REL Central Reference Desk Response

**Research Review:**

**The Nebraska Department of Education and Educational Service Unit #1**

**Supporting Native American School Districts**

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# Executive Summary

The Nebraska Department of Education and Nebraska’s Educational Service Unit #1 (ESU#1) provide support to four districts located on Native American reservations in the northeastern part of the state. Each of these school districts has at least one school that has been designated as a “persistently lowest-achieving school” (PLAS), as defined by the U.S. Department of Education and identified by the Nebraska Department of Education. ESU#1 supports these school districts in their service area as they work to change their school improvement designation. Each of these four school districts has an enrollment predominantly made up of Native American students.

The Nebraska Department of Education, in seeking to assist the staff of the Department and ESU#1, requested that REL Central develop a review of the research literature on seven topics, with an emphasis on literature relating to Native American students.

The seven topics identified for review are:

1. Student mobility;
2. Attendance;
3. Graduation rates;
4. Family involvement;
5. Youth expectations;
6. Increasing reading and mathematics achievement levels; and
7. School–community partnerships.

Because there is limited research specific to Native American students within these topics, this review also includes information on studies that do not focus on any particular student group. Studies that do focus on Native American populations are specifically identified as such.

## Student Mobility

High student mobility (unscheduled student entrances and exits during the regular school year) is associated with factors such as homelessness, parent migrant employment, and family school choice (Weissbourd, 2008). REL Central was unable to identify research specific to Native American student mobility. Generally, the influence of mobility on student achievement differs depending on the reason for mobility; further, the different causes of mobility often require different solutions for mitigating its impact. The literature recommends several strategies to decrease student mobility, including implementing mobility reduction programs and offering support to mobile students to mitigate negative impacts (Popp, Stronge, & Hindman, 2003). However, these proposed strategies for mitigating student mobility lack rigorous evidence to support their use.

## Attendance

The general research on attendance confirms a negative impact of truancy or non-attendance on student achievement and a link to increased negative student outcomes (e.g., drop-out rates, substance abuse). A variety of contributing factors can increase truancy, such as parent unemployment and/or family illnesses. (Sheldon, 2007; Nauer, White & Yerneni, 2008). According to Teasley (2004), very little research has been conducted on strategies to mitigate the effects of these factors on poor attendance.

However, strong, high-quality partnerships between schools, communities, and families can improve attendance and thus, student learning (Nauer et al., 2008; Sheldon, 2007). Recommendations from a 1997 survey of Native American tribal leaders stated the need for dropout prevention programs in schools attended by Native American students. The survey also identified a need for high school equivalency programs (i.e., G.E.D). Both programs were identified by tribal leaders who responded to the survey as being of the highest educational priority (Wells, 1997).

## Graduation Rates

Research on graduation rates for Native American students suggests that rates can be positively influenced by several factors: parent encouragement, student proficiency in their Native language as well as in English; incorporating traditional values and beliefs in classroom practice; completion of vocational courses in Grades 8 or 9; importance of school to self; and high expectations for oneself (Brandt, 1992; Clarke, 1994).

## Family Involvement

Research conducted on parent/family involvement in schools (e.g., in-school activities, such as parents volunteering in school; or in-home activities, such as parents helping students with homework) indicates effective ways to engage parents in their children’s education. Jeynes’ research on minority populations (other than Native Americans) suggests that parent involvement has a positive effect on student achievement (Jeynes, 2003). Orozco’s (2008) research in Latino communities emphasizes the importance of schools working in concert with parents and families, and using a strengths-based perspective that focuses on the positive aspects of different cultures, attitudes, and languages.

Leverque (as cited in Demmert, 2001) reports that Native American parent involvement in designing and implementing school programs is strongly associated with improved student achievement. In early childhood education, Banks-Joseph and McCubbin (2005) conclude that it is important for involvement in the school to include community, tribal, and intertribal relations. Identifying the needs of Native American families is necessary in order to design services that engage families. Evaluation of the efficacy of those services should include information on whether or not they improve academic competence (Kratochwill, McDonald, Levin, Young Bear-Tibbets, & Demaray (2003).

