Summer learning programs have emerged as a promising way to address the achievement gap between children of the poorest families and those of the most affluent. Research shows that during summer, low-income students suffer disproportionate learning loss, particularly in reading, contributing to the achievement gap between low- and higher-income children. The research also shows that high-quality summer programs can benefit struggling students of all class backgrounds by providing additional time to learn material they did not master during the school year. While many school districts offer mandatory summer programs to students who are at risk of repeating a grade, fewer districts offer summer learning programs to a broader population of students to stem summer learning loss and boost the academic performance of participating children.

By Catherine H. Augustine and Jennifer Sloan McCombs
The Wallace Foundation is funding a multiyear demonstration project to determine whether voluntary, district summer learning programs can stem summer learning loss for low-income students. Six districts—Boston, Cincinnati, Dallas, Duval County (Florida), Pittsburgh, and Rochester, New York—were selected for the demonstration project and committed themselves to offering such programs to large numbers of at-risk elementary students. These programs are all voluntary; offer reading, mathematics, and enrichment activities such as arts, sports, and science exploration; operate for a full day; provide transportation to students; are free of charge; and share a goal of maintaining or improving student achievement. They served students rising from third into fourth grade, and most served other grade levels as well.

To gather information for evaluations of the six districts for the years 2011, 2012, and 2013, we interviewed district leaders and summer site leaders and teachers; surveyed teachers, parents, and students; observed program training, instruction, and logistics; engaged professors of elementary education reading and mathematics to review the curricula; gathered program cost data; and analyzed district data on attendance.

Although the demonstration project is not complete, key lessons can be drawn in six broad areas:

- planning
- curriculum
- teacher selection and training
- enrichment activities
- academic time on task
- program cost and funding

### Planning

Launching a summer program is akin to launching a new, albeit more limited, school year, only with less time for planning and execution. A management structure has to be established, including district program responsibilities and oversight and site-level leadership and staffing; hiring and training summer teachers and administrators; developing or choosing a summer curriculum; selecting enrichment activities suitable for the program; recruiting summer students and creating ways to promote consistent attendance; and managing many other details, such as transportation, meals, and supplies. These tasks require months of planning, all while the school year is in full swing. However, districts that managed the planning process well had fewer logistical problems and more instructional time for students.

Program leaders who decided on a summer program by December and began planning in January ran a smoother program with less disruption to academic instruction during the summer. When site leaders were hired in late winter, they were able to participate in district-level planning and to conduct their own site-level planning. Planning both at the district and the summer site level resulted in a smoother start-up to the program and fewer logistical challenges. When teachers were selected in the early spring, they were in place to participate in all trainings leading up to the summer programs. When curriculum selection and pacing guide development began in the winter, teachers had these materials with them during training on the summer curriculum.

When enrichment providers were identified in early spring, district boards could approve their contracts with sufficient time to pay them for advanced planning, staff hiring, and material purchases.

### Curriculum

In any education setting, teachers’ instruction of the curriculum has the greatest influence on student learning. In the context of summer learning programs, the quality of the curriculum and its instruction are critical to achieving improved student performance. There are several reasons why selecting a curriculum for the summer is challenging, including the limited number of summer-specific commercial curricula currently available. Involving district curriculum experts is critical to ensuring alignment to school-year curriculum and goals.

In most of the districts studied, there was one centrally purchased or developed curriculum that all teachers across the district followed in the summer. Teachers found lesson plans clear and easy to follow, and all students throughout the program were exposed to the same amount of instruction, targeted toward the same knowledge and skill development.

The districts with the strongest curricula selected commercial programs. In most of these districts, staff augmented the purchased curriculum with district-developed lessons and activities. In one of these districts, for example, students worked on a district-developed mathematics “problem of the week” that called on
students to use the skills they had been taught that week.

Although it is not necessarily the case that commercially available curricula are preferable to programs developed by a district, curriculum development is time-intensive and best done by curricular experts. In our observations, curriculum planning added another layer of responsibility that was difficult for program staff to manage. In some districts with homegrown curricula, we observed classes in which a majority of the class time was devoted to activities that bore little relevance to the subject of the class. For example, students in a writing block were expected to create greeting cards, decorate an author’s chair, brainstorm interview questions (that were to be written down by the teacher), and create posters. In many of these activities, students were expected to write almost nothing. In one district using its own curriculum, lesson plans were photocopied for teachers to use just minutes before the class was to begin. In another district, one teacher ended up “working nights and weekends” to finish the curriculum and did so only after the scheduled teacher training on the curriculum. Given these constraints, it is not surprising that the commercial curricula were judged to be of higher quality.

