgmnt	2,102	344,892	6.1
Education	996	124,846	8.0
Psychology	637	92,966	6.9
Biological Sciences	508	82,387	6.2
Engineering	456	86,048	5.3
Computer Science	221	38,916	5.7
Chemistry	80	11,829	6.8
Mathematics	73	15,840	4.6
Geosciences	28	4,313	6.5
Physics	22	4,875	4.5
Bachelor's across all fields	10,768	1,579,955	6.8

AIP Statistical Research Center compiled data collected by the NCES.

http://www.aip.org/statistics

The number and percentage of postsecondary degrees awarded to American Indian students are well below that of other ethnic groups (Christman et al., 2007). Furthermore, retention rates among Native Americans are minimal, with estimates as low as 15% (Astin, 1982; Tierney, 1992; Tijerina & Biemer, 1988 as cited in Guillory, 2011). The high dropout rate occurs across all types of schools and remains among the highest in the nation when compared to students of other ethnicities (Denmert, Towner, & Yap, 2003). The 2006-07 Consortium for Student Retention Data Exchange Retention Report (CSRDE, 2007), the product of an ongoing, voluntary, collaborative effort of the 438 college and university members of the Consortium for Student Retention Data Exchange, listed the first-time, full-time freshman (FTF) six-year graduation rate for Asian students who entered in academic year 1999-2000 at 65.2%; for white students at 59.4%; for Hispanic students at 48.4%; and for Black students at 44.0%. The six-year graduation rate for NA students was the lowest at 38.4%. Recent nationwide year-to-year persistence rates are uncertain, given the paucity of research studies on NA student retention in higher education and the inadequate representation of Native Americans in national and longitudinal research databases.

Resources

Christman, D. E., Guillory, R.M., Fairbanks, A., & Gonzalez, M.L (2007). A Model of American Indian School Administrators: Completing the Circle of Knowledge in Native Schools. *Journal of American Indian Education*, pages 53-71.

Consortium for Student Retention Data Exchange (CSRDE). (2007). *2006-07 CSRDE retention report.* Norman, OK: Author.

Czujko, R. (2010). Native Americans among Degree Recipients in Physics and Geoscience. AIP Statistical Research Center.

Demmert, W. G., Towner, J. C., & Yap, K. O. (2003). *A review of the research literature on the influ-
ences of culturally based education on the academic performance of Native
American students. (ED-01-CO-0048/0002).* Northwest Regional Educational
Laboratory. Portland, OR: U.S. Department of Education.
Guillory, R. M. (2008). It's about family: Native American student persistence in higher education. *Jour-
nal of Higher Education*, *79*(10), 58-87. Retrieved February 1, 2011, from
http://findarticles.com/p/articles/mi_hb172/is_1_79/ai_n29409986/.

Challenges Faced By NA Undergraduates

Census 2000 data (Ogunwole, 2006) indicate that while 12.4% of the total U.S. population
lived in poverty, over twice as many of the total Native American population (25.7%), including
37% of the Navajo Nation population, live in poverty. The median earnings for Native Ameri-
can men ($28,900) and women ($22,800) who worked full time were substantially below those
of all men ($37,100) and women ($27,200). Navajo men ($25,992) and women ($21,077) re-
ported even lower median earnings. Chronic poverty often is accompanied by a range of social
problems, including violence, depression, substance abuse, high rates of suicide, unhealthy
diets, inadequate healthcare, and health problems.

Pavel et al. (1998) in their seminal work on the Native American postsecondary academic ex-
perience, reported that Native American students entering college possessed an unusually
high number of risk factors that threatened their ability to succeed in higher education (35%
faced four or more risk factors compared with only 22% of undergraduates overall). Native
American undergraduates were twice as likely as undergraduates overall to be single parents,
and 35% more likely to be lacking family financial support. While only 22% of total under-
graduates reported having at least one dependent, 37% of Native American undergraduates
reported this risk factor.

Resources

Ogunwole, S. U. (2006). We the people: American Indians and Alaska Natives in the
United States. *Census 2000 special report, CENSR-28*. Washington, DC: U.S. Census Bureau.
Pavel, D. M., Skinner, R., Farris, E., Cahalan, M., Tippeconnic, J., & Stein, W. (1998).
American Indians and Alaska Natives in postsecondary education (NCES 98-291).
Washington, DC: U.S. Department of Education, National Center for Education
Statistics.