## Youth Expectations (Self-Esteem)

In REL Central’s review of the research literature, we did not find a body of work on youth expectations. Therefore, we selected the topic of self-esteem (i.e., a person’s overall evaluation or appraisal of his or her own worth). Although there is a little research on self-esteem for Native American students, Whitesell, Mitchell, Kaufman, Spicer and the Voices of Indian Teens Project Team (2006) established developmental trajectories of personal and collective self–concept among these adolescents and found significant, moderate gains across adolescence, suggesting a natural expectation of increased self-esteem. McInerny and McInerny (2000) found self-esteem to be a motivator for Native American students to strive for school success.

## Increasing Reading and Mathematics Achievement Levels

All of the research selected for this review on increasing reading and mathematics achievement is specific to Native American students. Trumbell, Nelson-Barber, and Mitchell (2002) report that specific instructional sequences that build on a Native American student’s intuitive and ethno-mathematical knowledge are successful for teaching mathematics to Native American students. Ethno-mathematical knowledge includes forms of mathematics embedded in culturally linked activities in everyday life. For example, since traditional Native approaches emphasize cooperation and reflection, mathematics tasks might allow for group work.

A research review by Apthorp, DeBassige D'Amato, & Richardson (2003) of studies of culturally congruent practices for Native American student achievement in reading and mathematics found mixed results. Studies from the 1990s and earlier on indigenous language and bilingual programs documented both positive and negligible effects on language arts achievement. Hilberg, Tharp, and DeGeest’s (2000) study suggested that at-risk Native American students instructed in a manner consistent with a focus on language development, teachers and students producing together, and higher-order reasoning (i.e., reflecting the Center for Research on Education, Diversity and Excellence’s [CREDE] Five Standards for Effective Pedagogy and Learning) learned more mathematics than students instructed using traditional approaches. Increased reading achievement scores were also reported for grades K-3 in a Native American school which used a Reading First grant to implement a direct instruction  program, involving clear objectives, carefully sequenced content and instruction, and continuous student-teacher interaction through demonstration, explanation, practice, and feedback  (SRA/McGraw-Hill, 2006).

## School–Community Partnerships

A study by Hoggarth, Myer, and Rousey (1996) on school-community partnerships in the Native American community evaluated a five-year, federally funded program designed to reduce alcoholism on the Spirit Lake Reservation in rural North Dakota. The school-community partners in this program included a community college, which led the partnership, and more than 30 partners from local schools, the tribal council, and various tribal and public agencies.

Additionally, the National Network of Partnership Schools and the Coalition for Community Schools have completed research on school-community partnerships and both organizations have ongoing research agendas in this area.

# Student Mobility

## Working Definition

Student mobility is defined as unplanned student entrances and exits from school during the regular school year. The research on student mobility focuses on students who change schools because of homelessness, migrant status, and school choice. For this literature review, we included studies that highlight the issues and consequences of student mobility as well as programs designed to reduce mobility and mitigate negative outcomes.

## Research Studies Reviewed

Research studies on the general population discuss problems associated with mobility: low achievement, increased dropout rates, and difficult social adjustments (Gruman, Harachi, Abbott, Catalano, & Fleming, 2008; Hattie, 2009; Popp et al., 2003; Rumberger & Larson, 1998). Other studies provide descriptions of ways to reduce mobility or to mitigate its impacts on mobile students. Studies that focused on specific minority populations, including Native American students, were conducted by Nelson, Simonsen, & Swanson (2003) and Zehr (2007). Other studies have been conducted on migrant and immigrant students ( Ream & Stanton-Salazar, 2006; Smith, Fein, & Paine, 2008; Popp et al., 2003).

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## Findings

The effects of student mobility can be substantial, ranging from poor academic performance to social issues such as behavior problems and family stress. In her meta-analysis of studies on the general population, Hattie (2009) found an effect size[[1]](#footnote-1) of -0.34 on achievement for mobile students. This means that mobile students’ achievement was approximately one-third of a standard deviation below that of their non-mobile peers. Hattie cites evidence that the effects were consistent across socio-economic status and the number of times a student changed schools. Mobility further complicates students’ ability to satisfy graduation requirements in high school, potentially influencing dropout rates (Meeker, Edmonson, & Fisher, 2009). Mobile students change schools for a variety of reasons including homelessness, migrant employment, military transfers, or school choice (Weissbourd, 2008). Each of these reasons for changing schools can impact students differently and may require a situation-specific solution.

