

Asset Building and



Student Achievement

A Literature Review and Bibliography of
Research and Resources

by
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DEVELOPMENTAL ASSETS™ AND EDUCATIONAL ACHIEVEMENT

THE RESEARCH

More and more research is adding empirical evidence to what we know in our hearts: that the most effective learning takes place in safe, nurturing environments with caring teachers and a student sense of participation and belonging. The elements of *how, where, when* and *from whom* students learn are significant companions to *what* they learn. This document highlights the wealth of research that illustrates how important relationships, environments, and activities can be on student outcomes, and what asset-building schools are doing to increase academic achievement.

DEVELOPMENTAL ASSETS

In the world of youth development, several frameworks have been created to assist communities in fostering resilience and promoting healthy development in young people. One of the most widely used frameworks (and the one used by Alaska ICE) is the 40 Developmental Assets, a paradigm created from the research of the Search InstituteSM. Based on their extensive knowledge of the literature on resilience, prevention, and adolescent development, the Search Institute devised a survey to measure the protective factors – or “assets” – present in the lives of American adolescents (6th-12th graders). The 40 Assets framework reflects their findings on the support factors necessary to promote positive youth development¹.

ASSETS AND ACADEMICS – A FOUNDATION OF EVIDENCE

We’ve known that assets help youth development in general – it has been well documented that the more assets young people have, the more likely they are to successfully navigate difficult situations and make healthy choices for themselves². But what you may not know as well is that the presence of these assets has been correlated with how well students do in school. A recent longitudinal study from Search Institute shows a positive relationship between the number of assets a student has and his GPA³. In *Great Places to Learn* (1999)⁴, Search Institute identifies 13 of the 40 assets that schools can most directly influence: Parent Involvement in Schooling, Other Adult Relationships, Peer Influence, Interpersonal Competence, High Expectations, Caring School Climate, School Boundaries, School

¹ Search InstituteSM and Developmental AssetsTM are trademarks of Search Institute. See a full list of the Developmental Assets online at www.alaskaice.org/resources/assets/assets.php.

² See Benson, P.L. (1997). *All kids are our kids: What communities must do to raise caring and responsible children and adolescents*. San Francisco: Jossey-Bass. Also, for an extensive review on the positive outcomes associated with assets, see Scales, P.C. & Leffert, N. (1999). *Developmental assets: A synthesis of the scientific research on adolescent development*. Minneapolis: Search Institute.

³ See Scales, P.C. & Roehlkepartain, E.C. (2003). Boosting student achievement: New research on the power of developmental assets. *Search Institute Insights & Evidence*, 1(1), 1-10. Available online at <http://www.search-institute.org/research/Insights>

⁴ Starkman, N., Scales, P.C., & Roberts, C. (1999). *Great places to learn: How asset-building schools can help students succeed*. Minneapolis: Search Institute.

Engagement, Bonding to School, Academic Motivation, Homework, Reading for Pleasure, and Youth Programs.

While Search Institute offers supportive evidence based on their survey results, they present outcomes on a wide spectrum of youth development, including reduction in problem behaviors and an increase in positive attitudes and behaviors. There are numerous other scholars and practitioners contributing to this growing body of research who focus specifically on the positive correlation between building assets and improving student success in schools. In a recent literature analysis, we collected 129 research study reports, program evaluations, and literature reviews that explore the relationship between assets and academic success. Fifty-six of these documents met the criteria we had established for our review –

- The document focused on middle school and high school students.
- The document included some evidence of improved grades and/or test scores (some additional positive academic behaviors have also been included in our report).
- The document was published between 1990 and 2004 (with the exception of four studies from the 1980s).

This report presents a summary of our review and provides a foundation of evidence for how those assets specifically impact a young person's achievement in the classroom.

ORGANIZATION OF THIS PUBLICATION

As we reviewed the literature, we saw there were essentially three influential areas that can impact a student's desire to be in school and their motivation and ability to do well: the type and consistency of their **relationships**, the nurturing and encouragement they receive from their **school environments**, and the type of after-school and extracurricular **activities** in which they are engaged. We clustered the assets in groups according to these categories in order to discuss them more broadly.

In addition to the 13 assets identified above, two additional categories kept appearing as significant to student achievement: teacher behaviors/characteristics and cultural awareness/inclusion. We have added our findings in these areas to the list of assets.

Furthermore, in *Great Places to Learn*, Search Institute suggests the following five areas where schools can intentionally focus their efforts and academically benefit from asset building strategies: curriculum/instruction, organization of building and school day, co-curricular activities, community partnerships, and support services.

Based on all these factors, in the following pages you will find the discussion of results from our literature review, which has been organized in the following manner:

1. Assets
 - a. Relationships: parents, other adults, teachers, peers, interpersonal competence

- b. School Environments: high expectations, caring school climate, school boundaries, school engagement, bonding to school, academic motivation, cultural awareness/inclusion
 - c. Activities: homework, reading for pleasure, youth programs
 2. How Schools Can Help: curriculum/instruction, organization of school building and day, co-curricular activities, community partnerships, and support services.
 3. Other Helpful Resources
 4. Annotated Bibliography and Other Related Sources

ADDITIONAL NOTES

Because most of the studies reviewed in this report were not designed to be associated with specific assets, there is some overlap among the assets and how they are identified in the research. For example, it is somewhat difficult to distinguish between Caring Adults and Caring School Climate – in many of the studies a caring school climate is partly determined by the presence of caring adults in the school. In some cases a similar reference is listed in two places as it applies to both assets.

Other related sources

Included with the discussion of each asset is a section titled “other related sources.” The references listed here were cited in the studies and reports we reviewed as additional evidence of a relationship between an asset and academic achievement. However, we did not review these articles directly, and therefore cannot claim knowledge of the subjects, methods or results. While this is a less traditional format for a literature review, we feel it presents a broader lens for future reference, and we have included these citations in an attempt to provide a broader picture of the wealth of research that has been conducted in a particular area. A list of all sources cited in these sections can be found at the end of the annotated bibliography.

Most notably among the “other related sources”, we have included references to Search Institute’s in-depth literature review as published in *Developmental Assets* (Scales & Leffert, 1999). The empirical evidence included in Scales & Leffert’s review is broadly focused on *all* benefits assets have for youth development. We have noted the support they found for academic achievement here; however, their criteria included elementary school students and positive academic behaviors beyond improved test scores and grades, which is broader than the scope of our study.

Specifically focused on American Indian/Alaska Native students

Many of Alaska’s schools have significant populations of Alaska Native students. For this reason, we have included a specific category to highlight the findings from studies focused on this unique population. Many of the references are taken from major literature reviews – as in the “other related sources” category, we have included the original source in these citations as well.

We make no claims that this is an exhaustive study. There is undoubtedly more research out there, and more being produced all the time. Our intention was primarily to present a collection of evidence as a tool to promote the importance of intentional asset building as an integrated part of our schools.

DEVELOPMENTAL ASSETS

Search Institute and Alaska ICE have promoted the concept of Developmental Assets as the “building blocks” of positive youth development. The full list of Developmental Assets includes 40 building blocks, which encompasses a wide range of developmental tasks and outcomes. Thirteen of these assets have been identified by Search Institute as particularly relevant to school settings and student achievement. The following section discusses these thirteen assets and provides research-based evidence that they do, in fact, correlate positively with improved grades, test scores, and student attitudes about learning.

In addition to the thirteen assets highlighted by Search Institute, our review revealed significant support for two other important factors: teacher attitudes and behaviors, and cultural awareness, especially with Native populations. These factors have been included in our discussion of the research below.

RELATIONSHIPS

The quality and consistency of relationships in a student’s life has a significant influence on how motivated he is and how well he performs in school. The people that are important to that student are arguably the strongest persuasions on whether he values his school experience or not. Parents, other family members, teachers, mentors, other adults in the community, and peers all impact a student’s academic achievement, and research provides the following evidence for those influences.

Parent Involvement in Schooling

Parental support is one of the key influences on a student’s school success (Finn & Rock, 1997; Henderson & Mapp, 2002; Miller, 2003; Scales, Benson, Leffert, & Blyth, 2000). In our review, we found correlations between student achievement and parental involvement in schools through school activities, helping with homework, involvement with school decision-making, or having strong communication with the school. Parents also provide their children with encouragement to stay in school and be motivated about their studies. Specific associations we found include the following:

- Middle school students involved in a specific parent-involved homework program showed improved language arts grades (Epstein, 1997) and science grades (VanVoorhis, 2001).
- Among New Brunswick high schools, those where parents felt they received sufficient information from the schools also reported higher examination scores (Grobe & Bishop, 2001).
- African-American middle school students who reported both parent support and school support had higher average grades than students who had only one or neither of these supports (Gutman & Midgley, 2000).
- A longitudinal study of secondary schools found that “restructuring” (non-traditional) schools that intentionally incorporated parent volunteers as one of their strategies show students making bigger advancements in math, science, history, and reading than more traditionally-structured schools (Lee, Smith, & Croninger, 1996).

- Students who perceive high levels of parental support also exhibit higher levels of achievement motivation (Maya, 2001).
- A retrospective comparison of parent involvement and student grades showed that students whose parents had been involved in more school-related activities had consistently performed better in elementary and middle school (Miedel & Reynolds, 1999).
- Parental encouragement was the strongest influence on at-risk students' decisions to stay in school (Miller-Cribs, Cronen, Davis, & Johnson, 2002).

Other related sources

- In the research synthesis conducted by Scales and Leffert (1999)⁵, Search Institute cites these additional studies that provide evidence of parental support being associated with one or more of the following: “higher school engagement, motivation, aspirations, attendance, personal responsibility for achievement, more hours spend on homework, higher grades, and higher standardized test scores: Astone & McLanahan, 1991; Bisnaire, Firestone, & Rynard, 1990; Bogenschneider, Small, & Tsay, 1997; Cauce, Felner, & Primavera, 1982; Chavkin & Gonzalez, 1995; Christenson, Rounds, & Gorney, 1992; Cotton & Savard, 1982; Davey, 1993; Eccles, Early, Fraser, Belansky, & McCarthy, 1997; Epstein, 1987; Feldman & Wentzel, 1990; Glaser, Larsen, & Salem Nichols, 1992; Glasgow, Dornbusch, Troyer, Steinberg, & Ritter, 1997; Grolnick & Slowiaczek, 1994; Harnisch, 1985; Henderson & Berla, 1994; Keith, Reimers, Fehrman, Pottebaum, & Aubey, 1986; Kurdek, Fine & Sinclair, 1995; Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Marjoribanks, 1990; Masselam, Marcus, & Stunkard, 1990; McDonald & Sayger, 1996; Otto & Atkinson, 1997; Palmer, Dakof, & Liddle, 1993; Paulson, 1994; Rosenthal & Feldman, 1991; Ryan, Stiller, & Lynch, 1994; Scott & Scott, 1989; Steinberg, Elmen, & Mounts, 1989; Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994; Steinberg, Lamborn, Dornbusch, & Darling, 1992; Steinberg, Mounts, Lamborn & Dornbusch, 1991; Stevenson & Baker, 1987; Swick, 1988; Taylor, Phillip, Hinton, & Wilson, 1992; Visser, 1987; Wang, Fitzhugh, Westerfield, & Eddy, 1995; Wentzel, 1994; Yap & Enoki, 1994” (p. 25).

