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# Focus Area Policy Brief: Teacher & Mentor Relationships Supplemental Appendix

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This supplemental appendix provides further resources for the Policy Brief: Teacher & Mentor Relationships.

The first section contains web links for practitioner resources for generalized and specific interventions mentioned in the policy brief, as well as further information regarding evaluations of program efficacy. The intervention may have been evaluated by What Works Clearinghouse (WWC), a division of the Institute of Education Sciences (IES). These evaluations are indicated by the title "IES WWC Report". The WWC holds a stringent standard regarding both the study design and statistical significance of findings; as such, interventions rated effective by the WWC are proven to be successful. However, if a program does not meet the effectiveness rating of the WWC, it does not necessarily indicate the intervention is not worthy of consideration, only that the study of the intervention did not meet the WWC standard.

The second section provides an annotated reference list from all academic citations mentioned in the policy brief. Note that the reference list contains a combination of literature/evidence reviews, and peer-reviewed evaluations of intervention effects. Therefore, while some programs may not have been featured in a WWC report, you may review the references for more information regarding evaluations of the interventions.

## Recommendation Resources

### *Student-Teacher Relationships (General)*

- 1) APA Overview of Student-Teacher Relationships: <http://www.apa.org/education/k12/relationships.aspx>
- 2) CARE for Teachers (professional development) : <https://www.garrisoninstitute.org/signature-programs/care-for-teachers/>
- 3) Collaborative for Academic, Social and Emotional Learning: <http://www.casel.org/>
- 4) Review of Student-Teacher Relationships (book chapter): <http://www.pearweb.org/conferences/sixth/pdfs/NAS-CBIII-05-1001-005-hamre%20&%20Pianta%20proof.pdf>

### *Social-Emotional Learning Programs*

- 5) Promoting Alternative Thinking Strategies (PATH ®): <http://www.pathstraining.com/main/curriculum/>
- 6) IES WWC Report: [http://ies.ed.gov/ncee/wwc/pdf/intervention\\_reports/wwc\\_fasttrack\\_100714.pdf](http://ies.ed.gov/ncee/wwc/pdf/intervention_reports/wwc_fasttrack_100714.pdf)
- 7) Caring School Community (CSC):

- 8) Website: <https://www.collaborativeclassroom.org/caring-school-community>
- 9) IES WWC Report: [http://ies.ed.gov/ncee/wwc/pdf/intervention\\_reports/WWC\\_Caring\\_School\\_042307.pdf](http://ies.ed.gov/ncee/wwc/pdf/intervention_reports/WWC_Caring_School_042307.pdf)

### *My Teaching Partner™*

- 1) General information about MTP program: <http://curry.virginia.edu/research/centers/castl/mtp>
- 2) IES WWC Report: [http://ies.ed.gov/ncee/wwc/pdf/intervention\\_reports/wwc\\_mtp\\_061615.pdf](http://ies.ed.gov/ncee/wwc/pdf/intervention_reports/wwc_mtp_061615.pdf)

### *Responsive Classroom®*

- 1) <https://www.responsiveclassroom.org/>
- 2) [http://curry.virginia.edu/uploads/resourceLibrary/CASTL\\_Research\\_Brief-Curby\\_et\\_al\\_\(2013\)\\_JSP\\_updated.pdf](http://curry.virginia.edu/uploads/resourceLibrary/CASTL_Research_Brief-Curby_et_al_(2013)_JSP_updated.pdf)

### *Small Learning Communities*

- 1) Successful Implementation of Small Learning Communities: [http://www.irre.org/sites/default/files/publication\\_pdfs/getting\\_ready\\_0.pdf](http://www.irre.org/sites/default/files/publication_pdfs/getting_ready_0.pdf)
- 2) First Things First
  - a. Implementation Final Report: [http://www.mdrc.org/sites/default/files/full\\_531.pdf](http://www.mdrc.org/sites/default/files/full_531.pdf)
  - b. <http://www.mdrc.org/project/scaling-first-things-first#overview>
  - c. IES WWC Report: [http://ies.ed.gov/ncee/wwc/pdf/intervention\\_reports/WWC\\_FTF\\_012408.pdf](http://ies.ed.gov/ncee/wwc/pdf/intervention_reports/WWC_FTF_012408.pdf)
- 3) Career Academy
- 4) Program website: <http://www.ncacinc.com/nsop/academies>
- 5) IES WWC Report: [http://ies.ed.gov/ncee/wwc/pdf/intervention\\_reports/wwc\\_careeracademies\\_092215.pdf](http://ies.ed.gov/ncee/wwc/pdf/intervention_reports/wwc_careeracademies_092215.pdf)

### *Mentoring Resources*

- 6) Resources for designing a mentoring program: <http://educationnorthwest.org/resources/youth-mentoring-program-planning-and-design-resources>
- 7) National Mentoring Partnership: <http://www.mentoring.org/>
- 8) Elements of Effective Practice for Mentoring: [http://www.mentoring.org/images/uploads/Final\\_Elements\\_Publication\\_Fourth.pdf](http://www.mentoring.org/images/uploads/Final_Elements_Publication_Fourth.pdf)
- 9) Center for Evidence-Based Mentoring: <http://www.umbmentoring.org/>
- 10) Check & Connect program
  - a. Website: <http://checkandconnect.umn.edu/>
  - b. IES WWC Report: [http://ies.ed.gov/ncee/wwc/pdf/intervention\\_reports/wwc\\_checkconnect\\_050515.pdf](http://ies.ed.gov/ncee/wwc/pdf/intervention_reports/wwc_checkconnect_050515.pdf)
- 11) Big Brothers Big Sisters-School Based Mentoring
  - a. Website: [http://www.bbbs.org/site/c.9iILI3NGKhK6F/b.5961387/k.6048/SchoolBased\\_Programs.htm](http://www.bbbs.org/site/c.9iILI3NGKhK6F/b.5961387/k.6048/SchoolBased_Programs.htm)
  - b. IES WWC Report: [http://ies.ed.gov/ncee/wwc/pdf/single\\_study\\_reviews/wwc\\_bbbs\\_031213.pdf](http://ies.ed.gov/ncee/wwc/pdf/single_study_reviews/wwc_bbbs_031213.pdf)
- 12) U.S. DOE Student Mentoring Program (SMP)
  - a. IES WWC Report: [http://ies.ed.gov/ncee/wwc/pdf/quick\\_reviews/schoolbasedmentoring\\_062309.pdf](http://ies.ed.gov/ncee/wwc/pdf/quick_reviews/schoolbasedmentoring_062309.pdf)