The research literature posits several approaches to reducing the impact of student mobility. First, schools must be held accountable for monitoring and ameliorating the effects of mobility. Ream and Stanton-Salazar (2006) found that the increased pressure for student achievement under NCLB resulted in school staff encouraging low-performing students to transfer to different schools, rather than in staff accepting responsibility for these students. In a working paper on mathematics education in rural communities, with a focus on Native Americans, Nelson et al.(2003) note that a system to track students as they move between schools and school districts should be developed for use across all districts within a state to ensure that students do not fall through the cracks and that there is some consistency in their educational experiences as they move between schools. In conjunction with enrollment data, such a tracking system could serve as a database for variations in curricula and materials across the system’s schools.

Second, schools should examine the reasons for mobility rates and seek appropriate means to mediate them. For example, providing homeless families with bus passes or alternate transportation may help keep students in one school (Zehr, 2010), or partnering with community agencies might provide needed support and resources to stabilize families. In a case study in Oregon, the district staff members report strategies that they believe have been effective in reducing mobility including implementing an enrollment plan to screen students immediately upon enrollment, implementing a school-wide instructional support plan, and implementing a coordinated assessment plan (Smith et al., 2008). These approaches have not yet been formally studied, so there is a lack evidence to support them.

When parents choose a different school, school staff can discuss how mobility affects students and offer strategies to mitigate the consequences (Popp et al., 2003). Kerbow (as cited in Zehr, 2007) suggests that schools can address Native American student mobility by developing a personal connection with parents so that they have a contact at school, creating a standard way to quickly assess students in academic subjects who enroll after the start of school year, devising a portfolio of student work that can travel with the student from one school to the next, building links between schools so that staff members can share information about the needs of students who move from school to school, and supporting teachers in integrating students into classes. Finally, when student transfers do occur, schools and teachers can provide supportive environments (Gruman et al., 2008) and social workers can monitor students who have transferred to provide social and academic remediation (Popp et al., 2003). (These strategies also have not been formally studied.)

# **Attendance**

## Working Definition

Attendance is the daily presence of a student in class. For this review, we included studies that examined the relationship of attendance to student achievement and those that provided evidence on the strategies that worked to improve attendance. This included studies that examined schools that offered transportation options, provided positive motivating tools for attendance, offered family support, and followed up on attendance issues. In a survey of Native American tribal leaders (Wells, 1997), leaders gave highest priority to dropout prevention programs that also included high school equivalency programs, such as G.E.D.

## Research Studies Reviewed

Most studies found were descriptive in nature or focused on evaluations of specific programs and did not focus on Native American students specifically. One study employed a more rigorous design (Sheldon, 2007) and one meta-analysis included attendance as an outcome variable (Wilson, Gottfredson, & Najaka, 2001). The research indicates that attendance is an important factor for student learning and achievement and discusses specific programs to mediate truancy, or nonattendance.

## Findings

Absenteeism (non-attendance) is a large and often underreported problem. Nationally, on average, 10 percent of kindergarteners are chronically absent and miss more than 10 percent of school per year (Chang, 2010). The numbers can be much higher in certain schools, such as those in large, high- poverty, urban areas (Sheldon & Epstein, 2004). Nauer et al. (2008) found that in New York City, 20 percent of students in grades K-5 missed a month or more of school per year. Low attendance is related not only to decreased student achievement (Gottfried, 2009) but also correlates to increased drop-out rates and substance abuse (Sheldon, 2007). High absenteeism for younger students is a strong predictor of truancy in later elementary and secondary grades (Spencer, 2009). Schools with attendance issues should monitor and seek to remediate early truancy problems as soon as they become apparent in order to break that pattern (Spencer, 2009; Chang, 2010).

Research on the general population indicates that truancy can be caused by complex risk factors (Weissbourd, 2008). In order to mitigate low attendance, a variety of support from community agencies and schools is needed. A one-size-fits-all solution is not always appropriate and schools must incorporate their own context into the truancy solution (Teasley, 2004). One meta-analysis found that individual programs to reduce truancy and dropout produce small overall effects (ES=.16). Researchers concluded that a single program solution would not have large effects and that schools might benefit from offering multiple solutions (Wilson et al., 2001).

