EFFECTIVE AND PROMISING SUMMER LEARNING PROGRAMS AND APPROACHES FOR ECONOMICALLY-DISADVANTAGED CHILDREN AND YOUTH

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Approaches for Economically-Disadvantaged Children and Youth:

A White Paper for the Wallace Foundation[1]

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Executive Summary

Children and youth who reside in economically disadvantaged households and who live in low-resource, urban neighborhoods are more likely to lose ground in reading over the summer than their middle- and upper-income peers. These children and youth also often come from ethnic minority backgrounds. In addition, both lower and higher income students lose ground in math over the summer. The academic disparities between low-income and higher-income children increase as children grow older, widening this achievement gap. Summer learning programs are an important strategy for "narrowing the gap".

In 2007, then-Senator Barack Obama (D-IL) and Senator Barbara Mikulski (D-MD) re-introduced the Summer Term Education Programs for Upward Performance Act (STEP UP) act, which supports increasing summer learning opportunities for disadvantaged students, to Congress. More recently, Obama/Biden's position paper entitled "Plan for Lifetime Success through Education"[1] recommends "expand[ing] summer learning opportunities" as a way to narrow the achievement gap. In light of these recent calls for action, identifying effective and promising summer learning approaches for this population is imperative.

This White Paper summarizes findings from an extensive literature review that was conducted to identify effective and promising models and approaches for meeting the needs of low-income children, youth, and families during the summer months. Special attention is paid to summer learning programs that serve urban, low-income children and youth. Data on program participation suggest that children and youth who would stand to benefit the most from summer learning programs (i.e., children and youth who are economically disadvantaged, have low school engagement, and/or exhibit problem behavior) are the least likely to participate.

Experimental and non-experimental studies, as well as reports and practitioner insights, were reviewed to identify effective and promising summer learning practices. Program impacts from experimental evaluations were identified for outcomes ranging from reading achievement to an increased likelihood of employment. Drawing from a limited number of experimental evaluations, we found that reading achievement gains were achieved for a handful of programs, whereas math achievement was less often evaluated. Few impacts were found on high school completion, college enrollment, and employment. Finally, a lack of evidence was found for youth development and health and fitness outcomes due to the fact that these outcomes were rarely, if ever, evaluated.

Without question, there is a lack of experimental research to measure the impacts of summer learning programs on children and youth. At the same time, we have some preliminary evidence to suggest that good summer learning programs can improve the educational and career development outcomes of economically disadvantaged students. Strategies for preventing summer learning loss include: (a) identifying effective summer learning programs and approaches and replicating them; (b) extending effective school-year, out-of-school time programs that have academic components through the summer; (c) improving existing programs by incorporating characteristics of effective and promising programs; and (d) establishing extended-year or year-round schools that incorporate practices and approaches from effective summer learning programs.

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History and Background

Summer learning and enrichment programs (including educational camps and summer reading programs) originated in the late 1880s (Fiore, 2005), if not before. By this time, perceptions of youth residing in urban, inner-city areas had shifted from viewing children as little adults who needed religious education and distance from the social problems of urban life to viewing them as individuals who needed guidance and support from caring adults and social institutions. While some programs focused on developing vocational and reading skills, others, like *Trailblazers,* focused on the development of values and life skills. *Trailblazers* was founded in 1887 to improve the youth development outcomes of poor children from New York City. This organization, which runs a summer camp on a 1,100 acre Nature Conservancy area in New Jersey, continues to this day. Organizations like *Trailblazers* paved the way for summer camps and many other youth serving organizations.

Although summer camp programs in the U.S. have a rich history, few have undergone rigorous evaluation and even fewer are designed to support the needs of economically disadvantaged youth. This is partially because many parents with limited resources can not afford to send their children due to the cost of tuition. Overnight or sleep away camps range from 2 to 8 weeks and cost $300 to $2000 per week; day camps cost substantially less, but are rarely offered free of charge.[2] Nonetheless, summer camps are believed to promote child and adolescent well-being. A recent pre-experimental (no comparison group, no random assignment), study of 3,395 families whose child attended one of 90 day or residential summer camps for at least one week found improvements from pre-test to post-test in positive identity, social skills, physical and thinking skills, and positive values and spirituality.[3]

In recent years, attention to summer learning programs for disadvantaged children and youth has grown. Much of this heightened attention may relate to the impetus of the *No Child Left Behind* legislation and by studies on summer learning loss which find that low-income youth regress more in reading skills over the summer than their higher income peers.[4,5,6] For example, Alexander and his colleagues (2007)[7] found that about two-thirds of the ninth-grade academic achievement gap between economically disadvantaged and advantaged teens can be explained by summer learning loss during the elementary school years. The reasons low-income students suffer greater reading loss than higher-income students are not fully understood. Some have attributed this phenomenon to less time spent reading, less access to books at home, and less time spent in the library during the summer months than their middle- and high income peers.[8] Others have speculated low-income students are more highly affected because they do not have as many resources and opportunities in their homes and neighborhoods to cushion the lack of school structure, learning, and support.