Traditional models/theories of student retention or persistence

Three theoretical models account for the majority of published research on student retention:
the Student Attrition Model (SAM) (Bean, 1982; 1985), the Student Integration Model (SIM)
(Tinto, 1975; 1993; 1997), and Astin's Theory of Involvement (1975; 1987). These comple-
mentary theories explain student departure prior to degree completion by incongruence be-
tween the student (pre-college attributes, intentions, goals, and commitments) and the campus
environment. Positive interactions with individuals, structures, and members of the college or
university community lead to involvement and integration and result in student retention,
whereas negative interactions or experiences reduce integration, increase alienation, promote
marginality, and eventually lead to student withdrawal.

These models, however, do not take into account the "cultural clash" experienced by Native
American students who attend mainstream universities, and do not fully explain the driving
forces and barriers that exist specifically for NA students. For instance, they inadequately take
into account unique family, political status, tribal affiliation, language, tribal customs and tradi-
tions, and tribal community factors (Pavel & Padilla, 1993).

Resources

Astin, A. W. (1975). *Preventing students from dropping out.* San Francisco: Jossey Bass.

Astin, A. W. (1987). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel, 25*, 297–308.

Bean, J. P. (1982). Student attrition, intentions, and confidence: Interaction effects in a path model. *Research in Higher Education, 17*, 291–319.

Bean, J. P. (1985). Interaction effects based on class level in an exploratory model of college student dropout syndrome. *American Educational Research Journal, 22*, 35–64.

Pavel, M., and Padilla, R. (1993). American Indian and Alaska Native postsecondary departure: An example of assessing a mainstream model using national longitudinal data. *Journal of American Indian Education, 32*(2), 1-23.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research, 45,* 89–125.

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition.* Chicago: The University of Chicago Press.

Tinto, V. (1997). Classrooms as communities. *The Journal of Higher Education, 68*(6), 599–623.

Factors influencing Native American student retention in higher education

Studies of Native American students who attend mainstream colleges and universities (e.g., Barbatis, 2010; Doyle, Kleinfeld, & Reyes, 2009; Froelich, 2006; Guillory, 2011; Huffman, 2001, 2003; Gonzalez, 2000; Lee, Donlan, & Brown, 2011; Smiley & Sather, 2009) suggest that the following factors can be sources of encouragement and motivation and can impact NA students' ability and/or desire to persist in college:

- Family support in embracing the value of education
- Students' hope of giving back to their tribal communities
- On-campus social support
  - retention of a strong cultural identity
  - opportunities to maintain active connections to home communities and participate in cultural ceremonies (e.g., at American Indian student centers).
  - supportive and involved faculty
  - institutional commitment, including:
    - financial support (scholarships and fellowships, e.g., the College Assistance Migrant Program [CAMP] scholarship) and knowledge regarding how to obtain and manage financial aid (e.g., financial counseling sessions)
    - resources for child and family care (especially for single parents) and retention programs designed specifically for Native Americans
    - academic programs specifically tailored to meet the needs of NA students
      - academic, summer-bridge, and orientation programs (e.g., the American Indian Research Opportunities Program [AIRO] and the Bridge Program for NA nursing students)
      - coursework on the Native language and culture, along with cultural connections with all courses
- Pre-college academic preparation, including access to information technology necessary for successful transition to college

Lack of support in any of these areas may become barriers to continuing education. Native American students and institution representatives in Guillory's (2011) study held contrary views about what drives Native Americans to finish college, at least in terms of relative importance of each. Institution representatives placed a high premium on financial factors and strong academic programs, whereas Native American students, while recognizing that lack of money is pervasive, did not see finances as a persistence factor nor as the most daunting bar-

rier to overcome, and emphasized that family support and participation in the life of the tribal community, as well as social support on campus, were critical to their persistence. A strong sense of family financial responsibility is identified as a chief cause for withdrawal from college (Lee, Donlan, & Brown, 2011). Both students and institution representatives view lack of academic preparation at the K-12 level as a severe barrier, emphasizing that public school systems on Indian reservation land are substandard and that ill-prepared students sometimes avoid more rigorous college-level courses, particularly in English, math, and the sciences.

Resources

Barbatis, P. (2010). Underprepared, Ethnically Diverse Community College Students: Factors Contributing to Persistence. Journal of Developmental Education, 33(3), 14-24.

