TRIBAL AND STATE RELATIONS COMMITTEE
January 18, 2012
Robert V. Marthaller, Assistant Superintendent
701-328-2267
Department of Public Instruction

Mr. Chairman and Members of the Committee:

My name is Bob Marthaller and I am an Assistant Superintendent with the Department of Public Instruction. I am here to report to you on the progress made on the study of Indian education issues.

You are aware that an in depth study of Indian education issues, along with a request for funding, was one of the initiatives the Department, with support from the North Dakota Indian Education Advisory Council (NDIEAC), proposed during the 62nd Legislative Session. As a result, HB 1049 was passed and the bill requires the Department to conduct a study and, then to develop criteria for grants to low-performing schools.

In order to meet the requirements of the study, the Department is working collaboratively with the North Central Comprehensive Center (NCCC) and Mid-continent Research for Education and Learning (McRel) to develop a framework relative to Indian student achievement that will increase state capacity to propose and develop solutions to address the needs of Indian students and the needs of schools at which they attend. This framework will be based on research and evidence-based

best practices. The North Dakota Indian Education Advisory Council (NDIEAC) is actively involved in the study process.

Our partners at McRel and NCCC have delivered several documents reviewing the available research and I would like to briefly summarize two documents for you. The first is entitled *Review of Studies on The Education of American Indian Students* and the second *A Community of Promise in Support of Native Youth: Review of Literature.*

The content of these documents was presented at our last NDIEAC meeting and summarizes available research on factors that influence American Indian student achievement.

Review of Studies on The Education of American Indian Students

The Department asked for a review of the "research on factors that influence American Indian student achievement." Four topic areas immerged:

1. Family and Community Involvement
2. Alternative Instructional Techniques
3. Culturally Responsive Education
4. Language Needs of Native Students

Family and Community Involvement

"Parent and community involvement has been identified as a key factor in academic achievement (Gutman & Midgley, 2000). For American Indian students,

interconnections between school and community practices are critical for ensuring that approaches to classroom instruction reflect student values and norms, and support students in ways that they learn best. Instruction that reflects students' culture and values has been shown to have a positive effect on the academic achievement of American Indian students (Rickard, 2005; Whitbeck, Hoyt, Stubben, & LaFramboise, 2001).

However, there continues to be limited parent and community involvement in American Indian schools (Mackety & Linder-VanBerschot, 2008)."

Alternative Instructional Techniques

"Alternative instructional techniques include activity-based instruction, instruction based on small student groups working together, teacher modeling of learning, student-centered dialogue, attention to whole-student needs, and technology-based methods. Current instructional techniques for American Indian students include both conventional instruction and these alternative instructional strategies. Conventional instruction, in this case, refers to textbook-based methods traditionally used in public schools. Comparative studies often use classrooms with conventional approaches to evaluate the effects of alternative instructional techniques, as in Zwick and Miller's (1996) study examining elementary classrooms with American Indian and non-American-Indian students. They selected two fourth grade classrooms and assigned one to the alternative program

and one to the conventional program. Their analysis of science test scores showed a statistically significant improvement for both American Indian and non-American-Indian students in the treatment (or alternative, activity-based) classroom."

Culturally Responsive Education

"Culturally responsive education is a philosophically based approach to teaching not only American Indian students, but also students of other ethnicities. For American Indians, it involves alternative instructional techniques and includes various teaching methods and programs that base curriculum and instruction on the values, learning styles, and dynamics of the students' particular tribal cultures. Culturally responsive teaching is a key topic in the literature on American Indian education; however, as observed by the Northwest Regional Educational Laboratory's 2003 review of culturally based educational strategies, "the availability of quantitative research literature on culturally based education programs for Native American children is severely limited" (Demmert & Towner, p. iii)."

Language Needs of Native Students

"Indigenous students present a wide variety of language needs as they enter school. Some indigenous students are proficient in English; some are bilingual, as they are also proficient in their indigenous language; and some have no English

background. Research on second-language learners in a variety of home languages has found that, for most students, schooling in the indigenous language for at least four to seven years has been the most powerful predictor of academic success (Thomas & Collier, 1997). Studies of students with a home language of Spanish or French have indicated that teaching these students in their home language for several years enables them to close the achievement gap in comparison to non-indigenous students (McCarty, 2003)."

"For American Indian populations, the lack of language proficiency is largely a result of the history of forcing indigenous speakers to abandon their languages in favor of English (McCarty, 2003). Some students entering school have no exposure to the tribal language; some were taught the language by parents at home, but not in school; and a few have had a more regular exposure to the indigenous language. Language immersion schools or projects are a more recent attempt to support American Indian students' education (Pease-Pretty On Top, n.d.)."

"Few rigorous studies have been conducted with indigenous students. Early efforts to create programs that incorporated indigenous languages have been documented primarily through case studies. "In each of these cases, the benefits to students correspond directly to the development and use of curricula grounded in

local languages and knowledge, and to the cultivation of a critical mass of Native educational practitioners" (McCarty, 2003, p. 152)."

For this document, the literature review suggests:

Some of the barriers to family and community involvement include unwelcoming environments; previous negative experiences with education; school's lack of cultural sensitivity; and differences in interpersonal communication styles.

Factors that influence positive family and community involvement include caring, supportive and communicative school staff; a culturally respectful environment; access to Indian programs, resource centers, after-school activities and clubs; and the presence of an on-site advocate or liaison.

School, family and community partnerships can significantly increase student attendance.

Student achievement and retention may be positively influenced by varied instructional techniques and learning styles.

Instruction that infuses culturally relevant methodology and integrative Native perspectives positively influences student achievement and outcomes.

Language immersion programs have beneficial and positive effects on student achievement as well as on revitalization of the Native language.

A Community of Promise in Support of Native Youth: Review of the Literature

A Starting Point

"The literature suggests that an underlying theme is the need to involve tribal leaders and Native community elders in working with families and schools to develop policies and programs that will connect Native youth with their heritage."

"The literature suggests that engaging the varied partnerships and ensuring that all voices are heard in developing and implementing a plan for joint action is important."

Partnerships

"Partnerships among schools, parents, and community members; between tribal leadership and public school educators; and between health and social service providers and tribal leaders are seen as an essential part of improving the outcomes for Native youth (Project TRUST, 2008; Keyes & Soleil, 2001; Boyer, 2006)."

School-Community Relationships

"Keyes and Soleil (2001) reported benefits to students and schools from school-community relations, and spell out three stages for forming and maintaining

a school-community relationship: planning and development, implementation and management, and monitoring and evaluation. They also list characteristics of effective programs, although they did not identify the research basis for these claims. The characteristics included programs that are comprehensive, flexible, responsive, and sustained; that see children in the context of their families and families as parts of communities; that establish trust and good communication among all and are governed by group process rather than top-down; and programs whose members share a common vision."
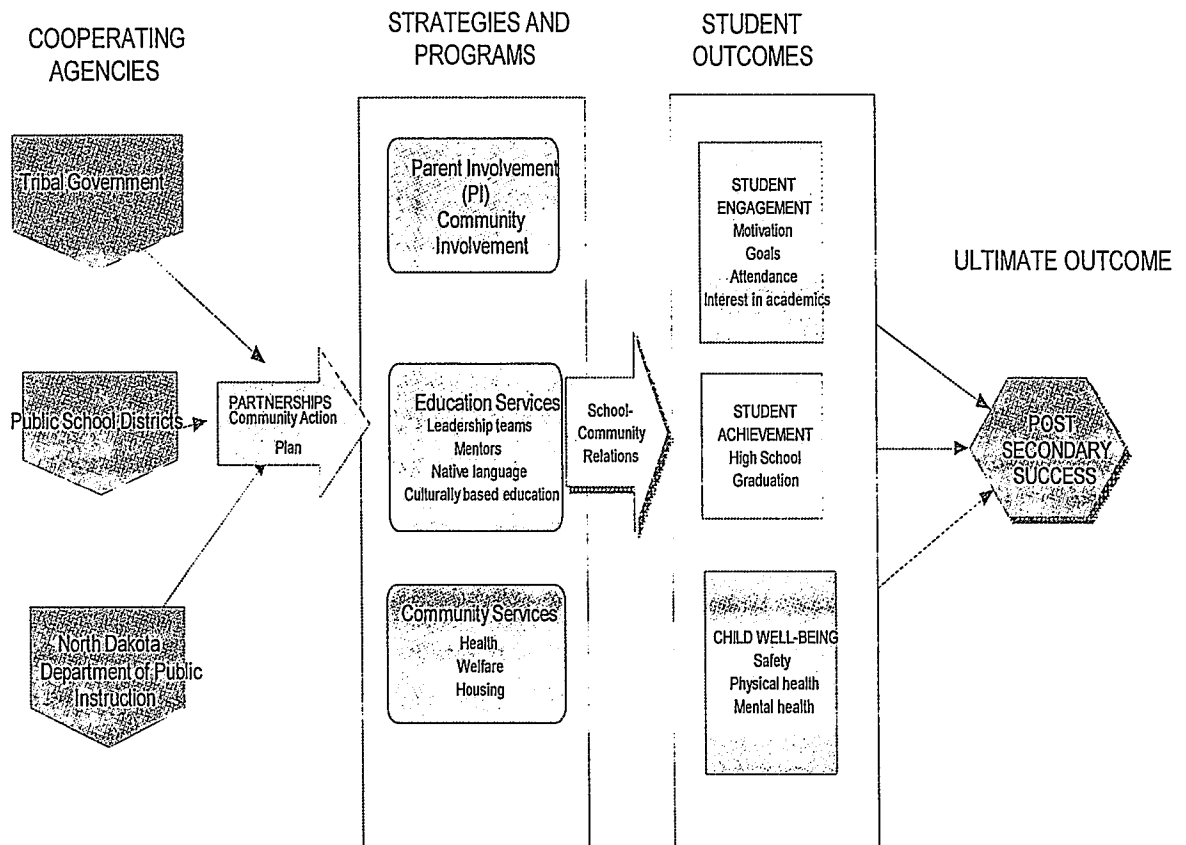
Strategies and Programs

"There is a growing body of research that emphasizes the importance of both Native parent involvement and community involvement to support student engagement and achievement."