Offering disadvantaged youth access to a variety of summer learning experiences has become a priority for the new administration. In their position paper entitled "Plan for Lifetime Success through Education",[9] President Barack Obama and Vice-President Joe Biden recommend "expand[ing] summer learning opportunities" as a way to narrow the achievement gap. This White Paper may be viewed as a resource to inform funders, policymakers, and administrators on the various ways in which they may respond to this recent call for action.

Data on Summer Program Participation

Out of 11 nationally-representative surveys reviewed, only four surveys – the *National Survey of America's Families (NSAF)* 1999[10], the *Early Childhood Longitudinal Study – Kindergarten Cohort (ECLS-K)- 1998-99[11]*, the *Child Development Supplement (CDS) to the Panel Study of Income Dynamics (PSID)* 2002[12], and the *Current Population Survey (CPS)[13]* 1996, – offered information on summer program participation.[14] Findings for three of these surveys are summarized below:

- An analysis of *ECLS-K* 1998-99 data found that approximately 1 out of 5 children participate in overnight or day camps. Children with a high socioeconomic status background were about 8 times more likely to participate than children with a low socioeconomic status background (42.5 percent versus 5.4 percent). [15]
- An analysis of *CDS-PSID* 2002 data found that children and adolescents (aged 6 to 17) from higher income families were more likely to participate in summer overnight camps and more likely to participate in organized activities during the summer. In addition, white children and adolescents were more likely to participate than non-white children and adolescents, with Hispanic children and adolescents being the least likely to participate. [16]
- An analysis of the *CPS 1996* data found that 36 percent of children aged 6 to 11 participate in organized summer activities.[17]

The following analysis builds on existing work by examining *NSAF* data to explore additional correlates of summer program participation, such as social-behavioral factors and school and out-of-school-time involvement. In addition, the *NSAF* 1999 variable specifically asks about summer programs. The question is worded: ""Is [your child] attending a summer program?" *(Section C: Parent/Child/Family Interaction and Education*, item C02). [Although 2002 data are available, these data do not include variables that focus exclusively on summer program participation.]

Findings from the 1999 National Survey of America's Families

We analyzed the summer version of the 1999 *NSAF* survey (of 6,656 households), to explore whether children aged 6 to 11 who participate in summer programs differ from children who do not participate. Analyses of overall participation suggest that 1 in 4 children participate in summer programs.[18] This proportion falls in between the proportions obtained in analyses of the *ECLS-K* 1998-99 and the *CPS 1996*. It is higher than the *ECLS-K* finding (20 percent), most likely because the *ECLS-K* item is limited to overnight and day camps; and it is lower than the *CPS 1996* finding (36 percent), most likely because the *CPS 1996* item uses more inclusive wording ("organized summer activities, such as camp, organized recreation or sports, special interest programs, or [lessons/classes]").

Overall, summer program participation rates are lower than participation rates for school-year, out-of-school time programs. (It is estimated that 4 in 5 children and youth participated in some type of out-of-school time activity in the past 12 months.)[19] Several reasons may account for this. First, many summer programs are offered at a cost, whereas most afterschool time programs are offered free of charge. Second, summer program offerings may be less available to students than afterschool and other school-year, out-of-school time programming – due to there being fewer programs. Third, summer programs, on balance, are less accessible than afterschool

programs, because they are more likely than afterschool programs to require transportation back and forth from the program. Other factors are also likely to account for the lower summer program enrollment rates.

To better understand who participates in summer programs, we ran crosstabulations and multivariate regressions to identify sociodemographic and social-behavioral differences between summer program participants and non-participants. The findings of these analyses are summarized in the next section and outlined in Table 1. Significant differences by income and club participation are depicted in Figure 1.

