

Aim High:
Closing the Achievement and Opportunity Gaps
Through Summer Learning

Implementation Study Final Report

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I. INTRODUCTION

About Aim High

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).

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. Founded in 1986, the program currently serves over 1,900 students across fifteen sites in Northern California: seven in San Francisco; three in Oakland; three in the South Bay; one in the North Bay; and one in the Tahoe/Truckee area. 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 young people of color 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, for those who are in high school, and as interns for those in college—and encourages them to pursue careers in education. Aim High currently engages over 500 educators, predominantly teachers of color and majority multilingual, to staff its program.

Current Study

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 in-depth formative evaluation 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. In particular, the study sought to address the following overarching questions:

- Q1.** How is Aim High implemented relative to the intended program model? What are factors that influence program implementation?
- Q2.** What are students’, parents’¹, and teaching staff’s experiences with the program?

¹ We use the term “parent” to refer to the child’s primary caregiver, who may be a parent, relative, or other adult in the child’s life.

Q3. To what extent is Aim High participation associated with shifts in students' and teachers' outcomes?

Q4. What elements of Aim High are essential to the program's desired results?

The study employed a convergent parallel mixed methods research design (Creswell & Plano Clark, 2011) and involved the collection of both quantitative and qualitative data which were analyzed separately; the results were mixed during the interpretation stage. The use of quantitative and qualitative methods in a complementary fashion allows for triangulation of the results and 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. Further, the design for this implementation study does not include a comparison group of students or teachers who do not participate in Aim High.

Data sources included individual interviews with Aim High leadership, central office staff, and site directors; focus groups interviews with students, teaching staff, and parents; observation of program activities; and student, teaching staff, and parent surveys. Please see Appendix A for a description of the research methodology and Appendix B for a summary of data sources utilized to address each of the research questions.

Aim High's Theory of Change

Below we lay out a theory of change for Aim High that builds on key elements of the Aim High program design, as articulated in the student and teacher logic models (Appendix C1 and C2 respectively), guided by foundational literature in youth development and education, and informed by insights from our study of Aim High's program implementation. We crafted this theory of change as an organizing conceptual framework for describing the implementation findings of our study presented in sections II-IV. The theory of change allows us to take Aim High's logic models to a more explanatory level enabling a deeper understanding of how the program works. Specifically, we seek to better understand how Aim High's program model, strategies, goals, and implementation relate to desired outcomes for students and teachers.

Challenge

Aim High was developed to address multiple concerns facing urban youth. Specifically, summer learning loss has been documented as a pernicious challenge facing urban youth with long lasting negative consequences (Alexander et al., 2007). Middle school youth are particularly vulnerable. Developmentally they are undergoing significant change and also experiencing significant transitions in school. Research has documented that as students transition from elementary to middle school their motivation and engagement in learning declines (Meece, Anderman, & Anderman, 2006). Further, success for these urban youth is also influenced by the quality of their teachers. Research has documented that highly qualified teachers make a difference in student achievement and this is especially true for under-represented minority youth (Haberman, 1995; Darling-Hammond, 1997; Warren, 2002). Additionally, many have documented that youth do better when their teachers reflect

their own cultural and class backgrounds (Ladson-Billings 2009; Darling-Hammond, 2000). Unfortunately, the recruitment and retention of teachers is also related to the conditions of schools (Achinstein et al., 2010; Tyack & Cuban, 1995; Darling-Hammond, 1997). In response to these and other related persisting challenges, Aim High developed a summer learning program for urban middle school youth.

Goals

Two overarching goals guide Aim High:

- 1.** Actively prevent summer learning loss and increase achievement for middle school youth
- 2.** Build a pipeline of high quality, diverse teachers, with a focus on increasing the population of young teachers of color

Together, these goals inform the development and implementation of the Aim High summer program. Below we lay out key elements of the program design and theory of change.

Resources and Program Inputs

Aim High has a rich set of program inputs and human resources that facilitate the program. Although the program itself runs during the summer, many of the staff work year round. The commitment to developing and recruiting from within their network is evident in the teaching and leadership ranks. Currently, Aim High employs approximately 15 staff in their central office located in San Francisco. Roles include administration, program development, resource development, technology support, and organizational learning. Each Aim High site is co-directed by two experienced educators. Site Directors range in tenure from 1-16 years of leadership experience with Aim High. Oftentimes, a team of Site Directors includes a returning or experienced Site Director with one of less experience in the role. Typically, a Site Director has served as an Aim High teacher and may also have been a Teaching Intern, volunteer, or student participant as well. These Site Directors work 10% during the school year and full-time during the summer program.

The Aim High classrooms include at least two teaching staff. An experienced Lead Teacher is paired with a Teaching Intern and/or a Teaching Assistant. Lead Teachers are experienced teachers who teach core academic classes and mentor junior staff. Some, but not all, are credentialed educators. Teaching Interns are generally college students and adults interested in education or a career change to teaching who work directly with students under the supervision of lead teachers. Teaching Assistants (TAs) are high school students who assist Lead Teachers and Interns in teaching academic classes and are responsible for leading or assisting in afternoon elective classes and other program activities. Aim High also employs a number of additional staff, such as learning support specialists (who provide sites with specialized instructional support), and behavioral health staff (who support sites with addressing students' behavioral health needs). These staff often serve multiple sites.

Strategies

Through our research we identified four inter-related strategies that Aim High deploys at the organizational, site, and individual (student) levels to achieve its goals. Together, these mutually reinforcing strategies guide the Aim High summer program, and include:

- Intentional organizational structure and design,
- Engaging curriculum and pedagogy,
- Positive supportive culture, and
- Explicit focus on creating educational leaders.

These strategies are described in detail throughout this report. Importantly, through the description of the findings below, it is clear that these strategies are not entirely distinct or discrete from each other but, rather, interwoven throughout the design and implementation of the program. Further, while these strategies provide a useful organizing framework for presenting our research findings, we also note that many key elements of Aim High are apparent across them. For instance, professional development for Aim High teachers and staff emerges as a key component of Aim High's intentional structure and design, and has important implications for delivering engaging curriculum and pedagogy, fostering a positive supportive culture in Aim High sites, and creating a pipeline of educators.

In conceptualizing Aim High's theory of change we also introduce what the Gardner Center typically calls a "tri-level lens." This systems view of education has a long tradition (Bronfenbrenner, 1979) and enables us to better understand the interconnected nature of the multiple strategies and key components of Aim High. Although these three levels—individual, setting, and system—may appear distinct, they are interdependent and dynamic. Changes that occur at one level can have effects on another. As such, the strategies are shifting and continuously influencing one another. Studying all three levels enables intentional and effective action—informing key areas for improvement in policies and practices. Employing this lens to understand Aim High will support our collective efforts to both understand what makes this innovative program work and will reveal key opportunities for improvement. This tri-level perspective assumes that changes in system-level factors will stimulate and support (or frustrate) changes in settings, which in turn will (or will not) lead to positive changes in youth outcomes (Dukakis et al., 2009).

Outcomes

Based on these four interconnected strategies, the table below describes outcomes for Aim High in three time frames (short, intermediate, and long term) and at three levels (organization, site and student).

	Short-Term Outcomes (1-3 Years)	Intermediate-Term Outcomes (3-5 years)	Long-Term Outcomes
Aim High students	• Maintain or increase academic knowledge and skills • Increase sense of competence, confidence, social and emotional skills • Increase perceived relevance of school for future goals • Experience a sense of community • Develop awareness of college and career requirements and opportunities	• Transition successfully into a college prep high school program • Demonstrate academic success • Demonstrate positive behavior • Develop college ready plan • Exhibit excellent attendance	• Graduate from high school on time and college ready • Enroll in college or certificate program by subsequent fall • Graduate from college or certificate program within 6 years of graduating from high school
Aim High teaching staff	• Increased teaching knowledge, skills, and confidence. • Desire to teach during the school year (in the communities served by Aim High and/or under-served student populations)	• Inspire diverse and talented young people to pursue a career in the field of education • Teach in the communities served by Aim High and/or teach under-served student populations	• Remain in the classroom longer than the 5 year average for new teachers • Teach in the communities served by Aim High and/or teach under-served student populations
Aim High as an organization	• Create new Aim High teacher leaders	• Sustain new teacher leader program	• Sustainable cadre of teacher leaders

Organization of the Report: A Focus on Four Primary Strategies

This report is organized around the four primary Aim High strategies mentioned above—each of which contains multiple sub-components. Further, within each strategy area we highlight key findings at the system, setting, and individual levels. The framing of the report around these strategies allows us to answer the research questions in an integrative manner. Specifically, we describe how implementation of the Aim High model occurs in practice at the various levels of the program (organization, site, student), and the implications for Aim High’s desired results for participating students and teachers. Throughout we draw on and integrate information regarding

student, teacher, and parent experiences obtained through our multiple data collection methods including surveys, individual interviews, and focus groups.

II. INTENTIONAL ORGANIZATIONAL STRUCTURE AND DESIGN

Aim High's organizational structure and design reflects youth development principles (Eccles & Gootman, 2002) and research on best practices for middle level education teaching and learning (Goodlad, 1984). Specifically, the program design optimizes contact between adults and youth to develop relationships with a low teacher-student ratio (1:8). Developing relationships with a caring adult has been documented as a protective factor for youth enhancing their health and other positive outcomes and reducing the possibility of risk taking behaviors (Durlak, et al., 2007; Eccles & Gootman, 2002).

Summer program activities for students include close to 73 hours of academic instruction and 78 hours of enriching activities each summer (see Student Logic Model, Appendix C1). A typical Monday-Thursday day at Aim High consists of academic classes in the morning covering math, science, humanities (a combined language arts and social studies curriculum), and Issues & Choices (an adolescent development class). In the afternoon, students participate in enrichment activities of their choice (such as cooking, sports, gardening, and creative writing), and spend time exploring issues that impact the local community. Students also participate in advising groups focusing on learning study skills, high school preparedness, and early college awareness. On Fridays, students participate in academics in the morning, then go on field trips or participate in culture days in the afternoon.

Another important dimension of the intentional organizational structure and design involves Aim High's human resource practices. The Aim High "central office" staff in San Francisco is responsible for hiring and training the Site Directors. Additionally, the Aim High team provides a one week orientation and training to all of the teachers prior to the (also one week) orientation and planning at each program site. The intentional effort to hire from within maintains a continuity of the "Aim High way" for both students and adults.

System Level: Aim High as an Organization

Below we discuss findings related to Aim High organizational structure and design that appear to be key system-level factors integral to achieving program outcomes. Specifically, we discuss Aim High's approach as it relates to ensuring a low teacher-to-student ratio, staff hiring practices, and student attendance, recruitment, and retention.

Low Student-to-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). Aim High offers small class sizes with multiple teachers, typically ranging from 12-20 students per class,

with one Lead Teacher and one Teaching Assistant or Intern. Our observations of program activities (n = 35) documented an average total class size of 14 students and an average staff to student ratio of less than 7.²

Small class sizes create opportunities for differentiated instruction and extra support for the students who need it. Our observations documented multiple instances of such differentiation in instruction. The effective implementation of Aim High's project-based curriculum also benefits from a low teacher-to-student ratio. Indeed, project-based learning activities are often completed in small groups and are less structured and more complex than traditional classroom tasks (Ormrod, 2008). They tend to require extensive teacher scaffolding and challenge teachers to balance the need for student autonomy with the need to maintain order in the classroom (Thomas, 2000).

The low teacher-to-student ratio also facilitates the development of strong relationships between students and adults. In the words of one of the Site Directors:

...At the most, [teachers are] working with 22 students, but they probably have one or two other people in the classroom. So, the student contacts are way down, and that allows you to develop a much more rich relationship with the students, much more quickly than you would in a regular school-year classroom.

Site Director Hiring and Retention Practices

Site Directors, hired at the Aim High central office level, usually are recruited from inside the program. As a consequence, most Site Directors have been involved with Aim High for a number of years and have a deep understanding of the program's mission and the values that guide all program activities. Moreover, Site Directors are encouraged to continue in their position for multiple summers, to ensure continuity of leadership at any given site. Aim High puts intentional efforts in place to pair up a veteran Site Director with a less experienced one at each site, with the goal of building the leadership capacity of new directors, through mentoring and on-the-job professional development.

Student Recruitment, Attendance, and Retention

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. Student recruitment is handled mainly by Aim High Central Office with Site Directors in a supporting role doing some outreach (e.g., giving presentations at schools or staffing the Aim High table at a summer program fair). Students apply online or through paper applications, and Central Office makes a preliminary pass at classifying them

² According to Aim High program records, Lead Teacher, Teaching Intern, and Teaching Assistant to Student Ratio: 1:5; Lead Teacher to Student Ratio: 1: 13; all Aim High Summer Staff to Student Ratio: 1:4 (Summer Staff includes Site Directors, Specialists, Academic Coordinators, Campus Coordinators, Lead Teachers, Teaching Interns, Teaching Assistants and Volunteers).

into one of three categories: low, medium, or high priority. Returning students, siblings, students from low-income families, and students who would lack access to other programs/activities during the summer are given high admission priority. Site Directors thoroughly review applications for their respective sites and make final admission decisions. Sites were able to accept the majority of students who applied while at the same time staying close to recruitment targets. For sites where more students applied than expected, Site Directors received support from Central Office to open additional class sections so as to preserve a low teacher-student ratio. An issue raised by several Site Directors was that they usually see a decline in enrollment from 8th to 9th grade, possibly because many entering 9th graders attend summer bridge programs designed to ease their transition into high school.

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. Parents also reported on students’ initial resistance to attend Aim High. For example, a parent shared, “My daughter didn’t want to come. Because she said, ‘It’s academic, and homework,’ and things like that. And so in the beginning, she didn’t want...she didn’t want to come.”

In order for students to benefit from summer learning programs, they need to attend regularly and be motivated to participate (McCombs et al., 2011). Both parents and students indicated that the initial student reluctance to attend Aim High quickly faded away once they actually started attending the program, in some cases after just one or two days or by the beginning of the second week at the latest. When asked to elaborate on what had made them change their mind about Aim High, both students and parents referred to three main factors: projects, activities, and teachers. We elaborate next on the activities and the projects and discuss teachers later on in the report.

