

What if Summer Learning Loss Were an Education Policy Priority?

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Introduction

It's difficult to imagine a professional musician or athlete whose performance would not suffer from a three-month vacation from practice each year. Musicians who only practiced for nine months of the year and never touched their instruments during the remaining 25% of the year would be at a considerable disadvantage compared to those who honed their skills year-round. Similarly, it's reasonable to assume that professional athletes who completely abstained from exercise during the off-season would be unable to compete at optimal levels. While it's clear that everyone should experience periodic breaks from their daily routines, it's also true that prolonged periods of time without practice affects performance. Common sense suggests that consistency in training and practice is a key to achieving and maintaining high levels of professional performance. Continuous improvement is widely praised throughout American society as the hallmark of organizational and personal effectiveness. Yet, in a nation obsessed with improving the quality of public education and "leaving no child behind," few policies exist to address the negative impact of the traditional summer vacation on academic achievement.

For far too many young people, summer vacation results in a three-month holiday from constructive learning activities and valuable opportunities to practice the skills they need to be successful in school and in life. Research demonstrates that all students experience significant learning losses in procedural and factual knowledge during the summer months. Studies also show that the magnitude of summer learning loss varies significantly by grade level, subject matter, and family income. Most

importantly, research identifies the cumulative effect of summer learning differences as a primary cause of widening in-school achievement gaps between students by family income.

Despite the apparent strength of this research, the issue of summer learning loss is either obscured by current efforts to end social promotion or largely ignored due to a complex web of mutually shared cultural traditions, business interests, and fiscal constraints. For example, in many school districts, mandatory summer school programs are designed as single-summer remedial programs rather than as long-term solutions to the cumulative impact of summer learning loss. Similarly, modifications to the school calendar most frequently result from overcrowding of schools rather than as a response to the adverse impact of summer vacation on student learning. Such modifications to the school calendar often reduce the duration of summer vacation, but do not result in an overall increase in the available instructional time for students.

If policymakers are serious about improving excellence and equity in public education, social science research suggests that high-quality summer programs must become a significant and central component in school reform efforts. While the vast majority of school districts offer some type of summer programs, few are research-based attempts to prevent the cumulative effects of summer learning loss. To a large extent, summers remain an untapped resource for school districts and communities as they seek to develop policies to close achievement gaps and improve academic performance for all young people.

The Impact of Summer Vacation on Student Achievement

There are few issues facing education policymakers today that are as well documented by social scientists as summer learning loss. Since 1906, researchers have studied the effects of summer vacation on student learning. Cooper (1996) and others identified 39 studies involving a wide range of experimental designs and methods that demonstrate what social scientists describe as “summer effect,” “summer learning loss,” or “summer setback.” The common finding across all of these studies is that students generally score lower on standardized tests at the end of the summer than they do on the same tests at the beginning of the summer. Recent studies estimate that summer loss for all students equals about one month on a grade-level equivalent scale (Cooper, 1996). While such a global estimate of loss seems to suggest the losses students experience are inconsequential, a close examination of how much students lose in particular content and skill areas and the differential rates of loss between groups of students reveals the full magnitude of the problem.

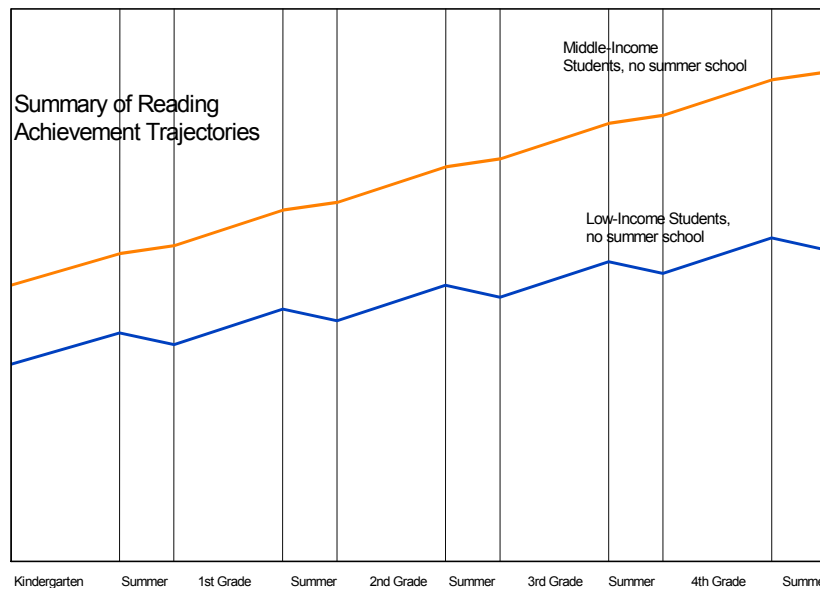
Summer Learning Loss in Mathematics

All students experience significant learning loss in mathematical computation as a result of summer vacation. On average, all students lose approximately 2.6 months of grade level equivalency in mathematical computation over the summer months (Cooper, 1996). Studies reveal that the greatest areas of loss for all students, regardless of socio-economic status, are in factual or procedural knowledge during the summer months. For example, students typically forget how to perform mathematical operations such as subtraction with regrouping or how to spell common words without regular

