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STUDENTS' BASIC READING AND MATH SKILLS atrophy during summer vacation by as much as one-third of a school year of learning. Summer learning loss does not affect all students equally, however. Students from low socioeconomic backgrounds see a much sharper decline in their reading and math skills during the summer months than students from higher socioeconomic households. Several scholars attribute this pattern of summer learning loss to the “faucet theory”—during the school year, the “faucet” of learning is on for all students, while during the summer it remains on only for more advantaged children who continue to participate in some form of educational activity.

Summer Opportunity Scholarships: Narrowing the Skills Gap

To combat summer learning loss for disadvantaged students, this proposal calls for the creation of Summer Opportunity Scholarships (SOS) to finance summer school or other summer enrichment programs. To reach lower income students, the proposal targets children who are eligible for the school free-lunch program. It is restricted to children in kindergarten through fifth grades because evidence suggests that the benefits of summer programs may be greater for younger children. The program would be phased in over three years. Nearly 1 million children would receive Summer Opportunity Scholarships in the program's first year, with that number more than doubling by the end of the decade.

Learning Loss during Summer Vacation

THE CHALLENGE

Even in the early grades, a large gap in skills exists between students from socioeconomically advantaged and disadvantaged households. Much of the literature argues that this skills gap reflects year-round circumstances and events—whether at school, at home, or in the community. Another body of evidence, however, suggests instead that a substantial share of the skills gap emerges during summer vacations. Researchers have found that, for many American children, skills atrophy over the traditional three-month summer vacation, which is long by international standards. Teachers are well acquainted with summer learning loss. They routinely anticipate dedicating one or two months at the start of each school year to reviewing forgotten material.

Summer learning loss disproportionately affects disadvantaged children. In one study, for example, achievement gains over the school year were only moderately associated with family income, while gains over the summer were very strongly associated with family income. Another found that reading skills of middle-income students improved over the summer, while those of low-income students deteriorated, so that a three-month reading achievement gap emerged during the summer. Figures 1a and 1b present results from one study in Baltimore and illustrate a common pattern: student gains in reading and math during the school year do not vary significantly by socioeconomic status, while children from lower-socioeconomic-status households fall further behind over the summer months.

Some observers have attributed this pattern of summer learning loss to the “faucet theory.” When the faucet of learning is on during the school year, achievement rises

for all children; over the summer, the faucet is turned off for children in lower-socioeconomic-status households, but left on for children in higher socioeconomic households, who often continue to participate in some form of educational activity, either at home or in an organized program away from home. Socioeconomic status and related factors like family structure influence a child’s home learning environment. Children from poor families are read to less often, own fewer books, and watch more television. In addition, the more education a mother has, the more likely she is to read to and to introduce literacy techniques to her child. By many measures, the home environments of disadvantaged students are considerably less conducive to continuous academic achievement from the school year through the summer. This phenomenon has been called the “*Harry Potter* divide,” since low-income children are much less likely to read the *Harry Potter* books, or any other book for that matter, over the summer than are high-income children.

Low-income parents recognize the potential problem: 60 percent of low-income parents are concerned that their children will fall behind during the summer, compared with only 32 percent of higher income parents, according to a 2005 report by the Council of Chief State School Officers. In addition, the report shows that more than two-thirds of low-income students and four-fifths of minority students showed an interest in participating in a summer program that would help them manage their work during the school year or prepare them for the upcoming school year. Yet surprisingly few children currently attend summer school. In fact, according to National Center for Education Statistics, less than 10 percent of all low-income children in grades one through seven attend summer school.

Summer Opportunity Scholarships

A NEW APPROACH

We propose expanding access to summer school and other academic enrichment programs for the group that falls

furthest behind during the summer. The proposal calls for the creation of Summer Opportunity Scholarships (SOS), which will allow low-income children in kindergarten through fifth grade to participate in a six-week summer school program or other summer enrichment program chosen by the children's parents.