Some program leaders resisted the idea of purchasing curriculum because they believed summer programs should be “different” and “more fun.” However, we did not find that student satisfaction varied by district program, despite differences in the approach to curriculum. For example, in a program with a commercial curriculum that described itself as very “school like,” 84 percent of students surveyed thought the summer program was fun. In a different program with a homegrown curriculum and a “camp-like” atmosphere, 86 percent of the surveyed students reported that the program was fun—a nearly identical response. Both programs had similar attendance rates.

TEACHER SELECTION AND TRAINING

Research confirms that teacher quality has the largest school-based impact on student outcomes. To maximize district investments in the summer, districts need to hire their best and most highly motivated teachers. Research on teacher content knowledge suggests that effective teachers have a deep understanding of their material—and they know how to teach it. Summer teachers who have recently taught in either the sending or the receiving grade level are more likely to have deep content and content-specific pedagogical knowledge for the grade of students they are teaching. Some districts did indeed assign teachers to grade levels and subjects that matched the teachers’ recent experience, avoiding, for instance, assigning a middle school physical education teacher to teach third grade reading. By matching teachers’ summer experience to their school-year experience, districts also aimed to maximize teacher knowledge of grade-level standards and children’s developmental stages.

Some districts adopted rigorous selection processes for hiring teachers who not only had experience with the relevant grades but were motivated to teach in the
summer. These processes included requiring teachers to write an essay explaining why they wanted to work in the program, conducting interviews, soliciting recommendations from principals, and observing teachers in the classroom. In one district, summer program leaders considered school-year teaching effectiveness measures. However, union regulations often bind many districts to hire by seniority. In fact, the district that adopted the more selective policies had to negotiate with its local teachers union in order to change the hiring policy for summer. We recommend that districts seek similar exemptions.

Some districts tried to maximize the number of teachers who had previously taught the students or knew them from their school. Prior research from a mandatory summer program in Chicago showed that students taught by their school-year teacher during the summer posted larger gains during the summer than other students. The researchers theorized that having knowledge of students’ strengths and weaknesses enabled teachers to more effectively target instruction.

After teachers are hired, they need training in teaching the summer curriculum. In the district with the highest proportion of teachers reporting that they felt well prepared, training consisted of three hours on the English and language arts and three hours on mathematics.

Unfortunately, in this district and others, discussions of logistics often crowded out training on the curriculum—particularly when offered right before the start of the summer program. Teachers came to the training wanting to know how many students they would have, what grade they would teach, and the room to which they were assigned. To ensure that sufficient time is spent on the curriculum, districts should address logistical questions separately. Teachers could be told that they will have all logistical information in hand on a certain date, or the information could be provided to teachers before the curriculum training.

Finally, giving teachers scheduled, paid time to set up their classrooms paid off in better use of instructional time in the first few days of summer. Having time to review materials, learn about the room setup (including access to technology), test passwords needed for computers and smartboards, and prepare classroom materials reportedly helped ensure that teachers were able to start instructing students on day one. Not surprisingly, teachers indicated they wanted curricular materials provided early.

**ENRICHMENT ACTIVITIES**

All districts in the study offered enrichment activities such as the arts, sports, and science exploration to differentiate their summer programs from traditional “summer school,” which many students and parents perceive as punitive rather than as valuable and fun. District leaders hoped that advertising these activities would attract more students, and they hoped students would want to attend regularly once engaged.

In addition, district leaders expected to narrow the “opportunity gap” by providing low-income students some of the cultural opportunities typically available to more affluent students during the summer. Research confirms that lower income children are less likely to engage in art or music lessons, vacations, or visits to museums, zoos, and libraries than are their higher income peers. While the districts studied proceeded quite differently, all the approaches could be effective if well implemented. In two districts with summer programs that felt the most like “school” and where district leaders espoused firm academic goals above any others, programs hired certified teachers to provide enrichment activities. Enrichment activities in these two districts were similar to what schools might offer during the school year—visual art, music, dance, drama, and physical education. One district leader expressed the hope that arts instruction, which had been dropped from the district’s schools during the normal school year, would help narrow the opportunity gap for students in the summer.

One district issued a request for proposals in August, and initial proposals from community-based organizations (CBOs) were submitted in November. Responding CBOs were required to develop an enrichment curriculum that reinforced academic skills, a schedule, learning goals, projections of the number of students they could serve, and a budget. In its attempt to narrow the opportunity gap, this district offered a variety of programming across multiple grades, which included fencing, swimming, studio art, biking, science, and drama.

Not all enrichment activities need to be—or perhaps should be—linked to academic content. But if districts are pursuing this goal, they are more likely to succeed if they plan well,
School districts should take advantage of summer not only to combat summer learning loss, but simultaneously provide professional development.

offer specific curricular guidance and additional training, and promote greater coordination of academic and enrichment staff. The best examples of the integration of academic content and enrichment observed were those in which academic content was naturally embedded in the enrichment activity, such as drama (where students were reading and writing), music (where students used fractions to measure rhythms), and nature explorations (where students applied science concepts).