Student Outcomes

There are very few studies that specifically address student outcomes. Some identify a need for strong parental controls and community action while others indicated that providing culturally relevant opportunities to Indian youth helps build healthy, positive relationships.

Based on available research the following "Theory of Action" graphic presents a potential framework that could be established to positively influence student achievement and student well-being. The framework essentially provides for a partnership of cooperating agencies developing an action plan with research based strategies and programs that will enhance student outcomes, ultimately leading to student post-secondary success and successful and happy lives.

A Community of Promise in Support of Native Youth:
The Literature Review

COOPERATING
AGENCIES

STRATEGIES AND
PROGRAMS

STUDENT
OUTCOMES

Tribal Government

Public School Districts

North Dakota
Department of Public
Instruction

PARTNERSHIPS
Community Action
Plan

Parent Involvement
(PI)
Community
Involvement

Education Services
Leadership teams
Mentors
Native language
Culturally based education

School-
Community
Relations

Community Services
Health
Welfare
Housing

STUDENT
ENGAGEMENT
Motivation
Goals
Attendance
Interest in academics

STUDENT
ACHIEVEMENT
High School
Graduation

CHILD WELL-BEING
Safety
Physical health
Mental health

ULTIMATE OUTCOME

POST
SECONDARY
SUCCESS

This framework model is similar to *Promise Neighborhoods*, a United States Department of Education program established to improve educational outcomes for students in distressed urban and rural neighborhoods.

Similar to the *Promise Neighborhoods* program, "neighborhood" goals might be established within the framework and could include building a continuum of academic programs and family and community supports; focusing on achieving results and building a college-going culture; integrating programs and breaking down agency "silos" so that solutions are implemented effectively and efficiently across agencies; supporting and working with local governments to build policies, practices, systems and to provide needed resources; and ensure that outcomes are communicated and analyzed on a continuing basis by community leaders.

That concludes my remarks and I will be happy to answer any questions you may have.

REVIEW OF STUDIES ON
THE EDUCATION OF AMERICAN INDIAN STUDENTS

January 12, 2012

Prepared
by
The Regional Educational Laboratory for the Central Region
for
The North Dakota Department of Public Instruction
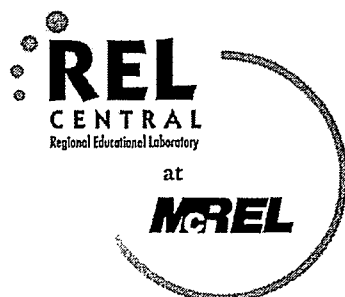
REL
CENTRAL
Regional Educational Laboratory
at
McREL

Regional Educational Laboratory
for the Central Region

TABLE OF CONTENTS

Introduction

The North Dakota Department of Public Instruction requested a review of research on factors that influence American Indian[1] student achievement. This review builds on a compilation of abstracts recently developed in conjunction with The National Indian Education Association (NIEA), a collaborating partner. The original compilation of abstracts focused on multiple topics specific to American Indian student achievement. For this review, we selected the four topics for which research studies had been found: Family and Community Involvement, Alternative Instructional Techniques, Culturally Responsive Education, and Language Needs of Native Students. For the current review, we searched the literature and reviewed the articles found to update the list in the four areas examined.

Background

As a subgroup, American Indian students struggle with high dropout rates (Faircloth & Tippeconnic, 2010; Freeman & Fox, 2005; National Caucus of Native American State Legislators, 2008); high rates of absenteeism, suspension, and expulsion (Freeman & Fox, 2005); and low academic performance (Freeman & Fox, 2005; Grigg, Moran, & Kuang, 2010; National Caucus of Native American State Legislators, 2008; Nelson, Greenough, & Sage, 2009). A growing body of American Indian education literature suggests that educational interventions, including teaching, should be congruent with American Indian cultures, values, and belief systems (Buly & Ohana, 2004; Castagno & Brayboy, 2008; Demmert & Towner, 2003; Hermes, 2007; Lambe, 2003; Lipka, Sharp, Brenner, Yanez, & Sharp, 2005; Lomawaima & McCarty, 2006; McCarty, 2002; Oakes & Maday, 2009; Pewewardy & Hammer, 2003; Powers, 2006; Yazzie-Mintz, 2007).

According to the literature, interventions to improve American Indian student academic performance should focus on nurturing resilience (Strand & Peacock, 2002) or self-esteem (Gilliland, 1999) among American Indian students; teaching to American Indian learning styles (Hilberg & Tharp, 2002; Pewewardy, 2002); and using strategies such as one-on-one tutoring and small-group settings (Sorkness & Kelting-Gibson, 2006). Other interventions stress the importance of building strong positive relationships between teachers and their American Indian students (Cleary & Peacock, 1998; Powers, Potthoff, Bearinger, & Resnick, 2003), although these relationships alone may not be enough to produce positive educational outcomes if teachers do not know how to incorporate American Indian culture into classroom instruction (Agbo, 2001).

---

[1] In this review, we use American Indian and Native American interchangeably to refer to the indigenous people of North America. The term Indigenous is used to refer to Native populations around the world.

Literature Search Results

A literature search conducted in May 2011 using a variety of search terms related to American Indian education resulted in 3,274 articles, books, and other documents, such as theses, conference proceedings, and electronic articles. Initial review of the items for relevancy to the broader focus of the compilation resulted in 482 possible articles for review. After omitting duplicate sources, certain publication types (e.g., newsletters), and sources that did not meet the selection criteria, 128 items remained in the original compilation of abstracts.

REL Central researchers separately reviewed and coded each of the retained abstracts according to their primary topic: the effect of family and community involvement, alternative instructional techniques, culturally responsive schooling, and language needs of Native speakers. The 128 abstracts were reviewed and 34 complete articles were obtained for articles that appeared to be research studies. Of the 34 articles, 21 were studies that were relevant to the topic, in which data was collected and a systematic method was used to analyze and interpret findings. The same searches were conducted in September 2011 to update the list of studies for the four topic areas. Nine new studies were added to the 21 studies previously identified, resulting in a total of 30 studies in this review.

Organization of the Review

The studies examined range from analyses of broad issues—for example, parent perceptions of their involvement in their students' education—to studies of strategies or programs, such as the evaluation of a comprehensive family involvement program. Although the studies could be focused either on one aspect of improving American Indian student achievement or could include several areas, each study was assigned a primary topic designation for inclusion in this review. This resulted in the following number of studies per topic: family and community involvement (4), alternative instructional techniques (11), culturally responsive schooling (11), or language needs of Native students (4).

Criteria for Inclusion

Articles were included in the review if systematic methods were used for investigating supporting strategies or student outcomes for any of the four identified topics. Different criteria were applied to characterize articles as either descriptive studies or outcome studies. To be included, descriptive studies must have employed systematic methods of collection and analysis of qualitative data (e.g., statistical analysis of survey data, grounded theory, comparative case study analysis, or ethnographic analysis). For outcome studies to be included, they must have employed experimental designs (random assignment to group) or quasi-experimental designs with pre- and post-test data on both treatment and control groups.

Family and Community Involvement

Parent and community involvement has been identified as a key factor in academic achievement (Gutman & Midgley, 2000). For American Indian students, interconnections between school and community practices are critical for ensuring that approaches to classroom instruction reflect student values and norms, and support students in ways that they learn best. Instruction that reflects students' culture and values has been shown to have a positive effect on the academic achievement of American Indian students (Rickard, 2005; Whitbeck, Hoyt, Stubben, & LaFramboise, 2001). However, there continues to be limited parent and community involvement in American Indian schools (Mackety & Linder-VanBerschot, 2008).

Research Studies Reviewed

Four articles on family and community involvement met the criteria for inclusion in the review. The first three are qualitative studies: one based on parent focus groups, one on interviews and a survey, and the third on survey data as compared to longitudinal data. The fourth study is a randomized controlled trial of the Families and Schools Together (FAST) program.

Mackety and Linder-VanBerschot (2008) conducted focus groups among American Indian parents in two districts in North Dakota. Parents from five elementary schools in each district were invited to participate. A protocol, including questions about barriers to and facilitators for involving parents, was systematically followed in each focus group. A variety of barriers were reported as being discouraging to American Indian parents' involvement, including unwelcoming environments, previous negative experiences with education, perceptions of a school's lack of cultural sensitivity, and differences in interpersonal communication styles. Factors perceived to encourage parent involvement included a caring, supportive, and communicative school staff; a culturally respectful environment; access to American Indian programs, resource centers, after-school activities, and clubs; and the presence of an advocate or liaison in each school.

A 2006 study by Rivera and Tharp, studying community involvement, investigated American Indian values, beliefs, and opinions about schooling and other education issues in order to inform the reform efforts of the Zuni Public School District in New Mexico. Two hundred randomly chosen Zuni individuals were surveyed about their community values and their beliefs and opinions about education. Results of the survey indicated agreement within the community on the type of curriculum, educational activities, and development path desired for their children. Findings also indicated that community members support instruction that is contextualized in Zuni culture. Participants believed that Zuni community members should be more involved in schools and that non-Zuni teachers would benefit from participation in community activities. In sum, the community supports curriculum that includes teaching Zuni cultural values and traditions, including the Zuni language. Community members also encouraged specific teaching strategies, such as allowing for alternative or different opinions, and hands-on activities, with teachers providing support only as needed.