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. While overall attendance at Aim High is quite high, several site directors did note that 9th graders tend to be absent more often than the younger students and, in some cases, they drop altogether from the program. In the words of one Site Director, “I do think that [9th graders] get to a point where they’re like, ‘Oh, we’re going into high school, and now look at all these little kids,’ or, ‘I’m too cool.’”³

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 the second or more consecutive summers, ranging from 46% to 89% across sites. Beyond their experiences with the program itself, a factor likely to influence the proportion of returning students is mobility rates, which are quite high for some of Aim High’s target communities. In one site with low retention, the Site Director expressed her intention to emphasize

³ Organization wide, Aim High student attendance by grade level showed very little variation. In 2015, attendance levels program-wide included the following: 6th and 7th graders, 93% attendance; 8th graders, 92% attendance, and 9th graders, 90% attendance.

that Aim High is a four-year program during recruitment events the next year. She thought that many parents and teachers may mistakenly believe that it is just a one-year program. She also mentioned that efforts to reach out to parents and connect with them should also help increase the proportion of returning students.

Setting Level: Aim High Sites and Classrooms

Teacher Hiring and Retention Practices

Aim High's hiring criteria for teaching staff is consistent across sites and aims at ensuring high person-organization fit. Research grounded in the field of organizational psychology (Arthur, Bell, Villado, & Doverspike, 2006) has documented a positive relationship between person-organization fit and employee satisfaction; moreover, high fit is associated with low staff turnover and superior job performance. Aim High hiring practices, therefore, can help explain Aim High's high staff retention rates from summer to summer as well as staff's high level of satisfaction with the program.

Our findings reveal strong agreement among Site Directors when asked to describe the "ideal Aim High teacher." The following quote is representative of the themes mentioned in all interviews:

I would say a teacher that is enthusiastic, that wants to be at "Aim High," that has a positive attitude. I would say a teacher that's committed to teaching [economically disadvantaged] students...and teaching students of color and [care about] closing the achievement gap [...] Teachers that are not afraid of and are willing to put in the work, because Aim High is a lot of work.

In addition, Site Directors said they look for teachers who want to learn with their students, who are open-minded, innovative, and willing to try new things. They also look for teachers who have a passion outside of teaching, "...because we have the electives, and if they have a passion about something, then that's something that they can teach." Site Directors often used the words "enthusiastic," "energetic," "genuine," and "caring" in describing the attributes they look for when recruiting new staff.

While all Site Directors agreed on the profile of the "ideal Aim High teacher," they confronted varying levels of difficulty in recruiting qualified staff. At one end of the spectrum, one Site Director said, "Teacher recruitment is very hard," and further added that she/he had ended up with several "last-minute hires" who, while competent teachers, would not have been their first choice if more applicants had been available. On the other end, a Site Director at a different site indicated, "[teacher recruitment] was very easy [...] I wasn't really drawing from this huge pool of teachers, I was really drawing from a select group that was recommended to me by other teachers." All the other Site Directors fell somewhere in between with regard to their staff recruiting experience.

Team Teaching

Peer feedback at Aim High provides an important professional development opportunity for all Aim High staff, facilitated by the team teaching structure. The majority of Interns (65%) and TAs (75%) reported receiving helpful feedback from their teaching partners, both on teaching and professional conduct. As one Intern described, in detail:

My Lead Teacher was able to model a lot of the behavior and conduct that helped me lead my own lesson in the classroom. I discussed my lesson and also general conduct with my teacher on occasion after class. We talked a lot about how students will see our behavior and how we need to be models for how we want our classroom to run. It was helpful to have both my co-intern and Lead Teacher to bounce ideas off, along with our humanities coach.

In the words of one TA:

My co-teacher was very involved in my experience this summer. He made sure that I had responsibilities and held me to high expectations. We often planned lessons together and he always welcomed my suggestions.

Another TA reported:

My teaching team are always checking in on me and making sure I realize the pros and cons of our behavior. We appreciate each other and have constructive criticism with each other. We are also very accepting of all that we present each other.

Overall, Interns and TAs reported multiple mechanisms through which their participation in Aim High constituted a positive professional experience, highlighting team teaching as one important facet.

Individual Level: Aim High Students

The intentional organizational structure and design of Aim High was nearly invisible to students as their experiences were positive and they might not necessarily perceive why. The positive youth development principles guiding the design informed the future orientation that developed through multiple strategies. From field trips to advisors/mentors to young teacher role models, these Aim High students were experiencing multiple opportunities to imagine a positive future.

III. POSITIVE SUPPORTIVE CULTURE

Aim High's program design incorporates research-based strategies (Weissbourd, Bouffard, & Jones, 2013) that promote children's social and moral development. These include, 1) prioritize teacher-student relationships; 2) expect adults to model moral, ethical, and prosocial behavior; 3) provide

opportunities for students to develop and practice skills such as empathy, compassion, and leadership; and 4) use discipline strategies that are not simply punitive.

The youth development orientation discussed above manifests not only in an approach to learning, but in the relationships among and between students and staff. As discussed later in this report, teacher-student relationships are very strong in Aim High. Additionally, the same caring and respect evident in those relationships carries over to create a strong community of peers among the students, as well as teaching staff. The positive supportive culture that nurtures these relationships also helps develop a sense of belonging to a community, evidenced by the adults and youth who return to the program year after year. Additionally, the supportive culture undergirds many of the teacher and student outcomes discussed later in the report.

System Level: Aim High as an Organization

Aim High's focus on rigorous academics is closely coupled with a positive supportive culture, articulated in Aim High's CORE values: Community, Opportunity, Respect, and High Expectations. Further, based on our findings, Aim High's Issues & Choices class (an adolescent development class) is positioned as a fertile ground for the promotion of socioemotional competencies. Indeed, at all focus group interviews, students spontaneously and with great enthusiasm shared things that they were learning about or discussing at 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.

Setting Level: Aim High Sites and Classrooms

Teacher-Student Relationships Matter to Learning

Research shows that the quality of teacher-student relationships is important for students' school adjustment. As documented in recent reviews of the literature (Cornelius-White, 2007; Roorda, Koomen, Spilt, & Oort, 2011), positive teacher-student relationships are associated with students' social functioning, engagement in learning activities and academic achievement. In reflecting about the ways in which Aim High influenced their beliefs about teaching and learning, staff described how Aim High helped them see, or reinforced their existing belief in, the importance of building positive student-teacher relationships. In fact, this was the theme most frequently mentioned in teacher responses.

Some staff referred in their comments to the responsibility teachers have to build positive relationships with students. For example, one teacher articulated, "In order to be a good teacher, you have to care [about students]. Just because you are good at a subject does not make you qualified to be at teacher. It takes way more than that." Other responses highlighted beliefs about student learning; specifically, that students learn more and better when they have a connection with the teacher. In the words of one staff, "[I] noticed that the students are much more willing to learn when they get to know their teacher more." Another teacher remarked, "I believe in developing close

relationships with students ... so that there is trust in the learning cycle.” In sum, teachers reported that their participation in Aim High helped them develop a deeper understanding of the importance of teacher-student relationships.

Emotional Safety

Emotional Safety captures the extent to which the program setting provides a positive emotional climate, free of bias, and exclusion. Youth need to experience psychological safety in order to take risks, participate, grow, and learn. The average Emotional Safety score on the Summer Learning Program Quality Assessment (SLPQA⁴) across all 35 observations that we conducted was very high, 4.85 out of 5 ($SD = .46$; range = 3 - 5). Our observations of lunch and recess time also consistently captured an overall caring and positive emotional climate. Instances of derogatory or exclusory behavior on the part of the students were usually detected by staff who intervened to address and diffuse. For example, in one observation, a student jokingly told another student, “don’t be stupid;” the teacher intervened, disapproved “putdowns,” and diffused the conflict. The teacher plays an important role in maintaining a positive emotional climate. Aim High classrooms consistently presented a positive emotional climate.

Collaboration & Leadership

High quality programs provide opportunities for youth to collaborate and work cooperatively with others. The Collaboration & Leadership domain on the SLPQA assesses the extent to which staff provides youth opportunities to:

- participate in activities with interdependent roles (i.e., youth have different tasks or roles such as record keeper, leader, timer, etc.)
- practice group-process skills (e.g., listening to others without interrupting, sharing ideas, taking turns, contributing to a discussion)
- help each other by explaining or demonstrating something they know but another peer does not
- lead a group (e.g., lead a discussion or project)

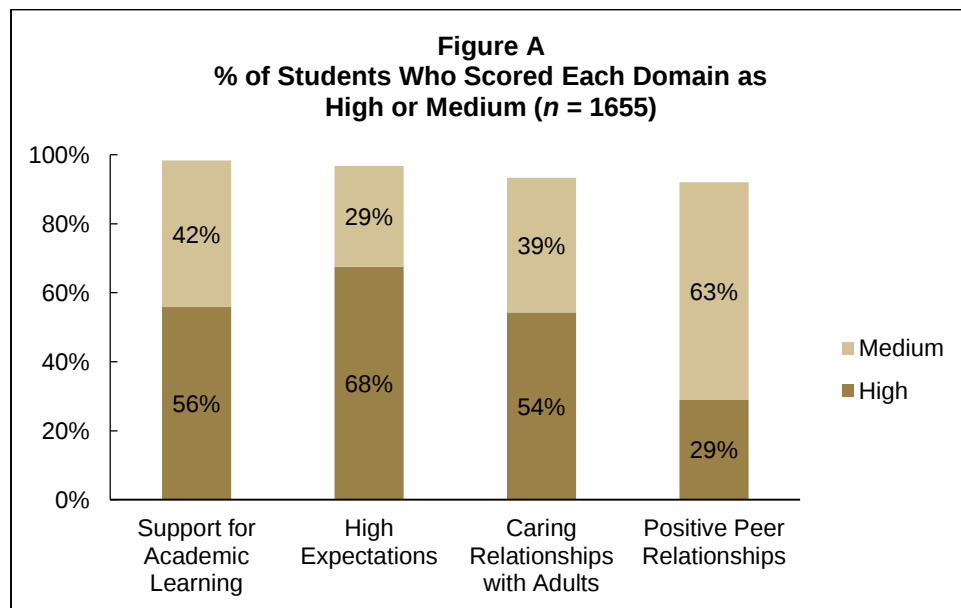
While we captured multiple instances of collaboration in our field notes, the average Collaboration & Leadership rating across all 35 observations was 2.21 out of 5 ($SD = 1.01$). This is an area in which Aim High scored lower on the SLPQA. Given the research evidence that links cooperative learning with achievement and improved peer relations (Roseth, Johnson, & Johnson, 2008) and the fact that a collaboration component is at the heart of Aim High’s program design, this could be an area to strengthen through future professional development and curriculum development efforts.

⁴ Please see Appendix A for a detailed discussion of research methods including the SLPQA.

Individual Level: Aim High Students

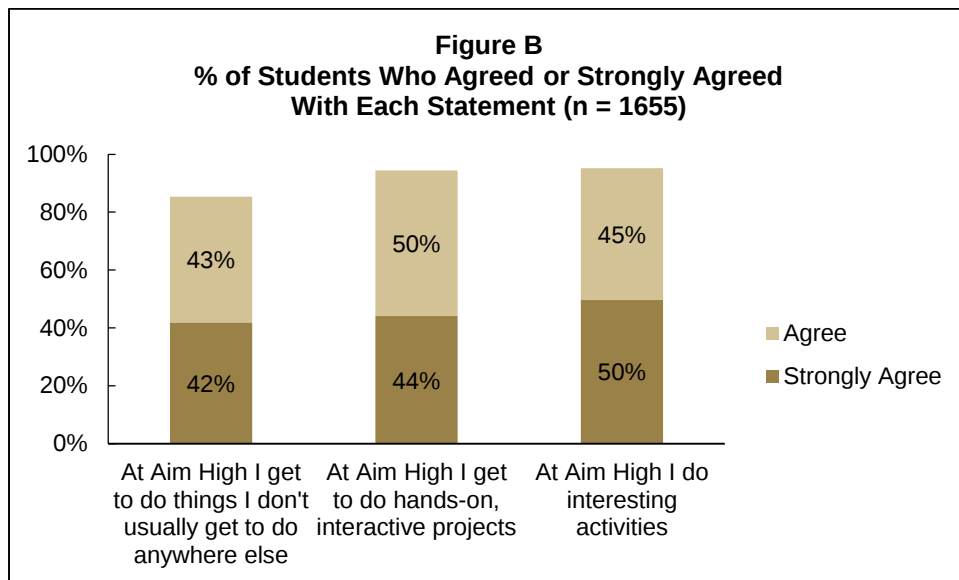
Most students experienced Aim High as a setting where supports were in place to promote their academic learning, adults held high expectations for them and cared about them, and was characterized by positive peer relationships. They also reported that at Aim High they got to participate in interesting activities and hands-on projects, and got exposed to activities that they do not usually get to do anywhere else. Finally, the great majority of students said that they would recommend the program to a friend and that they would like to return to Aim High the following summer. Parents provided consistent views with those of students—95% of the parent survey participants ($n = 814$) agreed or strongly agreed that, “My child enjoys attending Aim High” and “My child is excited about learning at Aim High.”

To examine students’ experiences with Aim High, the post-survey administered at the end of the program included questions eliciting their views about the following aspects of the program: *Support for Academic Learning* (four items; e.g., “Teachers at Aim High encourage me to ask questions about things I do not understand”); *High Expectations* (three items; e.g., “At Aim High, there is a teacher or some other adult who always wants me to do my best”); *Caring Relationships With Adults* (three items; “At Aim High there is a teacher or some other adult who listens when I have something to say”); and *Positive Peer Relationships* (three items; e.g., “At Aim High, students get along well with each other”)⁵. For each student, we averaged the students’ ratings for the items that make up any given domain to produce a score between 1 and 4 for that domain. We then computed the proportion of students who scored the domain as *high* (score higher than 3), *medium* (between 2 and 3), and *low* (lower than 2). As shown in Figure A, the majority of Aim High students rated each domain as medium or high.



⁵ Please see Appendix B for the full list of items that make up any given domain.

Moreover, as shown in Figure B, most students agreed or strongly agreed that at Aim High they do interesting activities and hands-on projects, and that they get to do things they do not usually get to do anywhere else.



When asked whether they would recommend Aim High to a friend, 80% of students in the sample ($n = 1655$) responded in the affirmative, 16% said they were not sure, and only 4% replied “no.” Similarly, 75% of students said that they would like to attend Aim High the following summer, 20% that they were not sure, and 4% said they would not like to return⁶.

In addition to the social dimensions of the Aim High culture that students described, we found evidence that this same positive supportive culture also assisted learning in concrete ways.