Participation Eligibility

The program will target economically disadvantaged children, with participation limited to students eligible for free school lunches under the National School Lunch Program, which requires that a child's family income be below 130 percent of the federal poverty line. As an alternative, the program could be made accessible to more students if we based income eligibility on eligibility for free *or* reduced-price lunches from the National School Lunch Program, which would add students with family incomes between 130 and 185 percent of the federal poverty line. Because some studies show that the most successful summer school interventions take place in the early grades, SOS will be provided for children in the elementary grades and will be phased in in two waves: in the first wave, spanning the first three years of phase-in, students who have just finished kindergarten through third grade will be eligible; in the second wave, beginning in the fourth year of phase-in, eligibility will be extended to students finishing the fourth and fifth grades.

We estimate that slightly fewer than 1 million students will participate in SOS in 2006, rising to 2.4 million by 2010. If eligibility is expanded to include students eligible for reduced-price lunches, as well as free lunches, those estimates rise to 1.4 million and 3.6 million, respectively.

Figure 1a. School Year Gains, by Socioeconomic Status (SES), Beginning School Study

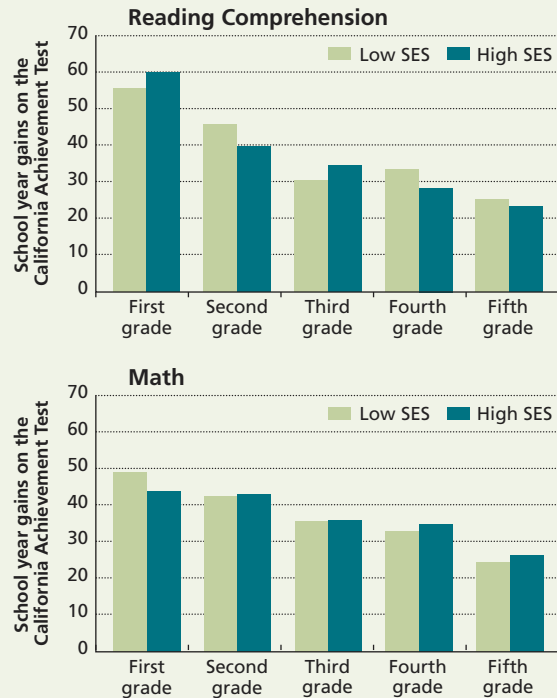
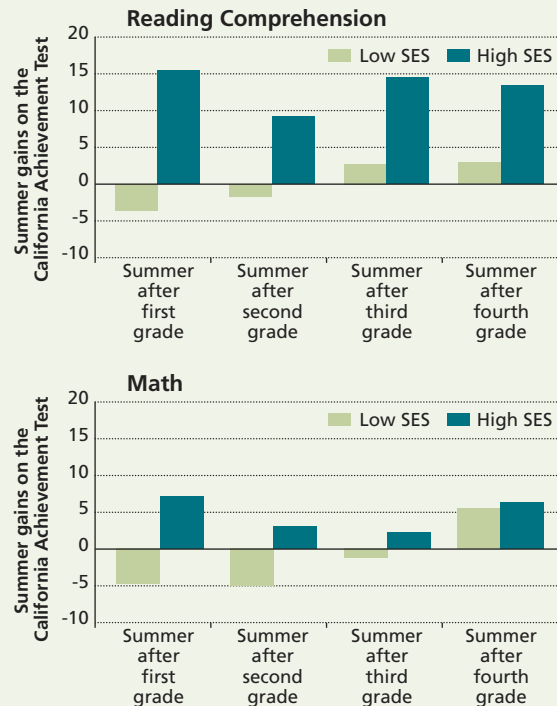


Figure 1b. Summer Gains, by Socioeconomic Status (SES), Beginning School Study



Source: Alexander, Entwisle, and Olson (2004), Table 2.3, p. 33. The sample consists of 665 Baltimore public school students who entered first grade in 1982. Socioeconomic Status (SES) is based on parents' education levels, parents' occupations, and family income relative to family size.

Assuming that the SOS programs will meet for thirty instructional days (six weeks), or one-sixth of the school year, we estimate the average per-pupil cost to be roughly one-sixth the average per-pupil school year expenditure—\$1,600 for 2006, rising to just under \$1,800 by 2010. Multiplying the estimated annual per-pupil cost by the number of students who are projected to participate each year, the total annual cost for SOS will grow from approximately \$1.5 billion in 2006 to \$2.2 billion in 2008. The cost then rises to \$3.7 billion in 2009 and \$4.3 billion in 2010, with the introduction of fourth and fifth graders into the program. If SOS eligibility is instead extended to students who qualify for free or reduced-price lunches, these estimated cost figures would increase by approxi-

mately one-third. We recommend that the federal government and the state each contribute 50 percent of total program costs.