In a longitudinal study conducted by Sheldon and Epstein (2004), secondary data were collected from 39 schools on rates of chronic absenteeism; students who missed 20 or more days of school were considered chronically absent. Data were also collected on family and community involvement activities implemented to counteract chronic absenteeism. Study results indicated that school, family, and community involvement practices can decrease chronic absenteeism. Specific family and community involvement activities that measurably reduced students' chronic absenteeism during the course of one year included: communicating with families about attendance, celebrating good attendance with students and families, and connecting chronically absent students with community mentors. These results are not specific to Native American students.

An experimental study of an adaptation of the Families and Schools Together (FAST) program (Kratochwill, McDonald, Young Bear-Tibbitts, & Levin, 2001), conducted in partnership with the Menominee Nation, examined academic performance of American Indian children in grades K–3 and classroom behavior problems correlated with school dropout. FAST is designed to promote positive classroom behavior using a collaborative parent involvement program. One thousand American Indian students from three schools were paired and then randomly assigned to the FAST or the control condition. Multiple outcome measures were used to evaluate the program, including measures of social performance and academic performance. The FAST program was more effective than the control condition on measures of social performance. No effects were found regarding school achievement. However, the FAST program does not traditionally target school achievement; improvements in academic performance may lag behind improvements in social functioning (Demmert & Towner, 2003). They suggest that the evidence presented indicates at least a moderate effect of a systematic home-school program such as FAST on the social behavior of young American Indian children. Additionally, the FAST program appears to be adaptable to a variety of groups and cultural settings.

Alternative Instructional Techniques

Alternative instructional techniques include activity-based instruction, instruction based on small student groups working together, teacher modeling of learning, student-centered dialogue, attention to whole-student needs, and technology-based methods. Current instructional techniques for American Indian students include both conventional instruction and these alternative instructional strategies. Conventional instruction, in this case, refers to textbook-based methods traditionally used in public schools. Comparative studies often use classrooms with conventional approaches to evaluate the effects of alternative instructional techniques, as in Zwick and Miller's (1996) study examining elementary classrooms with American Indian and non-American-Indian students. They selected two fourth grade classrooms and assigned one to the alternative program and one to the conventional program. Their analysis of science test scores showed a statistically significant improvement for both American Indian and non-American-Indian students in the treatment (or alternative, activity-based) classroom.

Research Studies Reviewed

Of the 11 research studies, 10, including Zwick and Miller (1996), were quantitative. Using a secondary analysis of NAEP data, Akiba, Chiu, Zhuang, and Mueller (2008) found that American Indian middle school students were least likely, of all ethnic groups, to be taught by teachers who reported that they were knowledgeable about mathematics standards and who participated in standards-based professional development. Nonetheless, the mathematics achievement scores of the American Indian middle school students, taught by teachers who reported that they were knowledgeable, were lower than scores of American Indian middle school students taught by teachers reporting no knowledge of mathematics standards or participation in standards-based professional development activities. If the standards-based activities reported by teachers did not focus on integrating American Indian culture into teaching, the authors believed it could have a negative effect on student achievement. The authors concluded that the level of affirmation and support of student culture reflected in school curriculum, instructional materials, and student-teacher interaction influences how effectively students learn.

A quasiexperimental study of mathematics instruction by Hilberg, Tharp, and DeGeest (2000) examined the use of the instructional standards from the Center for Research on Education, Diversity, and Excellence (CREDE) in mathematics for middle school American Indian students. Teachers used small-group learning and content-related dialogue methods to create culturally meaningful mathematics experiences. Results showed greater achievement by the treatment group relative to the nontreatment group, but it was not statistically significant. The treatment group did show significantly greater retention of concepts and improvement of attitude.

Buly's (2005) descriptive study of fourth grade American Indian students examined student reading scores to identify students' reading rate, accuracy, vocabulary, and comprehension. The study found that the students tended to need improvement in text comprehension and reading rate, and that they would benefit from teacher modeling, think-aloud strategies, and ongoing monitoring.

In a quasiexperimental study, Fayden (1997) examined American Indian kindergarten students with limited book exposure. The study found that active engagement of students through the use of Shared Reading methods—in the Shared Reading model, there are multiple readings of the books over several days—had a positive effect on developing the reading skills of emerging readers.

Marley, Levin, and Glenberg's 2007 experimental study of elementary and middle school American Indian students found a positive effect on the treatment group's ability to remember aspects of stories that were orally presented and accompanied with text-related motor activities, in comparison to the text-only control group. A comparable degree of memory facilitation was produced by asking students to create concrete visual representations of story events. Two subsequent experiments, included in an article by Marley, Levin, and Glenberg (2010), examined the memory retention of second- and third-grade American Indian students of a narrative that utilized three reading strategies: a visual strategy, a text-only strategy, or an activity-based strategy. For the second-grade students, the authors found a significant improvement in students' memories of narrative passages

using activity-based reading strategies, as compared to the effects on memory of visual and text-only strategies. For the third-grade students, improvements in memory were modest and statistically not significant.

Ngai and Koehn (2010) studied the effects of Place-Based education on skill and knowledge development in various disciplines through surveying students longitudinally. Place-Based education involves learning through experiencing the cultural and physical context of the students' lives. Relative to a comparison group from a nearby school that was not equivalent to the treatment group (and therefore comparisons may be biased), results for the Place-Based group showed an increase in knowledge and an improvement in attitudes related to other Indian tribes and cultures.

Cothran, Kulinna, and Garn (2010) conducted a case study that examined factors that encourage or inhibit teachers in integrating a physical activity program into the instruction of K–12 American Indian students. Findings indicated that factors that encourage integration include the students' physical and mental needs and the teachers' interest in health, as well as their perspectives on the program. Inhibiting factors are institutional, such as school-day scheduling and the requirements of academic standardized assessments.

Heath, Burns, Dimock, Burniske, Menchaca, and Ravitz (2000) conducted a mixed-methods study with a sample of K–12 schools, including five schools where American Indian students comprised two-thirds of the student body. Similar to Akiba et al. (2008), this study focused on constructivist learning methods, and examined the use of technology and the effects of professional development and administrative support on teachers' instruction. Results indicated that teachers did not change their instructional approaches until they were confident in using technology. They would then adapt constructivist methods to create new instructional practices. Without professional development and administrative support, however, teachers did not change their practices.

Culturally Responsive Education

Culturally responsive education is a philosophically based approach to teaching not only American Indian students, but also students of other ethnicities. For American Indians, it involves alternative instructional techniques and includes various teaching methods and programs that base curriculum and instruction on the values, learning styles, and dynamics of the students' particular tribal cultures. Culturally responsive teaching is a key topic in the literature on American Indian education; however, as observed by the Northwest Regional Educational Laboratory's 2003 review of culturally based educational strategies, "the availability of quantitative research literature on culturally based education programs for Native American children is severely limited" (Demmert & Towner, p. iii). Our review found that this continues to be the case for research in general, including qualitative studies. We found only 11 studies from the literature review for this section of the report. A study was included in this section and not in Alternative Instructional Techniques if its primary focus was on culturally responsive teaching.

Research Studies Reviewed

Four of the eleven research studies were quantitative. Bock (2008) studied fourth- through eighth-grade classrooms with student populations of two-thirds Euro-American and one-third American Indian, and compared the two ethnic groups' comprehension of moral themes in stories based in Western culture using a nonequivalent group design. Generally, results indicated that the Euro-American students had greater thematic comprehension of these stories than American Indian students, even with no difference between the groups' reading comprehension. The gap narrowed and disappeared in higher grades, where American Indian students reported receiving more teacher support. Euro-American students did not report more teacher support in higher grades. Peer support had no noticeable effect. The author concluded that differences in thematic comprehension may be due to differences in culture-based knowledge and values, suggesting that teachers should use a culturally relevant pedagogy that includes appropriate stories and a more collaborative and supportive teacher-student relationship.

Lipka and Adams (2004) examined the effects of a culturally based math curriculum, *Building a Fish Rack: Investigations into Proof, Properties, Perimeter, and Area*, on sixth-grade American Indian students. The curriculum connected a common Yup'ik task with learning the physical proofs of a rectangle's properties. Using a quasiexperimental design, they found that the rural American Indian treatment group did not fall as far behind the urban control group than did the rural American Indian control group. However, the interpretation of these positive effects was limited due to incomplete knowledge of how well the teachers followed culturally based and text-based methods of instruction of the mathematics curriculum.

Lippitt (1993) used a survey to compare American Indian learning styles to national learning style norms based on categorization of learning styles of the National Association of Secondary School Principals. No significant differences were found between American Indian and national learning styles with regard to tribal language groups or age difference (between seventh and twelfth grades). The result for one survey question was notable: two-thirds of the American Indian students preferred small-group learning.

Whitbeck, Hoyt, Stubben, and LaFramboise (2001) surveyed 212 students to examine the effect of enculturation on academic achievement. Enculturation included involvement in traditional American Indian activities, identification with American Indian culture, and traditional spiritual involvement. Results of the study suggested that enculturation could have a positive effect on academic achievement independent of variables such as family support, maternal warmth, extracurricular activities, and self-esteem.

