

# knowledge brief

Research evidence indicates that many students lose skills and knowledge during the summer months and that summer learning loss disproportionately affects low-income students (Cooper, Nye, Charlton, Lindsay, & Greathouse, 1996). Moreover, recent findings point to the potentially lasting consequences of the summer learning gap and its significance as a mechanism for the perpetuation of family advantage and disadvantage across generations (Alexander, Entwisle, & Olson, 2007). Participation in high quality summer learning programs can mitigate learning loss and even produce achievement gains (McCombs et al., 2011).

Founded in 1986, Aim High is a summer learning program designed to prevent the summer academic slide by providing middle school students from low-income families a five-week, tuition-free summer program that blends academics and enriching activities such as sports, art, and drama. At the time of this study (2015), Aim High served over 1,900 students across 15 sites in Northern California. Approximately three-fourths of Aim High students attend the program for at least two summers and many of them do so for up to four summers, until they enter high school. A second goal of Aim High is to build a pipeline for diverse teachers to enter the field of education. To that end, the program provides Aim High alumni and other low-income youth with paid job opportunities during the summer as teaching assistants and interns, and encourages them to pursue careers in education. Additionally, Aim High has developed multiple institutional practices to recruit, retain, and support its teaching staff. In 2015, Aim High engaged approximately 400 teaching staff, the majority of whom were people of color and proficient in more than one language.

## An Implementation Study of the Aim High Experience

### SUMMARY

**Our study found** Aim High to be implemented well and consistently across program sites. Through intentional program design, a positive supportive culture, engaging curriculum and pedagogy, and an explicit focus on building educational leaders, Aim High offers a program model consistent with high quality standards in the field of summer learning. Students reported positive shifts in academic learning, social emotional competencies, sense of competence, and college and career knowledge associated with their participation in Aim High. Additionally, through its emphasis on fostering a diverse community of educators and embedding professional development in its model, Aim High strengthens its program and offers a unique contribution to the field.





## Informing Efforts to Improve Program Practice and Policy

In the fall of 2014, Aim High engaged the John W. Gardner Center for Youth and Their Communities at Stanford University (Gardner Center) to conduct an implementation study of the program. As a first step, we supported Aim High in the process of refining the existing student logic model and developing a teacher logic model. Guided by Aim High's student and teacher logic models, the Gardner Center designed a mixed-method study to examine students' and teachers' experiences with the program and to identify key program elements and implementation conditions that bring about desired program outcomes.

The study involved the collection of both quantitative and qualitative data. Data sources included individual interviews with Aim High leadership, central office staff, and site directors; focus group interviews with students, teaching staff, and parents; observation of program activities; and student, teaching staff, and parent

surveys.<sup>1</sup> The use of mixed methods, along with multiple data sources, allows for a more comprehensive and robust analysis. That said, our findings with regard to shifts in student and teacher outcomes associated with program participation should not be interpreted to imply causality, as they are self-reported and, further, the design for this implementation study does not include a comparison group of students or teachers that do not participate in Aim High.

## Aim High Central Practices

Research has identified several essential components of high quality summer learning programs. These include smaller class sizes, differentiated instruction, high quality instruction, engaged and rigorous programming, maximized participation and attendance, sufficient duration of instruction, involved parents, and evaluations of effectiveness (McCombs et al., 2011; RAND, 2013). Aim High's program practices align with these standards of practice.

Specifically, this study identified four Aim High central practices designed to achieve these goals: 1) Intentional program design; 2) Positive program culture and climate; 3) Engaging curriculum and pedagogy; and 4) Building educational leaders.

### 1. Intentional Program Design

#### LOW STUDENT-TEACHER-RATIO

Keeping class sizes small has been identified as a characteristic of summer learning programs leading to academic improvement (McCombs et al., 2011; Terzian, Moore, & Hamilton, 2009). Small class sizes create opportunities for differentiated instruction and extra support for the students who need it. For engaged, project-based learning, a low student-teacher ratio can be particularly important. Project-based learning activities are often less structured and more complex than traditional classroom tasks (Ormrod, 2008). Teachers need to balance student autonomy with the need to maintain order in the classroom (Thomas, 2000).

Aim High offers small class sizes, typically ranging from 12-20 students with one lead teacher and one teaching assistant or intern. Teacher and site director data illuminate that teaching staff find the low student-teacher ratio allows them to build strong relationships with students, support students of different abilities in the classroom, and try ambitious project-based learning.