## Annotated Bibliography

Allen, J. P., Hafen, C. A., Gregory, A. C., Mikami, A. Y., & Pianta, R. (2015). Enhancing secondary school instruction and student achievement: Replication and extension of the my teaching partner secondary intervention. *Journal of Research on Educational Effectiveness*, 8(4), 475-489.

My Teaching Partner-Secondary (MTP-S) is a web-mediated coaching intervention, which an initial randomized trial, primarily in middle schools, found to improve teacher-student interactions and student achievement. Given the dearth of validated teacher development interventions showing consistent effects, we sought to both replicate and extend these findings with a modified version of the program in a predominantly high school population, and in a more urban, sociodemographically diverse school district. MTP-S produced substantial gains in student achievement across 86 secondary school classrooms involving 1,194 students. Gains were robust across subject areas and equivalent to moving the average student from the 50th to the 59th percentile in achievement scores. Results suggest that MTP-S can enhance student outcomes across diverse settings and implementation modalities.

Anderson, A. R., Christenson, S. L., Sinclair, M. F., & Lehr, C. A. (2004). Check & Connect: The importance of relationships for promoting engagement with school. *Journal of School Psychology*, 42(2), 95-113.

The purpose of this study was to examine whether the closeness and quality of relationships between intervention staff and students involved in the Check & Connect program were associated with improved student engagement in school. Participants included 80 elementary and middle school students referred to the Check & Connect program for poor attendance, an early sign of disengagement, while in elementary school. After accounting for student risk and prior attendance, student and interventionist perceptions of the closeness and quality of their relationship were found to be associated with improved engagement in terms of school attendance, and interventionist perceptions of their relationships with students were associated with teacher-rated academic engagement (e.g., prepared for class, work completion, persistence). The importance of designing and evaluating relationship-based interventions for students at-risk for school failure is discussed.

Bernstein, L., Dun Rappaport, C., Olsho, L., Hunt, D., & Levin, M. (2009). *Impact evaluation of the U.S. Department of Education's Student Mentoring Program* (NCEE 2009-4047). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

This report summarizes the findings from a national evaluation of mentoring programs funded under the U.S. Department of Education's (ED) Student Mentoring Program. The Office of Management and Budget (OMB) requested that the Institute of Education Sciences (IES) within ED oversee an independent evaluation of the Student Mentoring Program. In 2005, ED contracted with Abt Associates and its team of subcontractors, Branch Associates, Moore and Associates, and the Center for Resource Management, to conduct the Impact Evaluation of Student Mentoring Programs. The impact evaluation used an experimental design in which students were randomly assigned to a treatment or control group. Thirty-two purposively selected School Mentoring Programs and 2,573 students took part in the evaluation, which estimated the impact of the programs over one school year on a range of student outcomes. The evaluation also describes the characteristics of the program and the mentors, and provides information about program delivery.

Bottiani, J. H., Bradshaw, C. P., & Mendelson, T. (2016). Inequality in Black and White high school students' perceptions of school support: An examination of race in context. *Journal of youth and adolescence*, 45(6), 1176-1191.

Supportive relationships with adults at school are critical to student engagement in

adolescence. Additional research is needed to understand how students' racial backgrounds interact with the school context to shape their perceptions of school support. This study employed multilevel, latent variable methods with a sample of Black and White students (N = 19,726, 35.8 % Black, 49.9 % male, mean age = 15.9) in 58 high schools to explore variation in perceived caring, equity, and high expectations by student race, school diversity, and socioeconomic context. The results indicated that Black students perceived less caring and equity relative to White students overall, and that equity and high expectations were lower in diverse schools for both Black and White students. Nonetheless, racial disparities were attenuated in more diverse schools. The findings point to the need for intervention to improve perceptions of school support for Black youth and for all students in lower income and more diverse schools.

Burchinal, M. R., Roberts, J. E., Zeisel, S. A., & Rowley, S. J. (2008). Social risk and protective factors for African American children academic achievement and adjustment during the transition to middle school. *Developmental Psychology, 44*, 286–292.

The transition to middle school is often marked by decreased academic achievement and increased emotional stress, and African American children exposed to social risk may be especially vulnerable during this transition. To identify mediators and protective factors, the authors related severity and timing of risk exposure to academic achievement and adjustment between 4th and 6th grade in 74 African American children. Longitudinal analyses indicated that severity more than timing of risk exposure was negatively related to all outcomes and that language skills mediated the pathway from risk for most outcomes. Transition to middle school was related to lower math scores and to more externalizing problems when children experienced higher levels of social risk. Language skills and parenting served as protective factors, whereas expectations of racial discrimination was a vulnerability factor. Results imply that promoting parenting and, especially, language skills, and decreasing expectations of racial discrimination provide pathways to academic success for African American children during the transition from elementary to middle school, especially those exposed to adversity.