Specifically focused on American Indian/ Alaska Native students:

- Schools with high rates of successful American Indian/Alaska Native students had strong parent-teacher connections (From Strand & Peacock, 2002: Blum & Rinehart, 1997).
- Support of family members is found as significant reason for students to be motivated and stay in school (Coburn & Nelson, 1987; Silverman & Demmert, 1986) and their ability to do well in school (From Demmert, 2001: McInerney, Roche, McInerney, & Marsh, 1997).
- In a study of Ojibwa families, boys whose fathers spent more time involved in child rearing had better academics (From Demmert, 2001: Williams, Radin, & Coggins, 1996).
- Parental involvement in design and implementation of school programs was strongly associated with improved student achievement (Leveque, 1994).
- Student performance has improved in Alaska schools where parents are involved in the schools and have some part in the decision-making (From McDowell Group, Inc., 2001: Kushman, 1999; Reyhner, 2000; Yazzie, 2000).

⁵ Scales and Leffert's review included a broader spectrum of considerations; i.e. these studies may include elementary aged subject groups and a wider definition of academic achievement.

Other Adult Relationships

Caring adults outside the student's family, such as teachers and mentors, can have a significant influence on a young person's performance in school. In this review of the literature, 9 studies provided evidence of a caring adult's influence on improved grades and/or standardized test scores. In addition, 8 studies illustrate how other adults can encourage positive student attitudes, school satisfaction, academic motivation, decisions to remain in school, academic engagement, lower levels of behavior problems, and easier transitions into middle schools.

- In reviews of after-school programming, mentoring programs (such as Big Brothers/Big Sisters) were shown to have positive correlations with improved test scores and/or grades (Harvard Family Research Project, 2003; Miller, 2003).
- In a study of reasons that at-risk students stayed in school, the intervention programs most likely to influence them were mentoring/role model programs (Miller-Cribbs, Cronen, Davis & Johnson, 2002).
- Students involved in mentoring programs had better school attendance, better attitudes toward school, greater likelihood of pursuing higher education, and some gains in GPA (Jekielek, Moore, Hair, & Scarupa, 2002).
- Students who report caring and supportive interpersonal relationships in school have more positive attitudes, greater school satisfaction and higher engagement in academic work (Connell & Wellborn, 1991).
- Students who reported having support from people at school in combination with parent support had easier transitions into middle school and higher grades than students who reported support from only parents or school or neither (Gutman & Midgley, 2000).
- A longitudinal study of CA high schools comparing achievement test scores with student behaviors and student perceptions of school climate found that schools with a greater increase of test scores over time also had students reporting higher levels of caring relationships at school and meaningful involvement in the community (Hanson & Austin, 2003).
- An extensive literature review conducted by Haynes, Emmons, & Ben-Avie (1997) arrives at a convincing overall conclusion that students do better in schools with positive school climates, specifically those with positive interpersonal relations.
- Henderson & Mapp (2002) provide a review of 51 articles related to parent/community involvement in school, including several that highlight the positive influence other community members have on student achievement.
- Students who perceived strong teacher/school support exhibited higher levels of achievement motivation (Maya, 2001).
- Opportunities for shared student/staff activities has been linked to high student achievement (Schaps, 2003).

Other related sources

- Students who report caring and supportive interpersonal relationships in school have more positive attitudes and greater school satisfaction (From Klem & Connell, 2003: Battistich, Solomon, Kim, Watson & Schaps, 1996; Felner, Jackson, Kasak, Mulhall, Brand, & Flowers, 1997; Shouse, 1996) and higher academic engagement (Solomon, Battistich, Watson, Schaps, & Lewis, 2000).

- Schools that provide necessary support for students to meet expectations have high rates of academic success (From Benard, 1991; Brook, Nomuram, & Cohen, 1989; Edmonds, 1986; Levin, 1989; O’Neil, 1991; Rutter, 1979; Slavin, Karweit, & Madden, 1989).
- In their extensive review of the literature, Scales & Leffert (1999) cite these additional studies that show an association between support provided by other adults and “higher grades, more liking of school, higher IQ score, higher school completion rates, and higher math test scores: Cochran & Bø, 1989; Coon, Carey, & Fulker, 1992; Duncan, 1994; Entwisle, Alexander, & Olson, 1994; Wenz-Gross, Siperstein, Untch, & Widaman, 1997; Werner, 1993” (p. 27).

Specifically focused on American Indian/ Alaska Native students:

- Native students are more likely to do better in school when they feel connected to their parents, communities, and teachers (From Strand & Peacock, 2002; Bergstrom, Cleary, & Peacock, 2003; Whitbeck, Hoyt, Stubben, & LaFromboise, 2001).
- Support of community members and teachers motivates Native students and keeps them in school (Coburn & Nelson, 1987; Silverman & Demmert, 1986).

Teacher Behaviors/Characteristics

Teachers have a remarkably important role in student asset building and achievement. As the primary “other adult” at school, their influence is indeed significant, and for our purposes should be distinguished from the Other Caring Adults asset. Teachers appear to be most effective when students feel their teachers care about them and support them, are fair and consistent, establish clear rules, procedures and consequences, exhibit positive attitudes about students and teaching, and provide students with opportunities for participation and active learning. The following teacher behaviors and characteristics were found to be associated with academic improvements/achievement:

- Middle school students with high levels of teacher support are almost three times as likely to have high levels of school engagement (Klem & Connell, 2003).
- High schools in New Brunswick where students reported having understanding and helpful teachers also exhibited higher achievement scores (Grobe & Bishop, 2001).
- Specific teacher behaviors highlighted as related to school improvements include strong guidance, clear rules and procedures established with the consent of students, positive and negative consequences for student behavior, clear learning goals and feedback, student participation in goal-setting, taking a personal interest in students, exhibiting positive classroom behaviors toward students, and awareness and attentiveness to high-needs students (Marzano & Marzano, 2003).
- Comparing student grades to a variety of student relationships at school showed the student-teacher relationship was significantly related to GPA (Niebuhr & Niebuhr, 1999).
- Students have higher scores on standardized tests when they spent at least 15 hours per week in learning activities with teachers (in combination with other factors) (Clark, 2002).
- Academic improvements and achievements were found to be associated with teachers who build trust with their students and make personal connections with them (Schaps, 2003), show flexibility, fairness, and consistency (Cleary & Peacock,

1998), are warm, supportive, and caring (Reyhner, 1992; Schaps, 2003), and demonstrate positive attitudes about their students (Yagi, 1985).

Other related sources

- Overall student-teacher closeness in middle school contributed to higher academic achievement and lower levels of behavior problems (From Scales & Gibbons, 1996: Felner, 1992).
- Teachers who had high-quality relationships with their students had 31 percent fewer discipline problems, rule violations, and related problems (From Marzano & Marzano, 2003: Marzano, 2003).
- Data from the National Longitudinal Study on Adolescent Health suggests that, in general, adolescents tend to do better in school when they feel teachers treat students fairly and they get along with their teachers (From Strand & Peacock, 2002: Resnick, Bearman, Blum, Bauman, Harris, Jones, Tabor, Behring, Sieving, Shew, Ireland, Bearinger, & Udry, 1997).

Peer Influence

Positive peer relationships (including peer tutoring) are associated with academic competence in two studies, while negative peer associations were related to high school dropout and difficulty adjusting to middle school in another two studies. Peer tutoring has also been found to be a positive influence on student achievement.

- A student's relationship to his peers proved to be significantly related to his GPA (Niebuhr & Niebuhr, 1999).
- Association with anti-social peers increased the likelihood of high school dropout (Battin-Pearson, Abbott, Hill, Catalano, Hawkins, & Newcomb, 2000).
- Negative peer relationships contributed to absenteeism and difficulty adjusting to middle school; peer acceptance and friendships contributed to academic competence (Ladd, 1999).
- Peer tutoring has been shown as a positive influence on student achievement (Yagi, 1985).

Other related sources

- Hallinan & Williams (1990) demonstrated that "peers have considerable influence over the academic achievement of their peers" (As cited in Battin-Pearson, Abbott, Hill, Catalano, Hawkins, & Newcomb, 2000).
- Martens (1992) presents evidence that peer tutoring positively influences student achievement (From Demmert, 2001).
- An additional 5 studies were found by Scales & Leffert (1999) to show an association between positive peer influence and "higher academic achievement (Chen & Stevenson, 1995), higher math achievement (Hanson & Ginsburg, 1988), better grades (Mounts & Steinberg, 1995), and increased school competence (Cauce, 1986)" (p. 80).

Interpersonal Competence

The importance of interpersonal competence, or a student's ability to effectively interact socially, is rapidly gaining attention, especially through Social and Emotional Learning (SEL) strategies. Zins, Bloodworth, Weissberg, & Walberg (2004) published an entire book focused on the benefits of incorporating SEL into the daily curriculum. Many of the positive

outcomes are aligned with improved academic behaviors and practices. The studies reviewed here include associations between interpersonal competence and higher test scores, positive academic attitudes, and academic engagement.

- Peer acceptance and the ability to maintain friendships is correlated with academic competence (Ladd, 1999).
- Students who report getting along with their peers and teachers tend to do better in school (Strand & Peacock, 2002).

Other related sources

- “Students who report caring and supportive interpersonal relationships in school have more positive academic attitudes and are more satisfied with school (From Klem & Connell, 2003; Battistich, Solomon, Kim, Watson, & Schaps, 1996; Felner, Jackson, Kasak, Mulhall, Brand, & Flowers, 1997; Shouse, 1996); they are also more engaged in academic work” (Solomon, Battistich, Watson, Schaps, & Lewis, 2000).
- “Prosocial behavior in the classroom is predictive of performance on standardized achievement tests” (From Zins, Bloodworth, Weissberg, & Walberg, 2004; Malecki & Elliott, 2002; Welsh, Park, Widaman, & O’Neil, 2001);
- Social competence with peers and adults is linked to school success (From Miller, 2003; Wentzel, 1991; 1993).
- Scales & Leffert (1999) cite two additional studies that show an association between interpersonal competence and increased academic achievement⁶ (Arroyo & Zigler, 1995; Chen, Rubin, & Li, 1997).

⁶ Scales & Leffert combine Interpersonal Competence with Cultural Competence – these studies may address either or both assets.