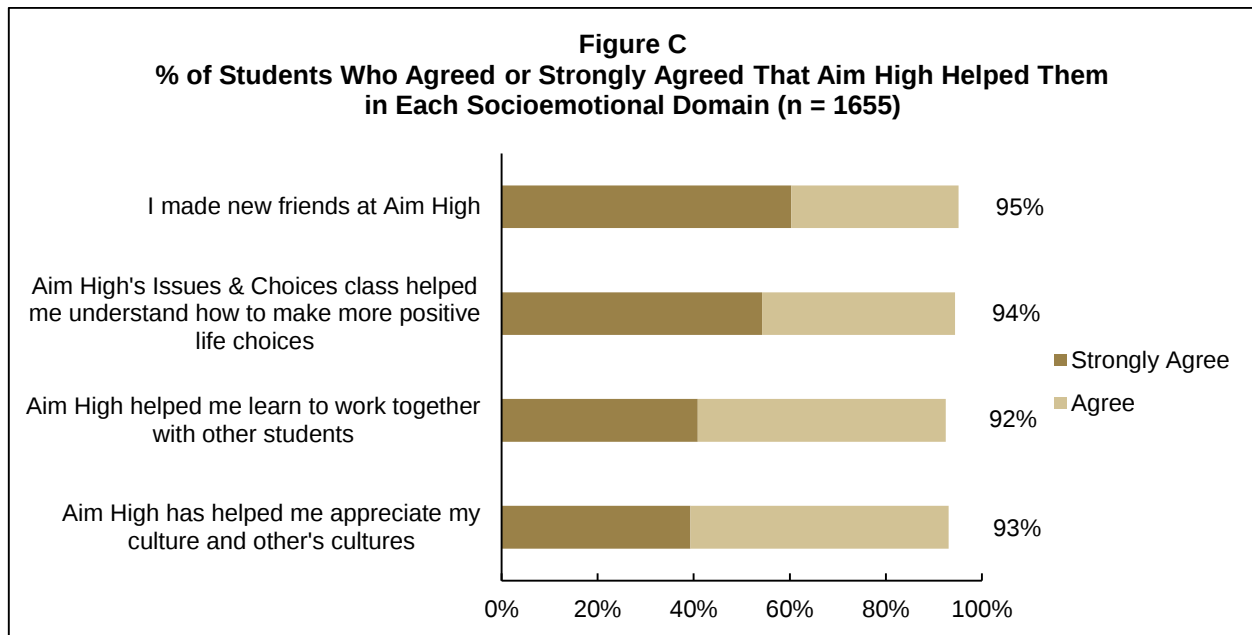
Socioemotional Competencies

Social and emotional learning is “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, para. 1). Research shows an association between socioemotional competencies and both better school performance and greater well-being (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011).

As shown in Figure C, the overwhelming 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,

⁶ 9th grade students and 8th grade students at the one Aim High site that serves only 6th and 7th graders were excluded from the analysis. Resulting sample size was $n = 1279$.

appreciate their own culture and other's cultures, and that Aim High's Issues & Choices class helped them understand how to make more positive life choices.



The survey results are consistent with students' responses to two questions we posed to them during focus groups: "What do you like about Aim High?" and "What have you learned at Aim High?"⁷ For example, many students said that they liked that at Aim High they could hang out with their friends, make new friends, or meet new people. And several students wrote that at Aim High they learned how to make friends or how to be friendly.

In addition to making friends, many other students' comments alluded to socioemotional competencies that they developed or expanded at Aim High. For example,

- *I learned that you should get a caring adult when you are being bullied*
- *I learned to be careful with who you hang out with [in order] to not be getting in trouble all the time*
- *I learned how to work as a team*
- *I learned about what love really is and what healthy and unhealthy love is*

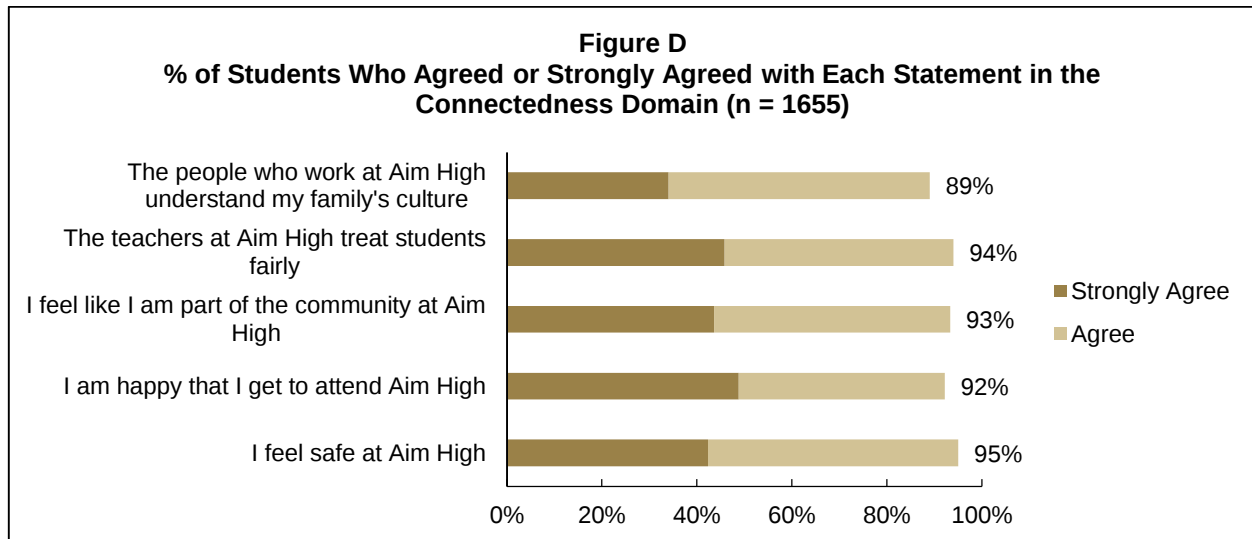
Sense of Community

Social and psychological connectedness is a protective factor for youth and research shows that students who form a close bond with adults in their settings display better academic achievement and socioemotional functioning and are less likely to get involved in delinquent behaviors.

⁷ Students wrote their anonymous answers on post-its, which were then collected and displayed for all to see. Students' reactions to each other's responses served as a spring board to have them reflect on their experience that summer at Aim High.

Community is one of Aim High’s CORE organizational values and fostering a sense of community is embedded in all aspects of the program.

The student post-survey included the items in the California Healthy Kids Survey (CHKS) connectedness scale⁸. As shown in Figure D, students reported high level of agreement with each item in the scale.



Ratings on the individual items of the connectedness scale were averaged together to produce a single connectedness score, with values ranging between 1 (low connectedness) and 4 (high connectedness). The average connectedness score for the whole sample was 3.35 ($SD = .50$; $n = 1655$).

Sense of connectedness figured prominently in students’ reflections during focus groups interviews. One of the three top reasons that emerged in students’ responses to the question “What do you like best about Aim High?” was “the teachers” (the other two top reasons were “the [afternoon] activities” and “the projects”). In the words of one student:

What I like about “Aim High” is that they tell us that we’re family, and then they help me, how could I say it, on math and make us more better and tell us, “Oh, you should do this,” but like in a nice way. And they do fun activities. Yeah.

Sense of Competence

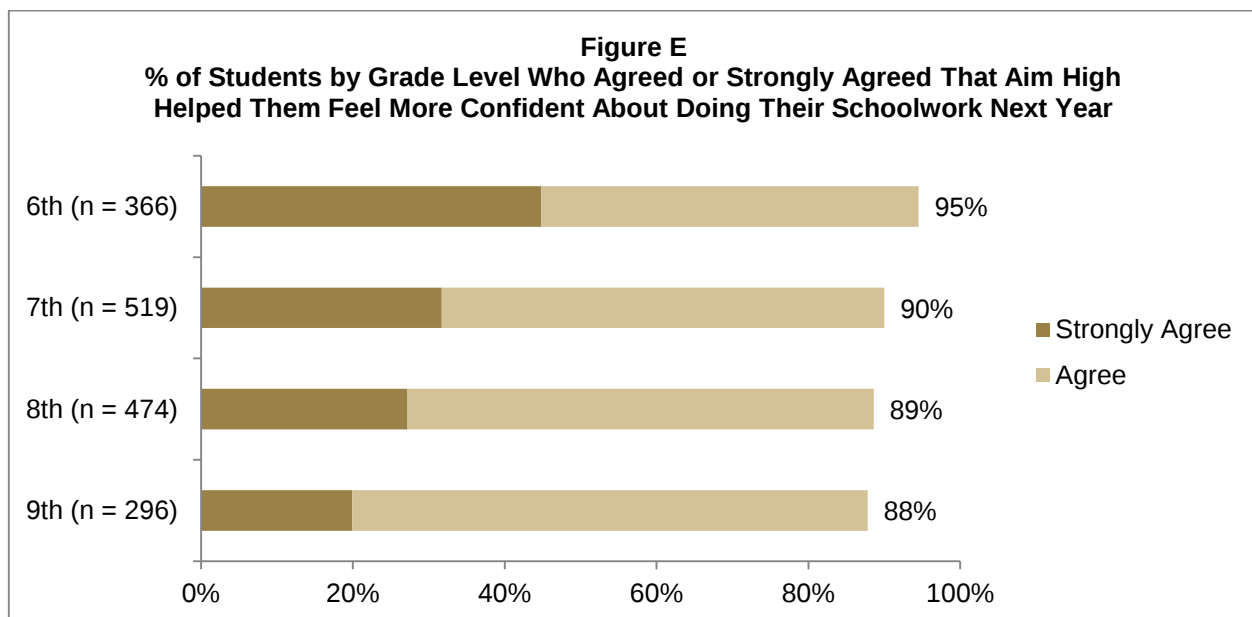
When compared to peers who feel insecure about their abilities, students who see themselves as capable learners are more likely to embrace challenging tasks, use more effective strategies, put more effort, persist in the face of obstacles, and generally perform better (Klassen & Usher, 2010; Wigfield, Eccles, & Rodriguez, 1998). Unfortunately, it is well documented that academic efficacy

⁸ Items were modified to elicit responses about Aim High instead of about school.

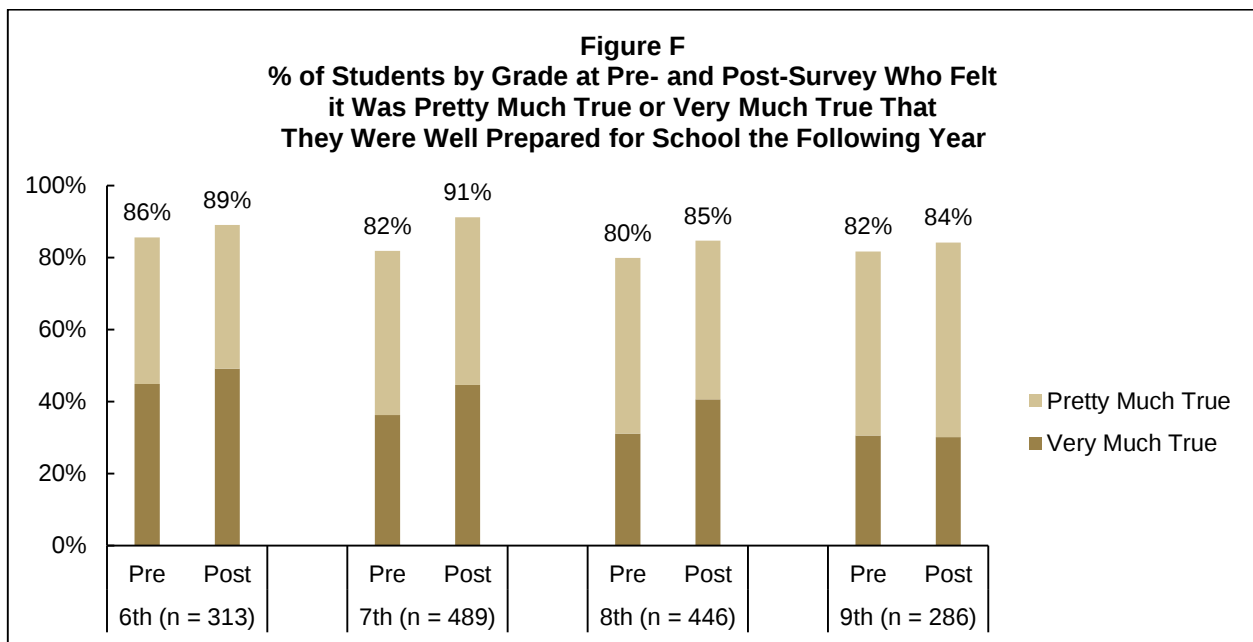
declines over time and that many young adolescents doubt their ability to succeed in school, question the value of doing schoolwork, and put forth less effort toward academics (Ryan & Patrick, 2001).

Research evidence shows that self-efficacy is malleable and points to classroom conditions that boost students' confidence in their abilities to meet the demands of challenging academic work (Anderman, Andrzejewski, & Allen, 2011; Farrington et al., 2012; Patrick, Ryan, & Kaplan, 2007; Strobel & Borsato, 2012). These include, 1) providing students with instructional strategies to support their learning; 2) displaying and communicating concern for students' emotional well-being; 3) creating a learning environment of mutual respect; 4) communicating expectations that students can succeed in their classroom. These are all practices embedded in Aim High's program design.