Doyle, A., Kleinfield, J., & Reyes, M. (2009). The Educational aspirations/attainment gap among rural Alaska native students. *The Rural Educator, 30*(3), 25-33.

Froelich, K. (2006). *Elementary/Special Education: Perceptions of Graduates.* Unpublished Doctoral Dissertation. Grand Forks: University of North Dakota.

Gonzalez, K. P. (2002). Campus culture and the experiences of Chicano students in a predominantly white university. *Urban Education, 37*(2), 193-218.

Guillory, R. M. (2008). It's about family: Native American student persistence in higher education. *Journal of Higher Education, 79*(10), 58-87. Retrieved February 1, 2011, from http://findarticles.com/p/articles/mi_hb172/is_1_79/ai_n29409986/.

Huffman, T. (2001). Resistance theory and the transculturation hypothesis as explanations of college attrition and persistence among culturally traditional American Indian students. *Journal of American Indian Education, 40*(1), 1-23.

Huffman, T. (2003). A comparison of personal assessments of the college experience among reservation and non-reservation American Indian students. *Journal of American Indian Education, 42*(2), 1-16.

Lee, J., Donlan, W., and Brown, E.D. (2011). American Indian/Alaskan Native undergraduate retention at predominantly white institutions: An elaboration of Tinto's Theory of college student departure. *Journal of College Student Retention, 12*(3), 257-276.

Smiley, R., & Sather, S. (2009). *Indian education policies in five Northwest Region states* (Issues & Answers Report, REL 2009 No.081).Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest. Retrieved February 2, 2011, from www.ies.ed.gov/ncee/edlabs.

Tribal colleges and universities (TCUs)

TCUs were created on reservations about 30 years ago in response to the higher education needs of NAs and generally serve geographically isolated populations that have no other means of accessing education beyond the high school level. TCUs are unique institutions that combine personal attention with cultural relevance to encourage Native Americans—especially those living on reservations—to embrace who they are and to overcome the barriers to higher education (See Appendix 1). Tribal colleges also serve as a way to ground students in their native language and culture and provide a system of supports that will help ensure that students who enroll in their academic programs will complete their studies. The work of the TCU is supported by the American Indian Higher Education Consortium (AIHEC), founded in 1972 and representing 36 colleges in the United States and one Canadian institution (http://www.aihec.org/).

Model of NA student retention

A successful student retention model in higher education that explicitly concentrates on Native American students[2] is the Family Education Model (FEM) developed by HeavyRunner and DeCelles (2002) and supported empirically by Lee, Donlan, and Brown (2011). Similar to traditional retention models, the FEM is based on principles of education and social work, but also offers strategies for dealing with NA student attrition, purposefully including the core cultural factors suggested by Pavel and Padilla (1993). This intervention-based model suggests that replicating the extended family structure within the college culture enhances a Native American student's sense of belonging, fortifies Native American students' academic persistence, reduces feelings of resentment that family members feel toward students because they spend time away from home, and consequently leads to their higher retention rates. The family specialist, who serves as family counselor, educator, advisor, advocate, team member, and event planner, is a unique model feature. The specialist works directly with students and their families, assisting with micro-level issues (such as child care, transportation, substance abuse, family illness, cultural ceremonies and feasts, academically unprepared students, family violence, and depression) and macro-level aspects of college (such as career planning and dealing with racism and discrimination in society).

Examples of successful programs

The University of Minnesota, Morris campus, developed a bridge program (the Gateway program) to meet the special concerns of African American and Native American incoming freshmen. The program initially prepares students for higher education through a four-week summer program that includes an umbrella course in math, computer literacy, and writing, as well as various workshops and recreational activities. Students meet with the program coordinator to assess their progress, register for the fall semester, and plan a first year of study, and are offered opportunities for mentoring by faculty and tutoring by upper division students and pre-service secondary education seniors. Although assessment data did not show a significant difference between the graduation rates of gateway students and majority students (possibly due to various factors of program implementation in the first years), the program prepares students of multi-ethnic backgrounds for success in their college careers, providing them with the necessary tools to meet their educational goals (Risku, 2002).