Most of the research on attendance focuses on evaluations of specific programs. Researchers found that implementing strong, high-quality partnerships between schools, communities, and parents improves attendance (Nauer et al., 2008; Sheldon, 2007). In particular, programs in which school staff or community social services intentionally reached out to families translated quickly into improved attendance. Frequent, positive dialogue between school staff and parents was seen as key to improving attendance.

The Indian Nations at Risk Task Force(1990) reported information about dropout prevention programs and strategies that educators believe are working, based on testimony from educators and parents in a joint session of the Indian Nations Task Force and the National Advisory Council on Indian Education. Among these were college-school cooperation that focuses on identifying and encouraging Native American high school students to stay in school to become teachers; early intervention for at-risk students; cultural sensitivity training for teachers and other school staff; hiring an Indian liaison to work with parents, students, and the school; adult education programs for overage students; and others.

# **Graduation Rates**

## Working Definition

Research on graduation/dropout rates (completion or lack of completion of high school) among Native American students indicates that the low number of Native Americans who graduate from high school continues to be a matter of urgent concern. For this literature review, studies were included that identified important factors that play a part in Native American students’ decisions to graduate or drop out of school.

## Research Studies Reviewed

Three studies were reviewed. Two provided evidence of effectiveness. One study examined data from 12 states (Faircloth & Tippeconnic, 2010); the other examined Navajo-area schools and was reported to be the first large- scale Indian dropout (Brandt, 1992). The third study was a report based on a questionnaire and interviews from Native American student respondents across three states (Clarke, 1994).

## Findings

Faircloth and Tippeconnic (2010) report that on average, fewer than 50% of Native American students in the 12 states in their study graduated each year. Brandt (1992) identified a number of factors associated with increased likelihood of persisting in school. These factors include early acquisition of the English language, parent encouragement, proficiency in the student’s Native language as well as in English, incorporating and honoring traditional values and beliefs, completion of vocational courses in Grades 8 or 9, and enrollment in small schools.

In the third report, which examined personal, cultural, school, and family factors that contribute to the decision of Native American students to remain in school, the four most important factors for staying in school as reported by graduates were: mother expected me to graduate, wanted to make a good life for myself, school was personally important, and I had high expectations for myself (Clarke, 1994).

One resource on dropout prevention, while not specifically focused on Native American students, is the IES Practice Guide, *Dropout Prevention: A Practice Guide* (NCEE 2008–4025), which provides recommendations that focus on reducing high school dropout rates. Strategies presented include identifying and advocating for at-risk students, implementing programs to improve behavior and social skills, and keeping students engaged in the school environment (Dynarski, Clarke, Cobb, Finn, Rumberger & Smink, 2008).

# **Family Involvement**

## **Working Definition**

Studies on family involvement (in-school activities, such as parents volunteering in school or in-home activities, such as parents helping students with homework) include any policy, practice or procedure aimed at producing a meaningful relationship between the school and the families of their students.Research focuses on practices to increase parent involvement and includes helping parents support their child’s education at home and encouraging involvement in school activities.

## Research Studies Reviewed

There is a wealth of research in the area of parent involvement, as indicated by the number of original studies and meta-analyses of varying quality and focus. However, many of the studies reviewed did not include key information such as student demographics, students’ cognitive ability, and program specifics, which limited the information about what strengthens or moderates the relationships of parent involvement to achievement (Erion, 2006; Mattingly, Prislin, McKenzie, Rodriguez, & Kayzar, 2002). Studies which are specific to Native American populations addressed the strong association of family involvement with improved academic competence and achievement (Kratochwill, et al. (2004) & Leveque (as cited in Demmert, 2001).

## Findings

In general, the studies reviewed found a positive relationship between parent involvement and student achievement. The following three studies are not specific to Native American parents. Weiss and Stephen (2009)state, “The research makes it clear that parents’ or caregivers’ behaviors, practices, and attitudes at home—as well as their involvement with school and other institutions—strongly influence children’s learning.” (p. 12). Hattie (2009), in a synthesis of multiple single studies, found moderate effects of parent involvement (at 0.51). While these findings indicate that parent involvement is important overall, Hattie also specifically indicates that certain factors, such as parents’ expectations and aspirations for their child’s education, are the most critical. The lowest effects were seen in areas that were more punitive, such as parents enforcing rules and monitoring homework. Hattie concludes that parent involvement would be most effective when schools “work in partnership with parents to make their expectations appropriately high and challenging, and then work in partnership with children and the home to realize, and even surpass, these expectations (p. 70). Marzano (2000) confirmed the importance of parent involvement with smaller but still positive effects (0.26) for specific aspects of parent involvement (i.e., a productive written exchange between schools and parents, including parents in decision making for policies and curriculum, and providing parents access to school staff).

