

Policy Brief
July 2016



Focus Area Policy Brief: Teacher & Mentor Relationships

Dr. Sarah K. Bruch
Director of Social and Education Policy
Public Policy Center
Assistant Professor of Sociology
University of Iowa

Harper Haynes
Sociology, M.A.
University of Iowa

Alex Hylka
Political Science
University of Iowa

Introduction

In February 2016, a student survey was administered to all 6th, 8th, and 11th grade students in the Iowa City Community School District (ICCSA). The survey asked students to report on their experiences of school across a number of areas including relationships with teachers, mentor relationships, support resources, negative experiences of school, social belonging, motivations to attend school, perceptions of discipline, inclusive classrooms, and the salience of race and gender for social identity and relationships. An extensive analysis of this survey was conducted and summarized in a report released in April 2016, *Assessing Student Experiences Survey Report*. (Bruch et al 2016) Drawing on the findings from the Report, three focus areas have been identified for the District: teacher and mentor relationships; inclusive community; and disciplinary environment.

This focus area brief concentrates on teacher and mentor relationships. Briefs have also been prepared for inclusive community and disciplinary environment. Each brief answers the following questions:

- 1) Why is this particular aspect of student experience important?
- 2) What is the extent of the problem in regard to this aspect of student experience in the ICCSD?
- 3) What are the strategies for intervening that have been shown in the education research literature to be effective?
- 4) What are the evidence-based recommendations that can inform the ICCSD decision-making process?

The Importance of Student-Teacher Relationships

Why do student-teacher relationships matter?

One of the most important aspects of student experiences in schools and classrooms are positive supportive relationships. Student-teacher relationships develop throughout the school year by a combination of interactions, attitudes, belief systems and affective behavior (Hamre and Pianta 2005). Positive relationships between students and teachers, and non-academic mentors, have been found to be associated with higher levels of student achievement (Hattie 2009; Lee & Smith 2001; NCR/IOM 2004), engagement and connectedness to the wide-range of social settings in the school environment (Niemic & Ryan 2009; Zimmer-Gembeck et al. 2006), and a lower likelihood of disciplinary problems (Crosnoe, Johnson, and Elder 2004). Extensive research evidence points to the importance of student-teacher relationships as both a direct impact on student outcomes, and indirectly through the complex interaction of school environments, and the students' peer and parent relationship dynamics (Wentzel 2010). Gaining insight into precisely how these student-teacher relationships can have such impactful results on students can clarify potential solutions to improve the quality of the connections.

How do student-teacher relationships impact students?

Like other relationships, the student-teacher relationship is a mutually reinforcing system, meaning that both parties contribute to the quality and characteristics of the relationship (Hamre and Pianta 2005). There is evidence that there is a complex reciprocal exchange throughout the course of these social interactions that impact students. For example, elementary school teacher involvement leads to heightened student engagement, which in turn, reinforces the teachers' investment and involvement in the classroom (Skinner and Belmont 1993). From a child developmental standpoint, student-teacher relationships can directly affect student behavior and academic competencies through promotion of emotional support and adjustment to school (Wentzel 2010). From a socialization standpoint, teachers serve as a socialization resource through exposing students to positive communication styles and clear expectations, providing guidance and instruction, and providing emotional support and safety (Wentzel 2010). Additionally, student perceptions regarding the quality of student-teacher relationships can serve as a compensatory resource to alleviate disparities in student engagement, motivation, connection to the school, prosocial behavior and academic achievement (Eccles and Roesser, 2011). For example, students who report supportive and caring relationships with teachers also report positive academic attitudes and satisfaction with school (Klem and Connell 2004).

What are the qualities of a positive student-teacher relationship?

Teachers facilitate the greatest amount of interaction between students and the school environment, and provide direct opportunities to foster and reinforce positive, affirming, and supportive feelings among students in the school environment. According to Wentzel (2009) "effective teachers are

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.” Further, positive teacher characteristics such as empathy, warmth, encouragement and positivity are all strongly and consistently associated with positive academic achievement and student behavior (Cornelius-White 2007).