Connell, J. P., Legters, N. E., Klem, A., & West, T. C. (2005). Getting ready, willing and able: Critical steps toward successful implementation of small learning communities in large high schools. *Prepared for the Office of Vocational and Adult Education, US Department of Education.*

This paper focuses on three key questions that district and school leaders face as they transition from a traditional comprehensive high school to smaller personalized learning communities: 1) what conditions at the building and district level are critical for successful implementation; 2) what are the essential components and activities of the planning and capacity building phase; and 3) what are the specific impacts these planning activities have on implementation timing and quality? The authors present learnings on a wide range of challenges and issues from their work partnering with schools and districts as technical assistance providers, and concludes with six key lessons learned.

Cornelius-White, Jeffrey. "Learner-centered teacher-student relationships are effective: A meta-analysis." *Review of educational research 77*, no. 1 (2007): 113-143.

Person-centered education is a counseling-originated, educational psychology model, overripe for meta-analysis, that posits that positive teacher-student relationships are associated with optimal, holistic learning. It includes classical, humanistic education and today's constructivist learner-centered model. The author reviewed about 1,000 articles to synthesize 119 studies from 1948 to 2004 with 1,450 findings and 355,325 students. The meta-analysis design followed Mackay, Barkham, Rees, and Stiles's guidelines, including comprehensive search mechanisms, accuracy and bias control, and primary study validity assessment. Variables coded included 9 independent and 18 dependent variables and 39

moderators. The results showed that correlations had wide variation. Mean correlations ( $r = .31$ ) were above average compared with other educational innovations for cognitive and especially affective and behavioral outcomes. Methodological and sample features accounted for some of the variability.

Crosnoe, R., Johnson, M. K., & Elder, G. H. (2004). Intergenerational bonding in school: The behavioral and contextual correlates of student-teacher relationships. *Sociology of education*, 77(1), 60-81.

To explore the significance of social integration in the educational system, this study examined whether student-teacher relationships predicted two important student behavioral outcomes (academic achievement and disciplinary problems); whether these within-school intragenerational relationships were predicted by the structural, compositional, and climate-related characteristics of schools; and how the behavioral and contextual correlates of student-teacher relationships varied by race-ethnicity. Our findings, based on nationally representative panel data, indicated that stronger intergenerational bonding in school was associated with higher academic achievement, especially for Hispanic American girls, and with a lower likelihood of disciplinary problems, especially for white girls. Moreover, these intragenerational bonds were stronger in schools with several characteristics (private sector, greater racial-ethnic matching between students and the student body, greater perceived safety, and lower socioeconomic status), although these associations also differed by race-ethnicity.

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*, 30(2), 157-197.

We used meta-analysis to review 55 evaluations of the effects of mentoring programs on youth. Overall, findings provide evidence of only a modest or small benefit of program participation for the average youth. Program effects are enhanced significantly, however, when greater numbers of both theory-based and empirically based “best practices” are utilized and when strong relationships are formed between mentors and youth. Youth from backgrounds of environmental risk and disadvantage appear most likely to benefit from participation in mentoring programs. Outcomes for youth at-risk due to personal vulnerabilities have varied substantially in relation to program characteristics, with a noteworthy potential evident for poorly implemented programs to actually have an adverse effect on such youth. Recommendations include greater adherence to guidelines for the design and implementation of effective mentoring programs as well as more in-depth assessment of relationship and contextual factors in the evaluation of programs.

Eccles, J. S., & Roeser, R. W. (2011). Schools as developmental contexts during adolescence. *Journal of research on adolescence*, 21(1), 225-241.

Considerable strides have been made in the past decade in recognizing the centrality of the cultural context of schooling to adolescent development. In this review, adopting a developmental systems conceptualization of schooling, we focus on selected new research findings from the past decade regarding how (a) teachers, curricular tasks, and classroom environments; (b) aspects of the school as an organization; and (c) district policies and practices can play an instrumental role in adolescents’ intellectual and social-emotional development.

Erickson, L. D., McDonald, S., & Elder, G. H. (2009). Informal mentors and education: Complementary or compensatory resources? *Sociology of education*, 82(4), 344-367.

Few studies have examined the impact of mentoring (developing a special relationship with a nonparental adult) on educational achievement and attainment in the general population. In addition, prior research has yet to clarify the extent to which mentoring relationships

reduce inequality by enabling disadvantaged youths to compensate for the lack of social resources or to promote inequality by serving as a complementary resource for advantaged youths. The results of a nationally representative sample of youths show (1) a powerful net influence of mentors on the educational success of youths and (2) how social background and parental, peer, and personal resources condition the formation and effectiveness of mentoring relationships. The findings uncover an interesting paradox—that informal mentors may simultaneously represent compensatory and complementary resources. Youths with many resources are more likely than are other young people to have mentors, but those with few resources are likely to benefit more from having a mentor—particularly a teacher mentor—in their lives.

Gehlbach, H., Brinkworth, M. E., King, A. M., Hsu, L. M., McIntyre, J., & Rogers, T. (2016). Creating birds of similar feathers: Leveraging similarity to improve teacher–student relationships and academic achievement. *Journal of Educational Psychology, 108*(3), 342.

When people perceive themselves as similar to others, greater liking and closer relationships typically result. In the first randomized field experiment that leverages actual similarities to improve real-world relationships, we examined the affiliations between 315 9th grade students and their 25 teachers. Students in the treatment condition received feedback on 5 similarities that they shared with their teachers; each teacher received parallel feedback regarding about half of his or her 9th grade students. Five weeks after our intervention, those in the treatment conditions perceived greater similarity with their counterparts. Furthermore, when teachers received feedback about their similarities with specific students, they perceived better relationships with those students, and those students earned higher course grades. Exploratory analyses suggest that these effects are concentrated within relationships between teachers and their “underserved” students. This brief intervention appears to close the achievement gap at this school by over 60%.