#### STAFF RECRUITMENT AND HIRING

Recruiting and hiring the right teachers is an important element of ensuring quality instruction (RAND, 2013). Moreover, there is increasing concern in the field of education with

<sup>1</sup> Please see full report and/or contact the researchers for a complete description of the research methodology.



the lack of recruitment, retention, and overall shortage of minority educators (Ingerstoll & May, 2011).

Several key practices distinguish Aim High’s hiring. Site directors themselves hire their teaching staff. As part of the program’s design, Aim High hires former Aim High alumni as teaching assistants and interns who, in many cases, ultimately become lead teachers. Aim High alumni who become teaching staff possess important institutional knowledge having experienced the program directly in the past. Additionally, they reflect a diverse teaching corps. Site directors showed tremendous consistency in what they look for in a teacher: they look for teachers who want to learn with their students, who are open-minded, innovative, and enthusiastic.

Most Site Directors, usually recruited from inside the program, have been involved with Aim High for a number of years and have a deep understanding of the program’s

mission and the core values that guide all program activities. Aim High puts intentional efforts in place to ensure site continuity by pairing a novice Site Director with a veteran. This practice also helps build the leadership capacity of new directors, through mentoring and on-the-job professional development.

### **STUDENT RECRUITMENT, ATTENDANCE, AND RETENTION**

The high rates of student engagement, attendance and retention can be viewed as leading indicators of positive student outcomes.<sup>2</sup> While

some models of summer learning focus primarily on academics, test preparation, and stemming summer learning loss, the Aim High curriculum reflects a new vision of summer learning (McLaughlin & Smink, 2010), one that departs from a narrow focus on remediation to blend academic instruction in core subjects, hands-on learning, and enriching activities.

Site Directors provided consistent accounts of a student recruitment process that prioritizes applications from students who may benefit most, and highlighted efforts to provide continuity by retaining students in the program from year to year. Our findings suggest that many students feel initially apprehensive about attending Aim High because they think it is going to be “pretty much like school but in the summer” and do so only under their parents’ insistence. While some students were initially reluctant to attend Aim High because they thought of it as summer school,

they quickly overcame this resistance once they experienced Aim High for a few days. Program attendance rates indicate students’ high engagement with the program—according to Aim High records, average attendance rate was 91%, ranging between 84% and 96% across sites. Aim High is intended to be a multi-year program from the summer before students enter middle school until the summer before 9th grade. Based on Aim High program records, an average of 72% students return to the program for two or more consecutive summers, ranging from 46% to 89% across sites.

### **2. Positive Program Culture and Climate**

Program culture and climate refers to the quality and character of program norms and values, social interactions, and organizational processes and structures. Culture and climate set the tone for learning and teaching in the program, and are predictive of students’ ability to learn and develop in healthy ways (Thapa et al., 2013). Additionally, a positive culture and climate is often linked to increased student attendance, participation, and engagement.

Our study indicates that both Aim High students and teaching staff consistently report positive program culture and environment. Students report high levels of support for academic learning, high expectations, caring relationships with adults, and positive peer relationships.<sup>3</sup> Additionally, the supportive culture undergirds many of the classroom practices. Our classroom observations indicate that Aim High classrooms reflect an emotionally safe and supportive learning environment,

<sup>2</sup> Leading indicators can be thought of as precursors or harbingers of future conditions. They can be useful measures when certain things, like student achievement, can take years to manifest.  
<sup>3</sup> These survey questions drew from the California Healthy Kids Survey (CHKS) scales, a validated instrument developed by WestEd, used widely across the state of California.

where students are willing to take risks, stretch their skills, and be pushed outside their comfort zone.<sup>4</sup>

Notably, the strong relationships that develop between teachers and students, found consistently across Aim High sites, was evidence of the positive program culture and climate. Teachers communicated a positive tone and commitment to the students. Students perceived that teachers not only cared about their success but also believed in their capacities. The personal relationships students and staff reported feeling towards one another created conditions for both motivation for participation as well as program satisfaction and engagement.

### **3. Engaging Curriculum and Pedagogy**

While some models of summer learning focus primarily on academics, test preparation, and stemming summer learning loss, the Aim High curriculum reflects a new vision of summer learning (McLaughlin & Smink, 2009), one that departs from a narrow focus on remediation to blend academic instruction in core subjects, hands-on learning, and enriching activities. Aim High offers close to 60 hours of academic instruction and 90 hours of enriching activities each summer, including afternoon elective activities, field trips, and college visits. Its core academic courses emphasize hands-on, project-based learning, an approach that engages students in the investigation of authentic problems (Blumenfeld et al., 2011). Student engagement—that students attend the program regularly, are motivated, and actively participate—is a necessary condition to achieving the benefits of summer learning programs (McCombs et al., 2011).