Are there disparities in student-teacher relationships?

Although the numerous benefits associated with supportive teacher relationships can potentially alleviate academic disparities, not all students experience these relationships equally. Girls typically develop closer bonds with teachers and exhibit less conflict than do boys across all grade levels, but given the overrepresentation of females in the teaching profession it is difficult to discern the causal impact of differential relationships by gender (Hamre and Pianta 2005). Research has found a consistent pattern whereby Black and Hispanic students generally have significantly different perceptions of schools compared to their white peers, and perceive less supportive relationships with teachers (Voight et al. 2015). These differential perceptions by race and class remain even when accounting for school-wide socioeconomic and racial diversity, meaning that targeting the student-teacher relationship itself is required (Bottiani et al. 2016). There is evidence to suggest that these perceptions are quite impactful for non-white student outcomes. In a meta-analysis of numerous studies, student ethnicity remained a significant predictor of the impact that teacher relationships can have on student engagement (Roorda et al. 2011).

Despite these disparities, there are numerous indications that students at a relationship disadvantage (in this instance, boys, lower socioeconomic status students and ethnic minority students) typically experience the largest gains when a strong and supportive teacher relationship is developed (Wentzel 2010). Additionally, teacher characteristics may play a role in the establishment of a positive student-teacher relationship. Research suggests that racial/ethnic matching between student and teacher can boost student performance on standardized testing, increase motivations and expectations for student performance, and teachers who share the same racial or ethnic background with students are likely to be better equipped to understand cultural differences that can influence perceptions and interpretations of student behavior (Goldhaber, Theobald and Tien 2015).

When do student-teacher relationships matter most?

Recent research underscores the significance of addressing issues concerning the development and quality of student-teacher relationships early on in student’s academic careers (Kindergarten through 5th grade). Developmental research shows that targeting student-teacher relationships earlier in childhood can alter a student’s long-term trajectory of engagement and achievement (Hughes et al. 2008). Early attention to developing positive relationships with teachers has been found to be particularly effective given that students often experience a decline in their perceptions of the school environment as they transition from elementary school to secondary school, and the effects of teacher relationship becomes stronger as children age (Burchinal et al. 2008; NRC/IOM 2004; Roorda et al. 2011; Wigfield et al. 2006; Zimmer-Gembeck et al. 2006). Therefore, efforts to improve student-teacher relationships are most effective if implemented through K-12 with a particular focus on preventative implementations at younger grades.

The Importance of Student-Mentor Relationships

Why do mentor relationships matter?

In addition to relationships with teachers, developing a close and supportive relationship with other adults in the school and community is also associated with improved overall academic achievement. Much like the characteristics associated with a positive student-teacher relationship, successful mentor-relationships can encourage social, emotional, identity and academic development for youth (Rhodes et al. 2006). Unlike the relatively structured context in which student-teacher relationships form, mentor relationships can vary in their formality, length, intention, and quality to such a degree that broad generalities about the characteristics of effective mentoring on youth is mixed. Yet, given the social nature of youth development, mentor relationships can influence student academic performance, future educational and occupational aspirations, and enhance a child’s social skills (Rhodes et al. 2006).

How do mentor relationships impact student success?

Given the variation in mentor programming, there is not a definitive answer for how a student can benefit with the implementation of mentoring programs (Rhodes 2008). Yet, evaluations of common practices in mentoring can provide insight into why mentors can be greatly beneficial to students. Mentor programs produce positive results when the relationships are longer and more durable (Herrera et al. 2007) and school-based mentoring is most impactful when it has a goal-driven, instrumental approach (McQuillin et al. 2013). An overall evaluation of various mentoring programs that received funding from the U.S. Department of Education Student Mentoring Program (SMP) indicates that mentoring programs have the capacity to increase student engagement and future academic orientations (Bernstein et al. 2009). Additionally, mentor programs are particularly amenable as a supplemental resource for students, and experts recommend the efficacy of combining mentorship programs along with Positive Behavioral Support Systems (PBIS) (McQuillin et al. 2013).