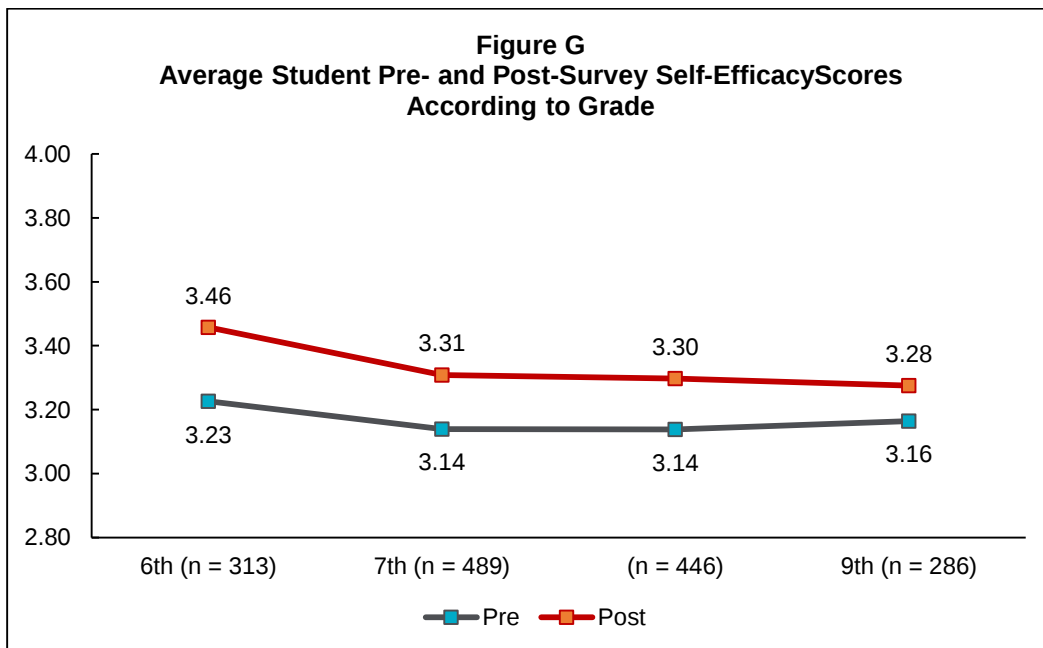
At the time of the post-survey, 90% of students ($n = 1655$) agreed or strongly agreed that Aim High had helped them feel more confident about doing their schoolwork next year. Figure E disaggregates this finding by grade level. While the majority of students at each grade level said Aim High had helped them feel more confident, endorsement declined as students got older. This trend is consistent with results emerging from cross-sectional and longitudinal studies of children's competence beliefs in various academic and non-academic settings (Wigfield, Eccles, Schiefele, Roeser, & Davis-Kean, 2006).



We also examined pre- to post-survey changes in the extent to which students felt they were well prepared for the following school year. As shown in Figure F, students reported increased feelings of preparedness for the next school year across all grades. Moreover, the difference between pre- and post-survey results in the proportion of students who felt prepared was statistically significant for each grade level (6th grade: $\chi^2(1) = 40.20$, $p < .001$; 7th grade: $\chi^2(1) = 37.33$, $p < .001$; 8th grade: $\chi^2(1) = 51.87$; $p < .001$; 9th grade: $\chi^2(1) = 17.50$; $p < .001$).



We also examined changes pre- to post- survey on a self-efficacy scale made up of items, "There are many things that I do well;" "can do most things if I try;" and "I can work out my problems." Scores on the self-efficacy scale range between 1 (low self-efficacy) and 4 (high self-efficacy). During the Aim High program, students' reported sense of self-efficacy increased significantly from a mean of 3.16 (SD = .54) in the pre survey to a mean of 3.33 (SD = .56) in the post survey ($p < .001$). As shown in Figure G, the magnitude of the increase declined as students got older.



IV. ENGAGING CURRICULUM AND PEDAGOGY

Aim High explicitly addresses concerns regarding summer slide through engaging academic courses. The students are held to elevated expectations and given support to meet the standards to which they are being held. The Aim High model of curriculum and pedagogy includes high expectations and high levels of engagement by both students and teachers. Students are expected to participate in fundamental academics each morning and electives each afternoon. Teachers are encouraged to utilize project-based learning and culturally responsive activities. This engaging curriculum and pedagogy marries youth development principles with rigorous core academic instruction.

System Level: Aim High as an Organization

While Aim High provides teachers with considerable autonomy and flexibility regarding daily classroom instruction, the organization encourages an engaging curriculum and pedagogy through emphasizing project-based learning, offering centralized curriculum resources available for teachers' use, and structuring the Aim High day to include core academic courses in the morning and afternoon electives and fieldtrips.

Project-Based Learning

Project-based learning is an approach that engages students in the investigation of authentic problems (Blumenfeld et al., 1991). In project-based learning, students investigate questions, make predictions, collect data, discuss ideas, and present their findings to others. Project-based learning is grounded in learning science ideas that position learning as active rather than passive, situated rather than decontextualized, facilitated by social interaction through sharing, using, and debating ideas with others, and amplified and expanded through the use of cognitive tools, such as learning technologies (Krajcik & Blumenfeld, 2006).

Even though an in-depth analysis of the Aim High curriculum was outside the scope of this study, our observations revealed a strong emphasis on project-based learning across all core classes. Project-based learning was also frequently mentioned by teachers and Site Directors. Teachers, in particular, reported appreciation for the projects included in the curriculum and expressed a desire for more projects to be added in the future. As was the case with the afternoon activities, students also expressed large endorsement of the projects and mentioned projects when asked about their favorite things about Aim High. For example, a 7th grade student said, "I like the projects we have in each and every class." Similarly, when asked about highlights from the prior week at Aim High, a sixth grader responded, "I liked the field trip, swimming, and the board game project that we did in Issues & Choices and Math".

Enrichment Activities: Afternoon Electives and Fieldtrips

The afternoon elective activities and the field trips were frequently cited by students when asked about their favorite things about Aim High. During focus groups, students often were enthusiastic when talking about the electives they were participating in and wanted to make sure to end the focus group on time so they would not miss those activities that day. Students often expressed statements such as, “I like all the fun activities we do in the afternoon” and “The activities make the summer more fun and exciting.” Students also strongly endorsed the field trips during focus groups and, in response to the open-ended survey question “Is there anything at Aim High that you would like to see changed or improved,” many of them said that they would like more field trips.

Setting Level: Aim High Sites and Classrooms

Students who are motivated and engaged in learning tend to perform higher academically and have fewer behavioral issues than unmotivated and un-engaged peers (Connell, Spencer, & Aber, 1994; Fredericks, Blumenfeld, & Paris, 2004; Thijs & Verkuyten, 2009). Teachers play an important role in promoting students’ interest, motivation, and engagement (Hill & Rowe, 1996), for example by fostering caring relationships in the classroom, or implementing engaging curriculum.

In their survey responses, Aim High teaching staff often spoke about their role as teachers in “making learning fun.” The experience of teaching at Aim High appeared to reinforce this belief, as well as motivate and inspire teachers to adopt engaging instructional strategies they planned to take back to their academic-year teaching contexts. In the words of one teacher:

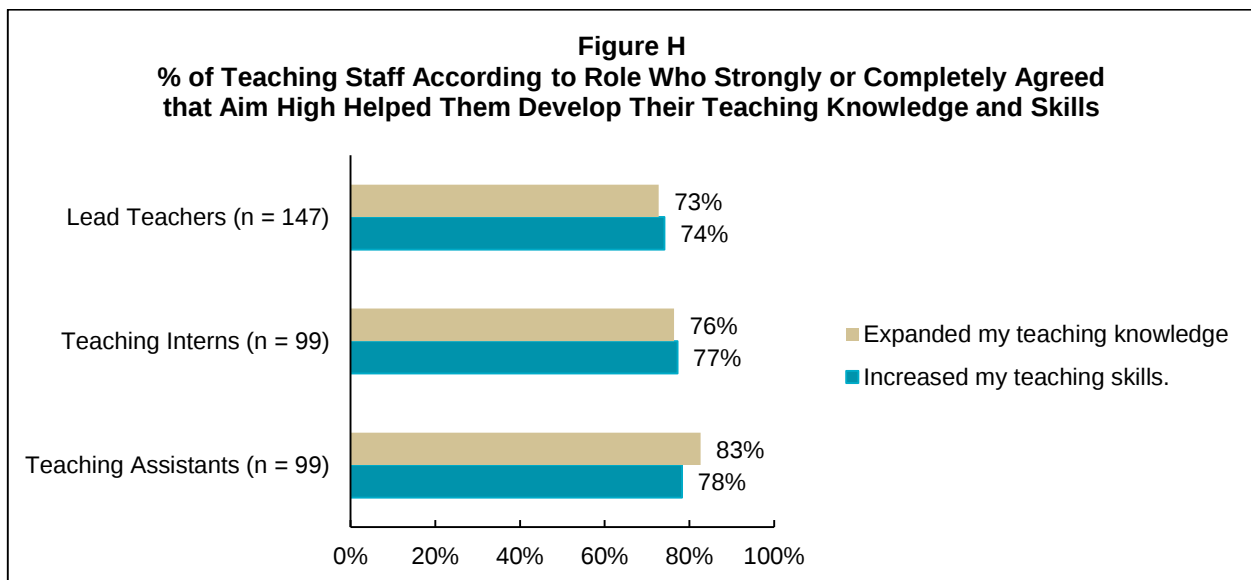
Learning should be--and can be--fun. Walking through the halls of a normal school, one does not see the same kind of energy and commitment [that is present in Aim High] to making learning a joyful experience. It has made me more aware of what I need to do in my own classroom to promote the same sort of energy and happiness in my students.

It was Lead Teachers in particular who indicated that Aim High reinforced their commitment to integrate more fun, hands-on approaches into their school-year instruction. However, even Interns and TAs reported a shift in their perception of the role of the teacher in creating a fun and engaging learning environment. As one Intern wrote: “Teaching doesn’t have to be monotonous; there are ways to help students enjoy learning more. All students can learn and all students deserve a chance.” A TA commented that: “I now see why lectures and [taking] notes are not a good method [to teach kids new] information. [When we used] more interactive, kinesthetic activities, we [noticed] better understanding as reflected [in] homework or whole class discussions.” In sum, teaching staff noted Aim High’s influence in understanding the important role of the teacher in fostering student engagement through instructional practice.

Teaching Knowledge & Skills

Organizational structures and efforts to build knowledge and skills among Aim High teachers bolster multiple elements of the Aim High model by influencing the extent to which staff can foster a positive and supportive culture, and provide engaging instruction. Further, teacher skills development has important implications for their career aspirations and trajectories. In this section we provide findings related most directly to Aim High teachers' capacity and orientation towards delivering engaging curriculum and pedagogy, while recognizing that these findings are interconnected with other key strategies discussed throughout the report.

The 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 (Figure H). Participants who elaborated on their response described three main themes: lesson planning and curriculum development, classroom management, and differentiated and personalized instruction.



Lesson planning and curriculum development.

The skill most frequently identified by teaching staff as connected to their experience at Aim High was lesson planning and curriculum development. Additionally, many staff mentioned specifically that they gained experience developing curriculum and planning lessons that supported project-based learning, more engaged learning, and differentiated learning. In the words of one teacher: "Over the past three years I have been influenced a great deal by my Aim High teaching experience. It has made me a better lesson planner, a better collaborator, and has turned my focus to project-based learning." Connected to the previously discussed belief about the importance of "making learning fun," several staff commented that Aim High helped them build their skills to develop and implement engaging and interesting lessons.

Classroom management.

Classroom management, which includes “actions taken by the teacher to establish order, engage students, or elicit their cooperation” (Emmer & Stough, 2001, p. 103), is a key predictor of student achievement (Wang, Haertel, & Walberg, 1993). Classroom management is also one of the most often cited concerns of preservice teachers, in particular with regard to behavior management (Kaufman & Moss, 2010).

Classroom management emerged as a prominent theme in teaching staff’s reflections about ways in which Aim High influenced their teaching knowledge and skills. They 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 students engaged, and conveying instructions clearly, among other things. Many of them attributed what they learned to the structure and culture of Aim High itself. In the words of one teacher, “The way Aim High is organized and how teacher expectations are delivered has allowed me to improve my teaching skills for classroom organization, and classroom set up has been strengthened.” Additionally, some teachers framed these skills in the service of fostering a positive classroom environment, and deepening student engagement and learning. One teacher commented:

I feel as if Aim High has helped me build my toolbox for creating positive relationships with students, and building a sense of community within a classroom. It helps me go back to my year-round teaching job with a new enthusiasm and commitment to my students.

Another teacher wrote that “My classroom management skills have changed for the better: more positive reinforcement and different techniques to maintain student engagement and getting classroom attention.” Overall, teachers found that participating in Aim High helped them develop more positive mechanisms of classroom management that bolstered student learning.

Differentiated and personalized instruction.

A third theme that emerged from staff’s comments was connected to the previously-mentioned belief in the role of the teacher to adapt instruction to the needs of individual students: many teachers reported that at Aim High they learned skills to help them differentiate their instruction. In the words of one teacher, “Aim High reminds me each summer that I cannot treat all students as equal learners with equal needs; this summer I differentiated in new ways I had not previously tried.”⁹ Teachers mentioned building skills adapting their teaching to many different kinds of students, including both different skill levels and diverse student populations. One teacher referenced learning about new texts to include in the classroom, more reflective of the demographics of her school’s student population.

⁹ In addition to these prominent themes, staff also described developing their skills and knowledge engaging and interacting with students. One teacher stated, “I developed more close relationships with students this summer than previous summers. I’ve found these relationships to have a positive effect in the classroom.” Another teacher commented, “I feel as if Aim High has helped me build my toolbox for creating positive relationships with students, and building a sense of community within a classroom. It helps me go back to my year-round teaching job with a new enthusiasm and commitment to my students.”

Supportive Learning Environment

A high Supportive Learning Environment includes a welcoming atmosphere; a flow of program/lesson activities that is well-planned, presented, and paced; opportunities for youth to engage in active learning (rather than passively receive information); and a teaching staff who encourages and supports youth in building skills. The average Supportive Environment rating on the SLPQA across all 35 observations was 4.27 ($SD = .48$; range = 2.83-5). Our observations indicate that the majority of the teaching staff provided a welcoming atmosphere, and explained activities clearly and paced them appropriately. We also captured many instances of students involved in active learning and of teachers encouraging them to attempt higher levels of performance and supporting their learning.

For example, in one 6th grade science class, the teacher presented the idea of why clear instructions are important for replication in the scientific method. She asked the student, “instruct me to write my name on this paper, what do I do first?” The student replied, “First, get a pencil.” The teacher pretended to try grabbing a pencil with her elbow. The student started laughing, and clarified his statement, “Grab it with your hand.” The teacher replied, smiling, “Oh, okay!” This instance of active learning illustrates how the teacher, rather than simply describing the concept of giving instructions, provides the student with an opportunity to engage actively with the concept. In another illustrative example of a teacher encouraging student performance, one 9th grade Issues & Choices teacher leading a writing exercise encouraged students, saying,

If you’re stuck, use your words—because what is today’s affirmation? ‘My words matter.’ Struggle with it, think about what represents your experience. But you can’t just sit there and look blankly. You should say, ‘hey [teacher], I need help. Or, [teacher], I’m struggling, I don’t know what to write, can you help me out?’