Grossman, J. B., Chan, C. S., Schwartz, S. E., & Rhodes, J. E. (2012). The Test of Time in School-Based Mentoring: The Role of Relationship Duration and Re-Matching on Academic Outcomes. *American Journal of Community Psychology, 49*(1-2), 43-54.

The influence of match length and re-matching on the effectiveness of school-based mentoring was studied in the context of a national, randomized study of 1,139 youth in Big Brothers Big Sisters programs. The sample included youth in grades four through nine from diverse racial and ethnic backgrounds. At the end of the year, youth in intact relationships showed significant academic improvement, while youth in matches that terminated prematurely showed no impact. Those who were re-matched after terminations showed negative impacts. Youth, mentor, and program characteristics associated with having an intact match were examined. Youth with high levels of baseline stress and those matched with college student mentors were likely to be in matches that terminated prematurely, while rejection-sensitive youth and mentors who had previous mentoring experience were more likely to be in intact relationships. Implications for research and practice are discussed.

Hamre, B., & Pianta, R. C. (2006). Student-teacher relationships. In G. Bear & K. M. Minke (Eds.), *Children's needs III: Development, prevention, and intervention* (pp. 59–72). Bethesda, MD: NASP.

This chapter argues that students’ relationships with teachers are fundamental to their success in school, and as such, these relationships should be explicitly targeted in school-based prevention and intervention efforts. Student-teacher relationships develop over the course of the school year through a complex intersection of student and teacher beliefs, attitudes, behaviors, and interactions with one another. Forming strong and supportive relationships with teachers allows students to feel safer and more secure in the school setting, feel more competent, make more positive connections with peers, and make greater academic gains. In contrast, conflict with teachers may place students on a trajectory of school failure in

which they are unable to connect to academic and social resources offered within classrooms and schools. The theoretical and empirical study of student-teacher relationships has led to the development of programs designed to promote students' school success by improving student-teacher relationships. Research is accumulating to support the efficacy of these efforts, but more empirical evidence is needed on aspects of these programs, such as the following: (a) the relative power of the student-teacher relationship to alter developmental trajectories in relation to the influence of the parents or peers; (b) the most effective ways to go to scale with intervention efforts targeting the student-teacher relationship; (c) how best to identify students and teachers in need of relationship support and thus target interventions; and (d) how to sustain these efforts over time and to effectively integrate them into the myriad programs for which schools are responsible. Answering these questions will refine our understanding of how teachers' relationships with students may further positive social development and academic growth and, ultimately, help make schools and classrooms more responsive to the diverse needs of today's students.

Hattie, J. (2009). *Visible learning*. New York, NY: Routledge.

This introduction has highlighted the amazing facility of those in the education business to invent solutions and see evidence for their pet theories and for their current actions. Everything seems to work in the improvement of student achievement. There are so many solutions and most have some form of evidence for their continuation. Teachers can thus find some support to justify almost all their actions—even though the variability about what works is enormous. Indeed, we have created a profession based on the principle of 'just leave me alone as I have evidence that what I do enhances learning and achievement.

One aim of this book is to develop an explanatory story about the key influences on student learning—it is certainly not to build another "what works" recipe. The major part of this story relates to the power of directed teaching, enhancing what happens next (through feedback and monitoring) to inform the teacher about the success or failure of their teaching, and to provide a method to evaluate the relative efficacy of different influences that teachers use.

It is important from the start to note at least two critical codicils. Of course, there are many outcomes of schooling, such as attitudes, physical outcomes, belongingness, respect, citizenship, and the love of learning. This book focuses on student achievement, and that is a limitation of this review. Second, most of the successful effects come from innovations, and these effects from innovations may not be the same as the effects of teachers in regular classrooms—the mere involvement in asking questions about the effectiveness of any innovation may lead to an inflation of the effects. This matter will be discussed in more detail in the concluding chapter, where an attempt is made to identify the effects of "typical" teachers compared to "innovations" in teaching. Indeed, the role of "teaching as intervention" is developed throughout the chapters in this book.

Herrera, C., Grossman, J. B., Kauh, T. J., Feldman, A. F., & McMaken, J. (2007). Making a difference in schools: The Big Brothers Big Sisters school-based mentoring impact study. *Public/Private Ventures*.

School-based mentoring is one of the fastest growing forms of mentoring in the US today; yet, few studies have rigorously examined its impacts. This landmark random assignment impact study of Big Brothers Big Sisters School-Based Mentoring is the first national study of this program model. It involves 10 agencies, 71 schools and 1,139 9- to 16-year-old youth randomly assigned to either a treatment group of program participants or a control group of their non-mentored peers. Surveys were administered to all participating youth, their teachers and mentors in the fall of 2004, spring of 2005 and late fall of 2005. The report describes the programs and their participants and answers several key questions, including: Does school-based mentoring work? What kinds of mentoring experiences help to ensure benefits? How

much do these programs cost? Our findings highlight both the strengths of this program model and its current limitations and suggest several recommendations for refining this promising model--recommendations that Big Brothers Big Sisters agencies across the country are already working to implement. Eight appendixes are included: (1) Methodology; (2) Impact Analyses; (3) Participating Schools; (4) Associations between Match Support and Training and Indicators of Match Success; (5) Effect Sizes; (6) Does BBBS SMB Provide Different Benefits for Different Groups of Littles?; (7) Follow-Up Analyses to Further Explore Associations between Match Length, Relationship Quality and Outcomes; and (8) Outcome Trajectories for One-School-Year and 15-Month Littles.

Hughes, J. N., Luo, W., Kwok, O. M., & Loyd, L. K. (2008). Teacher-student support, effortful engagement, and achievement: A 3-year longitudinal study. *Journal of educational psychology*, 100(1), 1.