The following three studies reviewed are specific to Native American populations. Kratochwill et al. (2004) studied a parent-mediated, multi-family group program for Native American children using a rigorous design. The multi-family group program called Families and Schools Together (FAST) was adapted by three Native American Nations in Wisconsin. They detected statistically significant teacher-reported differences between FAST and non-FAST students’ academic competence on the Social Skills Rating Scale (SSRS) at the one-year follow-up assessment. Leveque (as cited in Demmert, 2001) points out that parent involvement in the design and implementation of school programs was strongly associated with improved student achievement in a highly successful California school serving Native American students. A comprehensive review of the literature regarding Native American family/community involvement in early childhood education was carried out by Banks-Joseph & McCubbin (2005). They conclude that family involvement in early childhood education that extends to community, tribal, and intertribal relations is essential to effect change for future generations. Outreach efforts (i.e., identifying, informing, training, soliciting input on services needed and the efficacy of those services) to address Native American families’ needs in schools and on and off the reservation are recommended.

Additional studies of mainstream populations found that parents of middle and high school students are often intimidated by their child’s higher level of work, a large school setting, and multiple subjects taught by an array of teachers (Beyer, Patrikakou, & Weissberg,2003; Hill & Tyson, 2009). However, the importance of parent involvement persists at this level. Studies indicate that providing parents with an understanding of academic expectations, goals, and purposes was positively related to achievement. Conversely, areas associated with more parental control, such as monitoring and helping with homework, were not related to achievement. These findings were consistent across racial and ethnic groupings (Beyer et al.,2003).

Jeynes (2003) reported outcomes of parent involvement for students of different racial and ethnic groups and in different school contexts. Across student subgroups, effects of parent involvement strategies were small but consistent (ranging from 0.22 to 0.48) with a greater effect seen for African American students and medium effect sizes for students in urban schools (0.70 to 0.75) (Jeynes, 2005). Approaching immigrant families in a positive manner is important, because overcoming school cultural and language barriers may seem difficult and intimidating to them. But family involvement is essential for promoting student success (Turney & Kao, 2009). Educators should approach families from a strengths-based perspective that emphasizes the positive aspects of different cultures, attitudes, and languages. Further, “educators must set aside preconceived notions of low-income parents as not having anything to offer to the education of their children” (Orozco,2008, p. 34).

Finally, in a study conducted by REL Central, Mackety and Linder-VanBerschot (2008) examined Native American parents’ perspectives of parent involvement and factors that may encourage or discourage involvement in their children’s education. Strategies that parents perceived as encouraging involvement were school communications about children, a school open-door policy, a culturally respectful environment, cultural activities and resources, and school staff respectful of parent’s educational and cultural values.

# **Youth Expectations (Self-Esteem)**

## Working Definition

An initial search of the research literature failed to yield any literature on Native American youth expectations. Instead, REL Central searched for research on the topic of self-esteem (a person’s overall evaluation or appraisal of his or her own worth). Research on self-esteem for Native American students examined bicultural identity, developmental trajectories among adolescents, and as a need that motivates Native American students to strive for school success. For this topic, we included only studies that address self-esteem in relation to Native American students.

## Research Studies Reviewed

Three research studies were found. The first study used a longitudinal design to estimate a latent growth curve (Whitesell et al., 2006). The second study was a longitudinal qualitative study (McInerney & McInerny, 2000). The third study was a case study of a Northeastern tribe (Brown & Smirles, 2005). The research, although limited, speaks to the importance of self-esteem for Native American adolescents.

## Findings

In a longitudinal qualitative study of school motivation and achievement, the need for self-esteem was identified by Native American high school students as a motivator to strive for school success (McInerney & McInerny, 2000). Whitesell et al. (2006) sought to provide a picture of self–concept development in a Native American adolescent population by examining natural developmental trajectories of personal and collective self-concept. Personal self-concept was generally positive and showed significant, although moderate, gains across adolescence.

