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# A Review of the Literature

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## Resiliency and Academic Performance

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*Abstract:* Research reveals strong evidence connecting resilience and academic success. The resilience framework provides an understanding of why some students succeed in school while their peers from similar social and economic backgrounds do not. Programs aimed at teaching resilience have proven highly effective in improving academic performance.

Researchers have found that the juncture of three domains allows effective learning to take place. First, students need to be able to receive and process information, a process known as cognition<sup>1</sup>. Second, students need to be able to physically communicate their knowledge, a process relating to their psychomotor skills.<sup>2</sup> And third, students need to possess affect, the desire to learn and understand why their participation is beneficial to them (this is also called social emotional learning).<sup>3</sup>

A growing body of research points to resilience, a key component of social emotional learning, as being a critical facet of education. Referring to the ability to succeed in school despite adverse conditions such as poverty or abuse, resilience includes components such as confidence, a sense of well-being, motivation, an ability to set goals, relationships/connections, and stress management.

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### *Resiliency Skills*

- ❖ *Academic confidence*
  - ❖ *Sense of well-being*
  - ❖ *Motivation to succeed*
  - ❖ *Ability to set goals*
  - ❖ *Strong connections with adults and peers*
  - ❖ *Ability to handle stress*
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Research shows that resilience can significantly affect school and life outcomes for youth, including academic success, even for students who are faced with great adversity. Furthermore, these skills can be learned, measured, and have lasting effects on academic performance.

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## **Building Resiliency in Schools: Empirical Evidence**

A review of the literature reveals strong evidence connecting resilience and academic success. A longitudinal study by Scales et al. (2003) found that higher levels of resiliency traits are strongly correlated with higher grade point averages (GPAs) among middle and high school students. These findings hold true over time, so that students reporting more resiliency characteristics early in the study had higher GPAs three years later, compared to students with fewer assets at the start.<sup>4</sup>

Similarly, in a series of studies conducted by

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the U.S Department of Education, Waxman and Huang (1997) assessed inner-city students in the south-central United States. They found that students who ranked in the 90th percentile on the standardized tests in mathematics were highly resilient,

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reporting significantly higher levels of task orientation and satisfaction, social self-concept, achievement motivation, and academic self-concept than their counterparts who ranked below the 10th percentile.<sup>5</sup>

Reyes and Jason (1993) designed a study to understand successful high school students in an inner-city school. Two groups of Latino students were identified as being either at low or high risk for dropping out of school; all students shared a similar socioeconomic status, parent-student involvement, and parental supervision. They found that the low risk students reported strong resiliency, an attribute that the high risk students were significantly lacking<sup>6</sup>.

Hanson and Austin (2003) conducted a longitudinal study of students in California and found that nearly every measure of resilience was positively related to concurrent test scores. The highest increases in test scores occurred in schools where the students reported high levels of resilience. Moreover, resilience development proved to be equally beneficial for successive test score improvements in both low and high performing schools.<sup>7</sup>

In his work to pinpoint the aspects of resiliency most closely linked to academic performance, Solberg et al. (1998) identified six key skills as the foundations of educational resiliency: building confidence, making connections, setting goals, managing stress, increasing well-being, and understanding motivation.<sup>8</sup> Studies conducted by Solberg in Milwaukee Public Schools between 1998

and 2004 show that when students learn about and cultivate these six skills, their school performance improves significantly.<sup>9</sup>

Equivalently, in his *Breaking Barriers* study, Toldson (2008) examined the social, emotional, and cognitive factors contributing to the academic success of African American males (n=6000). Four overarching components empirically linked to academic performance were identified: 1) personal and emotional factors, such as emotional well-being and self esteem; 2) family factors, including household composition, parents' education and relationship with their children; 3) social and emotional factors, including economic standing and community involvement; and 4) school factors, relating to their perceptions of school and relationships with teachers.<sup>10</sup>