SCHOOL ENVIRONMENTS

The perception students have of their school environment provides a notably important influence on student achievement rates. Schools that establish a positive, caring, and safe learning environment with fair and consistent boundaries while also nurturing an enthusiasm for learning are more likely to have higher performing students. Communicating high expectations, providing the support to meet learning goals, and creating opportunities for active student participation are also successful strategies. In addition, schools with Native student populations also benefit from devoting attention to students' cultural backgrounds and heeding the learning traditions of their pupils. See Section 2 of this report ("How Schools Can Help") for more discussion on school structuring strategies.

High Expectations

Students who report that their teachers, schools, and families have high expectations for their success, give them challenging curriculum, and provide them the support necessary to achieve these expectations are more likely to have higher grades and test scores and go on to pursue higher education. Conversely, one study indicates that low expectations negatively influence student outcomes.

- High school classes presenting college core curriculum have a higher percentage of graduates go on to higher education (California Department of Education, 1990).
- Communicating low expectations has an impact on limiting student achievement (Cotton, 1990).
- Schools in California with students reporting high expectations at school exhibited greater gains in standardized test scores over time than other schools (Hanson & Austin, 2003).
- Middle school students who experience high, clear, and fair expectations are more likely to be engaged in school and therefore are likely to demonstrate higher success rates (Klem & Connell, 2003).
- High school students who perceive high teacher and parental expectations are more likely to be academically motivated (Maya, 2001).
- Schools that established a climate of high expectations and challenging curricula demonstrated gains in mathematics achievement (Phillips, 1997).
- Common characteristics of high-performing schools indicate that all students benefit from rigorous coursework (U.S. Department of Education, 2000).
- Demanding curriculum is associated with academic benefits in numerous studies (Southern Regional Education Board, 2002).

Other related sources

- "Research has identified that schools that establish high expectations for kids – and give them the support necessary to achieve them – have incredibly high rates of academic success (From Benard, 1991; Brook, Nomuram, & Cohen, 1989; Edmonds, 1986; Levin, 1988; O'Neil, 1991; Rutter, 1979; Slavin, Karweit, & Madden, 1989)."
- Scales & Leffert (1999) also present 6 studies in their review where high expectations were associated with "positive academic performance (Christenson, Rounds & Gorney, 1992), academic achievement (Achor & Morales, 1990; Chen & Stevenson, 1995; Reynolds & Gill, 1994; Rosenthal & Feldman, 1991)...and short-term

improvement in grades and school attendance among student in high-risk situations (Wienstein, Soulé, Collins, Cone, Mehlhorn, & Simontacchi, 1991)” (p. 81).

Specifically focused on American Indian/ Alaska Native students:

- Native high school students enrolled in an intensive academic summer program produced higher abilities in math and reading, and 65% of these students enrolled in four-year college programs after high school (Kleinfeld, 1992).

Caring School Climate

School climate refers to the overall sense of support and belongingness a student feels as a result of interpersonal interactions at school. We found a wealth of research illustrating that students achieve higher grades when they feel peers and adults at their school are supportive and accepting, and they feel physically, emotionally, and psychologically safe. In addition to performance results, students in caring school climates report having more positive attitudes about school and increased school attachment and satisfaction.

- Students reporting a combination of parent and school support had higher average grades than those who reported only one or neither of these supports (Gutman & Midgley, 2000).
- There was a greater increase over time in school-wide test scores for schools that had students reporting high levels of caring relationships at school; lower test scores where students reported high levels of harassment, theft, vandalism, fighting, and feeling unsafe at school (Hanson & Austin, 2003).
- Strong correlations were found between positive school culture and academic motivation/engagement, pleasant staff/environment and high student achievement, and perceived teacher caring and higher math proficiency (among at-risk students) (Schaps, 2003).
- A safe and caring learning community increases student attachment to school, thereby positively affecting student outcomes (Osterman, 2000).

Other related sources

- Haynes, Emmons, & Ben-Avie (1997) cite nine studies to support the following statement: “We have observed that students achieve academically and develop well in communities in which collaborative interpersonal relations ensure the successful implementation of policies and programs that focus on the students’ academic and social growth” (Brookover, Beady, Flood, Schweitzer, & Wisenbaker, 1977; Brookover & Lezotte, 1979; Edmonds, 1979; Gottfredson & Gottfredson, 1989; Maduas, Airasian, & Kellaghan, 1980; Rutter, 1983; Rutter, Maughan, Mortimore, & Ouston, 1979; Shipman, 1981; Teddlie, Falkowski, Stringfield, Desselle, & Garvue, 1984).
- “Students who report caring and supportive interpersonal relationships in school have more positive academic attitudes and are more satisfied with school” (From Klem & Connell, 2003; Battistich, Solomon, Kim, Watson, & Schaps, 1996; Felner, Jackson, Kasak, Mulhall, Brand, & Flowers, 1997; Shouse, 1996).
- A follow-up study of the Child Development Project showed increased student attachment in schools that offer a safe and caring environment (From Klem & Connell, 2003; Solomon, Battistich, Watson, Schaps, & Lewis, 2000).

- Schools where students report high expectations along with the support to achieve have high rates of academic success (From Benard, 1991; Brook, Nomuram, & Cohen, 1989; Edmonds, 1986; Levin, 1988; O'Neil, 1991; Rutter, 1979; Slavin, Karweit, & Madden, 1989).
- A longitudinal study of the School Transition Environment Project provided positive academic achievement outcomes based on increased student attachment to schools with a safe and caring learning environment (From CASEL, n.d.: Felner, Brand, Adan, Mulhall, Flowers, Sartain, & DuBois, 1993).
- In their extensive review of the literature supporting assets, Scales & Leffert (1999) found 20 studies that show an association between a caring school climate and “higher grades, engagement, attendance, expectations and aspirations, sense of scholastic competence, fewer school suspensions, and undelayed progression through grades (Davis & Jordan, 1994; DuBois, Felner, Meares, & Krier, 1994; Eccles & Harold, 1993; Eccles, Lord, Roeser, Barber, & Jozefowicz, 1997; Felner, Ginter, & Primavera, 1982; Goodenow, 1993a, 1993b; Gottfredson & Gottfredson, 1989; Graham, Updegraff, Tomascik, & McHale, 1997; Grossman & Garry, 1997; Hawkins & Lam, 1987; Hayward & Tallmudge, 1995; Lunenburg & Schmidt, 1989; Marjoribanks, 1990; Maryland State Department of Education, 1990; Noguera, 1995; Patrick, Hicks, & Ryan, 1997; Roeser, Midgley, & Urda, 1996; Rutter, 1983; Ryan, Stiller & Lynch, 1994)” (p. 26).

Specifically focused on American Indian/ Alaska Native students:

- The National Longitudinal Study of Adolescent Health found that adolescents in general tend to do better in school when they feel teachers treat students fairly, they feel close to people at school, get along with their teachers, and feel that other students are not prejudiced (From Strand & Peacock, 2002: Resnick, Bearman, Blum, Bauman, Harris, Jones, Tabor, Behring, Sieving, Shew, Ireland, Bearinger, & Udry, 1997).

School Boundaries

Three studies we reviewed provided a negative correlation between student achievement and presence of violence, behavior issues, and safety threats. In other words, there is evidence of higher test scores in schools where there were lower levels of theft, vandalism, weapons possession, discipline problems, and students feeling unsafe at school.

- New Brunswick schools reported higher test scores in middle schools where teachers reported having established guidelines for student behavior and fewer problems with class disruption, and high schools where students, teachers and parents reported fewer discipline problems (Grobe & Bishop, 2001).
- Students made smaller improvements on test scores in California schools where students reported high levels of theft, vandalism, and weapon possession on school grounds, and higher levels of feeling unsafe at school (Hanson & Austin, 2003).
- Students in schools with high violence had lower math scores; student offenses (serious and non-serious) were negatively correlated with achievement gains (United States Department of Education, 2000).

Other related sources

- Scales & Leffert (1999) also cite one additional study showing an association between school boundaries and increased student achievement (Lee & Bryk, 1989).

School Engagement

School engagement behaviors, such as school attendance, class preparation, homework completion, student efforts to succeed, and avoiding classroom disruption, were positively correlated with higher school success rates in the following studies we reviewed.

- In a study of resilient at-risk high school students, Finn & Rock (1997) found that school engagement behaviors, such as school attendance, class preparation, homework completion, and avoiding classroom disruption were positively correlated with higher success rates.
- School engagement contributed meaningfully to school success (as self-reported by students on the Search Institute Attitudes and Behaviors survey) (Scales, Benson, Leffert, & Blyth, 2000).
- Schaps (2003) reports strong correlations between school connectedness and increased GPA, student positions of responsibility in school and higher achievement, and feelings of “belongingness” and academic motivation.
- Wentzel (1989) found GPA scores were positively correlated with efforts to be a successful student, do one’s very best, and get things done on time.
- In their study comparing student engagement with levels of achievement, Klem & Connell (2003) found that middle school students who were highly engaged in school (i.e. working hard on schoolwork, being prepared, and paying attention in class) were 75% more likely to do well on an achievement and attendance index and 23% less likely to do poorly on this index.

Other related sources

- In their review of the literature, Klem & Connell (2003) write “student engagement has been found to be one of the most robust predictors of student achievement (Arhar & Kromrey, 1993; Bryk & Driscoll, 1988; Connell, Spencer, & Aber, 1994; Connell & Wellborn, 1991; Finn, 1989; 1993; Finn & Rock, 1997; Hallinger & Murphy, 1986; Kim & Others, 1995; Lamborn, Brown, Mounts, & Steinberg, 1992; Mounts & Steinberg, 1995; Voelkl, 1995), specifically with regard to achieving higher grades (Goodenow, 1993; Willingham, Pollack, & Lewis, 2002) and test scores (Lee & Smith, 1993, 1995; Roderick & Engel, 2001; Willingham, Pollack, & Lewis, 2002).”

Bonding to School

A student’s feelings of attachment and connection to school were found to be associated with increased GPAs and academic engagement in three studies. In addition, students who feel more attachment to school are less likely to engage in problem behaviors, such as skipping school, negative social encounters, and drug/alcohol use.

- Students who feel more attachment to school are less likely to engage in problem behaviors, such as skipping school, negative social encounters, and drug/alcohol use (CASEL, n.d.).
- Strong correlations were found between school connectedness and increased GPA (Schaps, 2003).

Other related studies:

- In a review of the Child Development Project, students with greater attachment to school were more likely to be engaged in their academic work (From CASEL, n.d.: Solomon, Battistich, Watson, Schaps, & Lewis, 2000).

Achievement Motivation

Students who report high levels of motivation and demonstrate this motivation through efforts to succeed also exhibit higher grades and test scores, as supported by four studies in this review.

- Achievement motivation was found to contribute meaningfully to school success (as self-reported by students on Attitudes and Behaviors survey) (Scales, Benson, Leffert, & Blyth, 2000).
- In a study of out-of-school time, students that spent 8-15 hours a week engaged in learning activities and knew how to study, plan, and complete projects were more likely to have higher standardized test scores (Clark, 2002).
- Among middle school students, self-regulated motivation was positively correlated with student GPAs (Pajares, 2001).
- Higher GPAs were related to student efforts to understand things, do one's best, and be a successful student (Wentzel, 1989).