Sociodemographic Differences

Demographic and socioeconomic backgrounds were associated with summer program participation (see Table 1). A comparison of percentages found:

- **Children who reside in households with two biological or adoptive parents** are more likely than children from other family types to participate in summer programs (28 percent versus 21 percent of those who reside with single mothers); and
- **Children who come from non-poor households** (200% or above the poverty line) are more likely than children from poor households (below 200% of the poverty line) to participate in summer programs (29 percent versus 18 percent)

However, after controlling for the covariates (i.e., gender, race, poverty, and family structure), socioeconomic differences were the only differences that remained. The strong association between poverty and program participation is consistent with research on out-of-school time programming which has found that children living in families below 200% of the federal poverty line are less likely to participate in activities out of school (34 percent versus 9 percent).[20]

Interestingly, although a much higher proportion of white children participate in school-year, out-of-school time programs than black children (82 percent versus 65 percent)[21], summer program participation rates were found to be slightly higher for black and white children than for children of other races (about 25 percent and 24 percent compared to 22 percent).

Social-Behavioral Differences in School and Out-of-School Time Involvement

Children who are more engaged in school and more involved in out-of-school time activities are more likely to participate in summer programs than children who are less engaged (see Table 1). A comparison of percentages found:

- **Children with high school engagement** were more likely than children with low school engagement to participate (30 percent versus 15 percent) in summer learning programs;
- **Children who attend social and recreational clubs** are more likely than children who do not attend social and recreational clubs, such as the Girl Scouts or the Boys and Girls Club, in the past year to participate (29 percent versus 20 percent); and
- **Children who are involved in 3 or more extracurricular activities** are more likely than children who are not involved in any activities to participate (27 percent versus 15 percent).

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		Participates in Summer Programs (row %)	Significance before adding covariates	Significance after adding covariates
Table 1. Percentage of *all* children aged 6 to 11 participating in summer programs, by various child socioeconomic, demographic, and other characteristics				
Total N= 684 *Children with bold-highlighted characteristics are more likely to participate in summer programs*		Participates in Summer Programs (row %)	Significance before adding covariates	Significance after adding covariates
Demographic	Gender (% within gender)		***	*ns*
	Male	**25%**		
	Female	23%		
	Race (% within race)		***	*ns*
	Black	**25%**		
	Other	22%		
	White	24%		
Socioeconomic	Poverty (% within poverty level)		***	*
	Below 200% of poverty line	18%		
	200% or above of poverty line	**29%**		
	Family Structure (% within family type)		***	*ns*
	Single parent household	21%		
	Household with 2 bio/adoptive parents	**28%**		
	Household with 2 parents (one is stepparent)	14%		
	Lives with no parents	10%		
School and Out-of-School Time	School engagement (% within engagement level)		***	*ns*
	Low school engagement	15%		
	High school engagement	**30%**		
	Social clubs (% within each group)		***	*
	Did not participate in clubs last year	20%		
	Participated in clubs last year	**29%**		
	Extracurricular Activities (% within each group)		***	*ns*
	Not involved in any activities	15%		
	Involved in 3 or more extracurricular activities	**27%**		
Behavior and Health	Social Competence (% within each group)		***	*ns*
	Acts too young for his or her age	14%		
	Acts appropriately for his or her age	**26%**		
	Behavior (% within each group)		***	*ns*
	Has high behavior problem scores	13%		
	Has low behavior problem scores	**18%**		
	Peer Relations (% within each group)		***	*ns*
	Doesn't get along with other kids	12%		
	Gets along with other kids	**25%**		
	Health (% within each group)		***	***
	Fair or poor health	**55%**		
	Good, Very Good or Excellent Health	23%		

*p<.05 and ***p<.001= statistically significant; ns = not statistically significant.
Note: Covariates include gender, race, poverty, and family structure.