### **From Research to Practice: How Resilience Can be Taught in Schools**

Research has established that resilience can be taught, even to students who considerably lack these skills. Researchers have further concluded that everyone has a capacity for learning resiliency, and once recognized, these self-protective characteristics can be improved and strengthened over time.<sup>11</sup> Furthermore, after the family, educators are best positioned to provide the supportive conditions that promote resiliency in youth.<sup>12</sup>

### **School-Based Strategies**

Research supports the effectiveness of a range of school-based strategies for building resiliency; the most effective are those that leverage on strengths students already possess, as well as identify areas where improvements may be needed. Walker, et al. (2005) found that when schools implement programs that build resilience in this way, they are able to focus on the development of the whole child.<sup>13</sup>

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One effective tactic involves cultivating a supportive school climate that emphasizes personalization and high expectations.<sup>14</sup> Building supportive ties at school can ameliorate potential risks at home and in the community.<sup>15</sup> Another important strategy is building teachers' capacity to foster healthy skills development.<sup>16</sup> Additionally, teaching resiliency skills with targeted curricular materials can enhance student resilience and lead to improved academic outcomes.<sup>17</sup>

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Led by Solberg, University of Wisconsin at Milwaukee researchers and educators applied resiliency methodology to create a curriculum and assessment piloted in Milwaukee Public Schools. Using a quasi-experimental, peer-reviewed research technique, Solberg was able to establish a correlation between students who learned resilience skills with higher grades, higher attendance, and an increased rate of passed classes. These results were then replicated at other schools with large free and reduced lunch populations. Solberg's program is now contained in ScholarCentric's *Success Highways* and provides not only a teacher-driven curriculum for developing the resiliency skills that are linked to academic success but also an independently validated assessment instrument for measuring individual skills capacity. In addition, reporting tools within the program allow students to monitor their progress and take responsibility for their growth.<sup>18</sup>

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Students exposed to the *Success Highways* resiliency curriculum demonstrated better attendance, earned higher grades, earned more credits, increased test scores, and were more likely to graduate. Moreover, the more

units students participated in, the higher their outcomes were; students exposed to two lessons had a higher GPA (1.9) after two years than the average student. Students exposed to three or more lessons achieved an even higher GPA (2.5) after two years.<sup>19</sup>

### **Teaching Resilience in Schools: A Case Study**

Designed to increase both academic performance and graduation rates, Denver Public Schools (DPS) implemented its Ninth Grade Academy, a two-week program designed to help ease the transitioning process for students entering high school. The program focuses in part on developing resiliency skills using the *Success Highways* program to target progress in achievement, engagement, and graduation.

Academic data was collected on approximately 900 participants of the program in 2007 as well as a comparison group comprised of approximately 700 DPS students who did not attend the program and were of similar academic proficiency, grade level, gender, race/ethnicity, and free and reduced lunch status. The study found that students who participated in the Ninth Grade Academy outperformed the comparison group in reading and writing test scores as well as G.P.A.; additionally they held higher attendance records and lower tardy rates and were less likely to be suspended or expelled. Furthermore, the Ninth Grade Academy students were significantly less likely to drop out of school and more likely to be on track to graduate.<sup>20</sup>

## Conclusion

Research shows that an often “missing link” in the classroom is the focus and development of resilience building, which in turn can lead to improved academic achievement. Resilience, combined with the creation of positive and constructive learning environments, can benefit all students, regardless of their risk level, and can effectively be taught in schools. The development of these skills is key in improving academic performance and enabling students to experience success in school, and subsequently, in life.