Measures of teacher-student relationship quality (TSRQ), effortful engagement, and achievement in reading and math were collected once each year for 3 consecutive years, beginning when participants were in 1st grade, for a sample of 671 (53.1% male) academically at-risk children attending 1 of 3 school districts in Texas. In separate latent variable structural equation models, the authors tested the hypothesized model, in which Year 2 effortful engagement mediated the association between Year 1 TSRQ and Year 3 reading and math skills. Conduct engagement was entered as a covariate in these analyses to disentangle the effects of effortful engagement and conduct engagement. Reciprocal effects of effortful engagement on TSRQ and of achievement on effortful engagement were also modeled. Results generally supported the hypothesized model. Year 1 variables had a direct effect on Year 3 variables, above year-to-year stability. Findings suggest that achievement, effortful engagement, and TSRQ form part of a dynamic system of influences in the early grades, such that intervening at any point in this nexus may alter children's school trajectories.

Jennings, P. A., Frank, J. L., Snowberg, K. E., Coccia, M. A., & Greenberg, M. T. (2013). Improving classroom learning environments by Cultivating Awareness and Resilience in Education (CARE): Results of a randomized controlled trial. *School Psychology Quarterly*, 28(4), 374.

Cultivating Awareness and Resilience in Education (CARE) is a professional development program designed to reduce stress and improve teachers' performance. Two pilot studies examined program feasibility and attractiveness and preliminary evidence of efficacy. Study 1 involved educators from a high-poverty urban setting (n = 31). Study 2 involved student teachers and 10 of their mentors working in a suburban/semi-rural setting (n = 43) (treatment and control groups). While urban educators showed significant pre-post improvements in mindfulness and time urgency, the other sample did not, suggesting that CARE may be more efficacious in supporting teachers working in high-risk settings.

Kemple, J. J., & Snipes, J. C. (2000). Career Academies: Impacts on Students' Engagement and Performance in High School. *MDRC*.

There has been a great deal of research on the Academy approach. Nevertheless, previous studies have been unable to determine reliably whether differences between Academy students' high school experiences and outcomes and those of other students result from the Academy itself or from the program's student targeting or its selection practices. Further, little is known about the relative effectiveness of Academies for different groups within the broad cross-section of students they now serve. There have also been few opportunities to explore the extent to which different contexts and implementation strategies may influence the effectiveness of the Academy approach.

This evaluation has demonstrated the feasibility and benefits of using a large-scale, multisite random assignment research design to determine the impact of Career Academies on student outcomes. A rarity in education research, this design provides a uniquely rigorous way of

comparing the performance of students who had access to an Academy with the performance of a truly comparable group of students who did not have access to the programs. In order to address a number of key policy issues for Academies and related high school reforms, this report focuses on three questions: 1) To what extent does the Career Academy approach alter the high school environment in ways that better support students academically and developmentally? ; 2) To what extent does the Career Academy approach change educational, employment, and youth development outcomes for students at greater or lesser risk of school failure? And 3) How do the manner and context in which Career Academy programs are implemented influence their effects on student outcomes?

Klem, A. M., & Connell, J. P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of school health, 74*(7), 262-273.

An emerging consensus exists in the school reform literature about what conditions contribute to student success. Conditions include high standards for academic learning and conduct, meaningful and engaging pedagogy and curriculum, professional learning communities among staff, and personalized learning environments. Schools providing such supports are more likely to have students who are engaged in and connected to school. Studies show students with caring and supporting interpersonal relationships in school report more positive academic attitudes and values, and more satisfaction with school. These students also are more engaged academically. The study reported in this paper was guided by a reduced version of the Self-System Process Model developed by Connell. In this paper, optimal and risk thresholds for the Student Performance and Commitment Index (SPCI) and engagement are reported, and then data on how much engagement matters for later success in school are presented. Thresholds associated with teacher support also are presented with estimates of how much teacher support matters for engagement in school.

Kraft, M. A., & Dougherty, S. M. (2013). The effect of teacher–family communication on student engagement: Evidence from a randomized field experiment. *Journal of Research on Educational Effectiveness, 6*(3), 199-222.

In this study, we evaluate the efficacy of teacher communication with parents and students as a means of increasing student engagement. We estimate the causal effect of teacher communication by conducting a randomized field experiment in which sixth- and ninth-grade students were assigned to receive a daily phone call home and a text/written message during a mandatory summer school program. We find that frequent teacher–family communication immediately increased student engagement as measured by homework completion rates, on-task behavior, and class participation. On average, teacher–family communication increased the odds that students completed their homework by 40%, decreased instances in which teachers had to redirect students’ attention to the task at hand by 25%, and increased class participation rates by 15%. Drawing upon surveys and interviews with participating teachers and students, we identify three primary mechanisms through which communication likely affected engagement: stronger teacher–student relationships, expanded parental involvement, and increased student motivation.

Lee, V. E., & Smith, J. (2001). *Restructuring high schools for equity and excellence: What works?* New York, NY: Teacher’s College Press.

This book uses data from the National Educational Longitudinal Study of 1988 (NELS:88) to examine whether students who attend restructured high schools learn more and have access to a more equal education. The NELS:88 examined the educational status and progress of a large, nationally representative sample of 8th grade students, retesting and resurveying students in 10th and 12th grades. The book investigates how restructuring relates to various organizational and structural properties of schools, including size, curriculum, instruction,

teachers' attitudes toward students, and how teachers press students to succeed. There are eight chapters in four parts. Part 1, "Context for the Study," includes (1) "Examining School Reform" and (2) "Who Goes Where? Characteristics of Students and Schools." Part 2, "A Focus on School Restructuring," includes (3) "Restructuring the Middle Grades" and (4) "Restructuring in the Early Years of High School." Part 3, "School Social Organization and Restructuring," includes (5) "The Organization of Teachers' Work Lives," (6) "Cumulative Effects of Restructuring," and (7) "A Focus on One Structural Feature: School Size." Part 4, "Implications from the Study," includes (8) "The Larger Meaning of School Restructuring for American High Schools." Overall, school restructuring positively impacted student achievement and educational environment.