Are there disparities in mentor relationships?

While there is general agreement that a stable and supportive mentor relationship can positively impact youth development, nationally representative data shows that mentorship is most likely to occur among more advantaged youth (Erickson et al. 2009). Students who have greater social and financial resources are most likely to have a mentor, yet those with fewer resources can benefit the most from the establishment of a positive mentor relationship (Erickson et al. 2009). Further, in an extensive analysis of mentoring programs, effective programs provide the greatest benefits to at-risk or otherwise disadvantaged youth (DuBois et al. 2002), and these benefits are greater when mentors share the same racial or gender background for underrepresented students (Zirkel 2002).

Student-Teacher Relationships in the ICCSD

Student-Teacher Relationship Survey Results

Survey Measure	Overall	Race Disparity	Gender Disparity	Socioeconomic Status Disparity
Teacher Encouragement	90%	White=91% Black=87% Latino=90%	Female=91% Male=89%	Low=85% Med=88% High=92%
Teacher Academic Relationship	84%	White=85% Black=79% Latino=82%	Female=84% Male=83%	Low=81% Med=82% High=86%
Teacher Personal Concern	74%	White=77% Black=63% Latino=70%	Female=76% Male=72%	Low=65% Med=73% High=77%
Teacher General Treatment	83%	White=85% Black=77% Latino=81%	Female=85% Male=81%	Low=76% Med=83% High=86%
Teacher Equitable Treatment	81%	White=84% Black=75% Latino=84%	Female=80% Male=83%	Low=76% Med=82% High=84%
Teacher Supportive Treatment	75%	White=76% Black=71% Latino=75%	Female=74% Male=76%	Low=67% Med=74% High=79%

Note: Race disparity includes the three largest racial/ethnic categories represented in the survey sample (White, Black, and Latino). Race is measured as the student's self-reported racial identification. Socioeconomic status is measured as the highest level of student's parental education. Teacher Equitable Treatment and Teacher Supportive Treatment were only asked of 8th and 11th grade students. Details on each survey measure are provided at the end of the brief. Light yellow highlighted cells indicate a 5-10% disparity between groups. Dark yellow highlighted cells indicate disparities greater than 10% between groups. Bold indicates the group with the lowest value for that particular survey measure.

Key Findings

- 1) There are moderate or large socioeconomic status differences for every measured aspect of student-teacher relationships.
- 2) There are large racial differences in teacher personal concern; and moderate racial differences in the quality of academic relationships with teachers, and for all three types of teacher treatment - general, equitable, and supportive.

Intervention Strategies

Evidence-based interventions that improve student-teacher relationships can broadly be categorized into three groups: 1) professional development that target teacher competency and practice through social-emotional learning frameworks, 2) universal programs that promote relationship-building and 3) activities that encourage connection and understanding between students and teachers. The programs described below represent interventions from each category that have substantial evidence to support its efficacy in improving the relationships between students and teachers. It should be noted that some programs mentioned are designed to modify a particular academic or behavioral outcome (i.e. risk of dropping out) *through* the improvement of student-teacher relationships.

Teacher Professional Development

There are numerous professional development programs that include methods for improving teacher relationships and interaction with, and support for students. Two examples are: MyTeachingPartner and Cultivating Awareness and Resilience in Education.

MyTeachingPartner™ is a system of professional-development supports that specifically focus on improving student-teacher interactions through guided web programs and mediated coaching for

teachers to identify and improve their ability to develop supportive, compassionate and responsive interactions with students (CASTL, 2016). MyTeachingPartner™ (MTP) demonstrates considerable evidence for success with flexible implementation. Independent research of the MTP program provide evidence that the program is effective in improving student-teacher interactions in both elementary and secondary settings, and implementation of MTP is associated with higher student gains in achievement and improved emotional climate in the classroom (Allen et al., 2015).