practice. Researchers speculate that summer learning losses in mathematics are similar among lower and middle-income students because all students are less likely to practice math skills outside the formal classroom setting.

Summer Learning Losses in Reading

Unlike the case of mathematics achievement, family income plays an important role in predicting the magnitude of summer loss in reading. Low-income students experience significant summer learning losses in reading comprehension and word recognition. On average, middle-income students actually experience slight gains in reading performance over the summer months. Low-income students experience an average summer learning loss in reading achievement of over two months. Studies also demonstrate that while student achievement for both middle and lower-income students improves at similar rates during the school year, low-income students experience cumulative summer learning losses over the elementary school grades. The impact of consecutive years of summer learning loss in reading is illustrated in the diagram below:



On average, children from low-income families lose nearly three months of grade-level equivalency during the summer months each year, compared to an average of one month lost by middle-income children when reading and math performance are combined (Cooper, 1996). Out-of-school influences in general, and the lack of summer learning opportunities in particular, contribute significantly to the widening of the in-school achievement gap (Alexander, 1996).

Costs & Consequences of Summer Vacation

There are several ways to estimate the costs associated with years of summer learning loss in reading and mathematics. First, one must acknowledge the instructional inefficiencies inherent in the standard nine-month school calendar. It's generally the case that teachers and principals accept without question that the first month or two of the school year will be spent re-teaching material that students have forgotten over the summer. A conservative estimate of lost instructional time is approximately two months or roughly 22% of the school year (one month spent re-teaching and one month not spent on new instruction). In financial terms, if the median per pupil expenditure in the U.S. is approximately \$7,000 per year (NEA, 2002), the current school calendar costs school districts an average of \$1,540 per pupil each fall. Over the course of one child's K-12 education, the total cost of inefficiency resulting from one month of re-teaching material each fall is \$18,480. In a large urban school district such as Baltimore, Maryland, with approximately 90,000 students, summer vacation results in an annual inefficiency of over \$138 million.

In addition to the financial inefficiencies associated with re-teaching, there are other lost opportunities associated with summer vacation that policymakers should consider. Communities make clear sacrifices with respect to important outcomes for schools, children, and families when they fail to provide high-quality summer learning programs. With respect to time, schools and communities could significantly increase the amount of time children practice math and reading skills if they implemented high-quality summer academic programs each year. Students involved in such programs would gain approximately 8-10 weeks of instructional time during the summer and two months each fall resulting from the elimination of re-teaching. In total, the introduction of high-quality summer programs could increase the amount of time students spend engaged in learning activities by as much as 30-35%.

Research on child and adolescent development suggests that young people need consistent, ongoing adult guidance and support in all developmental domains (cognitive, social, emotional, physical, moral, and vocational) if they are to achieve productive adulthood. The developmental needs of children do not take a vacation during the summer months. Over 28 million school-age children have parents who work outside the home (U.S. Department of Labor, 2000). Studies show that at least 7 million and as many as 15 million “latchkey children” go to an empty house on any given afternoon (U.S. Census Bureau, Urban Institute, 2000). Nearly two-thirds of voters report difficulty in finding quality, affordable after-school programs even after substantial federal investment in such programs over the past five years (Afterschool Alliance Poll, 2001). Current data suggests that after-school programs meet only half the demand

among parents of elementary and middle school students (National Opinion Research Center, August 1998).

While this data is used primarily to support the need for after-school programs, there are important implications to consider with respect to summer programs. First, it's reasonable to conclude that many students who are unsupervised during the after-school hours also spend considerable amounts time during the summer months without consistent adult supervision. In addition, one can reasonably estimate that the need for summer programs among parents is significant due to the fact that many after-school programs do not convert to full-day summer camp programs and that most parents have careers which require year-round employment.