The district in which most enrichment teachers had no difficulties with managing classrooms (as confirmed in observations) hired teachers with experience managing classrooms of elementary students. This district also kept class sizes the same size as the academic classes. Smaller class size is considered a best practice in summer learning programs, and the literature reinforces this district’s experience that smaller class sizes can support more effective behavior management by increasing student engagement and decreasing disruptive student behavior. As a result, only about one-quarter of enrichment teachers reported that class size prevented them from individualizing instruction and that student misbehavior resulted in wasted instructional time, compared with half to three-quarters of enrichment teachers in other districts.

In other districts, classes were combined during enrichment periods, resulting in larger class sizes. But enrichment teachers and their assistants did not always have experience instructing large groups. The enrichment teaching force in districts that partnered with CBOs ranged from experienced professionals (e.g., studio artists) to college and high school students. In addition, many enrichment instructors did not receive behavior management training. In these districts, difficulties with disruptive students were observed, and the teachers reported that disruptions wasted instructional time. One enrichment teacher said, “Too many kids whose behavior was off were pulling the energy from the majority who were here to learn.”

ACADEMIC TIME ON TASK

Offering a program does not guarantee results. Productive academic learning time is more predictive of student achievement than student time in the classroom. In other words, how programs use time is critical. Summer programs that last the same number of days can provide very different levels of average time on task depending on average daily attendance, the number of minutes assigned to academics each day, and how instructional time within academic blocks is used—in other words, how much is dedicated to instruction.

There was a great range in the academic time on task provided to an average student in these programs—from an estimated 37 hours to 121 hours. Table 1 shows how factors within the district’s control influence this variable, which is provided in the last row of the table. The three district examples are organized from highest time on task to lowest, with example 1 the most academically intense in terms of the number of days of programming and the amount of minutes per day dedicated to academic instruction. In addition, that district posted strong average daily attendance rates and was observed to use instructional time well—only 9 percent was spent on noninstructional activities. Example 2 has more minutes of daily academic instruction than other districts and very high attendance rates, but it was
the shortest program studied—only 16 days—which lowered the average academic time on task. Example 3 has the lowest time on task, low average daily attendance rates, and higher rates of noninstruction during the academic blocks. Three to four hours of academic instruction per day is typically recommended as a minimum.

Not surprisingly, teachers in programs with greater time for academic instruction were more likely to agree that the program could significantly improve students’ academic achievement. There was a great range across districts. In the district with the fewest hours scheduled for academic instruction, only 42 percent of teachers reported that the program could make a significant difference in student achievement, compared with 92 percent of teachers in the program with the greatest number of hours scheduled for academic instruction.

Scheduling time for academic instruction does not guarantee that the time will be used that way. Districts varied by 10 percentage points (from 81 to 91 percent) in the average amount of time spent on academic instruction during the academic segments of the program. A few practices appear to be related to effective use of classroom time: adopting a clear, effective curriculum with an expectation that teachers follow it; scheduling time for students to move from one class to another; hiring strong teachers; and clearly articulating that academic achievement is an important goal.

<table>
<thead>
<tr>
<th>Factors Influencing Academic Time on Task</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheduled days</td>
<td>30</td>
<td>16</td>
<td>23</td>
</tr>
<tr>
<td>Minutes of daily scheduled academic instruction*</td>
<td>310</td>
<td>240</td>
<td>180</td>
</tr>
<tr>
<td>Average daily attendance rate</td>
<td>82% (or 25 days)</td>
<td>93% (or 15 days)</td>
<td>66% (or 15 days)</td>
</tr>
<tr>
<td>Percentage of scheduled instructional time actually spent on academics</td>
<td>91%</td>
<td>85%</td>
<td>83%</td>
</tr>
<tr>
<td>Average hours of academic instructional time per student per summer*</td>
<td>121</td>
<td>51</td>
<td>37*</td>
</tr>
</tbody>
</table>

*Because minutes of academic instruction varied by site in many districts, we present the average minutes of daily academic instruction in the three districts. We included ELA, mathematics, and science in estimates of daily academic instruction.
Learning Center (21CCLC) funds, School Improvement Grant (SIG) funds, or general purpose funds.

Funding varied by program component. To pay for academic teachers, districts drew on Title I, general funds, or IDEA-B (for special education). To pay for enrichment, districts tended to rely on 21CCLC funds, city funds, or federal stimulus funds. Bus transportation was often paid for by Title I dollars. The cost of federally subsidized meals was passed through the districts since districts were reimbursed at cost through the USDA.