In both examples, teachers play a critical role in providing active learning opportunities and encouraging student performance. We observed many such examples across Aim High settings, as evident in the SLPQA score for this construct.

Engaged Learning

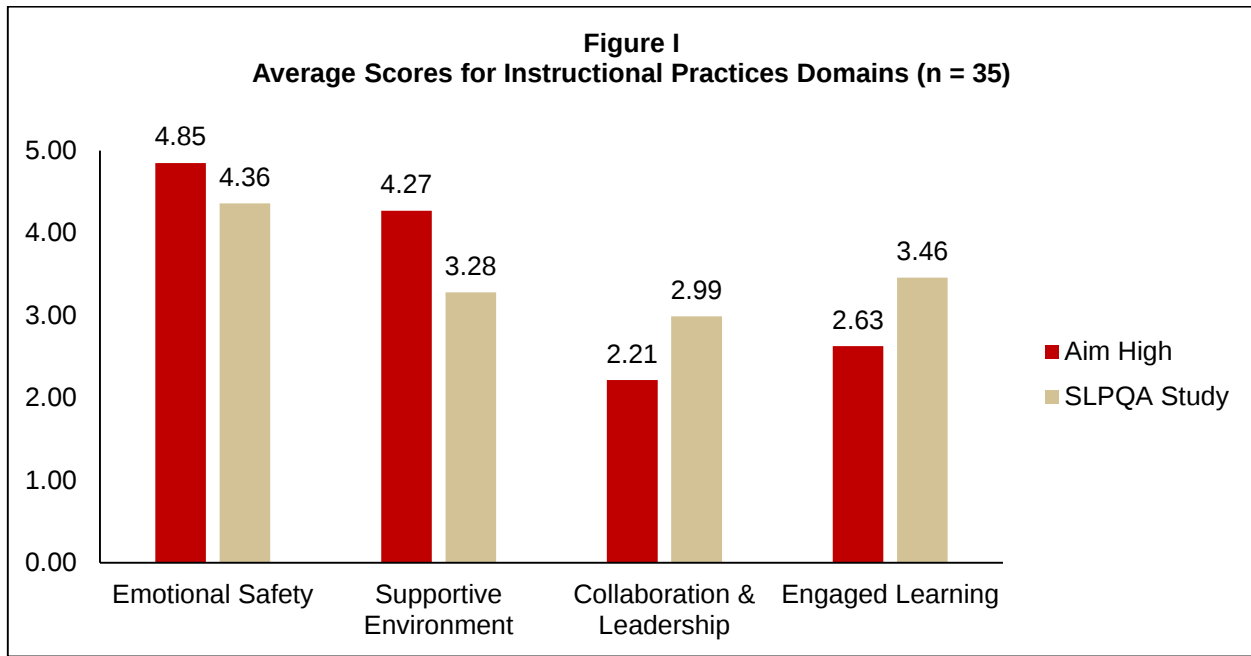
Engaged Learning, as defined by the SLPQA, gauges the extent to which students are offered opportunities for:

- planning, choice and reflection (e.g., set goals, consider a variety of alternatives, test different approaches and carry out plans, reflect on the effectiveness of their actions, consider revisions that could bring about more desirable outcomes)
- learning how to learn (e.g., staff helps youth identify the learning strategies they use, so they can apply them in other situations)
- developing higher order thinking skills (e.g., analyze, define a problem, make comparisons, predictions, inferences, generate alternative solutions)

The average score for Engaged Learning on the SLPQA was 2.63 out of 5 ($SD = .83$; range = 1.33-5), which positions this domain as a potential area of growth. That said, we did observe many instances of instruction aligned with the Engaged Learning domain. For example, in one 7th grade science classroom, the teacher provided a structured opportunity for students to reflect on a “Mystery Bag” exercise. At the end of the lesson and in the context of whole group discussion, the teacher elicited students’ views about what they got out of the Mystery Bag activity, remarking that there are no right or wrong answers. The last question in the activity’s accompanying worksheet also asked students to reflect on what they had learned during the lesson. This activity clearly provided an opportunity for students to reflect on an activity; our observations recorded many similar opportunities for student reflection.

Higher order thinking (the ability to analyze, define a problem, make comparisons, and generate alternative solutions) is a complex skill to develop, and can be equally difficult to teach. In one 7th grade math class, the teacher supported students’ higher-order thinking during a “Do Now” equation activity. During the activity, the teacher helped students, who were struggling not by giving them the answers but by asking them questions so they would arrive to the correct answer by themselves. Examples: “How do you know?”; “What do we know about squares?”; “What if you replace this square with circles, what happens then?” As is the case for instructional practices captured in the Collaboration & Shared Leadership domain, the Engaged Learning domain may provide one potential area of future focus for Aim High, with possible implications for curriculum design, professional development, and possibly hiring practices.

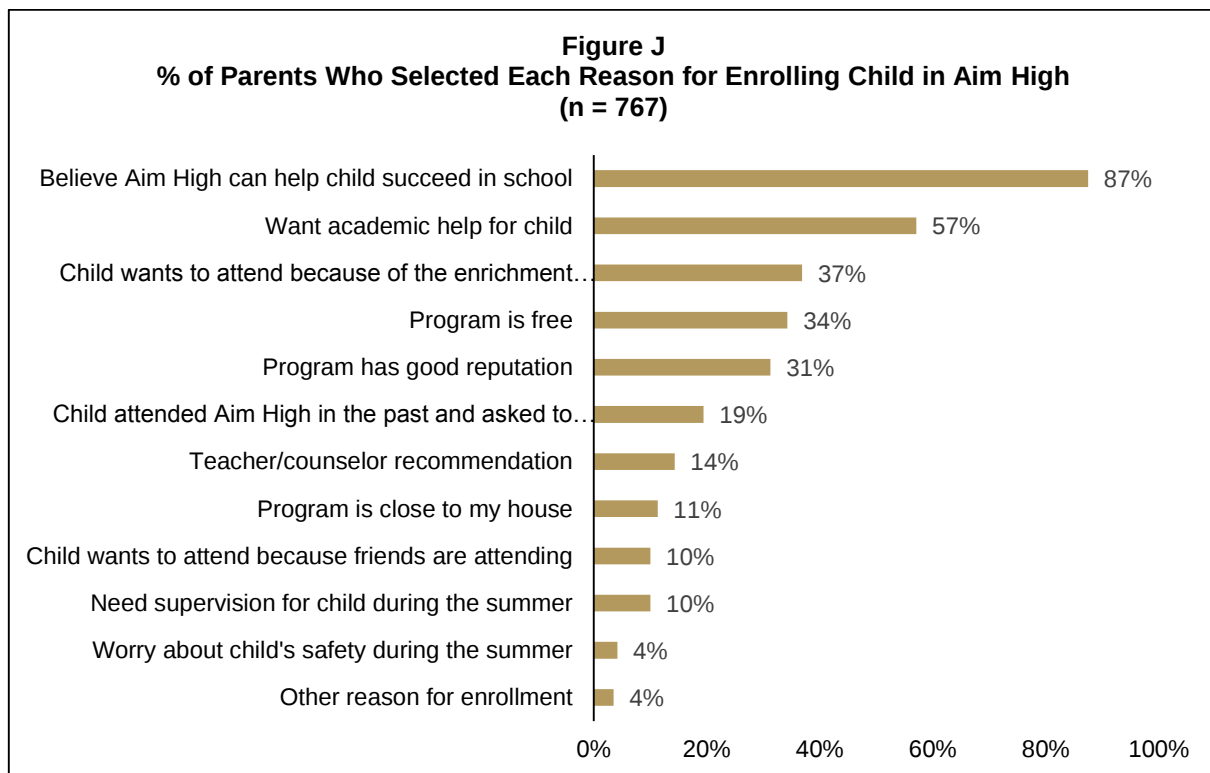
The findings presented in this section, along with those discussed in Positive Supportive Environment above, indicate that instructional practice across Aim High settings is strong in some areas, but more variable in others. Classroom environments consistently demonstrated providing a positive emotional climate and supportive learning environment. On the other hand, the extent to which opportunities for collaboration and leadership, as well as engaged learning (planning, reflection, higher-order thinking) were present varied. Importantly, the trend in scores evident in Aim High loosely parallels the scores of other summer learning sites where the SLPQA piloted. To provide a base of comparison, Figure I reports Aim High’s scores presented side by side with those reported in a study that examined 32 summer learning programs in Grand Rapids, Michigan., Northern California, and Seattle, Washington (Smith, Ramaswamy, & McGovern, 2015). Compared to these programs, Aim High appears to measure slightly higher on emotional safety and supportive environment, and slightly lower on collaboration and leadership, and engaged learning.



Individual Level: Aim High Students

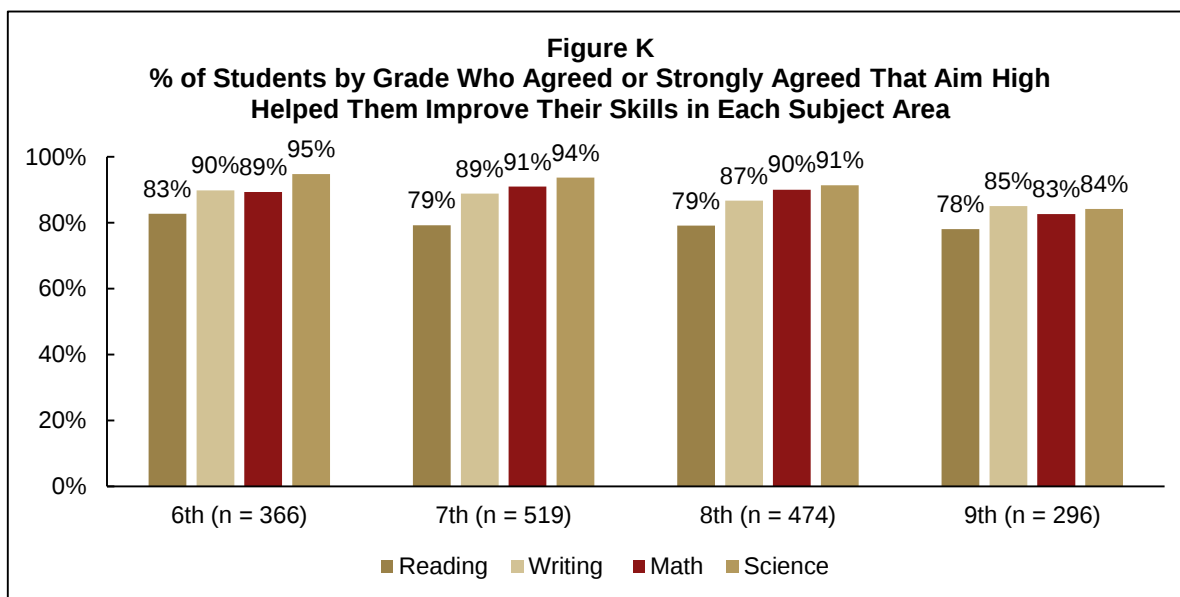
Academic Knowledge and Skills

Aim High offers academic instruction in math, science, and humanities (a combined Language Arts and Social Studies curriculum) designed to reinforce what students had learned the previous school year and get them better prepared for the year ahead. Moreover, believing that Aim High can help their child succeed in school is the reason most endorsed by parents (87%, $n = 767$) for enrolling their child in Aim High (Figure J). Our study did not directly measure students' knowledge and skills¹⁰. Rather, we elicited students' and parents' views at the end of the summer about the extent to which Aim High had helped with academics.



In the student post-survey ($n = 1655$), the great majority of students indicated that Aim High had helped them improve their reading (80%), writing (88%), and math skills (89%) and had helped them improve in science (92%). Figure K presents findings according to grade level. 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.

¹⁰ On a pre- and post- math assessment administered by Aim High, 76% of students obtained a higher score at the end of the program than they did during the first week; for 41% of students the increase in score was 15% or more.



During focus group interviews, we asked students for the reasons why they were attending Aim High that summer. Returning students, who had attended the program in previous years volunteered that Aim High had helped them with school in the past and that is why they had come back. For example, a 7th grade student said that before Aim High he had bad grades, but that he had improved after Aim High and now had a 3.5 GPA. When asked to elaborate, he said:

Aim High taught me things I was going to learn during the school year. So, like for math, [in school] we were going to learn about...area, for example, and I had already learned about it in Aim High, so...I would already know about it.

Similarly, 86% ($n = 336$) of parents of returning students (students who had attended Aim High in the summer of 2014) agreed or strongly agreed with the statement, “My child’s participation in Aim High last summer contributed to his or her success in school last year.” Moreover, among all parents who participated in the survey ($n = 814$), over 90% agreed or strongly agreed that, because of Aim High, their child was better prepared for school in the fall.

In summary, in the perspective of the majority of students who attended Aim High in the summer of 2015 and that of their parents, Aim High succeeded in its goal of boosting students’ academic skills and helping them to be better prepared for the next school year.