The Model for American Indian School Administrators (MAISA) at New Mexico State University (NMSU) in Las Cruces, New Mexico (Christman et al., 2007; Guillory, 2005), a federally funded distance education program, provides a collaborative, comprehensive master's degree in educational administration leading to licensure for aspiring American Indian administrators serving schools with significant NA student populations. It is designed to bring the education to the Native American students through a variety of delivery methods, such as an interactive, hybrid media-delivered class, as well as by having Native American faculty travel to various sites throughout New Mexico to teach and advise participants. Through these efforts and its design, MAISA had a 100% graduation rate. Because NMSU is a land-grant university that serves some of the largest American Indian tribes in the United States (Navajo and the 19 Pueblos), it is a peer institution to WSU, UI, and MSU, and its MAISA project provides an excellent model for these institutions.

The Native American Achievement Program (NAAP), within the, Multicultural Student Center of Arizona State University (ASU), a specialized program primarily designed to increase the

---

[2] Research that forms the basis for this model was conducted at five institutions in Montana--Fort Peck Community College, Stone Child College, Salish Kootenai Community College, Blackfeet Community College, and the University of Montana, Department of Social Work.

persistence and graduation rates of Native American students from the Navajo Nation, San Carlos Apache Tribe, and the White Mountain Apache Tribe, is an example of a successful program that incorporates some aspects of Tinto's and FEM models described above. NAAP participants have a significantly higher retention rate compared with Native American FTF financial aid recipients not in the NAAP program, and with NA FTF non-financial aid recipients (Lee, Donlan, & Brown, 2011).

Resources

Christman, D. E., Guillory, R.M., Fairbanks, A., Gonzalez, M.L (2007). A Model of American Indian School Administrators: Completing the Circle of Knowledge in Native Schools. *Journal of American Indian Education*, pages 53-71.

Guillory, R. (2005, Fall). The continuing journey to success: The Model of American Indian School Administrators. In C. Milyard (Ed.), *The New Mexico Association for Supervision and Curriculum Development* (p. 2). Deming, NM: Deming Public Schools.

Heavy Runner, I., & DeCelles, R. (2002). Family education model: Meeting the student retention challenge. *Journal of American Indian Education, 41*(2), 29-37.

Lee, J., Donlan, W., and Brown, E.D. (2011). American Indian/Alaskan Native undergraduate retention at predominantly white institutions: An elaboration of Tinto's Theory of college student departure. *Journal of College Student Retention, 12*(3), 257-276.

Risku, M. (2002). A bridge program for educationally disadvantaged Indian and African Americans. In: *An Imperfect World: Resonance from the National Violence. Proceedings of the Annual Meeting of the National Association of African American Studies, the National Association of Hispanic and Latino Studies, the National Association of Native American Studies, and the International Association of Asian Studies.* Houston, TX.

Implications

More needs to be done to increase the likelihood of NA students' success at mainstream colleges and universities nationwide. Besides offering NA students sufficient financial support and diversity-oriented programs, colleges and universities should create ways in which Native Americans can connect with both the university and their home communities. Any effort to improve NA undergraduate persistence should take into account the NA self-identity and culture that is highly integrated with family, community, and tribe (Lee, Donlan, & Brown, 2011). Colleges and universities need to acknowledge and support this critically important relationship: "replicating the extended family structure within the college culture enhances the student's sense of belonging and leads to higher retention rates" (HeavyRunner and DeCelles, 2002:29). While mainstream universities cannot fully replicate the FEM, which was developed in the tribal college environment, much could be adapted for use in these institutions.

Two effective retention strategies may be the creation of collaborative programs between institutions and local/regional Indian tribes that allow students to serve their communities while earning college credit (through internships, student teaching, business, or natural resources management), and the establishment of distance education programs to allow NAs to earn a college education but remain on the Indian reservation to support their families and help their communities (Guillory, 2011).

Resources

Guillory, R. M. (2008). It's about family: Native American student persistence in higher education. *Journal of Higher Education, 79*(10), 58-87. Retrieved February 1, 2011, from http://findarticles.com/p/articles/mi_hb172/is_1_79/ai_n29409986/.

Lee, J., Donlan, W., and Brown, E.D. (2011). American Indian/Alaskan Native undergraduate retention at predominantly white institutions: An elaboration of Tinto's Theory of college student departure. *Journal of College Student Retention, 12*(3), 257-276.