### Footnotes

1. Bloom, B.S. (Ed.). (1956). *Taxonomy of Educational Objectives, the classification of educational goals – Handbook I: Cognitive Domain*. New York: McKay.
2. Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1973). *Taxonomy of educational objectives, the classification of educational goals, Handbook II: Affective domain*. New York: David McKay Co., Inc.
3. Zins, J.E., Weissberg, R.P., Wang, M.C., & Walberg, H.J. (Eds.). (2004). *Building academic success on social and emotional learning: What does the research say?* New York: Teachers College Press.
4. Scales, P. C., Roehlkepartain, E.C., Neal, M., Kielsmeier, J.C., & Benson, P.L. (2006). The role of developmental assets in predicting academic achievement: A longitudinal study. *Journal of Adolescence*, 29(5), 692-708.
5. Waxman, H.C. and Huang, S.L. (1997). Classroom instruction and learning environment differences between effective and ineffective urban elementary schools for African American students. *Urban Education*, 32(1), 7-44.
6. Reyes, O. and Jason, L.A. (1993). Pilot study examining factors associated with academic success for Hispanic high school students. *Journal of Youth and Adolescence*, 22, 57-71.
7. Hanson, T.L. and Austin, G. (2003). *Student health risks, resilience, and academic performance in California: Year 2 Report, Longitudinal Analyses*. Los Alamitos, CA: WestEd.
8. Solberg, V.S.H., Gusavac, N., Hamann, T., Felch, J., Johnson, J., Lamborn, S., & Torres, J. (1998). The Adaptive Success Identity Plan (ASIP): A career intervention for college students. *Career Developments Quarterly*, 47, 48-95.
9. Solberg, S., Carlstrom, A., Howard, K., Jones, J. (2007). Classifying at-risk high school youth: The influence of community violence and protective factors on academic and health outcomes, *Career Development Quarterly*, 55, 313-327.
10. Toldson, I.A. (2008). *Breaking Barriers: Plotting the Path to Academic Success for School-age African-American Males*. Washington, D.C.: Congressional Black Caucus Foundation, Inc.
11. Bernard, B. (1991). Fostering resiliency in kids. *Educational Leadership*, 51(3), 44-48.
12. Henderson, N. and Milstein, M. (1996). *Resiliency in schools*. Thousand Oaks, CA: Corwin.

### Footnotes continued

13. Walker, B., Cheney, D., Stage, S., & Blum, Craig. (2005). Schoolwide screening and positive behavior supports: Identifying and supporting students at risk for school failure. *Journal of Positive Behavior Interventions*, 7, 194-204.
14. Darling-Hammond, L. (2006). Assessing teacher education: The usefulness of multiple measures for assessing program outcomes. *Journal of Teacher Education*, 57, 120-138.
15. Zimmerman, M.A. and Bingenheimer, J.B. (2002). Natural mentors and adolescent resiliency: A study with urban youth. *American Journal of Community Psychology*, 30(2), 221-223.
16. DuBois, D.L., Holloway, B.E., Valentine, J.C., & Cooper, H. (2002). Effectiveness of mentoring programs for youth: A meta-analytic review. *American Journal of Community Psychology*, 3(2), 157(41)..
17. Winfield, L. (1994). *Developing Resilience in Urban Youth. Urban Monograph Series*. (Report No. 142). Oak Brook, IL: North Central Regional Educational Laboratory. (ERIC Document Reproduction Service No. ED 378 289).
18. Solberg, V.S.H., Carlstrom, A.H., & Kowalchuk, R.K. (2001, August). *Longitudinal Evaluation: School Success Intervention with Low-Income Diverse Youth*. Paper presented at the 109th Annual Convention of the American Psychological Association, San Francisco, CA.
19. Solberg, V.S.H. (n.d.). Empirical research and underlying research framework for *Success Highways*. (Denver, CO: ScholarCentric).
20. Denver Public Schools. (2009). [Ninth Grade Academy Cohort 1: Progress on Achievement, Engagement, and Graduation Indicators]. Unpublished raw data.

### Bibliography

- Bernard, B. (1991). Fostering resiliency in kids. *Educational Leadership*, 51(3), 44-48.
- Bloom, B.S. (Ed.). (1956). *Taxonomy of Educational Objectives, the classification of educational goals – Handbook I: Cognitive Domain*. New York: McKay.
- Darling-Hammond, L. (2006). Assessing teacher education: The usefulness of multiple measures for assessing program outcomes. *Journal of Teacher Education*, 57, 120-138.
- Denver Public Schools. (2009). [Ninth Grade Academy Cohort 1: Progress on Achievement, Engagement, and Graduation Indicators]. Unpublished raw data.
- DuBois, D.L., Holloway, B.E., Valentine, J.C., & Cooper, H. (2002). Effectiveness of mentoring programs for youth: A meta-analytic review. *American Journal of Community Psychology*, 3(2), 157(41).
- Hanson, T.L. and Austin, G. (2003). Student health risks, resilience, and academic performance in California: Year 2 Report, Longitudinal Analyses. Los Alamitos, CA: WestEd.