McQuillin, S. D., Terry, J. D., Strait, G. G., & Smith, B. H. (2013). Innovation in school-based mentoring: Matching the context, structure and goals of mentoring with evidence-based practices. *Advances in School Mental Health Promotion*, 6(4), 280-294.

Youth mentoring is a popular and well-respected volunteer activity in the USA. Although there is support for the efficacy and cost-effectiveness of community-based mentoring (CBM), the research on school-based mentoring (SBM) – the most popular form of youth mentoring – is mixed. Most of the SBM studies find inconsistent or small effects. The reason for the difference in the success of CBM and SBM may be the unique context, structures and goals of SBM relative to CBM. In an effort to guide SBM programmes towards larger and more consistent positive results, the authors review context-specific considerations of providing mentoring in schools. We present several evidence-based practices that are compatible with SBM and should strengthen the effects of this popular intervention. To illustrate the importance of these considerations, we provide a case example of redeveloping a failed SBM programme into a promising programme by reviewing two iterative randomized evaluations. Finally, we encourage school-based mental health experts' involvement in the redevelopment of SBM.

Montoya, R. M., Horton, R. S., & Kirchner, J. (2008). Is actual similarity necessary for attraction? A meta-analysis of actual and perceived similarity. *Journal of Social and Personal Relationships*, 25, 889–922.

To evaluate the impact of actual and perceived similarity on interpersonal attraction, we meta-analyzed 460 effect sizes from 313 laboratory and field investigations. Results indicated that the associations between interpersonal attraction and both actual similarity ( $r = .47$ ) and perceived similarity ( $r = .39$ ) were significant and large. The data also indicate that (i) actual similarity was important in no-interaction and short-interaction studies, (ii) there was a significant reduction in the effect size of actual similarity beyond no-interaction studies, and (iii) the effect of actual similarity in existing relationships was not significant. Alternatively, perceived similarity predicted attraction in no-interaction, short-interaction, and existing relationship studies. The implications of perceived similarity, rather than actual similarity, being predictive of attraction in existing relationships are discussed.

Murphy, P. K., & Alexander, P. A. (2000). A motivated exploration of motivation terminology. *Contemporary educational psychology*, 25(1), 3-53.

The purpose of this review was twofold. First, we wanted to identify fundamental terms within the motivation literature associated with the study of academic achievement or academic development. Having identified these terms with the help of experts in the field of motivation, we wanted to document how motivation researchers defined and used these terms within their programs of research. To accomplish these purposes, over 120 achievement motivation articles were reviewed, and 68 met the criteria for inclusion. Various aspects of these studies, including definitions of terminology, framing variables (e.g., age/grade or domain/task), as well as patterns in language use were charted and analyzed. Based on

these analyses, we derived several interpretations, extracted conceptual definitions, and overviewed specific conceptual issues relevant to emerging trends in motivation terminology. Finally, implications for future research and practice are forwarded.

National Research Council and Institute of Medicine (NRC/IOM). (2004). *Engaging schools*. Washington, DC: National Academies Press.

Learning and succeeding in school requires active engagement—whether students are rich or poor, black, brown, or white. The core principles that underlie engagement are applicable to all schools—whether they are in urban, suburban, or rural communities. Yet although engagement is important for all students and all schools, the consequences of disengagement vary substantially. When students from advantaged backgrounds become disengaged, they may learn less than they could, but they usually get by or they get chances; most eventually graduate and move on to other opportunities. In contrast, when students from disadvantaged backgrounds in high-poverty, urban high schools become disengaged, they are less likely to graduate and consequently face severely limited opportunities. Failure to earn even the most basic educational credential or acquire the basic skills needed to function in adult society increases dramatically their risk of unemployment, poverty, poor health, and involvement in the criminal justice system.

Niemiec, C. P., & Ryan, R. M. (2009). Autonomy, competence and relatedness in the classroom: Applying Self-Determination Theory to classroom practice. *Theory and Research in Education*, 7, 133 – 144.

Self-determination theory (SDT) assumes that inherent in human nature is the propensity to be curious about one's environment and interested in learning and developing one's knowledge. All too often, however, educators introduce external controls into learning climates, which can undermine the sense of relatedness between teachers and students, and stifle the natural, volitional processes involved in high-quality learning. This article presents an overview of SDT and reviews its applications to educational practice. A large corpus of empirical evidence based on SDT suggests that both intrinsic motivation and autonomous types of extrinsic motivation are conducive to engagement and optimal learning in educational contexts. In addition, evidence suggests that teachers' support of students' basic psychological needs for autonomy, competence, and relatedness facilitates students' autonomous self-regulation for learning, academic performance, and well-being. Accordingly, SDT has strong implications for both classroom practice and educational reform policies.

Quint, J., Bloom, H. S., Black, A. R., Stephens, L., & Akey, T. M. (2005). *The Challenge of Scaling Up Educational Reform. Findings and Lessons from First Things First. Final Report. MDRC.*

First Things First (FTF) is a major comprehensive school reform that includes three central components: small learning communities of up to 350 students and their key teachers who remain together for several years; a family advocate system, in which each student is paired with a staff member who meets regularly with the student, monitors his or her progress, and works with the student's parents to promote success; and instructional improvement efforts aimed at making lessons more engaging and rigorous, as well as better aligned with state and local standards.