Aim High students cited the afternoon activities and project-based learning embedded into their academic classes as major reasons for their enjoyment of the program. Additionally, many teachers indicated that Aim High’s enriching activities helped them build stronger relationships with students, and that teaching at Aim High led them to expand their skills developing and implementing engaging lessons.

From the perspective of the majority of students who attended Aim High in the summer of 2015 and that of their parents and caregivers, Aim High played an important role in boosting students’ academic and social skills and helping them to be better prepared for future educational experiences.

#### **ACADEMIC LEARNING**

In the student post-survey, the great majority of students indicated that Aim High had helped them improve their reading (80%), writing (88%), math (89%), and science (92%) skills. Students in all grades perceived that Aim High helped them more with writing, math, and science than with reading; it may be the case that students felt they were already quite

proficient in reading at the start of the program. Moreover, among all caregivers who participated in the survey, over 90% reported that, because of Aim High, their child was better prepared for school in the fall.

#### **SOCIAL-EMOTIONAL LEARNING**

Social and emotional learning refers to “the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions” (CASEL, 2016). Research shows an association between socioemotional competencies with better school performance and greater well-being (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). The majority of students reported that they made new friends at Aim High, and that Aim High helped them learn how to work together with other students, appreciate their own and other’s cultures, and that Aim High’s Issues & Choices class helped them understand how to make more

<sup>4</sup> Observations were conducted using the Summer Learning Program Quality Assessment (SLPQA), an instrument developed and piloted by the Weikert Institute.

positive life choices.<sup>5</sup> In all focus group interviews students shared what they were learning or discussing in Issues & Choices, including bullying; gender and the media; racial and ethnic identity; prejudice and stereotypes; body image; how to deal with stress; kindness; and appreciation for diversity.

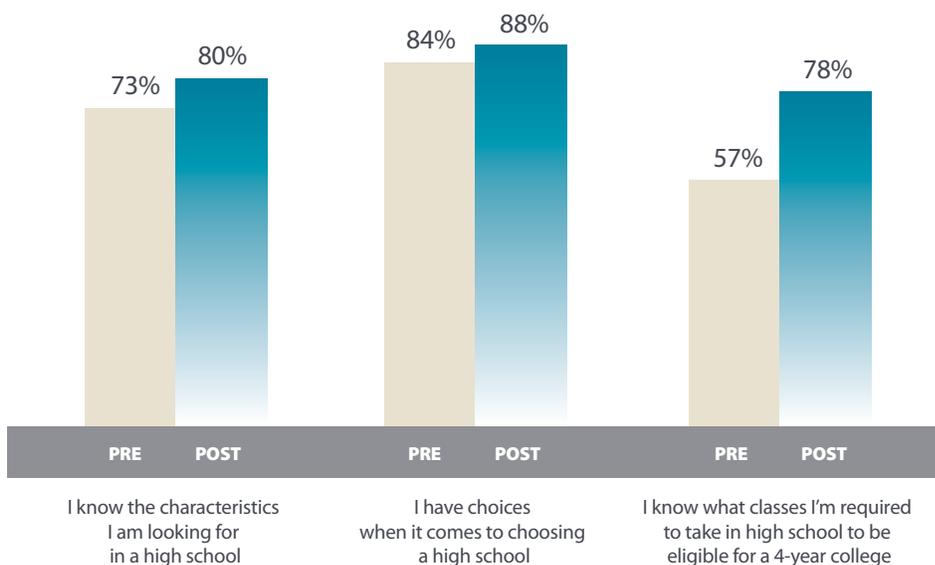
## CONFIDENCE

When compared to peers who feel insecure about their abilities, students who see themselves as capable learners are more likely to embrace challenging tasks, use more effective strategies, put forth more effort, persist in the face of obstacles, and generally perform better (Klassen & Usher, 2010; Wigfield, Eccles, & Rodriguez, 1998). Unfortunately, it is well documented that academic efficacy declines over time and that many young adolescents doubt their ability to succeed in school, question the value of doing schoolwork, and put forth less effort toward academics (Ryan & Patrick, 2001). At the time of the post-survey, 90% of students agreed or strongly agreed that Aim High had helped them feel more confident about doing their schoolwork next year. Additionally, pre- to post- survey changes revealed that students reported statistically significant increases in feelings of preparedness for the next school year across all grades. Lastly, pre- to post-survey changes of a self-efficacy scale showed statistically significant increases.