Other related studies

- In a Search Institute review of the literature, Scales & Leffert (1999) found an additional 7 studies that show an association between achievement motivation and “increased high school completion, increased enrollment in college, increased reading and math achievement test scores, and higher grades (Brooks-Gunn, Guo, & Furstenberg, 1993; Hahn, Leavitt, & Aaron, 1994; Jessor, Van Den Bos, Vanderryn, Costa, & Turbin, 1995; Paulson, Coombs, & Richardson, 1990; Wentzel, 1993; Wilson-Sadberry, Winfield, & Royster, 1991” (p. 121).

Specifically focused on American Indian/Alaska Native students:

- Schools with high rates of successful American Indian/Alaska Native students had high daily attendance, low dropout rates, and a higher percentage of college-bound students (From Strand & Peacock, 2002: Blum & Rinehart, 1997).

Cultural Awareness

Three articles and two extensive literature reviews provide notable evidence that the inclusion of Native language and culture in the classroom promote academic achievement among American Indian and Alaska Native students. Culturally relevant curriculum and teaching methods, teachers who understand and have a curiosity about their students' cultures, and involvement in Native cultural activities were also found to be influential.

- Culturally relevant curriculum (Yagi, 1985; From Demmert (2001): Brancov, 1994; Little Soldier, 1988; Martens, 1992; McCarty, Wallace, Lynch, & Benally, 1991) and teacher understanding and knowledge of students' cultures (Yagi, 1985) have all been positive correlated with Native student success.
- Inclusion of Native language and culture in the classroom promoted academic success (Reyhner, 1992; From McDowell, Inc. (2001): Lomawaima, 1995; Peacock & Day, 1995; Yazzie, 2000).

- Teaching methodologies that reflect how Native Hawaiian students learn at home resulted in greater student achievement (From Reyhner (1992): Jordan, 1984; Tharp, 1982; Vogt, Jordan, & Tharp, 1987).
- Being well grounded and connected to tribal culture was found to be an influential reason for staying in school (From Strand & Peacock (2002): Bergstrom, Cleary, & Peacock, 2003; Whitbeck, Hoyt, Stubben, & LaFromboise, 2001).

ACTIVITIES

Schools obviously have a great influence on how students spend their time during school hours, but there are also ways they can influence student achievement during non-school hours as well. In our review of the research, we found evidence that students who have regular homework assignments, spend some time reading for pleasure, and are involved in other types of extracurricular activities and programs were also demonstrating higher achievement scores in school.

Homework

Test scores and grades were proven to be higher for students who receive and complete regular homework assignments in six studies reviewed here.

- In a study of out-of-school activities, students produced higher test scores when they had been engaged in 8-15 hours per week of out-of-school learning activities (Clark, 2002).
- Middle school students enrolled in a specific parent-involvement homework program (TIPS) exhibited higher language arts grades (Epstein, Simon, & Salinas, 1997) and higher science grades (VanVoorhis, 2001).
- A study of resilient at-risk high school students found that school engagement behaviors, including effort made with homework assignments, were positively correlated with higher success rates (Finn & Rock, 1997).
- Examination scores were higher in middle schools where teachers regularly gave homework assignments (Grobe & Bishop, 2001).
- Mathematics achievement and overall school attendance were higher in programs that included rigorous classroom work and homework (Phillips, 1997).

Other related sources

- Scales & Leffert (1999) present 4 additional studies that draw an association between time spent on homework and “higher achievement test scores, grades, or both (Corno, 1996; Keith, Reimers, Fehrmann, Pottebaum, & Aubey, 1986; Leone & Richards, 1989; Thomas, Bol, Warkentin, Wilson, Strage, & Rohwer, 1993)” (p. 123).

Reading for Pleasure

Research on this topic is a bit slim, especially for middle school and high school students. One document we reviewed provided a case study of a reading program in rural Alaska where all members of the community were involved in encouraging students to read. As a result of this effort, achievement test scores were raised (Kleinfeld, 1992).

Other related sources

- Scales & Leffert (1999) also highlight two studies that associate reading with “increased reading achievement (Lee, Winfield, & Wilson, 1991; Smith, 1990)” and

one study that is associated with “increased overall academic achievement (Smith, 1990)” (p. 123).

Youth Programs

Involvement in formal after-school programs, extracurricular activities, and meaningful community activities have all been linked to higher grades and test scores, as supported by six studies we reviewed, and within those five, numerous additional studies are cited as relevant.

- In an evaluative study of formal community schools programs, 73% of those with a learning and achievement focus and were found to have positive influence on students’ school performances (Dryfoos, 2000).
- Eccles & Barber (1999) found that participation in extracurricular activities is a predictive factor in increased GPAs, school attachment, and full-time college enrollment at age 21. However, only volunteerism and church involvement among all students and involvement in performance arts among male students were associated with lower levels of alcohol and drug use.
- California schools with students reporting high levels of involvement in meaningful community activities (in combination with other factors) exhibited higher test score gains over time (Hanson & Austin, 2003).
- In a review of 27 evaluative studies of formal national and local after-school programs, 17 were shown to have positive correlation with increased test scores and/or grades (Harvard Family Research Project, 2003).
- Linking assets to school success (as self-reported by students on the Attitudes and Behaviors survey) found youth programs to be a predictor school success for all demographic groups except African-Americans (Scales, Benson, Leffert, & Blyth, 2000).

Other related sources

- Henderson & Mapp (2002) conducted a review of 51 studies regarding the influence of parent and community involvement on student success, including evaluation of formal youth programming. Many of these studies provide evidence that the program promoted academic success.
- Involvement in formal after-school programs has been linked to improved grades (From Miller, 2003: Baker & Witt, 1996; Brooks, 1995; Cardenas, 1992; Carlisi, 1996; Hamilton & Klein, 1998; Schinke, Orlandi, & Cole, 1992).
- “Participation in extracurricular activities has been linked to increases in GPA, school engagement, and educational aspirations” (From Eccles & Barber, 1999: Lamborn, Brown, Mounts, & Steinberg, 1992; Newmann, Wehlage, & Lamborn, 1992; Winne & Walsh, 1980).
- In Scales & Leffert’s (1999) review of the literature, five additional studies are cited as showing an association between youth programs and “increased academic achievement (Hanks & Eckland, 1976; Posner & Vandell, 1994), increased grade-point average among 11th graders (Barber & Eccles, 1997)...and improved protection of students at risk of dropping out of school (Mahoney & Cairns, 1997; Zill, Nord, & Loomis, 1995)” (p. 101).

HOW SCHOOLS CAN HELP

As we have determined in the previous section, students and schools reap great benefits when the school environment is intentional about building assets. However, rather than thinking of asset building as another program or responsibility added to already overburdened schools, it is actually best to think of it as an integral part of all the current activities and goals of a school. In *Great Places to Learn* (Starkman, Scales, & Roberts, 1999), the following five school strategies are offered as areas of the school system that could be structured with asset building as an intentional focus. In our review of the literature, we found convincing evidence that many of these strategies are also correlated with improved academic achievement.

Curriculum/Instruction

Schools can foster asset development in their consideration of what is taught and how it's taught. Examples of research-supported strategies include: implementing a variety of teaching techniques; having high expectations for students while also providing the support to accomplish them; engaging, activity-based learning techniques; cooperative learning (especially with presence of both group goals and individual accountability for the groups); providing a caring learning environment; using teaching methods that value individual student strengths; grouping students of mixed abilities; giving clear instructions; and creating opportunities for active student participation in discussion and presentation of content. Specific strategies and associations are as follows:

High Expectations

- Schools with higher numbers of students reporting high expectations at school had higher overall scores on standardized tests in California (Hanson & Austin, 2003).
- Caring, well-structured learning environments with high, clear, and fair expectations are related to highly engaged students, and high levels of engagement are associated with higher attendance and test scores (Klem & Connell, 2003).
- A high school program that taught college core curriculum resulted in a higher percentage of students going on to higher education when compared to a control group (California Department of Education, 1990).
- Students who perceive high expectations from their schools as well as the support to achieve them have demonstrated higher achievement than those who report lower expectations and/or the support to accomplish classroom goals (Klem & Connell, 2003).

Cooperative Learning

- Successful cooperative learning has been shown to produce bigger advances in math, science, history, and reading (Lee, Smith, & Croninger, 1996), and has positive effects on students of all achievement levels especially if it includes both group goals and individual accountability (Manning & Lucking, 1991).
- In a review of 52 studies on cooperative learning, 63% reported significantly higher achievement, 13% reported no difference, and only 3 of the studies showed cooperative learning classroom scores as lower than classrooms using traditional methods. Particular attention to both group goals and individual accountability consistently produced positive results (Slavin, 1995).

Teaching Techniques

- Teaching methods that at least partially value individual student strengths (Sternberg, 2001) and inclusion of students' individual interests in the curriculum (Southern Regional Education Board, 2002) are associated with academic success.
- Mixed-ability groupings with clear instructions and structured outlines are effective in increasing achievement for students of all abilities (Barley, Lauer, Arens, Apthorp, Englert, Snow, & Akiba, 2002).
- Schools that incorporated independent study time and mixed-ability classes showed bigger academic advances in math, science, history, and reading (Lee, Smith, & Croninger, 1996).
- A review of effective classroom management techniques includes having an appropriate balance between teacher dominance and student opportunities for cooperation, as well as teacher awareness and attention to high-needs students (Marzano & Marzano, 2003).
- Teachers who use variety of teaching techniques, i.e. analytical, creative, and practical methods in addition to traditional memory/rote, are more likely to see improvements in their students' progress (Sternberg, 2001; Sternberg, Torff, & Grigorenko, 1998).
- Classroom rigor and amount of instruction time has been shown to influence student success (Phillips, 1997).
- Democratic, goal-directed classrooms give students greater opportunities for participation and have been shown to improve student performance (Schaps, 2003).
- Students in smaller class sizes achieved greater academic success (Finn & Rock, 1997).

Other related sources

- Johnson & Johnson (1989) provide a comprehensive review of the academic benefits of cooperative learning (As cited in Manning & Lucking, 1991).

Specifically focused on American Indian/ Alaska Native students:

- Open-ended questioning, student participation in discussions with peers and teachers, and inclusion of Native language and culture all led to increased student responsiveness and articulateness (From Demmert, 2001: McCarty, Wallace, Lynch, & Benally, 1979).
- Attention to the unique learning styles of Native students promotes greater student success. Some of these styles include preferences for understanding the whole concept before digesting pieces of content; visual instead of verbal presentation; the opportunity to observe a learning goal first and then duplicate it; and cooperative learning (Hillberg & Tharp, 2002).
- A study of native Hawaiian students found increased academic achievement when the teaching methodologies incorporated more traditional teaching strategies (From Reyhner, 1992: Jordan, 1984; Tharp, 1982; Vogt, Jordan, & Tharp, 1987).