The impacts of FTF were measured using a comparative interrupted time-series design. In summary, the key findings are:

Middle and high school students in Kansas City, Kansas, registered large gains on a wide range of academic outcomes that were sustained over several years and were pervasive across the district's schools; similar gains were not present in the most comparable schools in the state. The improvements occurred over the course of eight years of substantial effort by the

school district and IRRE to implement FTF as the district's central educational reform.

It is not yet clear whether the expansion sites, which had operated FTF for two or three years at the time of the research follow-up, will replicate the impressive findings for Kansas City.

Randolph, K. A., & Johnson, J. L. (2008). School-based mentoring programs: A review of the research. *Children & Schools, 30*(3), 177-185.

School-based mentoring programs that promote academic success and prosocial behaviors among youths are of interest to school social workers. Because these programs are relatively new, little has been reported on the effectiveness of the services or the benefits to participants. The authors examined outcome evaluations of eight school-based mentoring programs to compare the organizing frameworks, evaluate whether and how best practices were integrated into program service structures, determine evaluation methods, and assess participant outcomes. Most of these programs are guided by a prevention-focused, risk and resilience framework, with a configuration of program services that incorporates recommendations from best practices models. However, questions remain about dosage, program outcomes, and other issues unique to school-based programs. These results also suggest that evidence demonstrating the benefits of school-based mentoring programs among youths is beginning to accumulate. Nonetheless, the next generation of evaluations needs to use more rigorous research methods to confirm these findings. Recommendations to school social workers about program design and evaluation are also presented.

Rhodes, J. E. (2008). Improving youth mentoring interventions through research-based practice. *American Journal of Community Psychology, 41*(1-2), 35-42.

Youth mentoring programs are in the limelight. Over three million young people have a Big Brother, a Big Sister, or a similar adult volunteer involved in their lives—a sixfold increase from just a decade ago—and generous federal funding continues to fuel new initiatives. This expansion speaks volumes about the faith our society places in one-on-one relationships between vulnerable young people and caring adults. But what do we know about the effectiveness of this intervention strategy? A better understanding of the research evidence for youth mentoring, including findings from reviews, evaluations, and meta-analyses, provides a basis for a more informed, practically applicable approach to strengthening youth mentoring interventions.

Rhodes, J. E., Spencer, R., Keller, T. E., Liang, B., & Noam, G. (2006). A model for the influence of mentoring relationships on youth development. *Journal of community psychology, 34*(6), 691-707.

Anecdotal reports of the protective qualities of mentoring relationships for youth are corroborated by a growing body of research. What is missing, however, is research on the processes by which mentors influence developmental outcomes. In this article, we present a conceptual model of the mentoring process along with a delineation of some of the current research on what makes for more effective mentoring relationships. A set of recommendations for future research is offered.

Roorda, D. L., Koomen, H. M., Spilt, J. L., & Oort, F. J. (2011). The influence of affective teacher–student relationships on students' school engagement and achievement a meta-analytic approach. *Review of Educational Research, 81*(4), 493-529.

A meta-analytic approach was used to investigate the associations between affective qualities of teacher–student relationships (TSRs) and students' school engagement and achievement. Results were based on 99 studies, including students from preschool to high school. Separate analyses were conducted for positive relationships and engagement (k = 61 studies, N = 88,417 students), negative relationships and engagement (k = 18, N = 5,847), positive relationships and achievement (k = 61, N = 52,718), and negative relationships and achievement (k = 28, N

= 18,944). Overall, associations of both positive and negative relationships with engagement were medium to large, whereas associations with achievement were small to medium. Some of these associations were weaker, but still statistically significant, after correction for methodological biases. Overall, stronger effects were found in the higher grades. Nevertheless, the effects of negative relationships were stronger in primary than in secondary school.

Schwartz, S. E., Rhodes, J. E., & Herrera, C. (2012). The influence of meeting time on academic outcomes in school-based mentoring. *Children and Youth Services Review*, 34(12), 2319-2326.

This study explores the role of mentor–youth meeting time on academic performance within school-based mentoring. Participants in the study (N = 1139) were part of a national evaluation of the Big Brothers Big Sisters school-based mentoring programs, approximately half of whom had been randomly assigned to receive mentoring at their schools. Within the treatment group, 44% were in programs in which matches met after school, 25% were in programs in which matches met during the school day excluding lunch, 6% were in programs in which matches met during lunch, and 26% were in programs in which matches met at various times during and after school. Among academically at-risk youth, the impact of school-based mentoring on academic outcomes was moderated by the time during which matches met. Specifically, academically vulnerable youth derived significant academic benefits from mentoring in programs that met after school or during lunch. In programs that met during school as a pullout program, there was no evidence of benefits and some evidence of negative effects on academic outcomes. Implications of the findings for research and intervention are discussed.

Skinner, E. A., & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. *Journal of educational psychology*, 85(4), 571.

On the basis of a new model of motivation, the authors examined the effects of 3 dimensions of teacher (n = 14) behavior (involvement, structure, and autonomy support) on 144 children's (Grades 3–5) behavioral and emotional engagement across a school year. Correlational and path analyses revealed that teacher involvement was central to children's experiences in the classroom and that teacher provision of both autonomy support and optimal structure predicted children's motivation across the school year. Reciprocal effects of student motivation on teacher behavior were also found. Students who showed higher initial behavioral engagement received subsequently more of all 3 teacher behaviors. These findings suggest that students who are behaviorally disengaged receive teacher responses that should further undermine their motivation. The importance of the student–teacher relationship, especially interpersonal involvement, in optimizing student motivation is highlighted.

Voight, A., Hanson, T., O'Malley, M. and Adekanye, L. (2015), The Racial School Climate Gap: Within-School Disparities in Students' Experiences of Safety, Support, and Connectedness. *American Journal of Community Psychology*, 56: 252–267.