Next Steps

This document provides a summary of current research and key issues. It does identify some gaps and areas of further research. Further resech involves a greater analysis of key issues, such as the relationship between achievement scores and federally funded programs like Title I of the Elementary and Secondary Education Act (ESEA), Native American students, and accountability programs. A significant area of study is to track data of students after graduation. Long-term studies that chart the success and challenges of students who graduate from secondary education programs will be valuable in planning future educational programming and funding for the Native students of our nation.

Additional Resources

Academic and social integration

Herzig, A. H. (2004). Becoming Mathematicians: Women and Students of Color Choosing and Leaving Doctoral Mathematics. *Review of Educational Research* **74(2), 171-214.**

This article looks at why a very small number of women of color (African Americans, Latinos, and Native Americans) complete doctoral degrees in mathematics in the United States and proposes a framework for understanding why those few women persist in doctoral mathematics. It is based on the notion that academic and social integration are critical to persistence and that integration develops through particular types of participation in the communities of practice of graduate school. An integrated summary of previous research on attrition and persistence of doctoral students identifies particular obstacles faced by women and students of color in doctoral mathematics and directs attention to ways in which faculty and others involved in doctoral education can work to improve the persistence rates, experiences, and diversity of their doctoral students.

Promising practices: community colleges

Levin, J.S., Cox, E.M., Cerven, C., & Haberler, Z. (2010). The recipe for promising practices in community colleges. *Community College Review, 38*(1), 31–58.

This study identifies and examines the key practices of California community college programs that have demonstrated success in improving the achievement of underrepresented groups whose educational attainment often lags behind the attainment of relatively well-off white students. Unlike many examinations that focus only on the transfer mission, this study includes other vital areas of the community college, including workforce preparation and developmental education.

Promising practices: pre-college support

Welsh, C.A. (2008). Making Science Education Meaningful for American Indian Students: The Effect of Science Fair Participation. Unpublished Doctoral Dissertation. University of Minnesota.

The purpose of this qualitative research is to describe how American Indian student participation in science fairs organized by The American Indian Science and Engineering Society (AISES) and the relationships students form with their teachers provide pre-college support in science and affect academic achievement and the likelihood of continued education beyond high school.

Information technologies

Brescia, W. & Daily, T. (2007). Information gap: Economic Development and Technology-Skill Needs on American Indian Reservations. American Indian Quarterly, 31(1).

The study discusses the digital divide between the Native American communities and the rest of the U.S. and suggests means of overcoming the information gap by creating educational opportunities for Native Americans that focus on information sciences. Increasing the number of Indian IT professionals is essential for securing the future of information technology assessment and implementation on Indian lands.

Cultural identity

Lucero, N.M. (2010). Identity Making Meaning of Urban American Indian Identity: A Multistage Integrative Process. *Social Work, 55*(4)

This phenomenological study examines the processes through which cultural identity was formed and maintained by a group of Native American Indians who had lived since childhood in urban areas, away

from their reservations or tribal communities. Four themes emerged from participant interviews that correspond to stages participants passed through, from their teens through their 30s, that led to understanding and integration of their American Indian identity. Findings point to the importance of considering issues of cultural identity development when providing social work services to urban American Indian young adults.

Postsecondary transition experiences

Jackson, A.P. & Smith, S.A. (2001). Postsecondary Transitions among Navajo Indians. *Journal of American Indian Education, 40* (2).
This study used interviews to examine the postsecondary transition experiences of 22 Navajo Indians. The interviews were transcribed and the interview texts analyzed using a synthesis of qualitative methods. The analysis showed that (1) family connections, (2) discrepancy between high school and college learning environments, (3) focus on faculty relationships, (4) vague educational and vocational constructs, and (5) connection to homeland and culture were prominent themes. Implications for interventions with Navajo Indians and suggestions for future research are discussed. In particular, the results of the study indicate a need for stable mentoring relationships with other American Indians who are involved and successful in college and related postsecondary experiences.

Financial

Hertel, A.L & Jäger, M.E. (2010). *Saving for Post-Secondary Education in American Indian Communities: A Geospatial and Quantitative Analysis.* Center for Social Development Working Papers, No. 10-21
The report examines the practices and behaviors of American Indians when it comes to saving for postsecondary education. The first objective is to assess spatially NC 529 College Savings Plan (NC 529 Plan or Plan) awareness and ownership among American Indian participants in North Carolina. The second objective is to identify significant indicators of saving for postsecondary education among participants. The indicators tested are income, child education expectations, homeownership, and credit card debt. Findings indicate that Plan awareness in tribal and urban Indian communities is low. There is a relatively high degree of NC 529 Plan ownership among sample participants compared to 2007 NC 529 Plan ownership in general. The only significant indicator of saving for college is child education expectations. Policy recommendations and areas for further research are discussed.