Thus, limited research supports the importance of self-esteem for Native American students but there is little guidance in the literature for developing or sustaining it.

# **Increasing Reading and Mathematics Achievement Levels**

## Working Definition

Increasing reading and mathematics achievement (improvement in a student’s knowledge and skills in these subjects) includes studies of programs that seek to improve academic outcomes. This review includes only studies or reports that specifically apply to Native American students.

## Research Studies Reviewed

Four studies related to Native American students’ reading and mathematics achievement were found. Trumbell et al. (2002) report that certain instructional sequences are successful for teaching mathematics to Native American students. The recommended instructional sequence builds on Native American students’ intuitive and ethnomathematical knowledge. Ethnomathematical knowledge includes forms of mathematics embedded in culturally linked activities in everyday life and can provide critical foundations for students.

Apthorp et al. (2003) reviewed research and related literature which included case study reports and program evaluation reports to summarize evidence on the effectiveness of different instructional practices for helping Native American students meet standards. Report findings about the effectiveness of culturally congruent practices for Native American student achievement in reading and mathematics were indeterminate.

Hilberg et al. (2000) tested the effectiveness of a standards-based instructional method to improve the achievement of at-risk students in a Native American mathematics classroom. The instructional method was based on the Center for Research on Education, Diversity & Excellence (CREDE) standards for Effective Pedagogy which focuses on language development, teachers and students producing together, and higher-order reasoning. Students in these classrooms learned more mathematics than in traditional approaches. SRA/McGraw-Hill (2006) reports a case study about a Native American school which successfully used a Reading First grant to implement direct instruction and increase reading achievement scores throughout grades K-3.

## Additional Resources

The IES Practice Guides, available through the What Works Clearinghouse, provide practical recommendations for educators to help them address the challenges they face in their classrooms and schools. Developed by a panel of nationally recognized experts, the Practice Guides consist of actionable recommendations, strategies for overcoming potential roadblocks, and an indication of the strength of evidence supporting each recommendation. Practice Guides relevant to reading and mathematics for K-12 grades provide resources reflecting both current research and expert recommendations. Below is a brief description of the relevant practice guides available from the U.S Department of Education’s Institute of Education Sciences’ website.

## *Reading*

[*Improving Reading Comprehension in Kindergarten through 3rd Grade*](javascript:__doPostBack('ctl00$ContentPlaceHolder1$gvPGs$ctl03$lnkbutPDF',''))

This Practice Guide recommends five specific steps that teachers, reading coaches, and principals can take to successfully improve reading comprehension for young readers (Shanahan, Callison, Carriere, Duke, Pearson, Schatschneider, & Torgesen, 2010).

[*Improving Adolescent Literacy: Effective Classroom and Intervention Practices*](javascript:__doPostBack('ctl00$ContentPlaceHolder1$gvPGs$ctl11$lnkbutPDF',''))

This Practice Guide presents strategies that classroom teachers and specialists can use to increase the reading ability of adolescent students. The recommendations aim to help students gain more from their reading tasks, improve their motivation for and engagement in the learning process, and assist struggling readers who may need intensive and individualized attention (Kamil, Borman, Dole, Kral, Salinger, & Torgesen, 2008).

## *Mathematics*

*Encouraging Girls in Math and Science*

The objective of this Practice Guide is to provide teachers with specific recommendations that can be carried out in the classroom without requiring systemic change (Halpern, Aronson, Reimer, Simpkins, Star, & Wentzel, 2007)

[*Developing Effective Fractions Instruction for Kindergarten through 8th Grade*](javascript:__doPostBack('ctl00$ContentPlaceHolder1$gvPGs$ctl02$lnkbutPDF',''))

Five recommendations intended to help educators improve students’ understanding of fractions are provided in this Practice Guide. These recommendations include strategies to develop young children’s understanding of early fraction concepts and ideas for helping older children understand the meaning of fractions and the computations involved. It also highlights ways to build on students’ existing strategies to solve problems involving ratios, rates, and proportions (Siegler, Carpenter, Fennel, Geary, Lewis, Okamoto, Thompson, & Wray, 2010)

[*Assisting Students Struggling with Mathematics: Response to Intervention (RtI) for Elementary and Middle Schools*](javascript:__doPostBack('ctl00$ContentPlaceHolder1$gvPGs$ctl07$lnkbutPDF',''))

The eight recommendations in this Practice Guide are designed to help teachers, principals, and administrators use Response to Intervention(RtI) for the early detection, prevention, and support of students struggling with mathematics (Gersten, Beckmann, Clarke, Foegen, Marsh, Star, & Witzel, 2009). The goal of this guide is to formulate specific and coherent evidence-based recommendations for use by educators addressing the challenge of reducing the number of children who struggle with mathematics by using “response to intervention”(RtI) as a means of both identifying students who need more help and providing these students with high-quality interventions (Gersten, Bechmann, Clarke et al., 2009).