Seven qualitative studies were identified for this topic, including three case studies: one of a single student, one of a magnet school, and one of a teacher and her class. In a single case study of an American Indian female student, Hogan (2008) used a sociopolitical critical theory to frame questions and interpret the effects across two years of a sixth-grade, culturally relevant math class and a seventh-grade, text-based math class. The author concluded that in the former class, with its

student-centered, hands-on instruction, the student performed as an *active* learner with the female teacher as a collaborative guide. In the latter class, with its structured text centered on the male teacher's instruction, the same student performed as a *passive* learner.

A case study by Hollowell and Jefferies (2004) used a sociopolitical critical theory to frame questions and interpret results of the study. The subject of the case study was a K–8 American Indian magnet public school that used culturally relevant curriculum and instruction in cross-disciplinary programs. The study described the "problem-posing education" approach in terms of teaching the sociopolitical perspective, and also noted the lack of academic assessments to measure that perspective.

In a case study, Rickard (2005) investigated a sixth-grade teacher and her students who were engaged in a hands-on, activity-based math instruction called Math in Cultural Context (MCC). MCC included student sharing, testing, and revising of geometrical concepts and skills. The class as a whole, as well as the six Alaskan Native students within the class, outperformed the control group class (using a textbook approach) on achievement tests in perimeter, area, and proof. The control group achievement results came from a larger research study of MCC.

Vallines-Mira (2008) examined beliefs of elementary- and high-school math teachers regarding models of research-based strategies for teaching American Indian students. Vallines-Mira studied how those beliefs agreed or disagreed with the details of the strategies' models by conducting classroom observations and interviews with four teachers (two elementary and two high school) teaching mathematics in two Montana schools. The results showed that although the teachers generally agreed with the research-based strategies, the teachers' perspectives on group work differed from the research-based strategies' definitions, and the teachers' implementations of the research-based strategies were customized by the teachers. The conclusion of this study was that there is a disconnect between research and practice and that there needs to be more "bi-directional communication" between researchers and practitioners.

Powers, Potthoff, Bearinger, and Resnick (2003) examined the effects of cultural programming on American Indian school outcomes by administering a survey to 240 American Indian students. The influences of cultural programming—independent of other proven indicators to success in school, such as motivation, ability and prior achievement, quality of instruction, parental involvement, school climate, and family income—were examined. The results of the study indicated that cultural programming moderately, and to a great extent indirectly, influences student outcomes. Further, the results indicated that the strength of Native-based programming appears to reside in parent involvement, quality of instruction, and school climate. Without these components, cultural-based education programs may not increase educational outcomes for American Indian students.

Kanu (2007) studied two 9th grade social studies classrooms that incorporated Native American cultural knowledge and perspectives into the curriculum: one classroom with cultural knowledge and perspectives integrated into the curriculum with the other classroom using the traditional

curriculum). The intended outcomes were to increase student academic achievement, class attendance, and school retention. Thirty-one American Indian students were included in this study, and extant data on their academic achievement, class attendance, and school retention were analyzed. One classroom infused Native cultural knowledge into the curriculum, while the other did not. The results of the study suggested "cautious optimism" in terms of a curriculum incorporating cultural aspects increasing academic achievement. However, the study also suggested that culturally responsive curriculum and pedagogy alone cannot counteract achievement trends. An approach that also includes more distal factors including social, economic, and political variables and improved outcomes such as higher test scores, better conceptual understanding, higher-level thinking, and improved self-confidence.

One additional study (Stancavage, Mitchell, de Mello, Gaertner, Spain, & Rahal, 2006) provides background information related to effective teaching of American Indian students. The authors analyzed the results from a national survey conducted in 2005 that examined the educational experiences of American Indian/Alaskan Native (AI/AN) students in grades 4 and 8. The survey was given to students, teachers, and school principals. Descriptive information for students and schools was reported, and some comparisons were made to non-AI/AN students using NAEP scores. Through the teacher surveys, there is information on AI/AN culture and language used in the curriculum of the teachers who responded. One notable finding was that culturally responsive instruction was more prevalent in schools with a high proportion (greater than 75%) of AI/AN students than schools with a low proportion (5% or less) of AI/AN students.

Language Needs of Indigenous Students

Indigenous students present a wide variety of language needs as they enter school. There are estimated to be 175 indigenous languages still spoken in the United States (Krauss, 1998). Some indigenous students are proficient in English; some are bilingual, as they are also proficient in their indigenous language; and some have no English background. Within each of these groups, there is a continuum of literacy. Research on second-language learners in a variety of home languages has found that, for most students, schooling in the indigenous language for at least four to seven years has been the most powerful predictor of academic success (Thomas & Collier, 1997). Studies of students with a home language of Spanish or French have indicated that teaching these students in their home language for several years enables them to close the achievement gap in comparison to nonindigenous students (McCarty, 2003). For American Indian populations, the lack of language proficiency is largely a result of the history of forcing indigenous speakers to abandon their languages in favor of English (McCarty, 2003). Some students entering school have no exposure to the tribal language; some were taught the language by parents at home, but not in school; and a few have had a more regular exposure to the indigenous language. Language immersion schools or projects are a more recent attempt to support American Indian students' education (Pease-Pretty On Top, n.d.).

Few rigorous studies have been conducted with indigenous students. Early efforts to create programs that incorporated indigenous languages have been documented primarily through case studies. "In each of these cases, the benefits to students correspond directly to the development and use of curricula grounded in local languages and knowledges, and to the cultivation of a critical mass of Native educational practitioners" (McCarty, 2003, p. 152). A beginning body of research reported below exists around language immersion interventions for indigenous language–speaking students.

Research Studies Reviewed

The four articles below include one needs assessment and three case studies of language immersion programs. No rigorous studies were found examining the incorporation of indigenous languages in the education of indigenous children. The issue of the revitalization of indigenous languages is sufficiently important to American Indian writers (Romero Little & McCarty, 2006) that the case studies, a first attempt to document the results of language immersion programs, are included in this review.

The Hawaiian immersion family run preschools, begun in 1983, are designed to strengthen the Hawaiian *mauli*—culture, worldview, spirituality, morality, social relations, and "other central features of a person's life and the life of a people" (Wilson & Kamanā, 2001, p. 161). The original concept of the Pu nana Leo program co-founders William H. Wilson and Kauanoe Kamanā was not "academic achievement for its own sake," but rather the re-creation of an environment "where Hawaiian language and culture were conveyed and developed in much the same way that they were in the home in earlier generations" (2001, p. 151). Although the program has emphasized language revitalization as opposed to academic achievement, Hawaiian immersion schooling has yielded academic benefits. Even though the results are compromised by unknown threats to validity, immersion students have garnered prestigious scholarships, enrolled in college courses while still in high school, and passed the state university's English composition assessments, despite receiving the majority of their English, science, and mathematics instruction in Hawaiian. Student achievement on standardized tests has equaled, and in some cases surpassed, that of Native Hawaiian children enrolled in English-medium schools, even in English language arts (Wilson & Kamanā, 2001).

Lipka (1999) conducted a case study that examined reform efforts underway in a small Native community in southwestern Alaska. In the early 1990s, the bilingual education program was improved. Increased student proficiency in the Native language and the use of the Native language was not achieved as intended. High teacher turnover was a barrier to meeting the objectives. The authors provided recommendations for reform efforts including site-based decision making, training for leadership teams, and the integration of the Native cultural knowledge, teacher education, and state policy.

Romero Little and McCarty (2006) report on four case studies. In each case study, heritage-language immersion was employed as a primary strategy to cultivate heritage-language proficiency among youth. The Pueblos of the Southwest and the Blackfeet of Montana illustrated community-based

approaches to language revitalization; Indigenous Hawaiian and Navajo immersion represented school-based approaches. These programs had salutary effects on both language revitalization and academic achievement. In particular, data from school-based, heritage-language immersion indicates that children acquire the heritage language as a second language without "cost" to their English language development or academic achievement, as measured by local and national (standardized) tests. Conversely, comparable students in English mainstream programs perform less well than immersion students in some subject areas, including English writing and mathematics. They also tend to lose whatever heritage-language ability they had upon entering school (Johnson & Wilson, 2004).

Platero (2001) conducted observations and interviews with staff at approximately 40 Navajo Head Start preschools in 1992 in a needs assessment as part of a formative evaluation. The results included several recommendations to strengthen the language immersion program in these sites. The impetus for the study came from the Navajo Division of Education and Head Start for a needs analysis to support a training program for Navajo teachers. The preschools included Navajo-speaking-only children, bilingual children, and English-speaking-only children. A longitudinal study was called for in order to more accurately identify language needs of Navajo preschoolers.

Discussion

The body of research focused on improving educational outcomes for American Indian students is sparse, especially for studies designed to provide educators, parents, and policymakers with evidence of effective strategies or programs. The 30 studies in this review included only four studies with a design that could result in such evidence, and three of these were variations of grade level for the same strategy. The fourth was a program evaluation of a parent-involvement program. Three studies were quasiexperimental in design, making an attempt to result in reliable findings, but limited by threats to validity. These three studied particular interventions that could provide a foundation for teacher practice and a basis for future experimental research on each. Two were mathematics interventions, and one was a reading intervention. In addition, a case study that was a spin-off from one of the two math studies was able to compare results for the class it studied to the control group of the larger study.

Eleven studies made comparisons of the treatment condition to nonequivalent groups. Thus, the results are hard to interpret. Four of these were longitudinal studies showing change across time, but factors other than the strategy being studied could have influenced these results. Six compared results to a neighboring classroom, school, or other group with no knowledge of how that group differed at the beginning. One reported teachers' and students' own perspectives on changes. The remaining 12 studies were purely descriptive, not drawing conclusions about improvement or effectiveness. These may set the groundwork for future experimental studies in the same area of interest.

There is not a body of reliable research to guide work intended to improve American Indian education. The challenge remains to identify researchers and funding for research to address this lack.