Demmert (2001) provides evidence that the following classroom strategies are associated with improved school performance among Native students:

- Highly engaging, activity-based learning and cooperative learning (Cleary & Peacock, 1998);

- Informal classroom organization and flexible furniture arrangement (Brancov, 1994; Little Soldier, 1988);
- Providing a “real world” purpose for the assigned school work (Cleary & Peacock, 1998); and
- Group work and cooperative learning (Brancov, 1994; Cleary & Peacock, 1998; Larimore, 1990; Little Soldier, 1988; Swisher, 2000) as well as opportunities for individualized instruction (Malmberg, 1983).

Organization and structure of school building and school day

Strategic decisions about a school’s structure and schedule can have an impact on student achievement. Specific examples found in our literature review include: school-wide stress on accomplishment; positive recognition of individual students; flexible student groupings; time structures and activities that allow for personal relationships among students and staff; interdisciplinary team teaching and more common planning time for teachers; effective, trustworthy leadership; established behavior guidelines and consistent consequences; student positions of responsibility within the school; frequent monitoring of instruction and teachers. The Caring School Climate asset is very closely related to this strategy and was discussed earlier in this report. Specific findings include the following:

- Schools with higher numbers of students reporting high levels of caring relationships at school had higher overall scores on standardized tests in California (Hanson & Austin, 2003).
- Middle schools with established behavior guidelines and fewer class disruptions also had higher test scores; high schools with fewer discipline problems also reported higher achievement levels (Grobe & Bishop, 2001).
- “Restructuring” schools (those that incorporate strategies such as students keeping the same homeroom throughout high school, staff collectively solving school problems, and interdisciplinary teaching teams) exhibited higher academic advances than more traditionally organized schools (Lee, Smith, & Croninger, 1996).
- Shared vision, or a clear sense of purpose with buy-in from the school staff and students, is key to successful school organization (United States Department of Education, 2000).
- Positive disciplinary environments and orderliness enhance student learning (United States Department of Education, 2000).

Other school-wide strategies that have been associated with improved student performance include:

- Flexible student groupings (Miles & Darling-Hammond, 1998);
- Time structures that allow for personal relationships (Miles & Darling-Hammond, 1998);
- More common planning time for teachers (Miles & Darling-Hammond, 1998);
- Longer and more varied blocks of instructional time (Miles & Darling-Hammond, 1998);
- Creative definition of staff roles and workday (Miles & Darling-Hammond, 1998);
- Shared student/staff activities (Schaps, 2003);
- Student positions of responsibility in school (Schaps, 2003); and
- Low student-adult ratios/smaller class sizes (Finn & Rock, 1997).

Other related sources

- In their literature review, Haynes, Emmons, & Ben-Avie (1997) cite the following sources as evidence that positive school climate correlates with student achievement (Brookover, Beady, Flood, Schwietzer, & Wisenbaker, 1977; Brookover & Lezotte, 1979; Edmonds, 1979; Gottfredson & Gottfredson, 1989; Maduas, Airasian, & Kelleghan, 1980; Rutter 1983; Rutter, Maughan, Mortimore, & Ouston, 1979; Schaps, 2003; Shipman, 1981; Teddlie, Falkowski, Stringfield, Desselle, & Garvue, 1984).

Specifically focused on American Indian/ Alaska Native students:

- Strong administrator, vocationally-oriented components, low student-adult ratios, and smaller class sizes have all been associated with improved academic performance among Native students (From Demmert, 2001; Malmberg, 1983).
- School-wide commitment to and promotion of a student reading program raised student achievement scores in the Yukon-Koyukuk school district (Kleinfeld, 1992).

Co-curricular Programs

Schools can be a resource and encouragement for student involvement in before- and after-school activities and programs. In addition to providing the traditional selection of extracurricular programs and activities, schools are finding creative ways of partnering with community youth programs. For example, some schools can provide space for programming, which is a resource many youth programs lack. See “Youth Programs” (above) for a summary of the research that supports the connection between co-curricular programming and academic achievement.

Community Partnerships

Schools with active parent and community involvement foster stronger connections across the community and, consequently, with their students. In the first section of this report, we provided evidence that the involvement of parents and other caring adults has significant influence on student achievement. Some examples of ways schools can foster these connections are to involve parents and community member as volunteers, decision-makers, or in other participatory roles at the school; partner with local youth clubs and recreation programs; or provide opportunities for student involvement in meaningful community activities, such as service-learning projects. The research we reviewed provided the following evidence:

- Community/parent involvement in local schools correlates positively with student achievement (Clark, 1983).
- Schools with higher numbers of students reporting significant participation in meaningful community activities had higher overall scores on standardized tests in California (Hanson & Austin, 2003).
- An extensive literature review conducted by Henderson & Mapp (2002) highlights numerous studies demonstrating a relationship between student-community interaction and improved school performance.

Specifically focused on American Indian/ Alaska Native students:

- Parent/community involvement in school decision-making has positive effects on student achievement among Native students (Demmert, 2001; McDowell Group, Inc., 2001).
- Strand & Peacock (2002) cite several studies conducted with Native students that show the importance of connections to communities in nurturing school performance.

Support Services (i.e. health, counseling, etc.)

While our focus in this review didn't uncover many studies to correlate supportive services with academic achievement, it isn't difficult to imagine how the presence of counseling, health services, and mediation programs could be helpful in building a caring school climate. The literature review focused on American Indian and Alaska Native students conducted by Demmert (2001), highlights associations between school success and the following services:

- Counseling
- Peer tutoring
- Hardship assistance

HELPFUL RESOURCES

For more resources and information on the significant influence asset development has on student achievement, check out the following websites:

Alaska Initiative for Community Engagement:

In addition to the full report of this literature review, find other resources and ideas for supporting students. Look under “resources” for the full report.

<http://www.alaskaice.org>

Search Institute is an independent nonprofit research organization that provides leadership, knowledge, and resources in the area of youth development, most notably through the Developmental Assets framework.

<http://www.search-institute.org>

The Collaborative for Academic, Social, and Emotional Learning (CASEL) is an organization dedicated to providing information and resources on incorporating social and emotional learning as an essential part of every child’s education. <http://www.casel.org>

AEL, Inc. is a nonprofit corporation providing education research, development, professional development, and consulting services in the K-12 arena. Their website includes links to documents from the U.S. Department of Education’s Educational Resources Information Center (ERIC), including a specific grouping of American Indian and Alaska Native documents, and other electronic library resources.

<http://www.ael.org>

IndianEduResearch.net provides a collection of resources in educational research and development focused on American Indian and Alaska Native populations. They also provide the opportunity for searching ERIC.

<http://www.indianeduresearch.net/>

Mid-continent Research for Education and Learning provides a comprehensive approach to educational information and strategies by offering a variety of services. Resources, policy studies, and significant information about school standards are available on their website.

<http://www.mcrel.org>

National Youth Development Information Center, a project of the National Collaboration for Youth, includes numerous resources on a variety of youth development topics, including school success.

<http://www.nydic.org>

ANNOTATED BIBLIOGRAPHY

Barley, Z., Lauer, P.A., Arens, S.A., Apthorp, H.S., Englert, K.S., Snow, D., & Akiba, M. (2002). *Helping at-risk students meet standards: A synthesis of evidence-based classroom practices*. Report prepared for the Office of Educational Research and Improvement by the Regional Educational Laboratory, Mid-continent Research for Education and Learning. Available online at <http://www.mcrel.org/topics/productDetail.asp?topicsID=14&productID=116> A synthesis of research studies focused on classroom-based practices that are effective in assisting low-achieving students. The authors found the following six general strategies in the research, which are explored in depth in this publication: general instruction, cognitively oriented instruction, student grouping structures, tutoring, peer tutoring, and computer-assisted instruction. Particularly relevant to our review is their discussion of student grouping techniques and the recommended use of mixed-ability groupings.

Battin-Pearson, S., Abbott, R.D., Hill, K.G., Catalano, R.F., Hawkins, J.D., & Newcomb, M.D. (2000). Predictors of early high school dropout: A test of five theories. *Journal of Educational Psychology*, 92 (3), 568-582.

As this is a study focused on the cause of high school dropouts, it contains a broad discussion of the elements leading to a student's withdrawal from school as opposed to those elements that foster school success. However, results of this study support the notion that poor academic achievement is the strongest predictor of dropping out of school. Also, within the literature review, the authors highlight several correlations between poor school performance and dropping out.

Benard, B. (1991). *Fostering resiliency in kids: Protective factors in the family, school, and community*. Available online from the resource library of Northwest Regional Educational Laboratory's Comprehensive Center, Region X, at http://nwrac.org/pub/library/f/f_foster.pdf.

This review of research supports concepts of resilience and protective factors and provides a general overview of the field and definitions of terms. Benard presents an exploration of how certain protective factors (caring and support, high expectations, and youth participation) are fostered within the family, school, and community. Regarding the school environment, this review highlights studies that show a relationship between high expectations (with support) and academic achievement, less failure, and more college-bound students.

Brezovsky, S.H. (2002). *The impact of students' enjoyment of school on their perceptions of their school experience*. Paper presented at the annual conference of the New England Educational Research Organization, Northampton, MA, April 24-26. University of Southern Maine: Center for Educational Policy, Applied Research, and Evaluation. Available online at www.usm.maine.edu/cepare/pdf/ts/neeroscott.pdf.

Brezovsky's study focuses on the relationship between a student's level of enjoyment of school and his experience of and attitudes toward school. Results indicate that students who have a higher level of enjoyment are more likely to be engaged in their learning, feel they have supportive relationships with adults at the school, and plan to attend four-year colleges

after high school. While these are indicators of academic success, this study does not link the results to actual school performance records.

California Department of Education (1990). *Enhancing opportunities for higher education among underrepresented students*. Sacramento: author.

This document includes the report on a high school program that presents college core curriculum. Results indicated that a greater percentage of graduates from this program were pursuing higher education than their comparative peer groups.

Clark, R.M. (2002). Ten hypotheses about what predicts student achievement for African-American students and all other students: What the research shows. In Allen, W.R. et al. (Eds.), *African American education: Race, community, inequality and achievement – A tribute to Edgar G. Epps*. Oxford, UK: Elsevier Science.

This article reports on a study of 1,058 low- and high-achieving students. Results of the study indicate that student achievement is highly related to how students, parents, and teachers use their time, as well as to the presence of adult mentors in student lives.

Coburn, J., & Nelson, S. (1987). *Characteristics of successful Indian students: Research and development programs for Indian education*. Portland, OR: Northwest Regional Educational Laboratory. (ERIC Document Reproduction Service No. ED 297 909)

In a survey of Native students who completed high school, 85% identified teachers as a strong influence on their school success. Attributes of these influential teachers include caring and positive attitudes, honesty, concern, respect, and patience. High expectations from teachers, parents, and friends were also motivating to these students. In addition, counselors and coaches were listed as important figures.