# School-Community Partnerships

## **Working Definition**

Community involvement is any policy, practice or procedure aimed at producing a meaningful relationship between the school and the community, particularly formalized school-community partnerships. REL Central’s review of the research included studies of partnerships with mutual structured relationships between the school and the community, whether these relationships were formalized or not. Some programs, such as Communities in Schools, place a coordinator in the school to work with community agencies, but do not form a partnership relationship.

## Research Studies Reviewed

Research on school-community partnerships has been conducted by two national school-community partnership agencies comprised of member schools that share instruments and data from their work. Neither organization lists Native American schools among its members. However, the findings of their research may inform other groups working within Native American schools. A large body of research on school-community partnerships has been, and is being, conducted by The National Network of Partnership Schools (NNPS), established in 1996 and based at Johns Hopkins University in Baltimore (<http://www.csos.jhu.edu/p2000/index.htm>). The Network has grown to include close to 1,650 members, with membership being primarily schools, districts, as well as state education agencies. However, other types of education-oriented agencies (e.g., parent information resource centers, foundation-supported family service agencies, etc.) are also members. NNPS provides professional development and a systematic approach to community partnerships for its members, including models for the development of community partnerships, as well as evaluation of these programs. Additionally, NNPS conducts research connecting community partnerships to outcome variables such as student achievement and attendance. For the most part, their research is drawn from annual surveys conducted with NNPS member schools and districts.

Another organization conducting research on school-community partnerships is the Coalition for Community Schools located in Washington, D.C. (<http://www.communityschools.org>). It provides resources on a wide range of models and approaches that can fit into a basic community framework. The Coalition defines a school-community partnership as one or more community agencies operating within a school. As a result of their work, the Coalition reports that participants in community-school partnerships have a higher percentage of improved math and reading scores as compared to schools who are non-participants in such partnerships. The Coalition also reports improved attendance, a reduction in the dropout rate, and improved behavior indicators in schools who participate in partnerships. However, the research is not sufficiently rigorous to conclude that the school model caused the improvements.

One report, whose findings are listed below, addresses how a Tribal Education Agency in South Dakota administers a partnership with the schools on its reservation (RJS & Associates, Inc. 1999). Other tribes have engaged in national programs that include a relationship with the community. A 1998 paper from the Native American Rights Fund outlines a number of voluntary agreements among schools and tribes (McCoy, 1998).

## Findings

We found four studies that address school-community partnerships that are not specific to Native American students. Evidence to link school-community partnerships to improved student achievement does not exist at this time. Sanders (2003) organizes the literature on school-community partnerships into four types: business partnerships, university partnerships, service learning partnerships, and school-linked service integration. Only business and school-linked service integration partnerships use student achievement as a typical outcome measure. However, the research Sanders cites on business partnerships are case studies, so increases in student achievement may have been caused by other factors. Secondly, documentation of school-linked service integration initiatives has indicated benefits in behavioral and academic gains across a variety of programs. Again, there is no way to rule out other possible causes of such gains. The National Network of Partnership Schools (NNPS) and The Coalition are endeavoring to gather such evidence and may in time have more results to offer.