Due to gaps between the work schedules of parents and the school calendar, large numbers of students do not benefit from the same level of guidance and support they receive from adults during the school year. Large numbers of students who qualify for federally subsidized meals do not have the same level of access to nutritious meals during the summer as they do during the school year. Only one in five (21.1 per 100) of the 15.3 million children who receive free or reduced priced school lunches on a typical day during the regular school year participate in federal nutrition programs during the summer (FRAC, 2002). Studies also show that crimes committed by and against young people occur at substantially higher rates when young people are not in school. School-age children and teens who are unsupervised during out-of-school time are far more likely to use alcohol, drugs, and tobacco; engage in criminal and other high-risk behaviors; receive poor grades; display more behavior problems; and drop out of school

than those who have the opportunity to benefit from constructive activities supervised by responsible adults (U.S. Department of Education, 2000).

In addition to not fully addressing the academic and development needs of young people, ignoring the issue of summer learning loss adversely affects school district public relations. Measuring achievement on an annual basis obscures the impact of summer learning differences and the significant role that schools play in halting the growth of the achievement gap. Studies by Alexander (1996) and others suggest that schooling during the primary grades helps low-income students move forward at a rate similar to that of more advantaged children, while out-of-school influences help mainly youth from higher income households. Therefore, the lack of understanding and publicity about the data on summer learning differences perpetuates in the assumption that schools bear the full responsibility for exacerbating achievement gaps.

This assumption drives the vast majority of public policy interventions related to the achievement gap that focus exclusively on school-based solutions – such as improving teacher quality, enhancing curricula, and increasing school funding. This is not meant to suggest that such reforms are not necessary and will not contribute to substantially to improved academic achievement for all students. Rather, we maintain that while no single factor fully explains the persistence of achievement gaps, ignoring powerful evidence about summer learning loss represents a substantial missed opportunity to address a key factor in the growth of achievement gaps between students after they begin school.

Current Policy Alternatives

Only ten percent of American students currently attend public schools during the summer months (Gold, 2002). Alternatives to the nine-month traditional calendar designed to specifically address social science research on the cumulative impact of summer learning losses are exceptionally rare. As a rule, most students and their teachers enjoy an extended break from the demands of schooling during the summer. Principals and school administrators use the summer months to prepare for the upcoming school year. Parents take advantage of this time to plan their family vacations. State and local legislators, meanwhile, balance their budgets knowing that scarce public funds need only support schools for nine months out of the year.

Despite the fact that most American students still enjoy a long summer break, a recent survey of the 100 largest school districts in the nation found that every district reported that they had some type of summer program in operation during the summer of 1999 (Borman, 2001). About 25 years ago, similar data reported by Barbara Heyns (1978) indicated that only half of the school systems in the U.S. offered summer school to their students. In view of these survey results, summer programs clearly seem to be growing in popularity – perhaps doubling in prevalence over the past quarter century.

The increased popularity of summer programs should be viewed as the result of efforts to provide humane alternatives to social promotion rather than as a response to the literature about summer learning loss. Over 90% of school districts currently

describe their summer programs as “remedial.” The overwhelming majority of these programs require attendance from students who do not score above certain thresholds on standardized tests. Programs in New York, Boston, and Chicago are available to students only at certain grades (typically 3rd, 6th, and 8th grade). Such single-summer interventions do not prevent the accumulation of learning losses that occurs over multiple years of a child’s education.

However, despite several key limitations, Cooper (2000) estimates that such summer school programs, which focus on lessening or removing learning deficiencies, do have a significant positive impact on the knowledge and skills of participants. Specifically, the following program characteristics are related most closely to improved achievement effects for summer program attendees:

- small-group or individualized instruction;
- early intervention during the primary grades;
- parent involvement and participation; and
- careful scrutiny for treatment fidelity, including monitoring to insure that instruction is being delivered as prescribed and monitoring student attendance.

In addition, other reviews of summer programs by Ascher (1988) and Austin et al. (1972) suggest that failed summer programs may share several of the following characteristics:

- short program duration;
- loose organization and little time for advanced planning;

- low academic expectations;
- discontinuity between the summer and regular-school-year curricula;
- teacher fatigue; and
- limited academic focus.

It is important to remember that while remedial programs generally do produce single-summer results in the form of improved test scores and promotion rates, they are not designed to serve as long-range preventative approaches to summer learning loss. The vast majority of these programs are reactionary and intermittent interventions, which provide assistance for students only after they have fallen behind. Nonetheless, they do provide important data about how to structure programs to produce positive results.

Modified school calendars represent another alternative to confronting the issue of summer learning loss. Modifications to the traditional school calendar typically take the form of either year-round school or extended school year programs. In most cases, year-round schooling does not actually increase the amount of structured learning opportunities available to students. Rather, students attend schools for the same number of days as they did with the traditional calendar; however, vacations are distributed equally throughout the calendar year every six or nine weeks. Research on the effectiveness of this intervention is emerging and suggestive of generally positive effects. However, effect sizes associated with year-round schooling are small

compared to many other educational interventions, and may be negligible in some instances (Cooper, 2002).