Cultivating Awareness and Resilience in Education (CARE) is a professional development program that seeks to improve a teacher's social-emotional competence and well-being, which proximally improves student-teacher relationship and classroom-management (Garrison Institute, 2016). Randomized control trials of the CARE program indicate significant improvement of a teacher's well-being and resiliency; however, the proximal effects on student outcomes have not been systematically examined (Jennings et al. 2013).

Promoting Relationship-Building

Aside from targeted professional development for teachers, universal or school-wide programs that promote relationship-building can improve interactions and connections between students and staff. There are two approaches to promote productive relationship-building mentioned in this section: a) restructuring of the school environment and b) changing communication practices.

Restructuring the form and function of a school, such as creating a small-learning community (SLC) or a "school within a school" is a potential solution to increase the quality and frequency of student-teacher interaction (Connell et al. 2005). The First Things First program is a comprehensive school reform model to improve student achievement by establishing smaller learning communities within the school and includes a student advocate system to monitor and support students (Quint et al. 2005). Another common SLC program is Career Academy, which develops links between peers, teachers, families and community partners to provide technical and academic curriculum to high school students (Kemple and Snipes 2000). While these SLC programs vary in their targeted outcome (i.e. dropout prevention, increased achievement, etc.), the structure of the programs promote intensive relationships, continuous communication between students and teachers, and lower student-teacher ratios.

Another strategy focuses on changing teacher communication practices in order to increase dialogue between students, their families and teachers. Clear and consistent communication not only provides critical information about a student's academic progress, it also demonstrates that teachers are invested and care for the success of the child. Research indicates that caring and involved teachers are associated with student engagement and academic achievement (Wentzel 1998). A randomized field experiment of daily communication from teachers through text message and phone calls was associated with increased completion of homework and assignments and participation in the classroom, and post-experiment data indicated that both teachers and students reported better relationships (Kraft and Dougherty 2012).

Enhancing Connection and Engagement

Extant social psychological research provides evidence that targeting shared commonalities between individuals can validate identities and establish closer bonds (Montoya et al. 2008). Brief interventions that affirm the shared commonalities between a teacher and student can improve relationships and student achievement. For example, in an activity-based randomized control trial, students received information regarding five similarities that they shared with their teachers. After the intervention, students and teachers in the treatment group perceived better relationships and students earned higher course grades and effectively reduced gaps in achievement (Gehlbach et al. 2016). Activities focused on establishing commonalities between students paired with effective classroom management strategies like positive relational communication themes (i.e. showing interest and care for a student) can improve rapport between students and teachers (Hamre and Pianta 2006). There are two particularly promising aspects of the intervention strategy that emphasizes similarities between students and teachers as a way to foster more positive relationships. First, this strategy has been found to be most effective in creating a positive student-teacher relationship for underserved students. Second, it was found to reduce the achievement gap by increasing the grades of low-performing students (Gelbach et al. 2016).

Refer to the Supplemental Appendix for further resources of student-teacher relationship interventions.

Recommendations

Drawing on the key findings from the Assessing Student Experiences Survey Report and the research evidence regarding the effective programs listed above, the following are general recommendations to guide the district in selecting and implementing programs and policies that can improve the relationship between teachers and students and equalize access to support for all students.

- Given the extent of racial and socioeconomic status disparities in several aspects of the student-teacher relationships with around a quarter of students in the most marginalized groups reporting a lack of encouragement, personal concern, and supportive, equitable treatment by teachers, the District may consider an approach that draws attention to the commonalities that students and teachers share. This may be particularly appropriate in school districts such as Iowa City where there is less congruence between the social backgrounds of students and teachers.
- The District may consider a teacher professional development strategy that emphasizes the importance of student-teacher relationships with students. While the vast majority of students in the district report positive relationships with teachers, the over-representation of more advantaged students reporting this points to the need for teachers to proactively reach out to less advantaged students and work to create and maintain positive relationships with all students. A potential professional development approach could provide teachers with the information on the disparities among students, and communicate to teachers the importance of developing strong relationships with all students.
- One particularly crucial aspect of building relationships is time spent together. Therefore, any strategy that the District uses to address disparities in student-teacher relationships should include opportunities for students and teachers to interact and spend time together in order to foster strong relationships.