Collaborative for Academic, Social, and Emotional Learning. (nd). *SEL and academic performance*. Available online at

www.casel.org/downloads/Safe%20and%20Sound/2B_Performance.pdf

A research brief that discusses the correlation between a safe and caring learning environment and student attachment to school, which in turn positively affects student educational outcomes. Another highlighted topic is the association between student attachment to school and a decrease in problem behaviors.

Cotton, K. (1996). *School size, school climate, and student performance*. Northwest Regional Educational Laboratory: School Improvement Research Series, Close-Up #20. Available online at <http://www.nwrel.org/scpd/sirs/10/c020.html>

Cotton's literature review on the relationship between school size and student performance provides extensive evidence that smaller schools (400-800 students at the secondary level) produce higher achieving, more satisfied students. Cotton reports that of the studies she reviewed, half found no difference in student outcomes between large schools and small schools, and the other half indicated that small schools have superior results. In addition to student achievement, Cotton discusses the advantages of small schools with regard to numerous other factors, including extracurricular participation, student attitudes and attendance, dropouts, and teacher attitudes.

Cotton, K. (1990). *Expectations and student outcomes*. Northwest Regional Educational Laboratory: School Improvement Research Series, Close-Up #7. Available online at <http://www.nwrel.org/scpd/sirs/4/cu7.html>

This review of literature explores the correlation between high expectations and student achievement and attitudes. The author discusses the impact of teacher expectations as well as school-wide expectations, and the relationship between high expectations and effective schools. Findings indicate there is a significant body of research to support this concept. Several of the studies illustrate that communicating low expectations has a greater impact on limiting student achievement than communicating high expectations has on increasing student achievement.

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

Available online at <http://www.ael.org/pdf/demmert.pdf>

An extensive literature review presenting studies associated with improved academic performance of American Indian and Alaska Native students. Most notably, Demmert discusses teacher characteristics that enhance academic achievement, the influence of parents and communities on school success, and the positive effects of including native languages and cultures as part of the student's education.

Dryfoos, J.G. (2000). *Evaluations of community schools: Findings to date*. Hastings-on-Hudson, NY: Coalition for Community Schools. ERIC Document Reproduction Service No.

ED450204. Available online at

<http://www.communityschools.org/evaluation/evalprint.html>.

This paper briefly reviews 49 evaluations of community-school initiatives, some large in scale with many local sites. It found that 36 programs reported academic gains for students they serve. The programs also reported improvements in student behavior and development, family well-being, and community life.

Eccles, J.S., & Barber, B.L. (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Journal of Adolescent Research*, 14 (1), 10-43.

Eccles and Barber conducted a longitudinal study to examine the benefits and risks associated with participation in various types of extracurricular activities. Results are consistent with previous studies: participation in extracurricular activities is a predictive factor in school success (e.g. increased GPAs, school attachment, and full-time college enrollment at age 21). Of the five types of activities identified in this study, only prosocial activities (volunteerism and church involvement) among all students and involvement in performance arts among male students are associated with lower levels of alcohol and drug use. Involvement in sports is related to positive academic outcomes, but also increased problem behaviors (such as drug and alcohol use).

Epstein, J.L., Simon, B.S., and Salinas, K.C. (1997). *Involving parents in homework in the middle grades*. Baltimore, MD: Johns Hopkins University. Phi Delta Kappan Research Bulletin, No. 18. Available online at <http://www.pdkintl.org/edres/resbul18.htm>

This is a study of Teachers Involve Parents in Schoolwork (TIPS), an interactive homework process developed by researchers at Johns Hopkins University and teachers in Baltimore and

the District of Columbia. It found that 683 Baltimore middle-grade students' test scores and grades in writing and language arts tended to improve when their families participated in TIPS learning activities at home.

Finn, J.D. & Rock, D.A. (1997). Academic success among students at risk for school failure. *Journal of Applied Psychology, 82* (2), 221-234.

This investigation focused on the educational resilience of urban African-American and Hispanic 10th-12th graders from low socio-economic households. Their study found that school engagement behaviors, such as "coming to class and school on time, being prepared for and participating in class work, expending the effort needed to complete assignments in school and as homework, and avoiding being disruptive in class" were positively correlated with higher success rates for these students. Positive self-esteem and an internal locus of control were also indicators of greater success rates.

Grobe, C., & Bishop, G. (2001). School attributes and student achievement. *Education Analyst, 4* (3). Found online at http://www.saeec.bc.ca/2001_4_3_2.html

In this survey of over 70,000 New Brunswick students, teachers, and parents, the researchers focused on correlates between each of these group's perceptions and student achievement. Examination scores were higher in middle schools where students indicated that their teachers summarized the lessons and gave regular homework assignments. Schools with established guidelines for student behavior and fewer problems with class disruption (as reported by teachers) also had higher test scores. The strongest correlation to achievement on the parent survey was parent satisfaction with student progress.

At the high school level, achievement was higher in schools where teachers, students, and parents reported discipline was not a problem and where parents felt they received sufficient information about their children. Students at these schools also felt their teachers were understanding and helpful.

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* (2), 223-248.

This study of African-American students transitioning into middle school found that the single most important factor in their achievement was a sense of confidence that they could do well in school. In addition, the support of parents and adults at school also had a significant positive effect on student grades.

Hanson, T.L., & Austin, G. (2003). *Student health risks, resilience, and academic performance in California: Year 2 report, longitudinal analyses*. Los Alamitos, CA: WestEd.

This report presents results of a longitudinal study conducted from 1998 to 2002 in California, which compares school-level changes in achievement test scores with health risk and resilience factors as measured by the California Healthy Kids Survey. Results indicate the following:

Schools with high percentages of students who are regularly involved in physical activities and healthy eating show higher test score gains than other schools.

Schools where students reported high levels of harassment, theft, vandalism, fighting, and feeling unsafe exhibited lower test scores.

Schools had greater increase in test scores where students reported high levels of caring relationships and high expectations at school as well as meaningful involvement in the community.

Measures of external assets were positively correlated with concurrent test scores; however, external assets were not as related to annual gains in test scores.

Harvard Family Research Project. (2003). *Out-of-school time evaluation snapshot: A review of out-of-school time program quasi-experimental and experimental evaluation results*. Harvard Graduate School of Education: Harvard Family Research Project. Available online at

<http://www.gse.harvard.edu/~hfrp/projects/afterschool/resources/snapshot3.html>

The Harvard Family Research Project reviewed 27 quasi-experimental and experimental studies of national and local after-school programs for elementary and middle school children. A summary of the studies' significant results are summarized and presented in this report. Of the 27 programs reviewed, 17 were shown to have positive correlation with increased student achievement test scores and/or grades. Other positive academic behaviors (such as homework completion) were also analyzed, as were other youth development outcomes.

Haynes, N.M., Emmons, C., & Ben-Avie, M. (1997). School climate as a factor in student adjustment and achievement. *Journal of Educational and Psychological Consultation*, 8 (3), 321-329.

This article discusses the concept of school climate and its impact on student perceptions and performance in school. In addition to highlighting the responses to a student perception survey, the authors provide an earlier foundation of research supporting positive school climate as an important influence on student achievement.

Henderson, A.T. & Mapp, K.L. (2002). *A new wave of evidence: The impact of school, family, and community connections on student achievement*. Annual Synthesis from the Southwest Educational Development Laboratory's National Center for Family and Community Connections with Schools. Available online at <http://www.sedl.org/connections/resources/evidence.pdf>

This research synthesis reviews 51 articles related to the influence of parent and community involvement on student success. The authors provide consistent and extensive evidence that students with involved parents and engaged communities tend to have better school outcomes, including better grades and test scores. This review also includes a discussion of parent and community organizing efforts to improve schools. Research-based recommendations for how the school can engage families and community groups in improving student achievement are also included.

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. ERIC Digest Special Edition, EDO-RC-02-03. Available online at <http://www.indianeduresearch.net/edorc02-03.htm>.

An ERIC Digest brief highlighting research on the learning styles of Native students and how they differ from traditional educational methods. The authors provide research foundation for their claim that among American Indian and Alaska Native students there is a tendency toward the following learning styles: a) a preference for understanding the whole context of a subject before understanding the pieces; b) a visual style of processing information (as opposed to a verbal style); c) a preference for a more reflective style in processing information (observing first, then doing); and d) a preference for a collaborative approach to task completion (cooperative learning).

Jekielek, S.M., Moore, K.A., Hair, E.C., & Scarupa, H.J. (2002). Mentoring: A promising strategy for youth development. *Child Trends Research Brief*, pp. 1-8. Available online at <http://www.childtrends.org/PDF/MentoringBrief2002.pdf>

This article presents results from a combination of studies conducted on the effectiveness of mentoring programs. Educational achievement is one of the outcomes highlighted in the study. Students involved in mentoring programs had better school attendance, better attitudes toward school, and greater likelihood of pursuing higher education. Impact on grades is not as conclusive; however, there is indication that some programs are associated with students' gains in GPA.

Kleinfeld, J.S. (1992). Alaska Native education: Issues in the Nineties. Fairbanks: University of Alaska, Center for Cross-Cultural Studies. Available online at http://www.alaskool.org/native_ed/research_reports/nineties_issues/kleinfel.pdf.

In this article, amidst a discussion of several issues related to education in Alaska, Kleinfeld presents a summary of successful programs. Two relevant examples include the Yukon-Koyukuk's River Reader Program, a systemic, community-wide effort which boosted student reading and raised achievement test scores at a nominal cost to the district. Another successful program highlighted in this article is the Rural Alaska Honors Institute, an intensive academic summer program at the University of Alaska Fairbanks. An evaluation of this program found significant increases in math and reading ability among students attending the RAHI summer session, and a higher percentage of students went to college and completed a four-year degree.

Klem, A.M., & Connell, J.C. (2003). *Relationships matter: Linking teacher support to student engagement and achievement*. Philadelphia: Institute for Research and Reform in Education.

As foundation for their study, Klem and Connell first present compelling evidence that student engagement is a reliable predictor of student achievement. Klem & Connell's study, as described in this article, compared levels of student engagement (i.e. working hard on schoolwork, preparedness, paying attention in class) to levels of achievement using a threshold method of analysis. Results show that students with high levels of engagement in school were 75% more likely to do well on the attendance and achievement index. Also included in this study is a measure of teacher support, with results showing that students with high levels of teacher support are more likely to be highly engaged in their learning.

Ladd, G.W. (1999). Peer relationships and social competence during early and middle childhood. *Annual Review of Psychology*, 50, 333-59.

Ladd conducts a review of literature primarily focused on grade school students' peer relationships and how negative relationships correlate with absenteeism and difficulties adjusting to middle school. Also included are studies that show how peer acceptance and friendships contribute to academic competence.