Limitations

There are two primary limitations to this review. First, while we made every effort to locate appropriate literature on the education of American Indian students in the four topics identified in the original compilation of abstracts, some of what is known on this topic may not be documented in the literature. Second, the scope of literature was limited with respect to systematic research studies, since most research studies involving American Indian students have usually lacked a control group, or have sample sizes too small to show statistically significant results. In sum, more research studies employing randomized control trials with American Indian populations are needed to augment the existing body of research literature on the education of American Indian students.

Studies Reviewed

Akiba, M., Chiu, Y., Zhuang, Y., & Mueller, H. (2008). Standards-based mathematics reforms and mathematics achievement of American Indian/Alaska Native eighth-graders. *Education Policy Analysis Archives, 16*(20), 1–31.

Bock, T. (2006). A consideration of culture in moral theme comprehension: Comparing Native and European American students. *Journal of Moral Education, 35*(1), 17.

Buly, M. (2005). Leaving no American Indian/Alaska Native behind: Identifying reading strengths and needs. *Journal of American Indian Education, 44*(1), 29–52.

Cothran, D., Kulinna, P., & Garn, A. (2010). Classroom teachers and physical activity integration. *Teaching and Teacher Education: An International Journal of Research and Studies, 26*(7), 1381–1388.

Fayden, T. (1997). What is the effect of shared reading on rural Native American and Hispanic kindergarten children? *Reading Improvement, 34*(1), 22–30.

Heath, M., Burns, M., Dimock, K. V., Burniske, J., Menchaca, M., & Ravitz, J. (2000). *Applying technology to restructuring and learning. Final research report.* Austin, TX: Southwest Educational Development Laboratory.

Hilberg, R. S., Tharp, R. G., & DeGeest, L. (2000). The efficacy of CREDE's standards-based instruction in American Indian mathematics classes. *Equity & Excellence in Education, 33*(2), 32–40.

Hogan, M. (2008). The tale of two Noras: How a Yup'ik middle schooler was differently constructed as a math learner. *Diaspora, Indigenous, and Minority Education, 2*(2), 90–114.

Hollowell, M., & Jeffries, R. (2004). Worldviews of urban Iroquois faculty: A case study of a Native American resource program. *American Indian Quarterly, 28*(3), 764–785.

Kanu, Y. (2007). Increasing school success among Aboriginal students: Culturally responsive curriculum or macrostructural variables affecting schooling? *Diaspora, Indigenous, and Minority Education, 1*(1), 21–41

Kratochwill, T. R., McDonald, L., Young Bear-Tibbitts, H., & Levin, J. R. (2001). *Families and schools together: An experimental analysis of a parent-mediated early intervention program for at-risk American Indian children. Final Report,* OERI. Madison, WI: Wisconsin Center for Education Research.

Lipka, J. (1999). *Closing the gap: Education and change in New Stuyahok.* Portland, OR: Northwest Regional Educational Laboratory.

Lipka, J. & Adams, B. (2004). *Culturally based math education as a way to improve Alaska Native students' math performance.* (Working Paper No. 20). Athens, OH: Ohio University, Appalachian Collaborative Center for Learning, Assessment, and Instruction in Mathematics. Retrieved November 9, 2011, from http://www.uaf.edu/mcc/award-recognition-and-oth/Culturally-Based-Math-Education-as-a-Way-to-Improve-Alaska-Native-Students-Math-Performance.pdf

Lippitt, L. (1993). *Integrating teaching styles with students' learning styles (Series of 14)*. Santa Fe, NM: Santa Fe Indian School, Learning Approaches Resource Center.

Mackety, D. M., & Linder-VanBerschot, J. A. (2008). *Examining American Indian perspectives in the Central Region on parent involvement in children's education* (Issues & Answers Report, REL 2008– No. 059). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Central.

Marley, S., Levin, J., & Glenberg, A. (2007). Improving Native American children's listening comprehension through concrete representations. *Contemporary Educational Psychology, 32*(3), 537–550.

Marley, S., Levin, J., & Glenberg, A. (2010). What cognitive benefits does an activity-based reading strategy afford young Native American readers? *Journal of Experimental Education, 78*(3), 395– 417.

Ngai, P., & Koehn, P. (2010). Indigenous studies and intercultural education: The impact of a place-based, primary-school program. *Intercultural Education, 21*(6), 597–606.

Platero, P. R. (2001). Navajo Head Start language study. In L. Hinton & K. Hale (Eds.), *The green book of language revitalization in practice* (pp. 87–100). San Diego, CA: Academic Press.

Powers, K., Potthoff, S. J., Bearinger, L. H., & Resnick, M. D. (2003). Does cultural programming improve educational outcomes for American Indian youth? *Journal of American Indian Education, 42*(2), 17–49. (ERIC Document Reproduction Service, No. EJ673686)

Rickard, A. (2005). Constant perimeter, varying area: A case study of teaching and learning mathematics to design a fish rack. *Journal of American Indian Education, 44*(3), 80–100.

Rivera, H., & Tharp, R. (2006). A Native American community's involvement and empowerment to guide their children's development in the school setting. *Journal of Community Psychology, 34*(4), 435–451.

Romero Little, M. E., & McCarty, T. L. (2006). *Language planning challenges and prospects in Native American communities and schools*. Tempe, AZ: Education Policy Studies Laboratory, Arizona State University.

Sheldon, S. B., & Epstein, J. L. (2004). Getting students to school: Using family and community involvement to reduce chronic absenteeism. *The School Community Journal, 14*, (2), 39–56.

Stancavage, F. B., Mitchell, J. H., de Mello, V. P., Gaertner, F. E., Spain, A. K., & Rahal, M. L. (2006). *National Indian Education Study, Part II: The educational experiences of fourth- and eighth-grade American Indian and Alaska Native students*. (NCES 2007-454). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.

Vallines-Mira, R. (2009). Teachers' beliefs regarding effective teaching strategies for American Indian students in mathematics. *Dissertation Abstracts International Section A: Humanities and Social Sciences, 69*(7-A).

Whitbeck, L. B., Hoyt, D. R., Stubben, J. D., & LaFramboise, T. (2001). Traditional culture and academic success among American Indian children in the upper Midwest. *Journal of American Indian Education, 40*(2). Retrieved October 13, 2009, from http://jaie.asu.edu/v40/V40I2A3.pdf

Wilson, W. H. & Kamana⁻, K. (2001). 'Mai loko mai o ka 'i'ini: Proceeding from a dream.' The 'Aha Pu⁻nana Leo connection in Hawaiian language revitalization. In L. Hinton & K. Hale (Eds.), *The green book of language revitalization in practice* (pp. 147-178). San Diego, CA: Academic Press.

Zwick, T. T., & Miller, K. W. (1996). A comparison of integrated outdoor education activities and traditional science learning with American Indian students. *Journal of American Indian Education, 35*(2), 1–9.

References

The following references were used to support sections of the paper.

Agbo, S. A. (2001). Enhancing success in American Indian students: Participatory research at Akwesasne as part of the development of a culturally relevant curriculum. *Journal of American Indian Education, 40*(1). Retrieved November 4, 2010, from http://jaie.asu.edu/v40/V40I1A2.pdf

Buly, M. R., & Ohana, C. (2004). Back to heritage: A different kind of school for American Indian adolescents. *Multicultural Education, 12*(1), 30–32. (ERIC Document Reproduction Service No. EJ781911) Retrieved November 11, 2010, from http://www.eric.ed.gov/PDFS/EJ781911.pdf

Castagno, A. E., & Brayboy, B. M. J. (2008). Culturally responsive schooling for indigenous youth: A review of the literature. *Review of Educational Research, 78*(4), 941–993. Retrieved September 6, 2010, from http://www.qsa.qld.edu.au/downloads/approach/indigenous_schooling_brayboy.pdf

Cleary, L. M., & Peacock, T. D. (1998). *Collected wisdom: American Indian education.* Boston: Allyn and Bacon.

Demmert, W. G., Jr., & Towner, J. C. (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. (ERIC Document Reproduction Service No. ED474128) Retrieved September 10, 2010, from http://www.eric.ed.gov/PDFS/ED474128.pdf

Faircloth, S. C., & Tippeconnic, J. W., III. (2010, January). *The dropout/graduation 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 November 11, 2010, 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

Freeman, C., & Fox, M. (2005). *Status and trends in the education of American Indians and Alaska Natives* (NCES 2005-108). Washington, DC: U.S. Department of Education, National Center for Education Statistics. Retrieved November 2, 2010, from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2005108

Gilliland, H. (1999). *Teaching the Native American* (4th ed.). Dubuque, IA: Kendall Hunt.

Grigg, W., Moran, R., & Kuang, M. (2010). *National Indian Education Study - Part I: Performance of American Indian and Alaska Native students at grades 4 and 8 on NAEP 2009 reading and mathematics assessments* (NCES 2010–462). Washington, DC: National Center for Education

Statistics, Institute of Education Sciences, U.S. Department of Education. Retrieved August 10, 2010, from http://nces.ed.gov/nationsreportcard/pubs/studies/2010462.asp

Gutman, L. M., & Midgley, C. (2000). The role of protective factors in supporting the academic achievement of poor African American students during the middle school transition. *Journal of Youth and Adolescence, 29*, 223–248.

Hermes, M. (2007). Moving toward the language: Reflections on teaching in an indigenous-immersion school. *Journal of American Indian Education, 46*(3), 54–71. (ERIC Document Reproduction Service No. EJ794260).