## COLLEGE AND CAREER KNOWLEDGE

Aim High’s Issues & Choices class curriculum incorporates units designed to support students’ transition to middle school and high school to build their college and career knowledge.

## 8TH GRADE SURVEY



Student surveys revealed statistically significant changes in students’ responses to various college and career knowledge-related items.

## 4. Building Educational Leaders

Aim High’s focus on fostering a diverse community of educators strengthens the program by embedding a professional development model within the program, supporting high quality instruction, and creating a positive program culture. Additionally, teachers who participate in Aim High report shifts in attitudes and beliefs, knowledge and skills, self-efficacy, and, ultimately, career plans.

## EMBEDDED PROFESSIONAL DEVELOPMENT

Professional development activities come in many forms, including workshops, seminars, conferences, courses, and other formal instructional settings. However, research and practice have taken a more broad-

based view of teacher professional development, treating teacher learning as interactive and social, based in embedded community practice (Cochran-Smith and Lytle 1999). This broader conception of embedded professional development views teacher participation in formal and informal learning communities as powerful mechanisms for growth and development (Borko, 2004). Embedded professional development can take the form of co-teaching, mentoring, reflecting on lessons, group discussions of student work, self-examination of one’s own teaching practice, and designing and selecting new curriculum.

Aim High systematically supports embedded professional development opportunities for teaching staff. Teaching staff reported that the “ideal” conditions Aim High affords them—for example, a low student-teacher ratio and a positive program culture/climate—provided an example to learn, as well as the opportunity for instructional innovation and experimentation.

<sup>5</sup> Based on our findings, Aim High’s Issues & Choices class (an adolescent development class) is positioned as a key setting to develop socioemotional competencies.

Additionally, staff cited the team teaching model, regular Site Director feedback, and exchanges with other teachers as providing ongoing, frequent, and engaged opportunities to learn, grow, and hone their practice.

### ATTITUDES & BELIEFS

Over 90% of Aim High teaching staff reported that their experience at Aim High influenced their beliefs about teaching and learning, and described three primary themes regarding the role of the teacher. Firstly, teachers reported that their participation helped them develop a deeper understanding of the importance of teacher-student relationships to student learning. Secondly, staff noted Aim High’s influence in understanding the important role of the teacher in fostering student engagement through instructional practice. Thirdly, staff perceived that Aim High fostered the belief that it is the teacher’s responsibility to adapt instruction to the needs of individual students, rather than the other way round.

### KNOWLEDGE, SKILLS, & METHODS

The vast majority of the teaching staff agreed completely or to a large extent that Aim High helped them expand their teacher knowledge and increase their teaching skills. Participant comments reflected three main areas of knowledge and skill development. Staff most frequently mentioned curriculum development and lesson planning, specifically designing lessons that were fun and engaging. Secondly, teachers mentioned that Aim High helped them increase their skills in developing procedures and setting class norms, learning better ways of dealing with problem behaviors (e.g., positive reinforcement), keeping

instructions clearly, among other things. Thirdly, staff remarked that Aim High strengthened their ability to adapt their instruction to the needs of individual students, including students of different skill levels, as well as diverse backgrounds.