Lee, V.E., Smith, J.B., & Croninger, R.G. (1996). Restructuring high schools can improve student achievement. *WCER Highlights*, 8 (1). Available online at http://www.wcer.wisc.edu/Publications/WCER_Highlights/Vol.8_No.1_Spring_1996/Restructuring_high_schools.html

As part of the Center on Organization and Restructuring of Schools at the University of Wisconsin – Madison, the authors analyzed academic data from 800 secondary schools collected in 1988, 1990, and 1992 with the National Education Longitudinal Survey. The schools were characterized as traditional, moderate, or restructuring, depending on if they were engaged in some type of school reform and to what extent those reforms were taking place.

Results indicate that restructuring schools show students making bigger academic advances in math, science, history, and reading. Furthermore, there is less of a gap between socioeconomic groups in these schools.

Schools characterized as “restructuring” schools demonstrated higher levels of social organization (collective responsibility for student learning). Practices in these schools include students keeping the same homeroom throughout high school, staff collectively solving school problems, parents volunteer in schools, independent study opportunities, interdisciplinary teaching teams, mixed-ability classes in math/science, and a cooperative learning focus.

Leveque, D.M. (1994). *Cultural and parental influences on achievement among Native American students in Barstow unified school district*. Paper presented at the National Meeting of the Comparative and International Educational Society, San Diego, CA. (ERIC Document Reproductive Service No. ED 382 416)

This study examined the school performance of Native American students and the involvement of their parents. Various comparisons were made between these two variables; the strongest link was found between student achievement and parent involvement in the design and implementation of programs.

Manning, M.L., & Lucking, R. (1991). The what, why, and how of cooperative learning. *Social Studies*, 82 (3), 120-125.

This article provides a general overview of cooperative learning and how it promotes academic achievement. The authors cite an extensive literature review for a comprehensive look at the academic benefits of cooperative learning. Two key points they raise regarding cooperative learning are that cooperative learning usually has positive effects of student achievement for all levels of learners, but all cooperative learning techniques do not produce academic progress. Methods that consistently produce greater achievement have two common features: group goals (requiring interdependence of team members) and individual accountability (success depends on contributions and learning of all members).

Marzano, R.J. & Marzano, J.S. (2003). The key to classroom management. *Educational Leadership*, 61 (1), 6-13. Available online at http://www.ascd.org/publications/ed_lead/200309/marzano.html

This article discusses the importance influence teacher behaviors can have on student outcomes, and provides a description of effective teacher behaviors.

Maya, C. (2001). *Factors affecting the achievement motivation of high school students in Maine*. Paper presented at the annual conference of the New England Educational Research Organization, Portsmouth, NH, April 2001. University of Southern Maine. Center for Educational Policy, Applied Research, and Evaluation. Available online at www.usm.maine.edu/cepare/pdf/he/factors.pdf

This study was designed to explore the correlation between student perceptions of parent involvement and school environment with their levels of achievement motivation. The literature review cites a number of studies that draw correlations between parental expectations and student achievement, active parent-school relationships and student achievement, and school environment and student achievement. The “Students Speak Survey” was given to 14,790 high school students to measure student perceptions of parental support and involvement, school climate, teacher support and expectations, and their own levels of achievement motivation (such as having high goals and expectations for oneself). Results indicate that adolescents who perceive parental and school support as well as high educational expectations were more likely to exhibit higher levels of achievement motivation.

McDowell Group, Inc. (2001). *Alaska Native education study: A statewide study of Alaska Native values and opinions regarding education in Alaska*. A report prepared for the First Alaskans Foundation. Anchorage: McDowell Group, Inc.

This two-part report focuses on the Alaska Native peoples’ relationship with education. Part one presents a summary of results from a multi-method survey of Alaska Native attitudes and values toward education. The second part is an extensive literature review covering the history of Alaska Native education, dropout studies, student assessment, language and culture, learning styles, community involvement, and higher education.

Miedel, W.T., and Reynolds, A.J. (1999). Parent involvement in early intervention for disadvantaged children: Does it matter? *Journal of School Psychology*, 37 (4), 379-402.

The authors interviewed 704 low-income parents of eighth graders about their involvement when the children were in preschool and kindergarten. All the students were part of the

long-term Chicago Longitudinal Study (CLS), which provided the opportunity to measure parent responses with student grades over time. Results show that students with more parental involvement did better in reading, were more likely to be promoted to the next grade, and less likely to need special education services.

Miles, K.H., & Darling-Hammond, L. (1998). Rethinking the allocation of teaching resources: Some lessons from high-performing schools. *Educational Evaluation and Policy Analysis, 20*, 9-29.

Miles and Darling-Hammond conducted a study on the allocation of resources in high-performing schools and low-performing schools. Strategies implemented by the high-performing secondary schools include the following: reduced specialization, more flexible student grouping, structures to create personal relationships, longer and more varied blocks of instructional time, more common planning time, and creative definition of staff roles and workday.

Miller, B.M. (2003). *Critical hours: Afterschool programs and educational success*. A report prepared by Miller Midzik Research Associates with a grant from the Nellie Mae Education Foundation. Available online at <http://www.nmefdn.org/CriticalHours.htm>

An extensive overview of after-school programs and the impact they have on 10-14 year olds. Prominent among the findings are links between formal after-school programming and improved school engagement and performance.

Miller-Cribbs, J.E., Cronen, S., Davis, L., & Johnson, S.D. (2002). An exploratory analysis of factors that foster school engagement and completion among African American students. *Children & Schools, 24* (3), 159-174.

The study presented in this paper reveals the results of a survey conducted with 231 metropolitan African-American high school students. The survey focused on students' reasons for staying in school and the influential factors that encouraged them to finish. Results indicate the greatest influence on school completion was the attitude and encouragement of parents. When asked about the intervention program most likely to help students stay in school, the highest rating was given to having a mentor/role model program.

Niebuhr, K.E., & Niebuhr, R.E. (1999). An empirical study of student relationships and academic achievement. *Education, 119* (4), 679-782.

This article presents the results of a study that compared five types of relationships students have in school (teachers, administration, guidance, peers, and racial relationships – as measured using the Comprehensive Assessment of School Environment) to levels of academic achievement (measured by GPA). The study was conducted in the southeast United States with 241 high school freshmen. A student's relationship with his teachers and peers both proved to be significantly related to his GPA.

Pajares, F. (2001). Toward a positive psychology of academic motivation. *Journal of Educational Research, 95* (1), 27-36.

In Pajares' study of 529 middle school students, relationships were analyzed between student motivational goals (reasons they want to succeed), academic self-efficacy/self-concept (beliefs in one's capabilities for learning), and degree of student's general optimism. The

scales of self-regulated motivation and optimism/positive psychology were both positively correlated with academic achievement (as measured by students' GPAs).

Phillips, M. (1997). What makes schools effective? A comparison of the relationships of communitarian climate and academic climate to mathematics and attendance during middle school. *American Educational Research Journal*, 34, 633-662.

Two theories of student achievement were tested using results of mathematics as the dependent variable: Communitarian (focus on social and personal needs of students and teachers first and student achievement will follow) and Academic Press (high academic expectations, classroom/homework rigor, instruction time). The study results indicated that the communitarian approach was not linked to student achievement or school attendance, but academic press was linked to both.

Reyhner, J. (1992). *Plans for dropout prevention and special school support services for American Indian and Alaska Native students*. Paper prepared for the U.S. Department of Education's Indian Nations At Risk Task Force. Available online at <http://jan.ucc.nau.edu/~jar/INAR.html> Reyhner has developed a comprehensive list of suggestions for reducing Native student dropout rates based on previous studies. His strategies include smaller schools, caring teachers, less passive teaching methods, culturally relevant curriculum, appropriate testing methods, less classification and division among types of students, and more parent involvement.

Scales, P.C., Benson, P.L., Leffert, N., & Blyth, D.A. (2000). Contributions of developmental assets to the prediction of thriving among adolescents. *Applied Developmental Science*, 4 (1), 27-46.

This article presents the results of a study that investigated the effects of specific developmental assets on 7 thriving indicators, including school success (as self-reported by students in the Search Institute Attitudes and Behaviors survey). From page 32 of the report: "Two assets contributed meaningfully to school success across all racial-ethnic groups: achievement motivation and school engagement. Time in youth programs was a predictor for all groups except African American youth. In addition, time at home was an important predictor for all groups except for American Indian and African American youth. Finally, personal power was a meaningful predictor for American Indian, African American, and Hispanic youth."

Scales, P.C., & Gibbons, J.L. (1996). Extended family members and unrelated adults in the lives of young adolescents: A research agenda. *Journal of Early Adolescence*, 16 (4), 365-389. This article serves as a review of literature identifying and characterizing the influence of unrelated adults in the lives of early adolescents. Their findings include relationships between higher academic achievement and student-teacher closeness and support from teachers.

Scales, P.C. & Leffert, N. (1999). *Developmental assets: A synthesis of the scientific research on adolescent development*. Minneapolis: Search Institute.

An extensive review of over 800 scientific articles and reports that provide an empirical foundation for Search Institute's framework of developmental assets. Associations between assets and a broad spectrum of positive youth outcomes are explained in depth. Among the outcomes are academic achievement and other positive school-related behaviors. A list of the sources cited in this report are included in the following reference list.

Scales, P.C., & Roehlkepartain, E.C. (2003). Boosting student achievement: New research on the power of developmental assets. *Search Institute Insights & Evidence*, 1 (1), 1-10. Available online at <http://www.search-institute.org/research/Insights>

This article reveals the results of both a concurrent study and a longitudinal study of students in St. Louis Park, MN, which indicate that students with more developmental assets have higher GPAs. There is also a positive relationship between current asset levels and future GPA, indicating that assets can be used as a predictor of academic achievement. Over the 3-year span of the study, "students whose asset levels remained stable or increased had significantly higher mean GPAs than students who had declined in their assets." Also, "students whose assets decreased across those three years were twice as likely to also go down in GPA."

Schaps, E. (2003). *The role of supportive school environments in promoting academic success*.

Developmental Studies Center. Oakland, CA: California Department of Education Press.

A review of research providing evidence that school culture can help or hinder student achievement. The author cites descriptive studies that correlate the environment to student outcomes as well as evaluations of programs implemented to alter the school environments in some way. The strongest correlations are made between positive school culture and positive student attitudes, academic expectations, and academic motivation/engagement. Schaps also reviews several school reform programs in this report.

Silverman, R.J., & Demmert, W.G., Jr. (1986). *Characteristics of successful Native leaders*. (ERIC Document Reproduction Service No. ED 269 208)

Profiles of 40 southeast Alaskan tribal leaders were conducted to determine common characteristics of their success stories. Respondents had positive, successful experiences with school, received encouragement and high expectations from family members (especially mothers), and listed teachers as a key influence outside the family.

Slavin, R.E. (1996). Cooperative learning in middle and secondary schools. *The Clearing House*, 69 (4), 200-204.