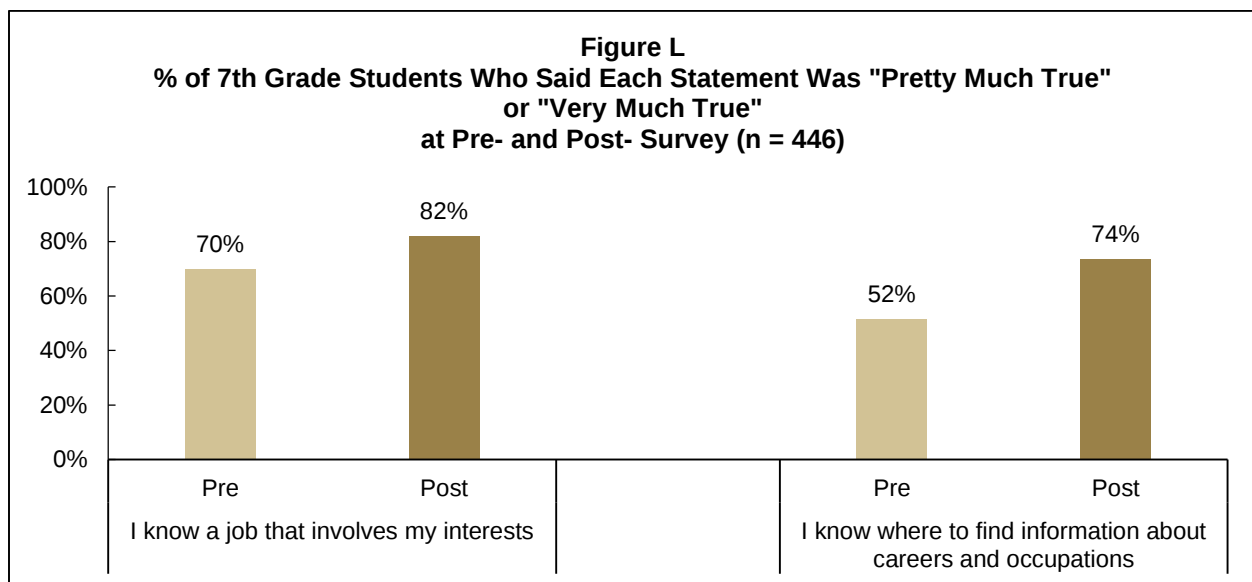
Early College and Career Awareness

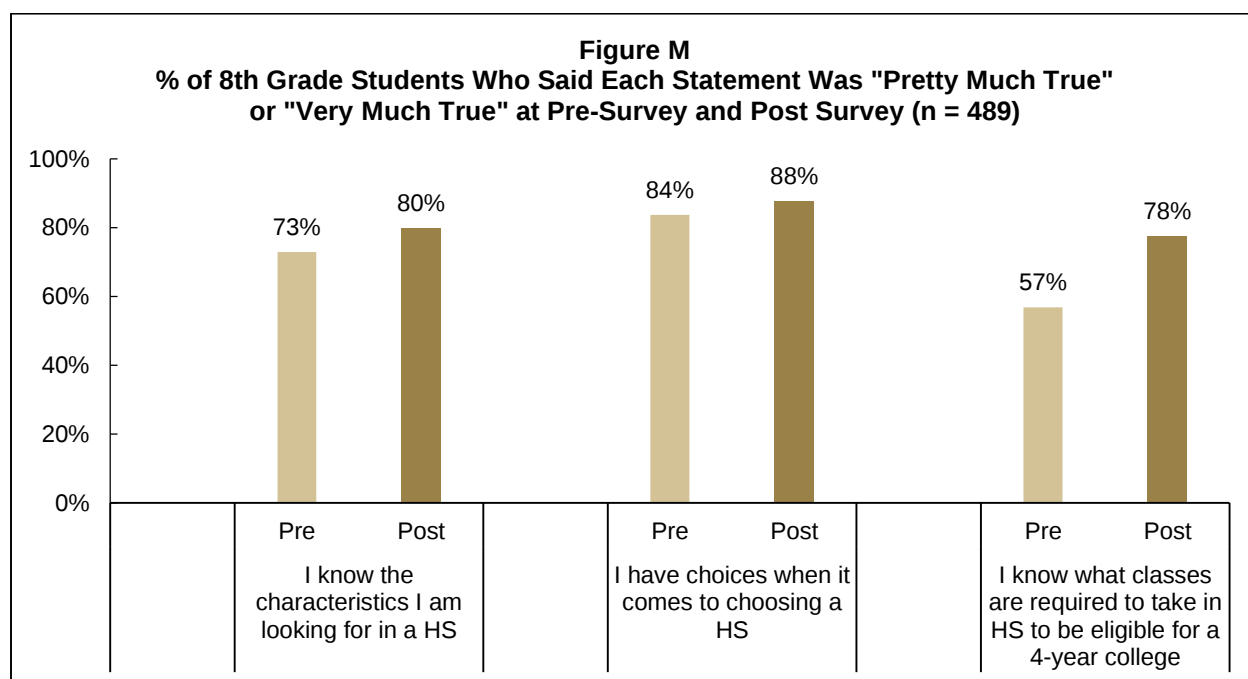
Aim High’s Issues & Choices class curriculum incorporates units designed to support students’ transition to middle school and high school as to build their college and career knowledge. Topics covered include exploration of career goals and interests; high school exploration and A-G requirements; and exploration of post-secondary options. In addition, 58% of students said that during the summer at Aim High they had visited a college campus; 89% had heard speakers/teachers

describe their path to college and/or career; 81% had heard speakers talk about their careers; and 40% had visited a workplace.

Students discussed what they were learning at Aim High about college and careers during focus group interviews, for example the A-G requirements (“the classes that you have to take in high school”), and average salaries of different careers (“we used iPads to find out the salary for the careers we want.” During focus groups students also mentioned field trips to local colleges and universities. In particular, when we asked a student whether he had learned anything new during the field trip to a college campus, he said, “[I learned that] you get the same education in a two-year college [as you do during the first two years of a] four-year college. The same thing, just...cheaper.”

Finally, analysis of the pre- and post-survey data revealed statistically significant changes in students’ responses to various college and career knowledge-related items (Figures L and M). Additionally, the proportion of 6th grade students who said they knew “at least one after school program they could join when in middle school” increased from 67% at pre-survey to 77% at post-survey.





Perceived Relevance of School for Future Goals

To address the extent to which participation in Aim High is accompanied by an increase in students' perceived relevance of school to future goals, we examined pre- to- post survey changes in students' extent of endorsement to the statement, "Getting a good job later in life depends on my success in school now". For the whole sample ($n = 1534$), the percentage of students who responded "pretty much true" or "very much true" was 91% and 93% at pre- and post- survey respectively. Because student endorsement was already very high at the time of the pre-survey, the question was likely not able to capture change in students' perceptions to the duration of the program.

V. EXPLICIT FOCUS ON BUILDING EDUCATIONAL LEADERS

One of Aim High's explicit goals is to help build and maintain a pipeline of passionate, skilled, and diverse educators committed to working in schools with low-income and underserved population. Importantly, Aim High teaching staff (site directors, academic specialists, lead teachers, interns, and TAs) reflects a diverse demographic: 70% of Aim High educators are teachers of color; 65% of educators are multilingual; and 25% of educators are program alumni.

System Level: Aim High as an Organization

At the organizational level, Aim High utilizes several strategies to support a pipeline of diverse educators and leaders. This includes creating embedded professional development opportunities for teaching staff, fostering educational leadership, as well as providing meaningful employment opportunities for young adults.

Embedded Professional Development

Professional development activities come in many forms, including workshops, seminars, conferences, courses, and other formal instructional settings. However, the past decade of research has taken a more broad-based view of teacher professional development, treating teacher learning as interactive and social, based in embedded community practice (Cochran-Smith & Lytle, 1999). This conception of embedded professional development views teacher participation in formal or informal learning communities as powerful mechanisms for growth and development (Borko, 2004). Within this framework, 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, or even designing and choosing new curriculum. An understanding of professional development as an embedded, interactive, and social experience highlights Aim High's potential as a fertile ground for teacher learning.

Aim High created a professional development and organizational design that would systematically provide supportive conditions for teaching. By ensuring teachers were paired with a colleague, by creating a system of peer feedback, and through building in team planning, teachers at all levels enjoyed significant professional growth opportunities. These opportunities were integral to the explicit goal of creating educational leaders.

In sum, support for teaching innovation through a combination of intentional organizational structure and design, engaging curriculum and pedagogy, and a positive supportive culture created an opportunity for teacher learning and growth and therefore helped to build a pipeline of educational leaders.

Modeling ideal environment

Teaching staff perceived the structures and environment of Aim High itself to foster learning and development. This "ideal environment" was described by multiple staff members as exposing them to "what a school should look like" and showing "what it means to truly serve students' needs and interests." In response to some of the open-ended survey questions, a number of teachers described how exposure to and engagement with this environment helped them improve their skills as teachers. For example, one teacher explained, "The way Aim High is organized and how teacher expectations are delivered has allowed me to improve my teaching skills for classroom organization and classroom set up." Another staff member commented:

Because Aim High creates an environment where students are more likely to feel positive and engaged by being in a school-like environment, I have the opportunity for many more positive interactions with challenging students. This gives me more positive examples to draw on for the future.

In sum, the embedded experience of teaching in a positive "ideal" environment helps teachers learn and grow as professionals, increasing knowledge, building skills, or harnessing experiences upon which to draw in their return to the classroom.

Structures and culture to support teaching innovation

Another mechanism through which Aim High facilitates embedded professional development is the structure and cultures that support teaching innovation. In responses to open-ended survey questions throughout the survey staff often described Aim High as offering what they called a “teaching laboratory,” a supportive and low-risk environment in which they could experiment with new curriculum, expand their skills, and implement exciting, challenging ideas. One teacher succinctly articulated it thus:

Because of the smaller class sizes and the strength of the Aim High community, I pushed myself to create assignments and lessons that I would be intimidated to attempt in a normal classroom setting. Aim High has given me the confidence to try new, challenging ideas in the classroom.”

The structures and culture of Aim High (e.g., low teacher-student ratio, supportive environment), appeared to facilitate the conditions for teaching innovation, as did the open curriculum. Teaching staff particularly credited the opportunity to develop and experiment with new engaging curriculum as helpful to their growth and learning. In the words of one teacher:

I never had to develop a complete curriculum before. This was a great experience to experiment with new class topics and projects. Aim High provided me with the environment to teach freely and get kids excited about science.

With recent shifts in teaching and learning standards, such as implementation of the Common Core, some staff felt that the professional learning opportunities provided by Aim High helped them be more prepared to meet these new challenges. One teacher stated:

The techniques and curriculum that I develop over the summer I will use in my classroom in the fall. Common Core is demanding that students really get away from rote memory and start getting their hands dirty with the material. This is the type of curriculum that I write at Aim High.

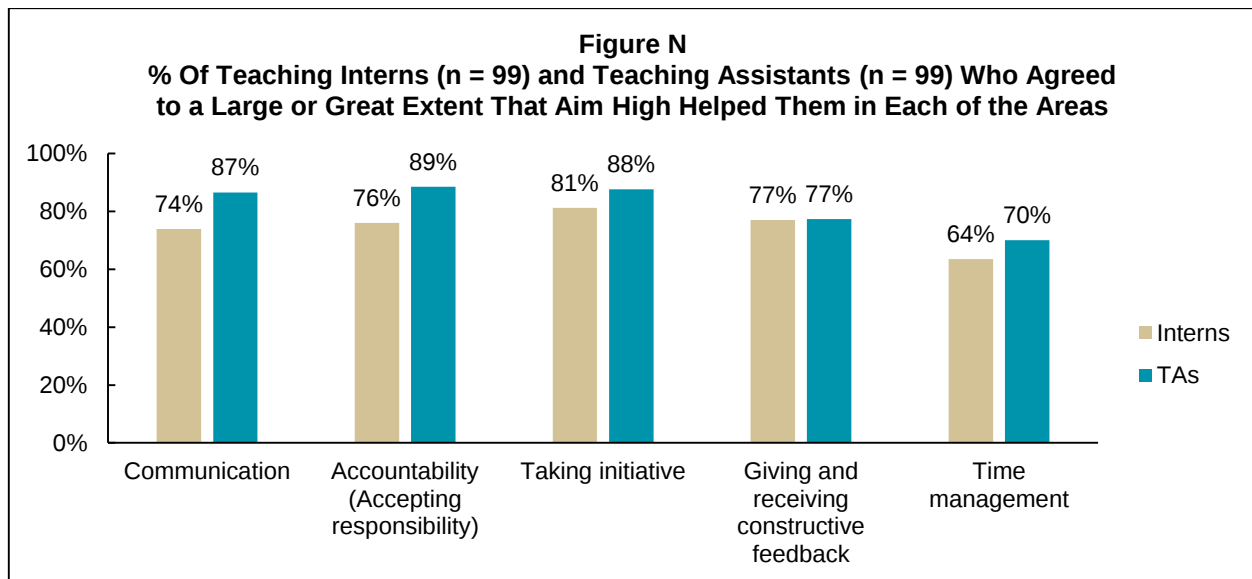
Meaningful Employment Opportunity

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 (and sometimes Lead Teachers) are youth themselves, and many within the target demographic of the program (i.e., young people of diverse backgrounds). Research demonstrates that employment can have positive effects on youth, such as fostering responsibility, positive work habits, motivation, time-management, and self-confidence—important socioemotional competencies with potential long-term academic and career benefits (Heckman, 2000; Jackson, 2012; Lillydahl, 1990; Mortimer, 2003). Summer employment specifically has been shown at times to reduce violent behavior among at-risk youth (Heller, 2014),

as well as produce modest gains in attendance during the subsequent academic year (Leos-Urbel, 2014).

Based on the staff survey, in the summer of 2015,

- Teaching at Aim High was the first professional experience for 24% of the interns ($n = 99$) and 66% of the TAs ($n = 99$)
- 82% of interns and 91% of TAs indicated they agreed completely or to a large extent that they gained important job skills while working at Aim High. Figure N presents extent of endorsement according to key competency.



As one Intern reported;

I really think Aim High taught me how to communicate my thoughts in a respectful and professional way. I also learned how to adjust my attitude to the students and become more understanding. I also learned how to work better with other people and understand where people's ideas are coming from.

Various TAs ($n = 22$) provided further explanation as to what they had learned at Aim High, including gaining deeper knowledge of professional conduct and expectations, concrete professional skills (e.g. public speaking, communication, organization), and furthering their leadership abilities (e.g., “being a role model”). In the words of one TA:

Aim High taught me that a job does not only have you doing one thing. There are multiple tasks and duties that come with a job and being able to juggle them as well as excelling in each aspect [is part of what comes with the role].

In sum, Aim High provides a meaningful summer employment and positive youth development opportunity for the young adults employed as TAs and Interns. These young adults also serve as role models for Aim High participants, reinforcing program objectives related to student’s college and career goals.