Student-Mentor Relationships in the ICCSD

Student-Mentor Relationship Survey Results

Survey Measure	Overall	Race Disparity	Gender Disparity	SES Disparity
Has a Mentor	89%	White=90% Black=87% Latino=88%	Female=91% Male=87%	Low=91% Med=88% High=90%
Mentor Relationship	87%	White=87% Black=85% Latino=88%	Female=89% Male=85%	Low=86% Med=87% High=88%
Mentor is a Teacher	58%	White=63% Black=44% Latino=59%	Female=62% Male=54%	Low=53% Med=59% High=61%
Gender-Matched Mentor	49%	White=50% Black=47% Latino=47%	Female=61% Male=36%	Low=53% Med=48% High=49%
Race-Matched Mentor	65%	White=95% Black=32% Latino=10%	Female=65% Male=66%	Low=45% Med=70% High=71%

Note: Race disparity includes the three largest racial/ethnic categories represented in the survey sample (White, Black, and Latino). Race is measured as the student's self-reported racial identification. Socioeconomic status is measured as the highest level of student's parental education. Mentor in the survey is measured as *an adult you have a close relationship with and that you can trust and go to for advice*. Details on each survey measure are included at the end of the brief. Light yellow highlighted cells indicate a 5-10% disparity between groups. Dark yellow highlighted cells indicate disparities greater than 10% between groups. Bold indicates the group with the lowest value for that particular survey measure.

Key Findings

- 1) Mentorship Relationships: Overall there are high rates of mentorship and positive relationships with those mentors for all groups of students.
- 2) Teachers as Mentors: There are large racial differences, and moderate gender and socioeconomic status differences in the rate at which teachers act as mentors for students.
- 3) Race- and Gender-Match of Mentors: There are large racial and socioeconomic status differences in race-matched mentorship; and large gender and moderate socioeconomic status differences in gender-matched mentorship.

Intervention Strategies

In general, there are two types of mentoring programs: community-based mentoring (CBM) and school-based mentoring (SBM). Given the individualized nature of mentor programs that requires appropriate matching of mentor and mentee, there is substantial variation in the type, quality, and evidence of positive effects for SBM models. SBM programs are typically interventions targeted to specific populations of students to improve prosocial behavior such as reducing drug and alcohol use or criminal activity; however, most programs can be catered for a more universal application (Randolph and Johnson 2008, Rhodes 2008).

Extensive evaluation of programs point to a few key considerations when choosing and implementing mentoring programs: 1) the use of evidence-based best practices and theoretically-driven mentoring models are the most successful, 2) poorly implemented programs can be detrimental to disadvantaged youth, 3) the program should have structured and consistent mentor-mentee interactions, and 4) continuous mentor training throughout program implementation leads to increased efficacy (Dubois et al. 2002). The two SBM programs reviewed below are meant to serve as a general introduction to effective mentoring designs for the district to consider.

Refer to the Supplemental Appendix for further resources of mentor program design and implementation.

School-Based Mentoring Programs

Big Brothers Big Sisters of America (BBBSA) has been a long-standing community program, and in recent years the organization has developed a school-based program. Results from a national, randomized trial evaluation of school-based BBBS provides evidence that the program is effective at establishing prosocial school ties and improved educational outcomes for mentees; however, these associations are stronger when the mentor is an adult rather than a high school-aged youth (IES 2013). Additionally, school-based BBBS programs are most effective in producing significant academic gains when precautions are taken to decrease the likelihood of mentee dropout (Grossman et al. 2011), and implemented after-school or during lunch periods rather than pulling mentees out of class (Schwartz, Rhodes and Herrera 2012).