Elementary and Secondary Education

Fleury DeVoe, J., & Darling-Churchill, K. E. (2008). *Status and trends in the education of American Indians and Alaska Natives: 2008.* Washington, DC: National Center for Education Statistics. Retrieved August 20, 2009, from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2008084.

Moran, R., & Rampey, B. (2008). *National Indian education study—Part II: The educational experiences of American Indian and Alaska Native students in grades 4 and 8* (NCES 2008–458). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Retrieved February 2, 2011, from http://nces.ed.gov/nationsreportcard/pdf/studies/2008458.pdf.

National Assessment of Educational Progress (NAEP) (2009). National Indian Education Study. National Center for Educational Statistics. Retrieved February 3, 2011 from http://nces.ed.gov/nationsreportcard/nies/.

National Indian Education Association. (n.d.). *Using culturally based education to increase academic achievement and graduation rates.* Washington, DC: Author. Retrieved August 20, 2009, from http://www.niea.org/sa/uploads/researchtopics/20.38.CBE.pdf.

APPENDIX 1.

Tribal Colleges and Universities Program (TCUP)[3]
ARIZONA
Tohono O'odham Community College
Sells, AZ 85634
Website: www.tocc.cc.az.us

MICHIGAN
Bay Mills Community College
Brimley, MI 49774
Website: www.bmcc.org

Keweenaw Bay Ojibwa Community College
Baraga, MI 49908
Website: www.kbocc.org

MINNESOTA
Fond du Lac Tribal and Community College
Cloquet, MN 55720
Website: www.fdltcc.edu

Leech Lake Tribal College
Cass Lake, MN 56633
Website: www.lltc.org

MONTANA
Blackfeet Community College
Browning, MT 59417
Website: www.bfcc.edu

Chief Dull Knife College
Lame Deer, MT 59043
Website: www.cdkc.edu

Fort Belknap College
Harlem, MT 59526
Website: www.fbcc.edu

Fort Peck Community College
Poplar, MT 59255
Website: www.fpcc.edu

Little Big Horn College
Crow Agency, MT 59022
Website: www.lbhc.cc.mt.us

Salish Kootenai College
Pablo, MT 59855
Website: www.skc.edu

---

[3] Based on U.S. Department of Housing and Urban Development Office of University Partnerships. (March, 2009). *Minority-Serving Institutions of Higher Education: Serving Communities, Revitalizing the Nation.* Author.

Stone Child College
Box Elder, MT 59521
Website: www.montana.edu/wwwscc

NEBRASKA
Little Priest Tribal College
Winnebago, NE 68071
Website: www.lptc.bia.edu

NEW MEXICO
Diné College
Tsaile, AZ 86556
Website: www.dinecollege.edu

Institute of American Indian Arts
Santa Fe, NM 87508
Website: www.iaia.edu/college/index.php

Southwestern Indian Polytechnic Institute
Albuquerque, NM 87184
Website: native.sipi.bia.edu

NORTH DAKOTA
Cankdeska Cikana Community College
Fort Totten, ND 58335
Website: www.littlehoop.edu

Fort Berthold Community College
New Town, ND 58763
Website: www.fbcc.bia.edu

Sitting Bull College
Fort Yates, ND 58538
Website: www.sittingbull.edu

Turtle Mountain Community College
Belcourt, ND 58316
Website: www.tm.edu

United Tribes Technical College
Bismarck, ND 58504
Website: www.unitedtribestech.com

SOUTH DAKOTA
Oglala Lakota College
Kyle, SD 57752
Website: www.olc.edu

Sinte Gleska University
Mission, SD 57555
Website: www.sintegleska.edu

Sisseton Wahpeton Community College
Sisseton, SD 57262
Website: www.swc.tc

WASHINGTON
Northwest Indian College
Bellingham, WA 98226
Website: www.nwic.edu

WISCONSIN
College of Menominee Nation
Keshena, WI 54135
Website: www.menominee.edu

Lac Courte Oreilles Ojibwa Community College
Hayward, WI 54843
Website: www.lco.edu