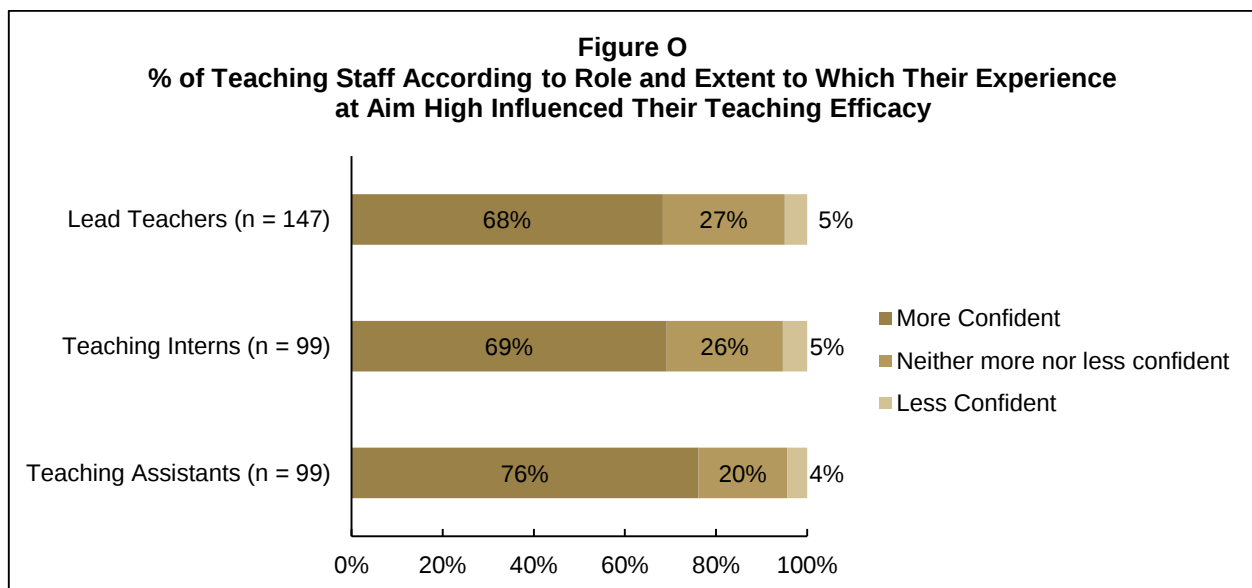
Setting Level: Aim High Sites and Classrooms

The organizational structures that support teacher learning and growth manifest at the setting level through the manner in which Aim High affects teachers’ knowledge and skills, self-efficacy, and career plans. In this section, we discuss each of these, in turn. We find that teachers perceived Aim High to influence their experience in each of these domains. We note that these domains likely contribute both to the likelihood that Aim High staff remain in the teaching profession, as well as the program culture and learning environment that Aim High participants experience during the summer.

Teacher 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 related to teachers’ persistence, enthusiasm, 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 difficult and unmotivated students (Figure O). When asked to explain their responses, 89 teachers provided comments, from which analysis emerged two main themes described below.



Opportunity to experience themselves as effective

Over a third of the staff ($n = 31$) providing comments explained their responses by describing concrete experiences of themselves, as Aim High teachers, effectively reaching “difficult” students and/or seeing “difficult” students thrive. As one teacher stated, “Having experienced children with a wide range of learning levels and seeing the transformation of unmotivated children into serious students, I feel more confident in my teaching skills.” Like this teacher, many others indicated both a belief in the ability of teachers, generally, to reach difficult students, as well as a confidence in their own personal teaching ability.

Opportunity for growth and mastery experiences

Over a quarter of staff respondents ($n = 26$) referred in their comments to opportunities they experienced at Aim High to improve their own practice supporting students. In the words of one teacher,

Throughout the summer, I saw myself constantly adapt my teaching style in attempt to engage the student's different learning styles. I observed students who worked better independently or in a group environment. Knowing this helped me guide them in different ways. I noticed a lot of unmotivated students would not do any work until they were approached, encouraged, and helped by the teacher. I saw more students asking for help and guidance throughout the summer.

Another teacher remarked explicitly on the growth both he and his students made over the summer. He said: “I was challenged to take on curriculum I had never seen before and was amazed by the amount of growth both the students and I made over the summer. Students performed at high levels and were introduced to rigorous material.”

In summary, staff reported that their experience in Aim High provided multiple opportunities to engage with students, try new strategies, and experience the success of these efforts. The experience of mastery in teaching students is precisely one of the most powerful influences on the development of teacher self-efficacy (Bandura, 1977; Woolfolk Hoy & Burke-Spero, 2005). The enhanced sense of self-efficacy underlies the high endorsement (93%) of professional Lead Teachers ($n = 120$) to the statement “I believe I will be a better teacher during the academic year due to Aim High.”

Career Plans

Our findings indicate that Aim High inspires many staff to consider or pursue a career in education, promotes leadership development, and provides a meaningful employment opportunity to young people still in high school or college. We describe each of these themes in detail below.

Desire to consider or pursue careers in education

According to survey responses, the vast majority of 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 ($n = 66$), 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 in Aim High, they were more likely to consider a career in education; this proportion was 59% for TAs.

Staff comments to the open-ended survey questions concur with these responses: for the majority of teaching staff, participation in Aim High led them to consider a career in teaching or education, or reinforced a decision already made on that regard. One Lead Teacher commented, “I really never seriously considered teaching before I was hired at Aim High, but now I love it so much and cannot imagine doing anything else.” Another Lead Teacher remarked, “All three summers at Aim High have changed my career trajectory drastically - I will begin a teaching position directly due to my participation in the program.”

Many Interns and TA commented that while they had already thought about teaching, the experience at Aim High made them consider it more seriously as a rewarding career path. As one Intern remarked, “It definitely made me look at teaching as a career path. Being told by students that I was a helpful aspect in their life is as rewarding as obtaining a golden Olympic medal.” A TA commented;

I have never been in such a position before and it feels good to know that I'm making a difference in someone's life. I enjoy seeing these kids grow and building relationships with them and I never really thought of it as a career before.

Several staff remarked that participation in Aim High helped them understand teaching as a vocation, and viable career path. In the words of one teacher: “As a recent college graduate, Aim High was an amazing experience for me to have professionally. I got to get a better handle of what teaching is like, and if I would want to pursue it in the future.”

Additionally, some teaching staff reported that Aim High reinforced a decision already in place, “reassuring” them that they had made the right career decision, or strengthening their resolve to teach. In the words of one TA, “I 100% want to be a teacher now.”

Leadership development for teachers

Some teaching staff already in professional teacher positions (e.g., credentialed and/or full-time teachers) remarked that Aim High provided an important leadership development opportunity for them. In some cases, Lead Teachers remarked that Aim High prepared and/or motivated them to take on leadership roles, such as creating new programs for students at their home school, mentoring

newer teachers, or even moving into school administration. One teacher describes how her experience at Aim High helped prepared her to start an afterschool program in a neighborhood school:

So, last summer when I was working with [another summer program], before I left, the principal [of a neighborhood school] asked me to come and start my own afterschool program. I was like, “You know, that sounds really fun. I don’t know if I have the tools to do that.” I’d been working with [the other program] for two years, I run my own program there, but I don’t know if I could start my own program. And I came here, and I was here for five weeks, and in those five weeks, I felt like I learned enough that I then called the principal and said, “Sure, I’ll do it.”

Site Director staff, in particular, attribute their experience at Aim High with helping to prepare them for leadership positions in other school settings. In the words of one Site Director, “I started full-time teaching in 2010, and I can really thank Aim High for that because I learned a lot of valuable things from this program... and I am a dean of students now.”

Individual Level: Aim High Students

Aim High’s strategy of creating a pipeline of educators most directly manifest at the organizational and through teacher experiences. Nonetheless, this goal relates to student participants themselves in that students understood that the Aim High community was a place that people returned year after year not only as students but also as teachers who serve as positive role models.

VI. STRENGTHS AND CONSIDERATIONS

In this section we highlight three areas of particular strength for Aim High and three areas for consideration in the future.

Areas of Strength

Below we highlight three key areas of strength for Aim High that emerge for our analysis. First, we observed considerable coherence in terms of consistency of program implementation as well as positive student and staff experiences across Aim High sites. Second, although our study did not set out to determine the causal effect of Aim High participation on student outcomes, our findings point to encouraging trends on leading indicators of success such as student attendance and engagement. Third, we note the continuity of an “Aim High culture” throughout our sample sites which was facilitated by the key Aim High strategies discussed above.

Coherence

Overall, Aim High sites demonstrated a high degree of consistency in program implementation, as evidenced across the array of data collected (student and staff surveys, student and staff interviews,

and observations). Aim High exemplifies very strong alignment from the system to the setting levels and that tight coupling may be one of the factors accounting for the positive outcomes experienced by youth.

Overall, the results from this study indicate positive student and staff experiences with Aim High, as well as positive shifts associated with Aim High participation. For instance, the majority of students indicated that Aim High helped them improve their reading, writing, and math skills and helped them improve in science. Further, teaching staff reported that participation in Aim High supports their career goals, either by provoking them to consider or pursue careers in education (or reinforcing an existing choice), providing opportunities for leadership development within the field (i.e. school administration), or simply providing a meaningful employment and positive youth development opportunity for diverse young adult staff. Taken together, Aim High's strategies appear to be advancing towards their goals. Again, while these findings should not be interpreted to imply causality, they paint a promising picture of the ability of Aim High to support desired outcomes for students and teachers.¹¹

Aim High strategies function interdependently, mutually reinforcing one another –most especially at the site level. For example, the Intentional Organizational Structure and Design choice to have small classes with multiple teachers supporting student learning had powerful implications for enabling Engaging Curriculum and Pedagogy. The structure facilitates differentiated instruction, student engagement, positive teacher-student relationships and teacher satisfaction. Aim High's low teacher-student ratio allows for more individualized attention than most students receive at their schools and extra-support for students who need it—two key conditions for differentiated instruction. Further, the low teacher-student ratio supports the conditions for effective project-based learning where students are supported to explore, try different approaches, and learn to collaborate with one another. Finally, this design allows for the formation of close relationships between teachers and students, which drive both student engagement as well as teacher satisfaction with Aim High.

Leading Indicators of Success

The high rates of student engagement, attendance and retention can be viewed as leading indicators of positive student outcomes.¹² 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. Our study found the Engaging Curriculum and Pedagogy of Aim High to play an important role in supporting desired outcomes. Students cited the afternoon activities and project-based learning embedded into their academic classes as major reasons for their enjoyment of Aim High.

¹¹ 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.

¹² 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.

The ability to make learning fun and desirable to students helps to ensure that students regularly attend and participate in the program, thus creating the conditions for positive student outcomes. Additionally, many teachers indicated that they benefited from the engaging curriculum, by both building stronger relationships with students (through the afternoon activities), as well as expanding their teaching skills to develop and implement lessons that were engaging and fun for students (e.g., project-based learning). In sum, the engaging curriculum supports student engagement, a leading indicator to affecting outcomes, as well as teacher skills and satisfaction.

Continuity of Culture throughout the Aim High Network

As mentioned above, our study found considerable consistency in implementation of Aim High's model across program sites, including the most geographically remote sites (Tahoe and Marin). Multiple mechanisms contribute to this level of coherence. We trace this consistency, in large part, to Aim High's hiring practices, which we found to facilitate the continuity of program culture and identity over both time and distance. The hiring practices of site directors, teachers, and teaching assistants all support stability and insure that the "Aim High way" is communicated.

All of these practices contribute to the continuity of the program, replicating, reinforcing and institutionalizing program culture. Additionally, these practices foster the repeated return participation of both students and staff, and allow the building and maintaining of relationships over, at times, many years. The personal relationships students and staff reported feeling towards each other are both a motivation for participation, as well as a reason for program satisfaction and engagement. Lastly, actively recruiting Aim High alumni and return staff help support the career development and teacher pipeline Aim High seeks to foster.

Areas for Future Consideration

Our study found several factors that appeared to influence implementation, and at times, presented significant challenges, including student population needs, communication and coordination with host school, difficulty recruiting professional teachers and variability in staff instructional practices. While these challenges manifested primarily at the setting-level, they reflect systemic issues that Aim High as an organization is best positioned to address. We elaborate on each challenge below.

Student Population Needs

Aim High's systemic design and setting level implementation seek to support the diverse needs of the student population. From the low student to teacher ratio, to the academic coach support, there are multiple efforts pressed into service to meet student needs. We found, however, evidence of barriers to meeting the needs of many of the students. For example, at sites with a high proportion of newcomer students and dual language learners, site directors shared the challenges they faced in serving that population and wished for more support, for example in the form of an English as a Second Language (ESL) coach. In addition, in order to communicate with families, those sites have high day-to-day translation needs which at times exceed staff capacity. As a result, some

communications home do not get translated and, as a consequence, misunderstandings sometimes arise. Our data also captured teacher comments about the challenges they faced in teaching groups of students with widely varying academic abilities. In this regard, they wished for curriculum lessons that incorporate suggestions on how to adapt instruction to meet the needs of all students.

Several Site Directors also commented on the high incidence of mental health conditions and problem behaviors among their student body as well as the high level of support many of their families need. These findings underscore the importance of the role of Student Support Specialist, a position that Aim High fills, at least on a part-time basis, at several of its sites.

In summary, Aim High Site Directors and teaching staff face the task of meeting the learning and socioemotional needs of a very diverse student population. Academic coaches and Student Support Specialists have key roles in assisting staff in creating the conditions so that each and every student can thrive at Aim High. A curriculum that provides adaptations for students who are below or above their grade level and provides scaffolds for dual language learners would also facilitate teachers' efforts to differentiate instruction.

Communication and Coordination with Host School

Program staff noted multiple challenges and improvement areas with regard to host schools, related both to sharing space and sharing information about students to inform program and service delivery.

Sharing their campus sites with other programs presented challenges to several Site Directors. For example, at one site there were three other programs running concurrently with Aim High, which presented many logistical and scheduling bottlenecks that required time and energy from the directors at that site to address. One Site Director offered the following suggestion:

It would be great, the Friday before the program starts, that the school principal, the school office manager, Aim High central office, and us [the Site Directors] sit together and establish expectations early so we're not playing email tag of, who do we contact for this, that, and the other.

In addition, in some cases, programs sharing building space with Aim High had different values and organizational cultures, which created challenges when it came to enforcing expectations about students' behavior and handling discipline issues.

Finally, both Site Directors and teachers indicated they would benefit from access to school records prior to the beginning of the summer. Knowledge about students' learning and developmental disabilities would be valuable to teachers in planning and implementing differentiated instruction and putting in place adequate learning supports.

Staff Recruitment and Hiring

Difficulty recruiting professional teachers

Several Site Directors mentioned challenges when it comes to recruiting professional teachers to teach at Aim High. They cited as the most prominent obstacle the fact that Aim High's compensation is lower compared to that offered at other programs. In reflecting about this issue, one Site Director shared that he/she had had teachers who, having accepted a position to teach at Aim High, called a month before the program started to say that they had reconsidered because it was "just not enough money." This in turn, caused last minute struggles to fill that position now vacant. This challenge seems amplified at sites where Aim High competes for teachers with the local school district, which "pays teachers twice as much for half as much work." According to Site Directors, one other reason underlying the difficulty in recruiting professional teachers is that they prefer to take the summer off or find a job that is not as intense and demanding as teaching at Aim High is. One Site Director shared his/her marketing approach to recruit Lead Teachers:

We don't pay very well for lead teaching, we don't pay very well at all compared to a lot of other programs. So, what I do, is pushing this teacher pipeline type of idea: 'Hey, you want to think of it as a lab; you can just try out whatever you want.'