This study used student and teacher survey data from over 400 middle schools in California to examine within-school racial disparities in students' experiences of school climate. It further examined the relationship between a school's racial climate gaps and achievement gaps and other school structures and norms that may help explain why some schools have larger or smaller racial disparities in student reports of climate than others. Multilevel regression results problematized the concept of a "school climate" by showing that, in an average middle school, Black and Hispanic students have less favorable experiences of safety, connectedness, relationships with adults, and opportunities for participation compared to White students. The results also show that certain racial school climate gaps vary in magnitude across middle schools, and in middle schools where these gaps are larger, the racial achievement gap is also larger. Finally, the socioeconomic status of students, student–

teacher ratio, and geographic location help explain some cross-school variation in racial climate gaps. These findings have implications for how school climate is conceptualized, measured, and improved.

Wentzel, K. R. (1998). Social relationships and motivation in middle school: The role of parents, teachers, and peers. *Journal of Educational Psychology, 90*, 202–209.

Adolescents' supportive relationships with parents, teachers, and peers were examined in relation to motivation at school (school- and class-related interest, academic goal orientations, and social goal pursuit). On the basis of 167 sixth-grade students, relations of perceived support from parents, teachers, and peers to student motivation differed depending on the source of support and motivational outcome: Peer support was a positive predictor of prosocial goal pursuit, teacher support was a positive predictor of both types of interest and of social responsibility goal pursuit, and parent support was a positive predictor of school-related interest and goal orientations. Perceived support from parents and peers also was related to interest in school indirectly by way of negative relations with emotional distress. Pursuit of social responsibility goals and school- and class-related interest in 6th grade partly explained positive relations between social support in 6th grade and classroom grades 1 year later. Continued research on the social origins of classroom motivation in early adolescence is needed.

Wentzel, K. R. (2010). Students' relationships with teachers. *Handbook of research on schools, schooling, and human development*, 75-91.

A central question addressed in this chapter is how and why students' relationships with teachers might be related to their social and academic functioning at school. Indeed, are student competencies that contribute positively to their social and academic successes at school simply those that also lead to the development of positive relationships with teachers? Similarly, is it the case that teacher-student relationships influence the development of students' social and academic competencies at school, or are the positive outcomes associated with these relationships the product of other relationships that students have with parents and peers? Toward this end, this chapter is organized around issues relevant for understanding the role that teacher-student relationships play in students' lives. First, the various theoretical perspectives that guide work in the field are described. Despite their common focus on the nature and functions of teachers' relationships with students, each of these perspectives provides the field with unique insights into the role of teachers in promoting students' competence at school. Next, research on teacher-students relationships that informs questions of causal influence is reviewed. Measurement and design issues associated with this research also are raised. Finally, directions for future work in this area are offered.

Wentzel, K. R. (2012). Teacher-student relationships and adolescent competence at school. In *Interpersonal Relationships in Education* (pp. 19-35).

There is growing consensus that the nature and quality of children's relationships with their teachers play a critical and central role in motivating and engaging students to learn. Effective teachers are typically described as those who develop relationships with students that are emotionally close, safe, and trusting, who provide access to instrumental help, and who foster a more general ethos of community and caring in classrooms.

Wigfield, A., Eccles, J. S., Schiefele, U., Roeser, R., & Davis-Kean, P. (2006). Motivation. In N. Eisenberg (Ed.), *Handbook of child psychology* (Vol. 3, 6th ed., pp. 933 – 1002). New York, NY: Wiley.

In this chapter we review work on the development of achievement motivation, focusing primarily on motivation for achievement in school. The chapter begins with a presentation

of major current theories of achievement motivation. We then discuss research on the development of children's achievement motivation across the childhood and adolescent years, with special attention paid to gender differences in motivation and the role of culture, ethnicity, and immigration in influencing the development of children's motivation. The second major section of the chapter focuses on the socialization of motivation. We discuss parental influences on motivation; how different aspects of schooling, school environments, and school transitions influence motivation; and the roles of peers in children's motivation. The chapter concludes with future directions for the field.

Zimmer-Gembeck, M. J., Chipuer, H. M., Hanisch, M., Creed, P. A., & McGregor, L. (2006). Relationships at school and stage environment fit as resources for adolescent engagement and achievement. *Journal of Adolescence*, 29, 911 – 933.

Guided by Self-Determination and associated theories, we examined whether adolescent (N=324, M age=15, 52% female) competence (academic engagement and achievement) were supported by relationships at school and school fit. Aspects of relationships and school fit that were measured included adolescents' perceptions of each context as promoting autonomy, relatedness and competence. Within a latent-variable structural equation model, direct and indirect path estimates, standard errors and confidence intervals were produced using maximum likelihood and bootstrapping. Results supported the hypothesized model. As predicted, school fit partially mediated the association between teacher-student relationships and engagement, but fully mediated the association between peer relationships and engagement. Engagement fully mediated the path from school fit to achievement. The use of SEM and bootstrapping are encouraged as the combination of these techniques can increase power to detect direct and indirect effects, and can be a better choice for data that do not conform to normal theory assumptions. Overall, these techniques allowed for more firm conclusions about the importance of a hierarchy of multidimensional contextual experiences for adolescent competence.

Zirkel, S. (2002). Is there a place for me? Role models and academic identity among White students and students of color. *The Teachers College Record*, 104(2), 357-376.

Surveyed early adolescents regarding the influence of race- and gender-matched role models. Students with race- and gender- matched role models at the beginning of the study performed better academically, had more achievement-oriented goals, enjoyed achievement-related activities more, thought more about their futures, and looked up to adults rather than peers more often than students without such models.