Figure 1. Likielihood of Participation and Non-Participation in Summer Programs by Child Characteristics
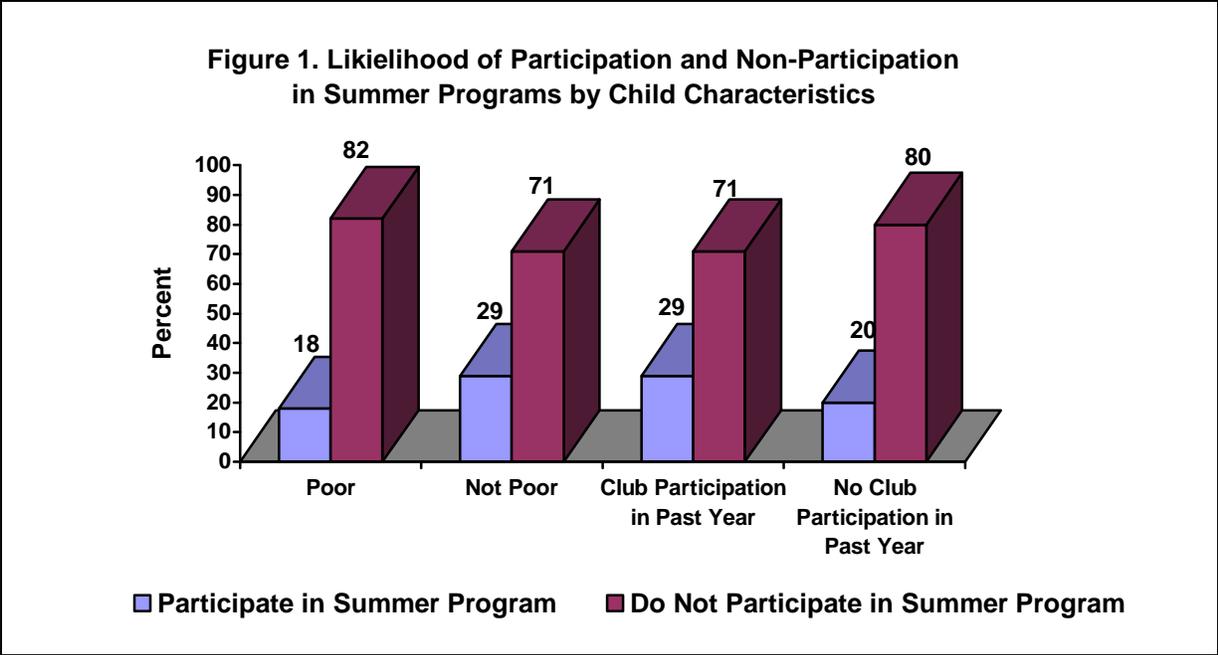
After controlling for sociodemographic covariates, however, club participation was the only measure that was significantly associated with summer program participation. Because these are cross-sectional data, it is not possible to say whether these findings reflect selection effects. They do indicate, though, that participation in summer learning programs is more common among children who enjoy or are able to spend time with groups of peers in organized activities.

Other Social-Behavioral Differences

Finally, children described by parents as having more social competence, fewer behavioral problems, and better peer relations are more likely than their counterparts to participate in summer programs (see Table 1). A comparison of percentages found:

- **Children with higher levels of social competence** are more likely than children with lower levels of social competence to participate (26 percent versus 14 percent);
- **Children with fewer behavioral problems** are more likely than children with many behavioral problems to participate (18 percent versus 13 percent); and
- **Children who get along with other kids** are more likely than children who do not get along with other kids to participate in summer programs (25 percent versus 12 percent).

These differences, however, become non-significant after controlling for covariates. Interestingly, children having fair or poor health are much more likely than those with good health to participate in summer programs (55 percent versus 23 percent), and this difference remains significant (p<.001), after controlling for covariates.

Although many of the differences are modest, these data tell a consistent story: children who have greater problems or fewer assets being less likely to participate in a summer program. In other words, those children who might benefit most are the least likely to have participated in summer programs. Children in fair or poor health are the only exception. These children are considerably more likely to be in a program than are more healthy children. Although the sample size is small, the data suggest that parents of children who are in fair or poor health may be more

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likely to send their children to summer programs than parents of children with good or excellent health.

What are Summer Learning Programs?

Summer programs have been developed for students with wide-ranging interests and needs. Examples include outdoor adventure camps, arts and music camps, sports camps, summer school, summer reading programs, high school transition programs, college preparatory programs, apprenticeships, and paid internship programs. Program formats range from a one-week course, to a two-week overnight camp, to a summer-long day camp. Typically, summer learning programs are about six weeks in duration and may be held at schools, places of worship, cultural centers, and youth-focused non-profit organizations.

In this White Paper, we focus on summer learning programs, as opposed to recreational, wilderness, or child care programs. Summer schools that focus on remediation are also not reviewed. Five types of summer learning programs are considered: (a) Educational/Cognitive (b) Youth Development; (c) Career Development; (d) Health and Fitness; and (e) Multi-element (see Figure 2).