Variability in quality of Staff Instructional Capacity

While most Aim High classrooms provided a positive emotional climate and supportive learning environment, the extent to which they offered opportunities for collaboration and leadership, facilitated reflection, choice and planning, promoted higher-order thinking, and helped students learn how to learn varied considerably as demonstrated by the data. This may be related to the difficult task of balancing the prerogative of providing youth a fun and enriching summer experience with the necessity of offering rigorous academic instruction to stem summer learning loss. Additionally, the heterogeneous backgrounds and levels of experience among teaching staff adds another potential layer of complexity. For example, in some cases, experienced teachers may provide more academic rigor to students, but maintain a more traditional classroom environment (i.e., less oriented towards summer fun); in others, less experienced teachers may offer a more dynamic and engaging setting, but lack the teaching skills of professional teachers. Incorporating quality youth development practices into core academic classes is a challenging task for instructors of all levels and experiences. While all Aim High sites consistently provided low teacher-student ratios and offered engaging curriculum, the instructional capacity to deliver the curriculum across classrooms varied considerably. The following quote from a Site Director interview is representative of the many comments we heard over the course of our data collection about the tension between rigorous academic instruction and summer fun:

When we look to hire, I think there's been a trend towards professional teachers, which I think is important for the program because we want to provide the best service we can. But, at the same time, I think that's where we also lose that creative fun piece, because if you are pulling people [to teach at Aim High] who have other life experiences, then that could bring in more

diversity into the curriculum and perspectives on life. So, I think that's something for us to think about.

Our findings show that Aim High can work to enhance their staff's cooperative learning and teaching skills as well as their ability to engage students in higher order thinking and conceptual understanding. Curriculum lessons that provide explicit guidance on how to effectively teach those skills could prove helpful; for example, especially to novice Lead Teachers. In sum, moving the needle in terms of students' academic achievement (e.g., to stem summer learning loss) requires consistent quality of staff instructional practice. Our study findings indicate that Aim High demonstrated strengths in some areas, and need for growth in others.

CONCLUSION

This study demonstrates that Aim High has a coherent set of strategies focused on the dual goals of preventing summer learning loss and increasing achievement for middle school youth, and building a pipeline of high quality educational leaders of color. Aim High pursues these goals through tightly coupled strategies that work throughout their network of sites to produce promising results for students and growing numbers of educators.

Aim High's thoughtfully developed organizational design reflects the best in educational and youth development philosophy that supports fostering relationships and providing ample time for powerful learning to occur. By carefully attending to its positive supportive culture, Aim High has consistently built a network of youth who not only participate as continuing students from year to year but also return as alumni staff and teachers. Through rigorous and engaging curriculum and pedagogy, Aim High builds the skills of students and improves their academics with habits of mind that bolster performance throughout the school year. Further, many teachers report that through by providing opportunities for formal and informal training, for developing strong relationships with students, and for innovation in the classroom, the summer experience can be a reenergizing one.

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. As Aim High seeks to grow, they have much strength upon which to build including 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. Finally, we identify areas for continuing growth, for instance by taking further steps to address the wide range of the student population needs, communication with the host school, and staff instructional variation. Our findings highlight Aim High's commitment and strong foundation upon which the entire network can continue to build.

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APPENDIX A. DATA AND METHODS

The study of Aim High relied on data collected primarily during the summer of 2015 and employed a mixed-methods approach, which included a) interviews with Aim High leadership and central office staff; b) interviews with site directors, d) focus group interviews with students, teaching staff, and parents, d) observation of program activities, and e) student, teacher, and parent surveys. We describe each of these research activities below.

- *Interviews with Aim High leadership and central office staff:* We used semi-structured interview protocols to elicit participants' views about Aim High. These interviews lasted approximately 45 minutes, were conducted in person, and took place in October 2014.
- *Interviews with site directors.* We conducted semi-structured interviews with at least one of the two site directors at all but one of the 15 Aim High program sites. Interviews with site directors lasted approximately 30 minutes, were conducted in person or on the phone, and took place during Weeks 4 and 5 of the 2015 summer program. The interviews elicited site director views about student and teacher recruitment to Aim High, highlights for the summer, challenges they faced as site directors, areas of program growth, and impact of Aim High on teachers and students.
- *Observations of program activities.* We conducted systematic observations of summer 2015 program activities using the Summer Learning Program Quality Assessment (SLPQA; cite website here: <http://www.cypq.org/SummerLearningPQI>), a tool specifically designed to assess the quality of staff instructional practices in both academic and enrichment settings within summer learning programs. In particular, SLPQA measures program quality in the following domains: emotional safety; supportive environment; collaboration and leadership; and academic rigor. Prior to the beginning of the summer program, the four research team members trained on the use of the SLPQA tool and reached acceptable levels of interrater reliability (Kappa coefficients for the subscales that make up the four domains ranged from .60 to .79).

We conducted the observations at five target sites, selected with feedback from Aim High to represent a range of program implementation experiences (different geographical regions, student demographic composition, long-established versus new). The observations took place across all five weeks of summer programming. Table B1 presents the main characteristics of each target site as well as the number of activities observed at that site. We also conducted one-day visits to two additional sites.

Table B1. Target Site Characteristics

	Location	# of Years as Aim High Site	Entering Grade Fall 2015-16	# of Students	Student Demographic Composition	# of Observations
Site 1	San Francisco	13	6-9	152	38% Latino, 41% Asian, 8% African American	7
Site 2	San Francisco	19	7-9	118	92% Asian	7
Site 3	Oakland	9	6-9	150	70% Latino, 11% Asian, 15% African American	7
Site 4	South Bay	10	6-8	128	73% Latino, 19% African American	8
Site 5	South Bay	1	6-7	85	87% Latino	6

- *Focus groups:* We conducted one student focus group (6-10 students) and one parent focus group (3-7 parents) at each of the target sites. In the focus groups, we elicited students' and parents' views about Aim High, including favorite aspects of the program and areas for improvement. We also conducted three focus groups with teaching staff according to role: one with lead teachers, one with interns, and one with TAs. During these focus groups we asked staff their views about the program and the ways, if any, in which their participation in Aim High influenced their beliefs about teaching and learning, their teaching skills, and their career plans. All focus groups took place during the last two weeks of the program.
- *Parent survey:* The parent survey consisted of both multiple choice and open-ended questions eliciting parents' views about Aim High and whether and how, if at all, the program benefitted their children. Across all sites, 814 parents completed the survey during the last two weeks of the program, of whom 85% identified themselves as mothers. Parents who had more than one child attending the program that summer were asked to fill out the survey with their oldest child in mind. For about half of the participants (54%), their child was in his or her first summer at Aim High. This proportion was 31%, 10%, and 4% for second, third, and fourth summer respectively. For most participants, their child was a rising 7th grader (34% of respondents) or 8th grader (30% of respondents). Slightly fewer caregivers (24%) had a child entering 6th grade in fall 2015; only 12% had a rising 9th grade child. The parent survey was administered by Aim High, who shared de-identified participant responses in spreadsheet format with the Gardner Center for subsequent analysis.
- *Teaching Staff Survey:* The anonymous teaching staff survey consisted of both multiple choice and open-ended questions eliciting staff's views about the program, including the quality of Aim High training; the leadership and support provided by their site directors; the effectiveness of the curriculum; and their general satisfaction with their experience at Aim High. The survey also had staff reflect on whether, and how, if at all, Aim High influenced their beliefs about teaching and learning, their confidence as teachers, and their teaching skills. Across all sites, 345 teaching

staff members completed the survey during the last two weeks of the program—147 lead teachers, 99 teaching interns, and 99 TAs. Among the lead teachers, 41% held a teaching credential, 47% did not, and 12% were in the process of obtaining a teaching credential. The teaching staff survey was implemented by the Gardner Center. Aim High central office shared the survey link with their teaching staff and encouraged their participation. Survey responses were downloaded in spreadsheet format for subsequent analysis.

- *Student surveys.* Students completed two surveys: 1) a short pre-survey during the first week of the program that elicited their views about themselves as learners as well as their knowledge about college and careers, and 2) a longer post-survey during the last week of the program that incorporated all the questions included in the pre-survey plus additional questions intended to capture students' experiences during the five weeks of summer program and their overall satisfaction with Aim High. The pre- and post- student surveys were administered by Aim High, who shared de-identified participant responses in spreadsheet format with the Gardner Center for subsequent analysis. Comparing students' responses before and after participating in Aim High allowed us to gauge change in a number of dimensions over the course of the program.

Analytical Approach

Individual and focus group interviews were audiotaped, transcribed, and transcripts uploaded into qualitative analysis software. The anonymous teaching staff survey administered by the Gardner Center was completed online and responses downloaded in spreadsheet format. Aim High administered pre/post student surveys and parent surveys and shared de-identified data with the Gardner Center in spreadsheet format. Multiple-choice survey responses were analyzed using statistical software. The surveys were also uploaded to the qualitative analysis software, which allowed us to conduct queries linking multiple-choice and open-ended question responses.

With regard to the observation data, after any given observation period was complete, the research team member who conducted the observation scored the SPLQA items on a 3-point scale scored 1, 3, 5, or NR (not rated), with higher scores indicating higher quality teaching practices, and also recorded a brief narrative justification (anecdote) for the selected score. At the end of data collection, SPLQA scores from all members of the research team were consolidated into one spreadsheet for analysis.

Finally, we used inductive, thematic coding consistent with grounded theory development (Glaser & Strauss, 1967) to analyze the qualitative data (individual and focus group interviews and responses to open-ended survey questions). By combining different data sources in the same analysis, we were able to assess similarities and differences across reported experiences of teaching staff, students, and parents who participated in Aim High.

APPENDIX B. DATA SOURCES ACCORDING TO RESEARCH QUESTION

Data Sources According to Research Question*

Research Question	Observations	Students			Parents		Teachers		Site Directors
		Pre Survey	Post Survey	Focus Groups	Post Survey	Focus Groups	Post Survey	Focus Groups	Interviews
1. How is Aim High implemented relative to the intended program model? What are factors that influence implementation?	X	---	---	---	---	---	X	X	X
2a. What are students' experiences with the program?	X	---	X	X	X	X	X	X	X
2b. What are parents' experiences with the program?	---	---	---	---	X	X	---	---	---
2c. What are teachers' experiences with the program?	---	---	---	---	---	---	X	X	X
3a. To what extent is Aim High participation associated with shifts in students' outcomes?	---	X	X	X	X	X	X	X	X
3b. To what extent is Aim High participation associated with shifts in teachers' outcomes?	---	---	---	---	---	---	X	X	X
4. What are elements of Aim High essential to the program's desired results?	X	---	X	X	X	X	X	X	X

* Shaded cells denote main data sources used to address each research question.

APPENDIX C. LOGIC MODELS

C1. Aim High Vision 2020 Student and Alumni Logic Model

Inputs	Outputs		Outcomes		
What We Invest	What We Do	Who We Reach	Short Term Summer Through Following School Year	Intermediate During High School	Long-Term End of 12 th Grade
Organizational Culture that embodies Aim High core values of community, opportunity, respect and high expectations. Funds/Fundraising Operational Capacity Program Design and Evaluation: Project based and collaborative learning Partnerships	5 week free summer program: 73.26 hours of academic instruction (includes Issues & Choices) 78.66 hours of enrichment (Includes advising and assemblies) 1:8 teacher to student ratio - Student advising - Family outreach 8th grade high school transition program Partnerships: - Quality after school middle school programs - Quality college preparatory high schools and out of school support programs	20 Sites 5 Regions 2700 students Over 90% attendance rate 50% of middle school students receive year round support 25% of high school students participate in college readiness programs 100% of 8th graders transition into a college prep high school support system	<u>During Summer</u> High level of student engagement ↓ <u>End of Summer /Following Year</u> Maintained or increased academic knowledge Increased sense of competence Increased perceived relevance of school for future goals Improved social and emotional skills Increased sense of community Increased early college and career awareness	Transition into a college prep high school program Academic Success Positive behavior High student attendance rates	Graduate from high school on time Enroll in college or certificate program by subsequent fall Graduate from college or certificate program within 6 years of graduating from high school.

C2. Aim High Vision 2020 Teacher Logic Model

Inputs	Outputs		Outcomes
What We Invest	What We Do	Who We Reach	
Organizational Culture that embodies Aim High core values of community, opportunity, respect and high expectations. Funds/Fundraising Operational Capacity Program Design and Evaluation: Team teaching model Partnerships	Professional Development Teachers: 38-58 hours of professional development (38 required) 25 hours of collaborative planning time - Instructional feedback loop based on classroom observations Interns: - Paid Summer Employment - Professional Skill Development Teaching Fellows 15 month program - Mentoring and Professional Development Workshops - Provide credit for credentialing programs - Job Placement Support Leadership Fellows 15 month program - Mentoring in leadership skills and in coaching developing teachers - Support in engaging in project focused on Aim High programming - Provide continuing education credit	608 Educators (Site Directors, Specialists, Lead Teachers, Teaching Interns and Teaching Assistants) Educators: 25% of educators are program alumni 70% of educators are teachers of color 65% of educators are multilingual 50% educator return rate 65% of Lead Teachers with teaching credential or degree with an education focus Students, families, educators and communities of school partners in five regions	Short Term: End of Summer (Teaching Staff: Lead Teachers, Teaching Interns and Teaching Assistants) - Increased teaching knowledge and skills - Increased teacher confidence - Met Aim High professional development goals - Desire to pursue or continue in the field of education - Desire to teach in communities served by Aim High during the school year - Desire to teach under served student populations during the school year Intermediate: 1-5 Years (Leadership Fellows, Educators: Site Directors, Specialists, Lead Teachers, and Teaching Interns) - Inspire diverse and talented young people to pursue a career in the field of education - During the school year, Aim High educators teach in the communities served by Aim High and/or teach under served student populations. - Leadership Fellows attain a leadership role in education Long-Term: 5+ Years (Teaching Fellows, Educators: Site Directors, Specialists, Lead Teachers, and Teaching Interns) - Aim High educators who enter the teaching field will remain in the classroom longer than the 5 year average for new teachers - Teaching Fellows will remain in the classroom longer than the 5 year average for new teachers - During the school year, Aim High educators teach in the communities served by Aim High and/or teach under served student populations.