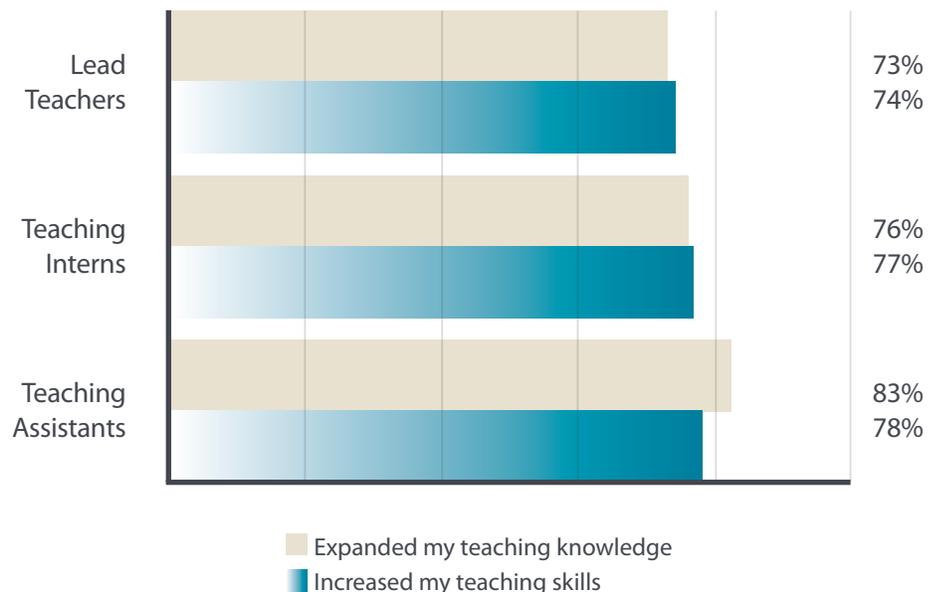
### SELF-EFFICACY

Teachers’ sense of self-efficacy—the extent to which teachers believe they can help students learn, even those students who are difficult or unmotivated—has been found to be related to teachers’ persistence, enthusiasm, and instructional behavior, as well as to students’ motivation, self-efficacy, and achievement (Tschannen-Moran & Woolfolk Hoy, 2001). The majority of the teaching staff reported that their experience of teaching at Aim High made them more confident in their role as a teacher. Specifically, 68% of lead teachers, 69% of interns, and 76% of TAs indicated that they felt more confident getting through to even the most challenging

students. Teaching staff remarked that Aim High allowed them multiple opportunities to see positive growth in students, as well as opportunities to improve their instructional capacity—and experience the success of these efforts. The enhanced sense of self-efficacy underlies the high endorsement (93%) of professional lead teachers to the statement “I believe I will be a better teacher during the academic year due to Aim High.”

Many of Aim High’s teaching staff—lead teachers, interns, and TAs—indicated that Aim High had influenced their desire to pursue or continue in the field of education. Among lead teachers who did not have a teaching credential, 42% said that their experience at Aim High made them consider obtaining one, and 46% said it made them consider pursuing education more broadly. Among interns, 56% reported that due to their experience at Aim High, they were more likely to consider a career in education; this proportion was 59% for TAs.

## TEACHING STAFF SURVEY



While not all Aim High teaching staff may go on to pursue careers as credentialed teachers or educators, the vast majority still perceive Aim High as a positive employment experience. This is especially important given that the majority of TAs and interns are youth themselves, and many within the target demographic of the program (i.e. young people of diverse backgrounds). Based on the staff survey, in the summer of 2015, teaching at Aim High was the first professional experience for 24% of the interns and 66% of the TAs. They vast majority of interns and TAs indicated that they gained important job skills while working at Aim High, such as communication, accountability, taking initiative, giving and receiving constructive feedback, and time management.

## Areas for Continued Growth

The findings from our study indicate that Aim High is well positioned to reach the program's intended outcomes for students and teachers. Consistent program implementation that was strongly aligned with the program design and culture was found across sites. The following are some key areas for Aim High to consider as it engages in efforts to grow and strengthen their summer program.

Aim High serves a student population with a wide range of academic, language support, and socioemotional needs. Our findings suggest that, despite the program's low student-to-teacher ratio and the inclusion of student support staff, the needs of some students may remain unmet. This was particularly true at sites with high proportions of English



language learners and/or students with severe behavioral health issues. This challenge underscores the important role of academic coaches and student support specialists in working side by side with teaching staff to ensure that all Aim High students have access to the supports they need. Additionally, knowledge about students' learning and developmental disabilities would be valuable to teachers in planning and implementing appropriate instruction and putting in place adequate learning supports.

While all Aim High sites consistently provided low student-teacher ratios and offered engaging curriculum, the instructional capacity to deliver the curriculum across classrooms varied considerably. Lastly, the program's emphasis on differentiated instruction, project-based learning, collaborative learning, and conceptual understanding call for pedagogical strategies that even experienced teachers often find difficult to implement effectively. Our study revealed substantial variability across classrooms in the extent to which teaching staff effectively implemented collaborative learning and engaged students in conceptual understanding.

We also found some sites faced substantial difficulty recruiting professional teachers, due in part to wage competition from local school districts or summer teacher "burnout." In moving forward, Aim High may want to consider prioritizing the hiring of experienced lead teachers and/or putting in place training opportunities, extensive academic coaching support, and curricular materials designed to help less experienced staff access quality instructional strategies.