How do Summer Learning Programs Differ from Summer School?

Traditionally, summer learning programs differ from summer schools in various ways. Although there is a growing movement to transform summer schools into learning environments that offer more engaging and enriching learning experiences for students, summer school has typically had the following characteristics:

- Solely include academic instruction;
- Focused on remediation and review;
- Attended by low-performing students;
- Frequently mandatory; and
- Takes place over a half day.

Alternately, summer learning programs are more likely to:

- Engage students in recreational and enrichment activities, as well as activities focused on building positive relationships with peers and adults;
- Blend remediation with enrichment activities and more advanced curricula;
- Be attended by students of varied skill levels;
- Be voluntary; and
- Take place over a full day.

Given how little we know about the relative effectiveness of summer school versus summer learning programs for minimizing summer learning losses, we are not advocating that one type of program supplant the other. There has been some evidence to suggest that summer school programs may not benefit the students from lower-income backgrounds as much as they benefit students from middle-income backgrounds.[22] However, this finding should not diminish the potential of summer schools to positively impact on the academic trajectories of low-income students, if effective out-of-school time practices (such as attracting students of varied skill levels, offering a greater variety of experiences to students, and offering accelerated learning and

enrichment activities) were integrated. These practices might improve student engagement and eliminate any negative stigmas attached to summer school programs.

Figure 2: Types of Summer Learning Programs
Educational/Cognitive programs attempt to increase academic motivation, improve skills relating to reading, math, science, and technology, increase math and reading achievement, promote high school completion, and improve college preparation skills. Effective programs teach these skills in the context of hands-on learning experiences and/or engaging cultural enrichment activities that often incorporate the arts. Some educational summer programs are designed to meet the needs of under-performing children and some are designed for talented and gifted children, but typically programs are intended for all children. Summer educational programs may be remedial or enrichment, or use some combination of these two approaches.
Youth development programs focus on fostering the skills necessary for personal, social, and career-related success. These skills include character development, interpersonal skills, life skills, health-related behaviors, conflict resolution skills, communication skills, leadership skills, and management skills. Activities related to service learning are often used to encourage civic participation and cooperation as well as career-related skills such as leadership and management. Some programs target a specific subpopulation of children, such as children with Attention Deficit and Hyperactivity Disorder or children with emotional and behavioral problems, however the majority of programs do not.
Career development programs seek to improve career decision-making skills, promote interviewing skills and other job-related skills, increase employment, and reduce the need for welfare benefits. These programs are typically delivered to upcoming high school juniors and seniors.
Health and fitness programs target behaviors such as developing healthy exercise and nutrition habits as well as developing disease management skills. These programs tend to target children with weight issues, disabilities, or other health-related issues.
Multi-element programs are designed to impact some combination of the above-mentioned program areas.

How do Summer Learning Programs Differ from School-Year, Out-of-School Time Programs?

Summer learning programs differ from school-year, out-of-school time programs primarily in terms of structure and format. For example, summer learning programs are more likely than afterschool programs to:

- Be offered to participants at a cost;
- Be implemented with more intensity (6-8 hours per day, 5 days per week);
- Be implemented over a shorter duration (6 to 8 weeks);
- Focused on academic instruction; and
- Use an accelerated learning approach.

Alternately, school-year, out-of-school time programs tend to:

- Be offered at no cost;
- Meet one to five times per week;
- Be implemented with less intensity (2-3 hours per day, 1 to 5 days per week);
- Be implemented over a longer duration (6 to 8 months);
- Be focused on youth development; and
- Use remedial academic improvement strategies, homework support and tutoring.

Comparing summer learning programs with school-year, out-of-school time programs allows us to better understand the range of out-of-school time options available to children and youth.

What Outcomes do Summer Learning Programs Target?

Summer learning and enrichment programs target a wide array of outcomes. Although most summer learning programs evaluate a narrow set of outcomes based on core program goals, many expect to achieve a broader range of outcomes – relating to youth development, career development, and health and fitness – in addition to educational outcomes (see *Figure 3* for a select range of targeted outcomes). However, due to limited evaluation resources, most programs are not able to evaluate the outcomes of all program activities.