Hilberg, R. S., & Tharp, R. G. (2002). *Theoretical perspectives, research findings, and classroom implications of the learning styles of American Indian and Alaska Native students.* Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools. (ERIC Document Reproduction Service No. ED468000) Retrieved September 15, 2010, from http://www.eric.ed.gov/PDFS/ED468000.pdf

Johnson, F., & Wilson, J. (2004, June 26). *Embracing change for student learning: Diné language immersion school.* Paper presented at the 25th Annual American Indian Language Development Institute, University of Arizona, Tucson, AZ.

Krauss, M. (1998). The condition of Native North American languages: The need for realistic assessment and action. *International Journal of the Sociology of Language, 132*, 9–21.

Lambe, J. (2003). Indigenous education, mainstream education, and Native studies: Some considerations when incorporating indigenous pedagogy into Native studies. *American Indian Quarterly, 27*(1-2), 308–324. (ERIC Document Reproduction Service No. EJ841980)

Lipka, J., Sharp, N., Brenner, B., Yanez, E., & Sharp, F. (2005). The relevance of culturally based curriculum and instruction: The case of Nancy Sharp. *Journal of American Indian Education, 44*(3), 31–54. (ERIC Document Reproduction Service No. EJ750256)

Lomawaima, K. T., & McCarty, T. L. (2006). *To remain an Indian: Lessons in the democracy of a century of Native American education.* New York: Teachers College.

McCarty, T. L. (2002). *A place to be Navajo: Rough Rock and the struggle for self-determination in indigenous schooling.* Mahwah, NJ: Lawrence Erlbaum.

McCarty, T. L. (2003). Revitalizing indigenous languages in homogenizing times. *Comparative Education, 39*(2), 147–163.

National Caucus of Native American State Legislators. (2008). *Striving to achieve: Helping Native American students succeed.* Denver, CO: Author. Retrieved April 19, 2010, from http://www.ncsl.org/print/statetribe/strivingtoachieve.pdf

Nelson, S., Greenough, R., & Sage, N. (2009). *Achievement gap patterns of grade 8 American Indian and Alaska Native students in reading and math* (Issues & Answers Report, REL 2009–No. 073). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest, with contributions from REL Central, REL Midwest, REL Northeast and

Islands, REL Pacific, REL Southeast, REL Southwest, and REL West. Retrieved November 11, 2010, from http://ies.ed.gov/ncee/edlabs/projects/project.asp?ProjectID=185

Oakes, A., & Maday, T. (2009, August). *Engaging Native American learners with rigor and cultural relevance* (Issue Brief). Washington, DC: The Center for Comprehensive School Reform and Improvement. (ERIC Document Reproduction Service No. ED507588) Retrieved September 2, 2010, from http://www.eric.ed.gov/PDFS/ED507588.pdf

Pease-Pretty on Top, J. (n.d.). *Native American language immersion: Innovative Native education for children & families.* Denver, CO: American Indian College Fund. Pewewardy, C. (2002). Learning styles of American Indian/Alaska Native students: A review of the literature and implications for practice. *Journal of American Indian Education, 41*(3). Retrieved August 21, 2010, from http://jaie.asu.edu/v41/V41I3A2.pdf

Pewewardy, C., & Hammer, P. C. (2003). *Culturally responsive teaching for American Indian students.* Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools. (ERIC Document Reproduction Service No. ED482325) Retrieved November 2, 2010, from http://www.ericdigests.org/2005-1/teaching.htm

Powers, K. M. (2006). An exploratory study of cultural identity and culture-based educational programs for urban American Indian students. *Urban Education, 41*(1), 20–49. Retrieved November 2, 2010, from http://www.csulb.edu/org/college/spsa/docs/documents/UrbanEducationfinalarticle.pdf

Powers, K., Potthoff, S. J., Bearinger, L. H., & Resnick, M. D. (2003). Does cultural programming improve educational outcomes for American Indian youth? *Journal of American Indian Education, 42*(2), 17–49. (ERIC Document Reproduction Service No. EJ673686)

Sorkness, H. L., & Kelting-Gibson, L. (2006, February). *Effective teaching strategies for engaging Native American students.* Paper presented at the Annual Meeting of the National Association of Native American Studies, Baton Rouge, LA. Retrieved October 27, 2010, from http://www2.ed.gov/rschstat/research/pubs/oieresearch/conference/sorkness_200602.pdf

Strand, J. A., & Peacock, T. D. (2002). *Nurturing resilience and school success in American Indian and Alaska Native students.* Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools. (ERIC Document Reproduction Service No. ED471488) Retrieved September 15, 2010, from http://www.eric.ed.gov/PDFS/ED471488.pdf

Thomas, W. P., & Collier, V. (1997). *School effectiveness for language minority students.* Washington, DC: National Clearinghouse for Bilingual Education.

Whitbeck, L. B., Hoyt, D. R., Stubben, J. D., & LaFramboise, T. (2001). Traditional culture and academic success among American Indian children in the upper Midwest. *Journal of American Indian Education, 40*(2). Retrieved October 13, 2009, from http://jaie.asu.edu/v40/V40I2A3.pdf

Yazzie-Mintz, T. (2007). From a place deep inside: Culturally appropriate curriculum as the

embodiment of Navajo-ness in classroom pedagogy. *Journal of American Indian Education, 46*(3), 72–93. (ERIC Document Reproduction Service No. EJ794261)
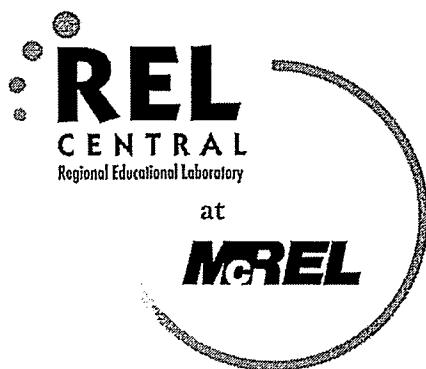
A Community of Promise in Support of Native Youth: Review of Literature

The North Dakota Department of Public Instruction
600 E. Boulevard Ave., Dept. 201
Bismarck, North Dakota 58505-0440

with

REL Central
at
Mid-continent Research for Education and Learning
4601 DTC Blvd., Ste. 500
Denver, CO 80237

November 2011

REL
CENTRAL
Regional Educational Laboratory
at
McREL

Background

The North Dakota Department of Public Instruction (NDDPI) requested that REL Central conduct a review of the research and other published articles to inform the development of partnering relationships in North Dakota in support of Native American students, the schools they attend, their families, and their communities. National data indicate that Native American students have higher rates of dropout, are caught in situations of violence both in and out of school, and are not engaged in school (e.g., absenteeism and dropout rates are high).(National Congress of American Indians & National Indian Education Association [n.d.]; Tharp, Lewis, Hilberg, Bird, Epaloose, Dalton, Youppa, & Rivera, 1999). Given these negative indicators, education, government and tribal leaders, along with social service providers, are looking for solutions that might positively impact Native American student engagement, achievement, and well-being. Specifically, NDDPI staff requested a review of research on the Promise Neighborhoods initiatives, such as the Harlem Children's Zone (HCZ), a neighborhood-based system of education and social services for children in Harlem, a low-income area in New York City, as well as other research and relevant articles on providing Native American students and their families with educational, cultural, and social supports. NDDPI staff suggested that a coordinated partnership, such as the Promise Neighborhood model, may have the potential to address Native American student needs to mitigate these negative indicators. Figure 1 represents the theory of action for a Community of Promise, which REL Central developed in collaboration with the NDDPI staff to organize the response to the request and depict relevant literature found in the review process.
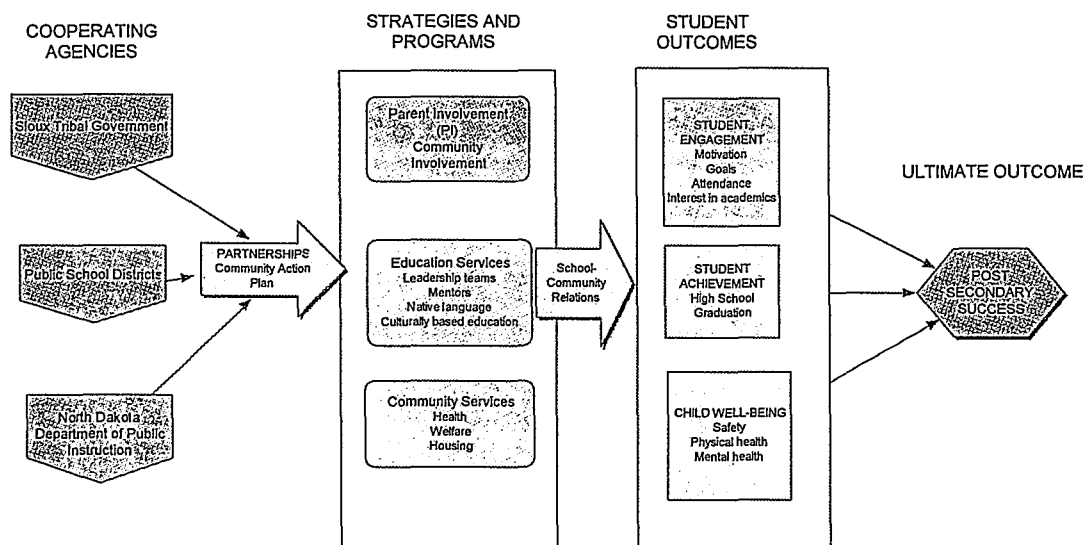

Figure 1. Theory of Action - Community of Promise for the Standing Rock Indian Reservation and the North Dakota Department of Public Instruction

Review of Articles

A REL Central librarian conducted multiple searches to identify literature related to the topic. Search keywords included: *Promise Community, Promise Neighborhood, Harlem Children's Zone, community involvement, student achievement or student outcomes, parent involvement, Native American* or *American Indian, culturally-responsive* or *culturally relevant* and *American Indian education*. Research-related keywords included: *experimental, quasi-experimental, meta-analysis, review of literature, literature review, research review*, and *review of research*.