Two studies analyzed intermediate outcomes, which can contribute to improved student achievement, but did not examine student achievement itself. Epstein and Sheldon (2002) sought to link family and school involvement to student attendance, hypothesizing that poor attendance predicts lower achievement which may result in dropping out of school. They used data from NNPS’s annual member survey, focusing in on 12 elementary schools. The survey results are comprised of self-reported data on the nature of the programs. The researchers also reviewed standardized data on attendance. They conclude that family, school, and community partnerships can improve student attendance. Sheldon and Van Voorhis (2004) also used data from NNPS’s annual member survey. They conducted a longitudinal analysis on data from more than 300 schools to identify factors that contribute to a high quality, school-family-community program and the connections between program quality and the extent of family involvement. Again, they report that family involvement has been established as an intermediate variable related to improved student achievement. They conclude that:

…the data suggest that when schools have higher quality programs they are likely to have more parent volunteers at school, more parent representatives on school decision-making committees, and institute greater use of homework that requires parent-child interactions. Each of these outcomes brings the school, family, and community environments into closer contact with one another. This overlap, as other studies show, will ultimately benefit students (Sheldon & Van Voorhis, 2004, p. 145).

Hoggarth, Myer, & Rousey (1996) evaluated a five-year, federally funded program aimed to reduce alcoholism on the Spirit Lake Reservation in rural North Dakota. The program included development of an interagency coordinating body, establishment of family circle groups, and training of American Indian addiction counselors. The coalition was led by a community college and its members included more than 30 representatives from local schools, the Tribal Council, and various tribal and public agencies. There was strong interagency coordination in all program aspects. Evaluation data showed extensive family involvement in program activities, declines in reported alcohol use and related problems among youth, and a community-wide decline in alcohol-related offenses. Again, while not directly indicating improved student achievement, these results could lead to improved student achievement.

The Rosebud Sioux Tribe in South Dakota, through its Tribal Education Department, created a tribal education code through which all schools and programs on the reservations are regulated. An evaluation of this program found improvement in dropout rates and attendance but little progress on student achievement (RJS & Associates, inc. 1999).

## Additional Resources

Two additional resources on community partnering set a framework for school community partnerships and describe various models and make suggestions for creating and maintaining partnerships. Rubin (2002) focuses on collaborative leadership and includes a life cycle for collaborations while Hiatt-Michael’s (2003) book is more practically oriented by including partnerships with businesses, museums, universities, and a full-service community school.

A third resource, a book focused on diversity, includes one chapter on culturally responsive school–community partnerships (Ford, 2006). This chapter on culturally responsive school–community partnerships suggests elements needed for such a partnership and has recommendations for preparing educators to participate in a culturally responsive partnership. None of these resources focuses specifically on Native American schools.

**Appendix A**

# Methodology

REL Central’s librarian and researchers conducted multiple searches to identify relevant, high-quality literature for each of the seven topics. REL Central consulted bibliographic databases, including ERIC, Academic Search Premier, Education Research Complete, and ProQuest, as well as Google Scholar and IES-supported organizations and websites, including the Regional Educational Laboratories website and the What Works Clearinghouse.

The following search terms were used: student attendance, student mobility, student supports, parent involvement, community involvement, community partnerships, dropout prevention, graduation rates, high expectations, self-esteem, self-efficacy, math/mathematics achievement, reading achievement, academic achievement and graduation, and science achievement. These broad topics were first searched and then narrowed by using the search terms Native American and/or American Indian. Searches were conducted for literature published between 2000 through 2010; however, works from earlier years were included if no literature from 2000 to 2010 existed for a given topic.

Articles were first reviewed to determine the relevance of the article to the topic and determine whether or not they included academic outcomes for Native American students. Because the focus of the review was to examine impacts on student achievement, any article that did not include student achievement data was not immediately reviewed. However, if the research on the topic was limited, articles that discussed other outcomes (i.e., dropout rates, attendance, and self esteem) or provided relevant information on the topic were included. The research articles included in this review varied in type and rigor and included meta-analyses, literature reviews, and single studies that incorporated a variety of methods (i.e., randomized controlled trials, descriptive research). The method used, as well as how it was used, determines the nature of the conclusions that can be drawn from this review. When available, we focused first on meta-analyses as an important source of research information, because they report the net results of multiple single studies.

Portions of this review of research were also reported in a review for Nebraska’s Poverty Plan program. Studies relevant to Native American students were added to this review as they were discovered.

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1. An effect size provides evidence of the magnitude of group differences. This statistic is generally considered to be “small” if it is between .20 and .50, “medium” if it is between .50 and .80, and “large” if it is greater than .80 (Cohen, 1988). The effect size is the difference between the two groups expressed in standardized units. An effect size is the mean of one group minus the mean of a second group, all divided by the pooled standard deviation. [↑](#footnote-ref-1)