Eligible Providers and Program Content

To be eligible, program providers must use small-group, scientifically based instruction techniques, akin to that required by the No Child Left Behind Act, with a strong emphasis on improving basic reading and math skills. Although programs should align their curricula with school year curricula for greatest benefit, they should not focus exclusively on remedial math and reading, since one of the benefits of the summer vacation is the flexibility to have new educational and cultural experiences.

Eligible providers for SOS will include school districts, for-profit companies, nonprofit organizations, summer enrichment camps, and possibly faith-based institutions. One study reviewed the effect of a summer literacy day camp, which is a good example of the type of innovative summer enrichment programs that would qualify for SOS funding. The day camp featured an eight-week literacy program for disadvantaged first-grade students from poorly performing schools in which at least 75 percent of the student population received free or reduced-price lunches. The program allotted thirty-two days for instruction and eight days for testing or field trips. On each instructional day, students received two hours of reading instruction from a credentialed elementary school teacher, who was assisted by camp counselors. In addition, each student received at least one hour of tutoring a week with a volunteer tutor. The remaining hours of the instructional days were spent on typical summer camp activities, such as arts and crafts, drama, music, and sports.

Evaluating Students and Providers

To assess the effectiveness of the summer programs, students will be tested twice a year, at the end of the academic year in the spring and early in the academic

Summer Literacy Day Camps



An example of the type of provider SOS might support is the summer literacy day camp. One such camp offered an eight-week program for first-graders from poorly performing schools in which three-fourths of the students were eligible for free or reduced-price lunches. It allotted thirty-two days for instruction and eight days for testing and field trips. On instructional days, students received two hours of reading instruction from a credentialed elementary school teacher, assisted by camp counselors, plus at least one hour of tutoring per week with a volunteer tutor. The rest of the day was spent in typical camp activities: arts and crafts, drama, music, and sports.

year in the fall. Additionally, a formal evaluation of the program's effects should be conducted. Market forces will further regulate providers: parents who are dissatisfied with their children's achievement gains may choose to move their children to a different eligible program in a subsequent summer. To give parents the information they need to make informed decisions, state officials will maintain and publicize a list of top-performing providers in each geographic area. In addition, providers that report achievement effects below a certain threshold, or that deviate from the specified instructional and curricular guidelines, may be disqualified from receiving future SOS funding.

Implementing the SOS Program

We recommend that SOS programs be implemented through scholarships, or vouchers, rather than directly through a child's existing school. Such scholarships would empower parents with more choice than would other options, such as summer school at the school a child attends during the regular school year, when it comes to deciding what their children do during the summer. Parents should value this flexibility, particularly during the summer months. Experimentation with voucher-like scholarships to provide summer-time education is also valuable in its own right, since there is a lack of consensus on the likely effects of vouchers for the regular school year. Since, in our reading of the evidence, private-school vouchers have produced only mediocre achievement gains for students who take advantage of vouchers during the regular school year compared with their counterparts who remain in public schools, a proposal to use voucher-like scholarships in the summer may provide a new and more productive outlet for the voucher movement, but in a way that shifts the focus away from disrupting the regular school year.

As with any voucher program, a check for the funds could be sent to the parents or to the providing institution. Distributing the scholarship directly to the parents creates

“Survey results suggest that more than two-thirds of low-income students are interested in a summer program.”

the potential for fraud whereby no educational services are provided but parents receive the money nonetheless. The payment system in school voucher experiments offers a mechanism to reduce the risk of fraud: a check made out to the parents would be sent to the providing institution in which the child has been enrolled; the parents would sign the check over to the school, thereby ensuring not only that the funds are not misused but also that the funds pass through the parents' hands and not directly to the provider.