## Conclusion

The Aim High program goes beyond typical summer school to insure that the population of youth most in need of summer programming will experience optimal learning and strong relationships. Aim High program strengths include coherence across all of their sites, leading indicators of student success (e.g., student retention, attendance and engagement), and continuity of culture throughout the network. Our findings highlight Aim High's commitment and strong foundation upon which the entire network can continue to build.

# References

Alexander, K. L., Entwisle, D. R., & Olson, L. S. (2007). Lasting consequences of the summer learning gap. *American Sociological Review*, 72(2), 167-180.

Augustine, Catherine H., Jennifer Sloan McCombs, Heather L. Schwartz and Laura Zakaras. Getting to Work on Summer Learning: Recommended Practices for Success. Santa Monica, CA: RAND Corporation, 2013. [http://www.rand.org/pubs/research\\_reports/RR366.html](http://www.rand.org/pubs/research_reports/RR366.html).

Blumenfeld, P. C., Soloway, E., Marx, R. W., Krajcik, J. S., Guzdial, M., & Palincsar, A. (1991). Motivating project-based learning: Sustaining the doing, supporting the learning. *Educational Psychologist*, 26, 369-398.

Borko, H. (2004). "Professional Development and Teacher Learning: Mapping the Terrain." *Educational Researcher* 33, no. 8: 3-15.

CASEL (2016). "What is Social-Emotional Learning." <http://www.casel.org/social-and-emotional-learning/>. Accessed 2/23/2016.

Cochran-Smith, M., & Lytle, S. (1999). "Relationships of Knowledge and Practice: Teacher Learning in Communities." *Review of Research in Education* 24 (1999): 249-305.

Cooper, H., Nye, B., Charlton, K., Lindsay, J., & Greathouse, S. (1996). The effects of summer vacation on achievement test scores: A narrative and meta-analytic review. *Review of Educational Research*, 66(3), 227-268.

**John W. Gardner Center  
for Youth and Their Communities**

**Stanford Graduate School of Education  
365 Lasuen Street, Third Floor  
Stanford, CA 94305-2068  
Phone: (650) 723-3099  
[gardnercenter.stanford.edu](http://gardnercenter.stanford.edu)**

**john w. gardner  
center** for youth and their communities

Durlak, J., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The Impact of Enhancing Students' Social and Emotional Learning: A Meta-Analysis of School-Based Universal Interventions (PDF). *Child Development*, 82(1), 405-432.

Ingersoll, R.M. and May, H. (2011). Recruitment, Retention and the Minority Teacher Shortage. Consortium for Policy Research in Education. CPRE Research Report #RR-69.

Klassen, R. M., & Usher, E. L. (2010). Self-efficacy in educational settings: Recent research and emerging directions. In T. C. Urdan & S. A. Karabenick (Eds.), *Advances in motivation and achievement: Vol. 16A. The decade ahead: Theoretical perspectives on motivation and achievement* (pp. 1-33). Bingley, UK: Emerald Publishing Group.

McCombs J. S., Augustine C. H., Schwartz H. L., Bodilly S. J., McInnis B., Lichter D. S., Cross A. B. (2011). Making summer count: How summer programs can boost children's learning. Santa Monica, CA: RAND Corporation.

McLaughlin, B., & Smink, J. (2009). Summer Learning: Moving from the Periphery to the Core. *The Progress of Education Reform*, 10(3). Denver, CO: Education Commission of the States. Retrieved from <http://www.ecs.org/clearinghouse/80/99/8099.pdf>.

Ormrod, J. E. (2008). *Human learning* (5th ed.). Upper Saddle River, NJ: Merrill/Prentice Hall.

Ryan, A. M., & Patrick, H. (2001). The classroom social environment and changes in adolescents' motivation and engagement during middle school. *American Educational Research Journal*, 38, 437-460.

Terzian M., Moore K. A., Hamilton K. (2009). Effective and promising summer learning programs and approaches for economically-disadvantaged children and youth: A white paper for the Wallace Foundation. New York, NY: Wallace Foundation.

Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A review of school climate research. *Review of Educational Research*, 83, 357-385.

Thomas, J. W. (2000). A review of research on project based learning. (<http://www.autodesk.com/foundation/news/pblpaper.htm>)

Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing and elusive construct. *Teaching and Teacher Education*, 17, 783-805.

Wigfield, A., Eccles, J.S., & Rodriguez, D. (1998). The development of children's motivation in school context. *Review of Research in Educational Psychology*, 23, 73-118.