Figure 3: Targeted Child and Youth Outcomes	
Educational/Cognitive • Grades and test scores • Motivation to learn • Attachment and belonging to school • Academic self-efficacy • Reading and math achievement/skills • Science and technology • Graduation/high school completion • College enrollment	**Youth Development** • Life skills (conflict resolution, negotiation, decision-making) • Character development (positive values, respect for others) • Social/emotional (self concept, peer relations, teacher relations) • Behavior problems (e.g., school attendance, aggression) • Civic engagement • Reproductive health • Substance Use
Career Development • Career decision-making skills • Job skills • Vocational skills • Employment	**Health and fitness** • Nutrition • Physical activity • Weight loss

Experimental Evaluations of Summer Learning Programs

This section outlines the impacts of programs evaluated using experimental research designs. We focus on random assignment experimental evaluations to inform our discussion of the impacts of summer learning programs in the next section, as random assignment experiments represent the gold standard for examining impacts. That is, the findings of these studies are more reliable and valid and allow us to draw conclusions about what intervention strategies do and do not work.

Findings from non-experimental evaluations of summer learning programs and from evaluations of out-of-school time programs are discussed later in this paper.

To discern effective summer learning practices, we identified experimentally-evaluated summer learning programs, summarized their impacts, and analyzed whether effective programs shared any characteristics that distinguished them from non-effective programs. The methods we used to identify experimentally-evaluated programs, the findings/impacts of these programs, and a synthesis of their characteristics are summarized below.

Methods Used to Identify Experimental Evaluation Studies

We searched the following online databases to identify experimental evaluation studies: – LINKS (Lifecourse Interventions to Nurture Kids Successfully)[23], the Out-of-School Time (OST) Program Research and Evaluation Database[24], JSTOR, EBSCO, ED Pubs, ProQuest, and Google Scholar. EBSCO search terms were "summer learning," and "out-of-school-time" and "program". JSTOR search terms were "experiential summer education," "summer learning," "summer school," "summer camp," and "program evaluation." All publications and presentations on the National Center for Summer Learning's web site (www.summerlearning.org) were downloaded. Programs that were delivered in the summer, targeted educational outcomes, and were evaluated using experimental research designs after 1985 were selected.

Findings of Experimentally-Evaluated Programs

Out of the 43 programs that were reviewed, only 11 programs have been evaluated using an experimental research design (see Table 3 in Appendix A). Program findings were classified into three different categories (see Table 2 below):

- *Not Proven to Work.* Programs in this category have *no impacts* on particular outcomes.

- *Mixed Findings*. Programs in this category have *varied impacts* on particular outcomes. For example, a program that results in significant improvements in reading test scores at post-test but has no impact at a one-year follow-up would be rated as having "mixed findings". A program that works for one subgroup of participants but not for another subgroup (on a particular outcome) would also receive a "mixed findings" rating.

- *Found to Work.* Programs in this category have *positive impacts* on particular outcomes.

For an overview of experimental studies that have positive impacts on at least one outcome, see Appendix B, Table 4. For an overview of experimental studies with mixed or null findings, see Appendix B, Table 5.

Overall, findings suggest:
- **Reading achievement gains are possible**. Of the 8 experimentally-evaluated programs targeting reading achievement, 3 were found to work (*Building Educated Leaders for Life, Louisiana State Youth Opportunities Unlimited*, and *Read to Achieve Summer Day Camp*), 4 had mixed findings, and one was not found to work.

- **Math gains appear less possible, although only a few studies evaluated math-related outcomes.** One out of three experimentally-evaluated programs *(Louisiana State Youth Opportunities Unlimited)* improved math outcomes.