Extended school year programs seek to increase the total amount of time students spend in school by adding instructional days to the calendar. Most arguments in favor of extending the school year for American students rely heavily on international comparisons showing that most students in the United States spend between 175 and 180 days in school each year, while students in Japan spend 240 days in school. There are several key challenges facing proponents of extending the traditional school year. In general, much of the argument focuses on the question of the desirability and efficacy of school year practices. In short, extended school year programs offer a “more of the same” strategy that is only effective when “the same” is actually desirable and supported by the general public.

Extended school year policies face considerable opposition due to strongly held cultural beliefs about summer and considerable financial interests connected to the current school calendar. In general, parents do not enthusiastically support the notion of extending the school year or the idea of summer being used for school-based instruction. A recent survey of parents conducted by the Academy of Educational Development found that nearly half of American parents (43%) just want their kids to have fun and relax during the summer. Second and third priorities for their children were learning new things (24%) and preparing for school (22%). In addition, efforts to extend the school year have faced opposition from teachers unions due to fears about

teacher burnout and student fatigue (NEA, 1987). Not surprisingly, the International Association of Amusement Parks and Attractions supports organizations such as Time to Learn, which is a grass-roots organization that opposes “bloated school calendars” and year-round school. Many businesses that are seasonal in nature or that depend heavily on young people for third quarter earnings oppose changes to the school calendar based on obvious financial interests.

A New Vision for Summer Programs

We argue that each of the above alternatives fails to capture the full promise and potential of summer learning programs to close achievement gaps and end patterns of cumulative seasonal learning losses for young people. The research on “summer setback” coupled with the minimal effectiveness and general lack of popular support for current summer policies strongly suggest the need for a new model of summer education. Federal, state, and local policies should support the notion that all young people, especially those from disadvantaged circumstances, should have access to high-quality summer enrichment programs throughout their educational careers.

If educational and developmental needs continue throughout the calendar year, why is public support seasonal? Research clearly demonstrates the need for a significant public role in addressing inequitable access to summer learning opportunities among America’s youth. There is currently considerable public support for after-school education programs. For example, federal funding of the 21st Century Community Learning Centers program recently surpassed \$1 billion. While legislative language

defines the focus of the initiative as providing “out-of-school learning opportunities” which includes before school, after school, weekend, or summer learning programs, the bulk of funded projects are after-school programs and the issue continues to be defined to the public and policymakers as “after-school” rather than as “out-of-school.”

There are tremendous opportunities for schools and community-based non-profits to leverage public investment in after-school to improve the quality and quantity of summer programs available to young people. Moreover, policies should be designed to promote collaboration between traditional summer school providers and youth development organizations. Historically, youth development organizations have documented success in attracting young people to their programs during the summer months. There is also a substantial body of research literature about the extent to which community-based youth development programs promote positive academic and social outcomes among school-age children and teens. For example, McLaughlin (2000) found that adolescents who participated regularly in community-based youth development programs (including arts, sports, and community service) have better academic and social outcomes – as well as higher educational and career aspirations – than other similar peers. Clark (1988) also found that low-income children who spent 25-35 hours of their non-school hours each week in engaged learning (such as reading for pleasure and playing educational games) received higher grades in school than their more passive peers.

Teachers and youth development professionals could use the summers to learn from each other and bridge historic communication and programmatic gaps between schools and youth programs. Rather than oppose cultural norms about summer as a time for relaxation, high-quality summer programs should demonstrate ways for students to continue learning during the summer that do not involve textbooks, tutoring, and traditional teaching methods. High-quality summer programs should acknowledge the unique role that summers play within American popular culture by demonstrating the power of informal learning experiences such as educational field trips, reading for pleasure, and gaining exposure to new cultures and ideas. Policies could support summer school models that use a community-based enrichment approach to promoting academic achievement. Locating summer programs in spaces other than school buildings may also be beneficial in terms of reducing negative perceptions about summer school attendance among students and parents.