An alternative to this approach is a more targeted mentoring program. Check and Connect is a mentoring program implemented through school staff referrals to target low attendance and problem behavior for elementary and middle-aged youth by assigning a mentor that monitors student progress and provides individualized support. The program is effective in terms of ameliorating risk of dropout; however, it also can serve as a formalized structure for a universal mentoring design through its combination of case management and mentor style approach (Anderson et al. 2004, IES 2015).

Recommendations

Drawing on the key findings from the Assessing Student Experiences Survey Report and the research evidence regarding the effective programs listed above, the following are general recommendations to guide the district in selecting and implementing mentoring programs and policies that can improve support to all students.

- Given the overall high rates of mentorship in the District currently, it may not be necessary to implement a program that is designed to increase mentorship overall. However, one of the key findings from the survey was the substantially different rates at which Black and low socioeconomic students have mentors who are teachers. Having teachers as mentors (as opposed to having mentorship relationships with other adults in the school) may provide distinct advantages related to student achievement and generally better relationships between teachers and students. Therefore, the District may consider implementing a policy or program that incentivizes teachers being mentors to students regardless of their social backgrounds.
- One of the potential reasons why there are lower rates of teacher mentorship with Black and low socioeconomic students may be due to the tendency for mentors and mentees to share social characteristics. We see evidence of this with the exceptionally low rates of race-matching between mentor and mentee for Black, Latino, and low socioeconomic students. Given that the majority of teachers in the District are white professionals, it is not surprising to find higher rates of mentorship with students of similar backgrounds. One strategy the District could pursue to equalize teacher mentorship and race- and gender-matching would be to increase the recruitment and retention of teachers from diverse social backgrounds.
- An alternative strategy the District may consider pursuing would be to focus on increasing any type of mentorship. The District could build on and support the existing programs that expand the network of adults that interact and form supportive bonds with students outside of the classroom setting.

Details on Survey Measures

Demographic Measures

Race and Gender are self-reported indicators of the student's racial and gender identification.

Student's socioeconomic status is measured by parents' highest level of education, which has been shown to be the most reliable indicator of socioeconomic status when asked of adolescents. Parents with a high school diploma or less are coded as "Low SES", those with a college degree as "Medium SES", and those with post-college degree as "High SES".

Teacher Relationships

Survey measures and results regarding teacher relationships are discussed in the full Survey Report (p. 15-21), available online here:

http://ppc.uiowa.edu/sites/default/files/iccsd_student_experience_onlineversion.pdf

There are five composite measures for teacher relationships mentioned in this brief. Encouragement of Teachers, Academic Relationship with Teachers, Personal Concern of Teachers, and General Treatment by Teachers are derived from survey items asking students to report on their own personal experience with their teachers, whereas Equitable Treatment and Supportive Treatment (asked only of 8th and 11th grade students) are derived from survey items asking students to report on their perception of teachers at their school more generally. All survey items in the composites were measured with a 4 category Likert scale ranging from "Strongly Agree" to "Strongly Disagree".

Encouragement is a combined measure survey items asking students their agreement with the two statements, "teachers encourage me to work hard" and "teachers encourage me to ask questions and participate in discussion".

Academic Relationship with Teachers is a combined measure of survey items asking students their agreement with the four statements, "if I were having difficulty in class, I am comfortable approaching most of my teachers about it", and in my classes... "my teachers notice my hard work", "my teachers care about my learning", and "my teachers expect me to do well".

Personal Concern of Teachers is a combined measure of survey items asking students their agreement with the statements, "most of my teachers really listen to what I have to say" and "most of my teachers seem to not understand where I am coming from". The second item is reverse-coded to make it a positive statement.

General Treatment by Teachers is a combined measure of survey items including the student's agreement to which, "most of my teachers treat me the same as other students" and "in my classes, I often feel "put down" by my teachers" which is reverse coded to make it a positive statement.