Table 2: **Select Impacts of Summer Learning Programs**

OUTCOME AREA	NOT PROVEN TO WORK	MIXED FINDINGS	FOUND TO WORK
Educational/Cognitive			
Reading Achievement	**Teach Baltimore** did not improve reading achievement after one year of program participation.	**Interactive Strategy Trainer for Active Reading and Thinking (i-START)** improved answers to text-based questions for students with low prior knowledge of reading strategies and improved answers to bridging-inference questions for students with high prior knowledge of reading strategies. **Summer Training and Education Program (STEP)** improved reading scores but impacts were not sustained. **Voluntary Summer Reading Program** The program improved reading achievement for black students only. **KindergARTen Summer Camp** improved word list scores (a small effect size of .27) and improved Developmental Reading assessment scores (a small-to-medium effect size of .40); but it did not improve phoneme segment skills, letter naming skills, or dictation skills.	**Building Educated Leaders for Life (BELL)** improved reading test scores and increased time spent reading books. **Louisiana State Youth Opportunities Unlimited (LSYOU)** decreased rate of reading comprehension loss **Read to Achieve Summer Day Camp** improved reading comprehension scores.
Reading Skills (Decoding, Reading Fluency, Oral Fluency)		**Read to Achieve Summer Day Camp** improved decoding abilities at post-test and 3-months but impact decayed by the 9 month follow-up. **Voluntary Summer Reading Program** improved reading fluency for students owning fewer than 100 books and for students with reading fluency below national norms. No impacts on oral fluency were found.	
Math Outcomes	***Building Educated Leaders for Life (BELL)** had no impact on children's effort to solve math problems independently (according to parent report)	**Summer Training and Education Program (STEP)** improved math scores but impacts were not sustained.	**Louisiana State Youth Opportunities Unlimited (LSYOU)** increased math computation and understanding of concepts and applications.
Grade Point Average (GPA)	**Upward Bound** had no impact on GPA, 3 years after program completion		
High School Completion	**Upward Bound** had no impact on high school completion rates 3 years after program completion **Summer Career Exploration Program (SCEP)** had no impact high school graduation rates. ***Summer Training and Education Program (STEP)** lacked positive impacts on high school dropout; impacts varied by cohort.		**Louisiana State Youth Opportunities Unlimited (LSYOU)** increased high school completion rates.

Table 2 **continued: Select Impacts of Summer Learning Programs**

OUTCOME AREA	NOT PROVEN TO WORK	MIXED FINDINGS	FOUND TO WORK
Educational Outcomes			
College Preparation		**Summer Career Exploration Program** (**SCEP**) increased enrollment in college-track curricula and visits to college information centers, but it did not impact the taking a college entrance exam; visiting a college; consulting adults about college or financial aid applications.	
College Enrollment		**Upward Bound** increased college enrollment in students with low expectations of obtaining an education beyond high school. *__Summer Training and Education Program__ (**STEP**) increased college attendance for Hispanic students in one cohort, 42 months after program enrollment.	**Career Beginnings** increased college enrollment and length in stay in college.
Engagement in Postsecondary education			**Upward Bound** students had greater postsecondary attendance; and use of personal counseling, learning skills centers and tutoring services. (3 years after program completion)
Youth Development			
Social Skills	**Building Educated Leaders for Life** (**BELL**) did not improve social skills. **Summer Training and Education Program** (**STEP**) did not improve social behavior.		
Substance Use		**Summer Training and Education Program** (**STEP**) appeared to decrease alcohol use in treatment group males, blacks, and Hispanics in one cohort of youth but not in another, after a little more than 3 years after program completion. Long-term impacts on marijuana and cocaine were non-significant.	
Reproductive Health		**Summer Training and Education Program** (**STEP**) improved contraceptive knowledge but not level of sexual activity, pregnancy, and contraception use.	
Career Development/Self-Sufficiency			
Career Decision Making		**Louisiana State Youth Opportunities Unlimited** (**LSYOU**) improved 4 out of 5 career decision making skills: decisiveness, involvement, orientation, and compromise; but not independence.	
Work-related Attitudes	**Summer Career Exploration Program** (**SCEP**) did not improve participants' attitudes towards work nor their ability to recognize the connection between school and work.		

Self Efficacy/ Self Concept	**Building Educated Leaders for Life** (**BELL**) did not improve academic self-concept.	**Summer Career Exploration Program** (**SCEP**) increased participants' confidence in their ability to teach or hold a job that requires reading and writing, but did not increase participants' confidence about their ability to make a decision about their careers.	
Employment	**Summer Career Exploration Program** (**SCEP**) did not impact the frequency and duration of employment or continuation of work once school resumed. **Summer Training and Education Program** (**STEP**) had no impact on the likelihood of employment at most follow-up points. **Career Beginnings** did not increase employment rates, however this was attributed to increased college enrollment.		**Upward Bound** increased employment, the number of hours per week worked during college (3 years after program completion)
Welfare Receipt	**Summer Training and Education Program** (**STEP**) had no impact on the likelihood of receiving welfare (AFDC, WIC, and food stamps).		

- **Impacts of summer learning programs on high school completion look less promising.** Only 1 out of 4 experimentally-evaluated programs (the *Louisiana State Youth Opportunities Unlimited)* increased high school completion rates.

- **Impacts of summer learning programs on college enrollment were also uncommon.** One out of three programs that evaluated this outcome (*Career Beginnings*) had a positive impact.