We reviewed the initial search results and expanded these searches as necessary. The resources consulted were:

- IES-supported organizations and websites, including the Regional Educational Laboratories website and the What Works Clearinghouse;
- ERIC bibliographic database; and
- Google Scholar.

In addition, the reference lists of retrieved articles were searched for additional articles.

After reviewing the abstracts of approximately 50 articles, we selected 30 and confirmed their relevance for inclusion by reviewing the full article. The articles were grouped to match the elements in the Theory of Action. Seven articles that discuss the Harlem Children's Zone, one article that includes examples of integrated school-based child and family support (Novick, 1999), and a literature review on school-community partnerships (Keyes & Soleil, 2001) were not specific to Native American students. The remaining 21 articles all focused on Native Americans: eight literature reviews, ten studies, and three opinion articles. Most studies are descriptive in design, providing illustrative material but not evidence of the effectiveness of the programs described.

Findings

Findings are organized into five sections:

1) *A Starting Point* begins with a contextual statement of the history of the relationship of Native American peoples and non-Native society, as well as an informational background on the Promise Neighborhood program;

2) The *Partnerships* section examines the literature on partnerships to support Native youth;

3) *School-Community Relationships* reviews studies of how schools and communities work together for Native youth;

4) *Strategies and Programs* examines strategies and programs intended to improve outcomes for Native youth; and

5) *Student Outcomes* includes the results of studies and reviews of student achievement and child well-being.

A Starting Point

Project TRUST, a partnership of service providers, community members, community organizers, youth, university faculty and staff organized to address the behavioral health needs of Native youth, has identified several key issues that affect Native youth and suggested directions for policy, practice, and research (Project TRUST, 2008). The underlying need is to understand "truths about historical trauma and current inequities" (p. 3) that influence the well-being of Native youth and their families. According to Project TRUST, a lack of recognition of this history has created distrust among Native peoples of the services intended to alleviate common problems (Project Trust, 2008). Compounding this perceive lack of trust is the fragmentation and underfunding of the services needed to meet the needs of Native youth and their families (Project TRUST, 2008). Roland Tharp and his colleagues (1999) also discussed obstacles specific to Native Americans that interfere with school reforms meant to improve education outcomes for Native youth:

> The geographical and social isolation of many Native American reservation communities hinders recruitment and retention of competent teachers and administrators. Communication is impeded by both subtle and profound cultural differences between school personnel and the families they purport to serve. Native American leaders work to make teaching methods and curricula responsive to local tribal situations. Often, tribal efforts, expectations, and needs are at cross-purposes to national professional organizations, educational standards, and accreditation agencies that strive to achieve and maintain national uniformity in education practice (p.6).

One response to a perceived lack of trust, not among Native peoples but among disadvantaged urban communities, is the Promise Neighborhoods approach. A Promise Neighborhoods Research Consortium(http://promiseneighborhoods.org/) funded by the National Institute on Drug Abuse, offers support to neighborhoods interested in instituting a Promise Neighborhoods program. A federal funding program, the Promise Neighborhoods Initiative, directly funds the Harlem Children's Zone (HCZ) in New York City.

The only research identified on Promise Neighborhoods in our literature search was a randomized controlled trial conducted on the HCZ, which compared children selected to participate by lottery with those who were not selected to participate in the program (Dobbie & Fryer, 2009). Participating 8th grade students had higher mathematics scores (with an effect size for 8th grade of 0.55, equivalent to a move from the 50th percentile to the 71st) than non-participating students.

Eighth graders also surpassed the non-participating 8th grade students in English language arts test scores with an effect size of 0.19, equivalent to a move from the 50th to the 58th percentile. The What Works Clearinghouse, a resource provided by the U.S. Department of Education, reviewed the study and found it met their standards of evidence (What Works Clearinghouse Quick Review, 2010). Finally, the authors of one article suggested data indicators that could be used to examine a Promise Neighborhoods program (Moore, Murphey, Emig, Hamilton, Hadley, & Sidorowicz, 2009). A separate article reported the development of a framework, *Creating Nurturing Environments*, to guide community efforts in improving student outcomes (Komro, Flay, Biglan, & Promise Neighborhoods Research Consortium, 2011).

Partnerships

Partnerships among schools, parents, and community members; between tribal leadership and public school educators; and between health and social service providers and tribal leaders is seen as an essential part of improving the outcomes for Native youth (Project TRUST, 2008; Keyes & Soleil, 2001; Boyer, 2006). Few research studies have been conducted on these partnerships. One descriptive study examined nine partnerships among organizations concerned with the education and well-being of Native youth. Beesley and colleagues (Beesley, Mackety, Cicchinelli, & Shebby, in press) interviewed a sample of nine Tribal Education Department (TED) directors who had reported having a partnership with their local school districts, and their partnering local school administrators. The authors note that "in four of the partnerships, the stakeholders mentioned being able to overcome a negative history involving discrimination, mistrust, or rivalry in order to set and work on mutual goals for Native American student success" (Beesley, et al., in press, p. 2).

School-Community Relationships

Six articles, four reviews, and two studies addressed school-community relationships. This type of partnering does not include the wider range of service agencies and tribal leadership. For two of the reviews, the authors reported having searched for, but found, articles on school-community relationships involving Native American students (Regional Educational Laboratory for the Central Region, June 2010 & November 2011). The third review (Keyes & Soleil, 2001) did not focus on schools with Native students. However, this review includes a thorough discussion of successful collaborations between schools and communities and examines the evidence of success, such as increased community support for schools and increased parent participation. Keyes and Soleil (2001) reported benefits to students and schools from school-community relations, and spell out three stages for forming and maintaining a school-community relationship: planning and development, implementation and management, and monitoring and evaluation. They also list characteristics of effective programs, although they did not identify the research basis for these claims. The characteristics included programs that are comprehensive, flexible, responsive, and sustained; that see children in the context of their families and families as parts of communities; that establish trust and good communication among all and are governed by group process rather than top-down; and programs whose members share a common vision. The fourth review (Lipka, 2002) focused on schools supportive of American Indian and Alaska Native self-determination and describes tribal- or

community-controlled programs. Programs described met at least two of three criteria: involve community/tribally controlled schools, use indigenous culture and language, and show gains in academic achievement. Lipka's four examples included Rock Point Community School and Fort Defiance in Arizona, the Kamehameha Early Education Project in Hawaii, and Kativik in Nunavik, Canada.

Two studies (Landis, 1999; Lipka, 1999) described school-community relations in Native Alaskan villages. These case studies do not show evidence of the effectiveness of school-community relationships. Lipka's study (1999) focused on student academic success; however, more rigorous research is needed to show effectiveness.

Strategies and Programs

Strategies and programs include parent and community involvement, education services, and community services. A total of 17 articles examined one or more aspects of this area: seven reviews, eight studies, a non-Native article (Novik, 1999) about integrated school-based child and family support, and an undated article from the National Congress of American Indians and the National Indian Education Association (n.d.) which called for strengthening programs for Native youth through extending tribal control.

Four reviews were completed by REL Central (June 2010, January 2011, June 2011, & October 2011). Each of these includes a section on parent and/or community involvement. Although the majority of research cited on either parent or community involvement in school is qualitative (based on surveys, interviews, or focus groups and resulting in descriptions of working programs), there is a growing body of research that emphasizes the importance of both Native parent involvement and community involvement to support student engagement and achievement.

A review by Reyner (2001) began with the necessity of focusing curriculum and instruction on traditional culture. The author focused on a conflict between community and school, including practices that students perceive as racist or uncaring on the part of teachers. He reports on a number of different approaches to improving the cultural context for Native American students but notes that there is a lack of confirming research.

In another review, Demmert (2001) noted that the Indian Education Act of 1972 recognized that partnerships between schools and parents (including tribal representatives) were requisite to improving academic performance of Native youth. The Act called for local control and ownership of schools. Demmert pointed out that local control is complicated by multiple interventions in any one setting and that more research is needed, specifically to understand under what circumstances parental and community control works most powerfully.

Banks-Joseph and McCubbin (2005) focused their review on early childhood family involvement. The authors posit that the efforts of many stakeholder groups (i.e., community, tribe, and social services) are needed to better respond to the needs of Native American families. Descriptive studies examined in the review identified parents' goals and the challenges faced, such as an

overrepresentation of Native children in special education and an underrepresentation in gifted programs, along with exposure to experiences in school that lack culturally responsive methodologies. They noted that the Office of Indian Education Programs and the BIA-sponsored Family and Child Education (FACE) programs focus on family literacy and the integration of tribal languages and cultures. No research evidence has yet been conducted on this program. Banks-Joseph and McCubbin (2005) listed15 "best practices," although none has been validated by research.

One empirical study was identified. Kratochwill, McDonald, Levin, Young Bear-Tibbetts, and Demaray (2004) conducted a randomized study to assess the effectiveness of Families and Schools Together (FAST) within three Native American nations in Wisconsin. Elementary students and their families were randomly assigned to FAST or the control condition. The FAST students showed a reduction of classroom problem behaviors and reported improved academic competence. More information on the FAST program, a program of schools and families working together, is available at http://www.familiesandschools.org/.