There are two components to this article. In the first, Slavin discusses the concept of cooperative learning and provides examples of several "student team learning" methods that have been developed. Included in these examples are methods that involve teacher

presentations followed by student group work to master the content, and then either individual quizzes or team tournaments to test their learning. In another example, students work in pairs on reading and comprehension assignments. Other examples include ideas for giving the students a learning outcome/goal and each team member is responsible for a piece of the learning.

The second portion of this article discusses a literature review of the research on cooperative learning. In a review of 52 studies, 63% reported significantly greater achievement in classrooms with active cooperative learning methods. Thirteen percent reported no difference and only 3 of the studies noted that the traditional learning classrooms outperformed the cooperative learning classrooms. In studies that gave particular attention to the two critical elements of cooperative learning (group goals and individual accountability), effects on achievement were consistently positive.

Southern Regional Education Board. (2002). *Academic achievement in the middle grades: What does research tell us?* Atlanta: author. Available online at <http://www.sreb.org/programs/hstw/publications/pubs/AcademicAchieveMiddleGrades.asp>

A review of literature highlighting the best practices for improving achievement among middle school students. Included among their findings are high expectations with support for achieving them; hands-on activities applicable to life outside the school; strong parent-school communication; and grouping students to help them connect what they are learning across the curriculum while also linking them to a caring adult within the school.

Starkman, N., Scales, P.C., & Roberts, C. (1999). *Great places to learn: How asset-building schools can help students succeed.* Minneapolis: Search Institute.

This Search Institute publication presents Developmental Assets as an integral strategy for successful schools. The authors provide an introduction to the assets, rationale for building assets in schools, ideas and success stories of how schools can integrate asset building, and numerous handouts, charts, and other tools.

Sternberg, R.J. (2001). Developing successful intelligence in all children: Adding creative and practical abilities to analytic thinking. *The CEIC Review*, 10 (4), 4-6.

This article describes an achievement abilities measurement tool from Yale University – the Sternberg Triarchic Abilities Test (STAT). The STAT was developed to measure 3 different types of achievement abilities: conventional memory and analytic abilities commonly taught in classrooms, creative/novel thinking abilities, and practical abilities needed to adapt to everyday life. Studies conducted on the test show that “students who are taught in ways that at least partially value their strengths perform better” than when they are always taught in the same standard ways. Also, teachers who used different styles of teaching in their classrooms had greater overall results from their students than those who just used the standard methods only.

Sternberg, R.J., Torff, B., & Grigorenko, F. (1998). Teaching for successful intelligence raises school achievement. *Phi Delta Kappan*, 79, 667-669.

The authors conducted a study of teaching pedagogies and their impact on student learning. Results from the two groups they studied show that students who are taught analytically, creatively, and practically as well as for memory (memory being the primary traditional

teaching method) performed better on standardized tests than the groups who were taught in memory methods (traditional techniques) only.

Strand, J.A., & Peacock, T.D. (2002). Nurturing resilience and school success in American Indian and Alaska Native students. *ERIC Clearinghouse on Rural Education and Small Schools Digest No. EDO-RC-02-11*. Found online at <http://www.ael.org/eric/digests/edorc02-11.pdf>. This article discusses factors related to resilience and school success for Native students. Most notably, the authors highlight the importance of student connections to parents, communities, teachers, and schools. Also presented within this report are findings that being well grounded and connected to tribal culture is an influential reason for staying in school.

U.S. Department of Education, National Center for Education Statistics. (2000). *Monitoring school quality: An indicators report*. NCES 2001-030 by Daniel P. Mayer, John E. Mullens, and Mary T. Moore. John Ralph, Project Officer. Washington, DC: author. Available online at <http://nces.ed.gov/pubs2001/2001030.pdf>.

This report examines the literature on school quality and presents findings on characteristics of schools most likely related to student learning. Included within these findings (and relevant to the influence of assets) are indicators that students perform better in schools with positive disciplinary techniques and high academic expectations for the students. Also included are discussions of teacher education and experience, classroom effectiveness, curriculum, and school climate.

Van Voorhis, F.L. (2001). Interactive science homework: An experiment in home and school connection. *National Association of Secondary School Principals' Bulletin*, 85 (627), 20-32.

This article describes the results of a study on involving families in 253 middle school students' homework. Using Teachers Involve Parents in Schoolwork (TIPS), an interactive homework process developed by researchers at Johns Hopkins University, sixth and eighth grade teachers sent weekly assignments home with information about how students could engage their families. TIPS students earned significantly higher grades than students who did non-interactive work.

Wentzel, K.R. (1989). Adolescent classroom goals, standards for performance, and academic achievement: An interactionist perspective. *Journal of Educational Psychology, 81* (2), 131-142. Wentzel presents a set of two studies which explore the relationship between student achievement (as measured by GPA and SAT scores) and student efforts and attitudes in the classroom (as measured by student self-reports on a scale of 12 goals). Results show that GPA scores are positively correlated to efforts to be a successful student, be dependable and responsible, understand things, do one's very best, and get things done on time, and negatively correlated to trying to have fun. Classroom motivation and efforts were not predictive of SAT scores. Student motivation to achieve social goals in the classroom were as predictive of academic performance as the cognitive goals.

Yagi, K. (1985). *Indian education act project in the Portland public schools. 1984-84 evaluation report*. Oregon: Portland Public Schools. Evaluation Department. (ERIC Document Reproduction Service No. ED 268 168)

An evaluation report of the Portland Indian Education Act Project (IEAP). The IEAP serves American Indian students in pre-school through high school and focuses on increasing academic achievement and attendance and lowering school attrition. Main activities of the program include tutoring/mentoring, cultural education, and hardship assistance. Five years of data show a decline in attrition and an increase in attendance and achievement.

Zins, J.E., Bloodworth, M.R., Weissberg, R.P., & Walberg, H.J. (2004). The scientific base linking social and emotional learning to school success. In Zins, J., Weissberg, R., Wang, M., & Walberg, H.J. (Eds.) *Building academic success on social and emotional learning: What does the research say?* New York, NY: Teachers College Press. Chapter available online at <http://www.casel.org/downloads/tcpres.doc>.

This chapter focuses on interventions that enhance academic, social, and emotional learning, and specifically the relationship between social emotional learning (SEL) and school success. Strong arguments for the implementation of social and emotional learning as an integrated part of an academic classroom are presented. Evidence is provided for the influence of SEL on positive student behaviors, such as school attendance and achievement motivation, which are in turn linked with academic achievement. Case studies and program descriptions are also included.

OTHER RELEVANT SOURCES

The sources listed in this section were cited within the studies we reviewed as further evidence of a correlation between assets and academic achievement.

From Battin-Pearson:

Hallinan, M.T., & Williams, R.A. (1990). Students' characteristics and the peer-influence process. *Sociology of Education*, 63, 122-132.

From Benard:

- Brook, J., Nomuram, C., & Cohen, P. (1989). A network of influences on adolescent drug involvement: Neighborhood, school, peer, and family. *Genetic, Social, and General Psychology Monographs*, 115 (1), 303-321.
- Edmonds, R. (1986). Characteristics of effective schools. In *The School Achievement of Minority Children: New Perspectives*, pp. 93-104. Hillsdale, NJ: Lawrence Erlbaum.
- Levin, H. (1988). Accelerated schools for disadvantaged students. *Educational Leadership*, 44 (6), 19-21.
- O'Neil, J. (1991). Transforming the curriculum for student risk. *ASCD Update*, June.
- Rutter, M. (1979). Protective factors in children's responses to stress and disadvantage. In *Primary Prevention of Psychopathology, Vol. 3: Social Competence in Children* (Kent, M.W. & Rolf, J.E., Eds.), pp. 49-74. Hanover, NH: University Press of New England.
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From Brezovsky:

Beaton, A.E. (1996). Mathematics achievement in the middle school years. IEA's Third International Mathematics and Science Study (TIMSS). Chestnut Hill, MA: Boston College, Center for the Study of Testing, Evaluation, and Educational Policy.

From CASEL:

- Felner, R.D., Brand, S., Adan, A.M., Mulhall, P.F., Flowers, N., Sartain, B., & DuBois, D.L. (1993). Restructuring the ecology of the school as an approach to prevention during school transitions: Longitudinal follow-ups and extensions of the School Transition Environment Project (STEP). *Prevention in Human Services*, 10, 103-136.
- Solomon, D., Battistich, V., Watson, M., Schaps, R., & Lewis, C. (2000). A six-district study of educational change: Direct and mediated effects of the Child Development Project. *Social Psychology of Education*, 4, 3-51.

From Demmert:

- Brancov, T. (1994). Cooperative learning in mathematics with middle school Indian students: A focus on achievement and on-task behavior (Native Americans). *Dissertation Abstracts International*, 55 (11), 3396A. (UMI No. 9506443)
- Cleary, L.M., & Peacock, T.D. (1998). *Collected wisdom: American Indian education*. Needham Heights, MA: Allyn & Bacon.
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- Martens, B.A. (1992). The implementation of a dropout prevention program for at-risk secondary students (at risk). *Dissertation Abstracts International*, 53 (08), 2759A. (UMI No. 9237374)
- McCarty, T.L., Wallace, S., Lynch, R.H., & Benally, A. (1991). Classroom inquiry and Navajo learning styles: A call for reassessment. *Anthropology & Education Quarterly*, 22 (1), 42-49.
- McInerney, D.M., Roche, L.A., McInerney, V., & Marsh, H.W. (1997). Cultural perspectives on school motivation: The relevance and application of goal theory. *American Educational Research Journal*, 34 (1), 207-236.
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- Willeto, A.A.A. (1999). Navajo culture and family influences on academic success: Traditionalism is not a significant predictor of achievement among young Navajos. *Journal of American Indian Education*, 38 (2), 1-24.

From Eccles & Barber:

Lamborn, S.D., Brown, B.B., Mounts, N.S., & Steinberg, L. (1992). Putting school in perspective: The influence of family, peers, extracurricular participation, and part-time work on academic engagement. In F.M. Newmann (Ed.), *Student Engagement in Achievement in American Secondary Schools* (pp. 153-181). New York: Teachers College Press.

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- Winne, P.H., & Walsh, J. (1980). Self-concept and participation in school activities reanalyzed. *Journal of Educational Psychology*, 72, 161-166.

From Finn & Rock:

- Finn, J.D., Fulton, D., Zaharias, J., & Nye, B. (1989). Carryover effects of small classes. *Peabody Journal of Education*, 67, 75-84.

From Haynes, Emmons, & Ben-Avie:

- Brookover, W., Beady, C., Flood, P., Schweitzer, J., & Wisenbaker, J. (1977). *Schools can make a difference*. Washington, DC: National Institute of Education. (ERIC Document Reproduction Service No. ED 145 034).
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From Klem & Connell:

- Arhar, J.M., & Kromrey, J.D. (1993). *Interdisciplinary teaming in the middle level school: Creating a sense of belonging for at-risk middle level students*. Paper presented at the annual meeting of the American Educational Research Association, Atlanta, GA.
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