Equitable Treatment by Teachers is a combined measure of survey items asked of 8th and 11th grade students in their agreement to which, "teachers treat students fairly", "teachers treat students of all races with respect", "teachers expect the best from students of all races" and "teachers give everyone the same opportunities in the classroom".

Supportive Treatment by Teachers is a combined measure of survey items asked of 8th and 11th grade students with their agreement to which, "students are supported by the teachers", "teachers listen to students when they have problems", "students get along well with teachers", and "teachers often let students know when they are being good".

Mentor Relationships

Survey measures and results regarding mentoring relationships are discussed in the full Survey Report (p. 22-26), available online here: http://ppc.uiowa.edu/sites/default/files/iccsd_student_experience_onlineversion.pdf

There are five measures for mentoring mentioned in this brief. Items related to student's mentor, including mentor's race and gender are reported by student respondents. The Mentor Role, Race-Match, Gender-Match and Mentor Relationship are only available for those students who reported having a mentor.

Mentor is a single item asking students to report whether or not there is, "A person you have a close relationship with and that you can trust and go to for advice".

Mentor Role is a single item asking students to indicate if the mentor is "a teacher or some other adult in the school".

Mentor Race-Match is a constructed "yes/no" variable that indicates if there is a race-match between student and mentor if the student's response to their own racial identification and that of the mentor matches.

Mentor Gender-Match is a constructed "yes/no" variable that indicates if there is a gender-match between student and mentor if the student's response to their own gender identification and that of the mentor matches.

Mentor Relationship is a combined measure including the student responses to their agreement with the statements, "I can go to this person for advice", "this person accepts me no matter what I do", "this person understands what I am really like", and "I can share my inner feelings with this person".

References

- 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.
- 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.
- 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.
- 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.
- Bruch, Sarah K. Harper Haynes, Tessa Heeren, Sana Naqvi, and Ha Young Jeong. 2016. "Assessing Student Experiences of School in the Iowa City School District." Public Policy Center, University of Iowa. http://ppc.uiowa.edu/sites/default/files/iccsd_student_experience_onlineversion.pdf
- 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.
- 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.
- Cornelius-White, Jeffrey. "Learner-centered teacher-student relationships are effective: A meta-analysis." *Review of educational research* 77, no. 1 (2007): 113-143.
- 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.
- 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.
- Eccles, J. S., & Roeser, R. W. (2011). Schools as developmental contexts during adolescence. *Journal of research on adolescence*, 21(1), 225-241.
- Erickson, L. D., McDonald, S., & Elder, G. H. (2009). Informal mentors and education: Complementary or compensatory resources? *Sociology of education*, 82(4), 344-367.
- 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.
- 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.
- 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.
- Hattie, J. (2009). *Visible learning*. New York, NY: Routledge.
- 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.
- 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.

- 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.
- Kemple, J. J., & Snipes, J. C. (2000). Career Academies: Impacts on Students' Engagement and Performance in High School. MDRC.
- 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.
- 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.
- Lee, V. E., & Smith, J. (2001). *Restructuring high schools for equity and excellence: What works?* New York, NY: Teacher's College Press.
- 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.
- 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.
- Murphy, P. K., & Alexander, P. A. (2000). A motivated exploration of motivation terminology. *Contemporary educational psychology*, 25(1), 3-53.
- National Research Council and Institute of Medicine (NRC/IOM). (2004). *Engaging schools*. Washington, DC: National Academies Press.
- 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.
- 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.
- Randolph, K. A., & Johnson, J. L. (2008). School-based mentoring programs: A review of the research. *Children & Schools*, 30(3), 177-185.
- Rhodes, J. E. (2008). Improving youth mentoring interventions through research-based practice. *American Journal of Community Psychology*, 41(1-2), 35-42.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- Wentzel, K. R. (2010). Students' relationships with teachers. *Handbook of research on schools, schooling, and human development*, 75-91.

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

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.

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.

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.