Summers offer policymakers a rare, “open space” in the field of education reform and youth development. In response to the literature on summer loss, state and local education agencies could develop proactive strategies for engaging young people in learning activities during the summer months that acknowledge rather than resist cultural norms about the meaning of summer and the place it holds in American society. Policies should support the use of summers as a time for teachers to innovate, experiment, and explore new curricula and instructional methods. We envision summers serving as a time for teachers to try new techniques, teach different subjects or grades, acquire new skills, and mentor new colleagues. Summers could also be used to attract current college students or recent graduates to internship experiences in

public school classrooms and with non-profit youth development organizations. There are currently few expectations for summer instruction other than providing additional time for student learning. Teachers, schools, and communities could capitalize on this opportunity to design and implement new curricula and tailor instruction to meet the individual students' needs and interests. This approach has the potential to both curb summer loss and encourage broader civic engagement in school reform efforts.

The experience of Teach Baltimore suggests that community-based organizations and schools can collaborate to address the issue of summer learning loss in a manner that is both cost-effective and demonstrates impact on student achievement. Founded in 1992, Teach Baltimore is an academically intensive summer program that recruits and trains outstanding university students to provide approximately eight weeks of reading and writing instruction to low-income elementary students. To date, Teach Baltimore has provided summer instruction to over 2,100 Baltimore City Public School students and has recruited and trained 287 college students from 45 institutions of higher education and a wide variety of majors. These instructors have contributed more than 54,000 hours of service to area youth. In the past two years, 21 Teach Baltimore alumni have accepted full-time teaching positions in Baltimore City public schools through an innovative partnership with The Johns Hopkins University Graduate Division of Education, U.S. Department of Education, and the Baltimore City Public School System.

The Teach Baltimore Summer Academy program begins with three weeks of pre-service training, in which the volunteer instructors receive training in reading curricula, lesson planning, and classroom management. Two days after training ends, the seven-week summer program begins. The Teach Baltimore day begins with a breakfast for all students. After breakfast, instructors provide three hours of intensive reading and writing instruction. In addition to using phonics-based instructional materials, Teach Baltimore instructors help students develop vocabulary and reading comprehension skills through engaging read aloud activities. At the conclusion of the morning session, staff members serve lunch to all program participants. After lunch, students participate in physical activities, hands-on math and science projects, educational games, arts and crafts, and enrichment activities. The following represents the typical daily schedule at a Teach Baltimore site:

8:30 – 9:00 AM	Breakfast
9:00 – 9:15 AM	Community Circle Time – Discussion of Weekly Goals/Themes
9:15 – 10:30 AM	Read-Aloud & Engaging Literacy Activities
10:30 – 11:30 AM	<i>Open Court</i> Phonics Workshop
11:30 – 12:00 PM	Lunch
12:00 – 12:20 PM	Physical Activities
12:25 – 12:45 PM	Drop Everything and Read
12:45 – 1:45 PM	Hands-on Math & Science Activities
1:45 – 2:30 PM	Enrichment Activities (i.e. arts & crafts, foreign language, music, and drama) organized by weekly themes.

Students also take weekly field trips to museums and participate in cultural events offered throughout the Baltimore community. The program acknowledges that much learning occurs during weekly field trips and cultural enrichment activities. Instructors integrate these outings with classroom activities and help students extend their experiences beyond their classrooms and neighborhoods. While the locations vary by year, the trips are designed to provide a good balance of experiential learning and fun. In addition to weekly field trips, students participate in a daily activities that include music, art, drama, foreign language, and physical education. Teach Baltimore capitalizes on the diversity of its instructors' talents and experiences. For example, instructors have taught Spanish, Swahili, costume design, and dance during the afternoon activities periods.

In addition to the potential strengths of its design, the program is easily and cost-effectively replicated. Estimates from funding income indicate that the average cost per student for the Teach Baltimore Summer Academy was approximately \$815. Teach Baltimore also receives approximately \$700 per student in in-kind donations of space, books, free lunch, AmeriCorps education grants, BCPSS supervisors and mentors (paid by the school system), and Federal Work Study funding. In comparison to other programs, which cost up to \$1,500 per student. Relying in large part on college students who are paid a small stipend, and federal and local in-kind support, the program is inexpensive to operate. In addition, the replicability of the program was demonstrated during the summer of 1999 by initiating services at four new sites serving eight new schools. The overall concept of the Teach Baltimore program also may be replicated in other districts. Urban school districts and local universities may form

mutually beneficial relationships, which provide training opportunities for prospective and non-traditional teachers and summer instruction for urban students.

Teach Baltimore offers a proactive intervention that begins early, before students have had the opportunity to fall so far behind as to be threatened with retention. Teach Baltimore offers low-income students continuing opportunities, summer after summer, to avoid the characteristic summer slide and to catch up with more advantaged peers. Although summer programs are not an educational “silver bullet,” our work suggests that proactive, multi-year programs can play a vital role in preventing summer learning losses, closing the test-score gap, and providing children the extra learning time many of them need—and all them can use.

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