**Bibliography continued**

Henderson, N. and Milstein, M. (1996). *Resiliency in schools*. Thousand Oaks, CA: Corwin.

Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1973). *Taxonomy of educational objectives, the classification of educational goals, Handbook II: Affective domain*. New York: David McKay Co., Inc.

Reyes, O. and Jason, L.A. (1993). Pilot study examining factors associated with academic success for Hispanic high school students. *Journal of Youth and Adolescence*, 22, 57-71.

Scales, P. C., Roehlkepartain, E.C., Neal, M., Kielsmeier, J.C., & Benson, P.L. (2006). The role of developmental assets in predicting academic achievement: A longitudinal study. *Journal of Adolescence*, 29(5), 692-708.

Solberg, V.S.H., Hale, B., Villareal, P., & Kavanagh, J. (1993). Validation of the College Stress Inventory for use with Hispanic populations: A confirmatory analytic approach. *Hispanic Journal of Behavioral Sciences*, 15, 80-95.

Solberg, V.S.H., O'Brien, K., Villareal, P., Kennel, R., & Davis, B. (1993). Self-efficacy and Hispanic college students: Validation of the College Self-Efficacy Inventory. *Hispanic Journal Behavioral Sciences*. 15, 80-95.

Solberg, V.S.H., Gusavac, N., Hamann, T., Felch, J., Johnson, J., Lamborn, S., & Torres, J. (1998). The Adaptive Success Identity Plan (ASIP): A career intervention for college students. *Career Developments Quarterly*, 47, 48-95.

Solberg, V.S.H., Carlstrom, A.H., & Kowalchuk, R.K. (2001, August). *Longitudinal Evaluation: School Success Intervention with Low-Income Diverse Youth*. Paper presented at the 109th Annual Convention of the American Psychological Association, San Francisco, CA.

Solberg, V.S.H. (n.d.). Empirical research and underlying research framework for *Success Highways*. (Denver, CO: ScholarCentric).

Toldson, I.A. (2008). *Breaking Barriers: Plotting the Path to Academic Success for School-age African-American Males*. Washington, D.C.: Congressional Black Caucus Foundation, Inc.

Walker, B., Cheney, D., Stage, S., & Blum, Craig. (2005). Schoolwide screening and positive behavior supports: Identifying and supporting students at risk for school failure. *Journal of Positive Behavior Interventions*, 7, 194-204.

Waxman, H.C. and Huang, S.L. (1997). Classroom instruction and learning environment differences between effective and ineffective urban elementary schools for African American students. *Urban Education*, 32(1), 7-44.

### **Bibliography continued**

Waxman, H.C., Gray, J.P, and Padrón, Y.N. (2002). Resiliency among students at risk of failure. In S. Stringfield & D. Land (Eds.), *Educating at risk students* (pp.29-48). Chicago: National Society for the Study of Education.

Waxman, H.C., Gray, J.P, and Padrón, Y.N. (Eds.). (2004). *Educational resiliency: Student, teacher, and school perspectives*. Greenwich, CT: Information Age.

Winfield, L. (1994). *Developing Resilience in Urban Youth. Urban Monograph Series*. (Report No. 142). Oak Brook, IL: North Central Regional Educational Laboratory. (ERIC Document Reproduction Service No. ED 378 289).

Zimmerman, M.A. and Bingenheimer, J.B. (2002). Natural mentors and adolescent resiliency: A study with urban youth. *American Journal of Community Psychology*, 30(2), 221-223.

Zins, J.E., Weissberg, R.P, Wang, M.C., & Walberg, H.J. (Eds.). (2004). *Building academic success on social and emotional learning: What does the research say?* New York: Teachers College Press.

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