Of the seven remaining studies, the authors of four examined parent involvement and the authors of three examined community involvement. In addition, three of the seven studies also addressed community services. Mackety and Linder-VanBerschot (2008) conducted focus groups with parents to better understand the challenges they face in becoming involved in school and the factors that support their involvement. They found that caring, supportive, communicative school staff and a culturally respectful environment were important. Two studies examined both parent and community involvement. Sheldon and Epstein (2004) conducted a longitudinal study that demonstrated that engaging parents in correcting their children's absenteeism and providing community mentors could reduce patterns of absenteeism. Cunningham-Sabo, Bauer, Pareo, Phillips-Benally, Roanhorse, and Garcia (2008) found that stronger parenting, combined with culturally relevant support for families and community support, could improve parents' food choices for children. Beesley and colleagues (in press) noted that when TEDs partner with schools, they often focus on parent involvement.

Pearson (2009) reported on five Tribal Youth Programs based on focus groups and interviews. The findings are presented in five case studies. Across the five sites, Pearson (2009) identified three themes: "1) building capacity, expanding services and coordinating resources through partnerships, 2) funding and sustainability, and 3) restoring Native identity by honoring culture and tradition" (p.15).Another case study, by Crooks, Chiodo, Thomas, and Hughes (2009),described the community services provided for violence prevention. These included peer mentoring, a credit-based academic course, and transition conferences for 8th grade students. There is preliminary evidence supporting the positive impact of the initiatives.

Student Outcomes

Each of the Native American studies and reviews included in this report were ultimately focused on better outcomes for Native youth; however, only one review and five studies specifically addressed

student outcomes. Outcomes for this report are categorized into student achievement and child well-being, given the holistic approach of the Community of Promise concept. Lipka (2002) found four Native American programs that involved locally or tribally controlled schools, are culturally based in programming, and showed gains in student achievement. In a case study of New Stuyahok in Alaska, Lipka (1999) found a positive trend in student achievement.

Four studies examined student outcomes in the area of child well-being. Through a series of interviews, Cunningham-Sabo, Bauer, Pareo, Phillips-Benally, Roanhorse, and Garcia (2008) identified a need for stronger parental controls and community action to enhance culturally relevant support for the food choices of young children and their families. Crooks, Chiodo, Thomas, and Hughes (2009) and Pearson (2009) examined negative behaviors such as violence, substance abuse, and dropout. Pearson (2009) described five Tribal Youth Programs using case studies. The case studies did not show evidence of the effectiveness of the programs. Pearson (2009) believed the programs are improving the lives of at-risk youth; however, more rigorous research is needed to show effectiveness. Through preliminary evidence, Crooks, Chiodo, Thomas, and Hughes (2009) reported that providing culturally relevant opportunities to Native American youth helps build healthy, positive relationships.

Discussion

In order to provide information responsive to the North Dakota Department of Public Instruction's request for research related to community partnerships, REL Central first developed a Theory of Action for the NDDPI's review and subsequently conducted this review of research in accordance with this Theory of Action. We searched for research on how a partnership of cooperating agencies, working together to enhance parent and community involvement as well as provide services, could lead to improved student outcomes. Our literature searches and subsequent reviews resulted in 30 articles, 21 of which were about Native American youth, their families, and communities: eight reviews, ten studies, and three opinion articles.

The literature suggests that an underlying theme is the need to involve tribal leaders and Native community elders in working with families and schools to develop policies and programs that will connect Native youth with their heritage. However, there is a lack of research evidence to guide the work. Some practices show preliminary indications of success; most of these are locally derived and therefore have not yet been studied using rigorous research methods. The literature suggests that engaging the varied partnerships and ensuring that all voices are heard in developing and implementing a plan for joint action is important. Case studies describing such partnerships, perceived as successful, are available in the literature but lack research evidence. Systematic evidence-producing research should be designed and implemented with careful attention to studying programs that support community, school, and agency partnership.

References

Banks-Joseph, S. (Arapaho) & McCubbin, L.D. (2006). American Indian and Alaska Native early childhood family involvement: A review of the literature. In *Proceedings of the Rural Early Childhood Forum On American Indian and Alaska Native Early Learning, July 28-29, 2005, Little Rock, AR.* (Rural Early Childhood Report No. 2), (pp. 132-154). Mississippi State, MS: The National Center for Rural Early Childhood Learning Initiatives, Mississippi State University Early Childhood Institute.

Boyer, P. (2006). It takes a native community: Educators reform schools in an era of standards. *Tribal College Journal of American Indian Higher Education, 17*(4), 14-19.

Demmert, W.G., Jr. (2001). *Improving academic performance of Native American students: A review of the research literature.* Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools.

Keyes, M.C., & Soleil, G. (2001). *School-community connections: A literature review.* Charleston, WV: Appalachia Educational Laboratory, Inc.

Komro, K. A., Flay, B. R., Biglan, A., & Promise Neighborhoods Research Consortium. (2011). Creating nurturing environments: A science-based framework for promoting child health and development within high-poverty neighborhoods. *Clinical Child and Family Psychology Review, 14*(2), 111-134.

Lipka, J. (2002). Schooling for self-determination: Research on the effects of including Native language and culture in the schools. *ERIC Digest.* Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools (ERIC ED459989).

McLester, S. (2011). The cradle-to-career solution. *District Administration, 47*(5), 32-34, 36, 38.

Moore, K. A., Murphey, D., Emig, C., Hamilton, K., Hadley, A., & Sidorowicz, K. (2009). *Results and indicators for children: An analysis to inform discussions about Promise Neighborhoods*, Washington, DC: Child Trends.

National Congress of American Indians, & National Indian Education Association. (n.d.). *National tribal priorities for Indian education.* Washington, DC: Authors.

Novick, R. (1999). *Family involvement and beyond: School-based child and family support programs.* Portland, OR: Northwest Regional Educational Laboratory.

Regional Educational Laboratory for the Central Region. (2010, June). *What does the research say? Interventions for low-performing Native American schools* (Information Request). Denver, CO: Mid-continent Research for Education and Learning.

Regional Educational Laboratory for the Central Region. (2011, January). *Supporting Native American school districts* (Information Request). Denver, CO: Mid-continent Research for Education and Learning.

Regional Educational Laboratory for the Central Region. (2011, June). *Compilation of abstracts effective teaching of American Indian students* (Information Request), Denver, CO: Mid-continent Research for Education and Learning.

Regional Educational Laboratory for the Central Region. (2011, October). *Review of studies on the education of American Indian students* (Information Request). Denver, CO: Mid-continent Research for Education and Learning.

Reyhner, J. (2001, October). *Family, community, and school impacts on American Indian and Alaska Native students' success.* Paper presented at the 32nd Annual National Indian Education Association Annual Convention, Billings, MT.

Tharp, R.G., Lewis, H., Hilberg, R., Bird, C., Epaloose, G. Dalton, S.S., Youppa, D.G., Rivera, H., In-Feathers, M.R., & Eriacho, W. (1999). Seven more mountains and a map: Overcoming obstacles to reform in Native American schools. *Journal of Education for Students Placed at Risk, 4*(1), 5-25.

What Works Clearinghouse. (2010). *WWC quick review of the article "Are high-quality schools enough to close the achievement gap? Evidence from a social experiment in Harlem."* Washington, DC: What Works Clearinghouse, Institute of Education Sciences.

Whitehurst, G.J., & Croft, M. (2010).*The Harlem Children's Zone, Promise Neighborhoods, and the broader, bolder approach to education.* Washington, DC: Brookings Institution.

Studies Referenced

Beesley, A. D., Mackety, D., Cicchinelli, L.F., & Shebby, S. (in press). *Partnerships between tribal education departments and local education agencies.*

Crooks, C.V., Chiodo, D., Thomas, D., & Hughes, R. (2009). Strengths-based programming for First Nations youth in schools: Building engagement through healthy relationships and leadership skills. *International Journal of Mental Health Addiction,8*(2), 160–173.

Cunningham-Sabo, L., Bauer, M., Pareo, S., Phillips-Benally, S., Roanhorse, J., & Garcia, L. (2008). Qualitative investigation of factors contributing to effective nutrition education for Navajo families. *Maternal and Child Health Journal, 12,* 68-75.

Dobbie, W., & Fryer, R. G., Jr. (2009). *Are high quality schools enough to close the achievement gap? Evidence from a social experiment in Harlem.* Cambridge, MA: National Bureau of Economic Research.

Kratochwill, T. R., McDonald, L., Levin, J.R., Young Bear-Tibbetts, H., & Demaray, M.K. (2004). Families and Schools Together: An experimental analysis of a parent-mediated multi-family group program for American Indian children. *Journal of School Psychology, 42*, 359–383.

Landis, S. (1999). *Making school work in a changing world: Tatitlek Community School. Case study.* Portland, OR: Northwest Regional Educational Laboratory

Lipka, J. (1999). *Closing the gap: Education and change in New Stuyahok.* Portland, OR: Northwest Regional Educational Laboratory.

Mackety, D. M., & Linder-VanBerschot, J. A. (2008).*Examining American Indian perspectives in the Central Region on parent involvement in children's education* (Issues & Answers Report, REL 2008–No. 059). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Central. Retrieved from http://ies.ed.gov/ncee/edlabs.

Pearson, S.S. (2009). *Strengthening Indian country through tribal youth programs.* Washington, DC: American Youth Policy Forum with the Office of Juvenile Justice and Delinquency Prevention, Office of Justice Programs, U.S. Department of Justice

Project TRUST Partnership. (2008). *Project TRUST Report and recommendations for enhancing the well-being of Native American youth, families, and communities.* Santa Fe, NM: Author.

Sheldon, S.B., & Epstein, J.L. (2004). Getting students to school: Using family and community involvement to reduce chronic absenteeism. *The School Community Journal, 14*(2), 39-56.