Among private funding sources, the Wallace Foundation was the largest, providing an average of 17 percent of summer school revenues. Other private funds, such as support from local foundations, amounted to only 2 percent of total revenues.

Figure 2 shows the average proportion of total costs by category. As anticipated, summer programs spent the greatest share of their funds on academic teachers (45 percent of total expenditures on average), followed by other school-based staff paid for by the summer budget, which included site managers, paraprofessionals, secretarial staff, and nonprofit employees who taught arts, sports, or other enrichment (23 percent on average). District-level costs paid for by the summer budget averaged 10 percent of expenditures. (Although districts often contributed staff “in kind” to help carry out summer programs, only those staff directly paid from the summer program budget were included here since districts were not able to systematically account for their in-kind staff contributions.) Busing, materials, and food constituted roughly equal shares of the balance of the summer school budget.

Because school districts typically must follow teacher pay scales for summer school programs, teacher wages are often a predetermined component of the overall budget. However, districts can exercise influence over a number of other features of summer programming that have large cost implications. We identified six of these in the district data:

- **Attendance rate.** Attendance had a profound impact on costs, inflating program costs by as much as 60 percent more per hour per child in districts with low attendance rates of 63–68 percent. Because districts designed their summer programs to serve a set number of intended enrollees and hired staff accordingly, the costs of the program...
per slot (i.e., per student served on a typical day) were much higher when attendance was low. Some of the voluntary summer programs struggled to maintain strong attendance.

**Size of program.** Generally speaking, the larger programs had lower costs. Based on direct observations of these districts’ summer programs, we hypothesize efficiencies derived from spreading the fixed costs of running a summer program—such as curriculum development, planning, professional development, and the formation of partnerships with CBOs—over a greater number of students.

**Number of students per summer site within a district.** Over and above the size of the summer program itself, clustering more students per site (i.e., at a school where the program is operated) reduced the cost per slot relative to spreading students over more sites. In other words, some of the fixed costs in summer programming accrue at the building level. In larger sites, some fixed costs, such as the cost of a school building principal, are spread over a greater number of students.

**Duration.** Among the four- to six-week summer programs across the districts, we observed lower costs per hour for longer programs, suggesting there are declining marginal costs from adding hours to the summer program. As is the case for several of these cost-related factors, these savings could derive from the division of fixed costs associated with the summer program over a greater number of hours.

**Ratios of children to adults.** Although there were no data on the number of adults per enrollee in all of the grades across the six districts, direct observations of sampled rising fourth grade classes yielded average ratios of children to adults ranging from 6.5 to 11.6. Assuming these ratios hold for all grades within a district’s summer program, costs per hour (as expected) are higher for programs with fewer students per adult.

**Start-up costs.** New summer programs often require the acquisition of new materials and the development of policies and procedures than older programs do not. Understanding these factors can help districts design programs to minimize costs while providing the greatest benefits to students. But it is important to recognize that cost efficiencies can threaten quality. For example, devoting fewer hours to academic instruction can lower

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**Figure 2. Average Expenditures by Category, Summer 2011**

![Figure 2. Average Expenditures by Category, Summer 2011](image)
costs, but it may also reduce the potential for academic benefits. Larger class sizes (after factoring in attendance) can also reduce costs, but larger classes inhibit individualized instruction.

**CONSIDERATIONS FOR STATE POLICYMAKERS**

Although most of the guidance here is directed toward school district administrators, there are lessons here for state policymakers as well:

**Vet curricula for summer use.** Many states vet curricula for use during the school year (or even create homegrown curricula for their districts). Districts often struggle to select appropriate curricula for summer programs. If states reviewed or developed and then suggested a summer curriculum, districts may be more likely to select high-quality curricula.

**Ensure that districts are aware of any state money available for summer programming in the fall.** Summer programs run more smoothly when planning begins in the preceding fall. Many districts delay planning due to funding uncertainties. If state money is available for summer programs, announcing this in the late summer or early fall will promote higher quality summer programs.

**Incentivize cost saving.** If state funding is available, incentivize cost-saving measures by providing more funding to districts offering programs that are at least five weeks long, have 10 to 15 students per teacher, serve large proportions of eligible students, but also exhibit plans that maximize economies of scale while maintaining quality.

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1See Catherine L. Augustine et al., Getting to Work on Summer Learning: Recommended Practices for Success (Santa Monica, CA: RAND Corporation, 2013). Findings from this study are to be reported in stages, with findings on student outcomes from the first year due in December 2014. They will be posted at rand.org and wallacefoundation.org.


11We calculated these costs using data from five districts. One district did not collect sufficient cost data to be included in the analysis.

12Only four of six districts could provide complete data by category to contribute to this breakdown. Appendix B provides a detailed accounting of reasons data were not available.