Potential Impact of Summer Opportunity Scholarships

Three main types of interventions have been suggested in the academic literature to address summer learning loss: a modified school calendar to eliminate extended school vacations, a longer school year to shorten the summer break, and summer school. Based on our comprehensive review of the relevant evidence, particularly a systematic quantitative survey of the literature, we believe that summer school, which is most akin to our envisioned SOS program, has the greatest ability to remedy summer learning loss. More time devoted to class work, homework, or education-related activities generally seems to be especially valuable for boosting the skills of children from low-socioeconomic-status families. Thus, we have used the available evidence on the effectiveness of summer school to shape the specifics of our proposal. In particular, SOS will fund a six-week program for young children since the evidence suggests that a six-week program is long enough to produce desirable results.

Summer school programs have proven successful in combating summer learning loss and improving academic achievement. One study concluded that programs that focus on remedial instruction substantially increased participating students' scores. In another study, of the students who could not meet the promotion standard for math or reading to move to the next grade, roughly half did so by the end of a summer school program.

Summer school has proved especially effective for lower socioeconomic students. One study showed that attend-

ing a remedial summer program increased scores by about the same amount as the typical summer learning loss for low-income students. Effects are also greater when the intervention takes place in early elementary school grades or in secondary school. For example, one study found that, for third-graders, the effect in the first year after the completion of summer school was approximately 20 percent of a year's worth of learning. By the second year, the effect for third-graders was an attenuated but still significant 14 percent of a year's worth of learning. By comparison, summer school for sixth-graders had virtually no effect. Another study that did find gains from summer school for sixth-graders found them to be much smaller than the gains for third-graders.

Although there is some evidence suggesting only modest long-term effects from summer school, we believe the SOS program will be more likely to have greater and longer-term impacts than the previous summer school programs for three reasons: first, we start the intervention earlier in a child's education; second, SOS programs will operate for multiple summers; and third, we are proposing a more intensive academic program than was offered in many previous summer school programs.

Potential Resistance to Implementation

Some teachers' unions may hesitate to support this program, fearing that if their school districts opt to provide services to children receiving Summer Opportunity Scholarships, existing school staff will bear additional burdens or that other education spending will be reduced. These concerns, however, are easily surmountable. The SOS program need not place additional burdens on existing school staff or reduce funding for other educational needs. Participation by teachers will be entirely voluntary, and many teachers may welcome the program as an opportunity to increase their incomes over the summer months. Perhaps more to the point, school districts currently bear substantial costs as a result of summer learning loss in the form of time spent on remediation. For

Key Findings

- Students lose considerable educational ground in the summer.
- These losses are much greater for students from disadvantaged families, including many minority children.
- Each fall, schools and teachers expend substantial time and effort trying to regain the summer's losses.
- Our proposal, for a voluntary Summer Opportunity Scholarships initiative, builds on research showing the benefits of a variety of summer programs that:
 - are academically strong.
 - start at an early age.
 - are repeated for several years.
 - are approximately six weeks long.
- We estimate that, by 2010, some 2.4 million disadvantaged children would participate, at an annual cost of \$4.3 billion.
- Many types of providers could participate, as long as they met curricular and instructional standards.
- Fostering higher educational achievement in children's early years will create lifelong benefits for these children, their families, and society.

large, urban school districts, the potential for reallocating resources to more productive uses than combating summer learning loss at the beginning of each school year would be quite substantial.

CONCLUSION

Academic research strongly suggests that students' basic reading and math skills suffer during summer vacations.

Furthermore, summer vacations serve to widen the skills gap: children from affluent families maintain their pace while children from disadvantaged families fall further and further behind. Our proposal for Summer Opportunity Scholarships aims to reverse the summer slide among students from lower-socioeconomic-status families and therefore to make strides toward closing the skills gap. This will be accomplished by allowing such children to attend the same sort of summer school programs and enrichment camps that are already available to many of their more economically advantaged counterparts. Such a program would be especially effective because a majority of lower income parents recognize the problem and desire a solution. For such parents, Summer Opportunity Scholarships offer both better learning opportunities for their children and a chance to reduce worries over day care and their children's safety during the summer. For society as a whole, Summer Opportunity Scholarships offer an investment with a potentially high rate of return. An intervention such as SOS that takes place during the elementary school years could produce a lasting positive impact on a child's lifetime learning trajectory.

The Hamilton Project white paper discussed in this policy brief, *Summer Opportunity Scholarships: Narrowing the Skills Gap* can be found at www.hamiltonproject.org. The paper was authored by:

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