- **Impacts on employment are similarly lacking.** Only 1 out of 4 experimentally-evaluated programs improved employment outcomes. *Upward Bound* was successful in increasing employment three years after program completion.

Due to insufficient experimental evidence, we could not evaluate impacts relating to youth development outcomes (only two programs evaluated youth development impacts). Studies of youth development outcomes were more likely to be found in the non-experimental literature (see section entitled "*Findings of Programs with Non-Experimental Evaluations*" to review findings). No studies examined impacts on health and fitness outcomes.

Characteristics of Effective Programs (Based on Experimental Studies)

From the perspective of funders, policy makers, practitioners, and parents, the primary goal of summer learning programs is to prevent learning losses that occur over the summer. But, for most children and adolescents, the summer is a time to get a break from school and have fun. Thus, to be effective, summer learning programs tend to balance educational activities with activities typical of summer camps, such as games and sports. In addition, summer learning programs use an accelerated learning approach to teaching that relies more heavily on interactive, hands-on projects and enrichment activities.

Programs that positively impact at least one child and/or adolescent outcome shared several characteristics. These characteristics, due to the fact they are based on a limited number of programs, may also be viewed as *promising approaches*. (For a summary of impacts yielded by effective experimental studies, see Table 4 in Appendix B). We have listed these practices below:

➢ **Make learning fun.** Successful summer learning programs supplement academic instruction with enrichment activities that are relevant and engaging to children and youth. Some examples include a debate on current events, use of technology, field trips, hip-hop dance, rap and spoken word, improvisational comedy, art, drama, and storytelling. They also include time for sports and recreational activities to offer students a chance to participate in the physical activities they enjoy.

➢ **Ground learning in a real-world context.** Consistent with an accelerated learning approach, academic concepts are best learned when applying them in a real-world context, for example, by teaching students about the difference between deciduous and coniferous trees by taking them on a hike through the forest.

➢ **Integrate hands-on activities.** Didactic lectures may increase knowledge but are not very effective at changing behavior.[25] Interactive forms of instruction such as immersion and experiential learning help to keep students engaged in the material. Engaging children in games, group projects, field trips to historic sites, nature expeditions, and science experiments are all ways in which to make learning more interesting and applied.[26]

➢ **Content should complement curricular standards.** Successful educational programs integrate learning activities that complement what children are learning during the school year.[27] Therefore, academic content is aligned with statewide, grade-level curricular standards for English Language Arts and Mathematics.

➢ **Hire experienced, trained teachers to deliver the academic lessons.** All 3 programs that produced favorable outcomes for reading and math achievement used experienced teachers who had at least a Bachelors degree, whereas, 4 out of 5 programs resulting in mixed impacts hired college students and provided them with training or, as with the *I-START* intervention, did not rely on live instructors to deliver academic content.

➢ **Keep class sizes small.** Class sizes of about 10-15 students tended to be most effective for small-group instruction, with one lead teacher and one teaching assistant (or about a 1:5 adult-to-student ratio). Individualized instruction is also helpful.

For economically-disadvantaged students, who often miss out on extracurricular activities such as sports and music during the school year, combining academic instruction with youth development and physical fitness activities may be particularly effective.

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Non-experimental Evaluations of Summer Learning Programs

To further discern promising summer learning practices, we also identified non-experimental (quasi-experimental, pre-experimental, and qualitative) evaluations of summer learning programs, summarized the outcomes they were associated with, and analyzed whether promising programs shared any characteristics that distinguished them from non-promising programs. The methods we used to identify these programs, the findings of these programs, and a synthesis of their characteristics are summarized below.

Methods Used to Identify Non-Experimental Evaluation Studies

To locate non-experimental evaluation studies, a literature search was conducted in a manner similar to that used for identifying experimental studies – by searching the online databases (i.e., LINKS, OST Program Research and Evaluation Database, JSTOR, EBSCO, ED Pubs, ProQuest, and Google Scholar), using keywords. In addition, review articles, meta-analyses, and monographs were reviewed, and program contacts were emailed with specific questions about program implementation when necessary. Key words, such as "summer slide", "achievement gap", "summer learning loss", and "expanded learning" were used. Web sites, such as the National Center for Summer Learning's web site (www.summerlearning.org), the National Clearinghouse of Educational Facilities (www.edfacilities.org/rl/community_use.cfm), the National Institute on Out-of-School Time (www.niost.org), and the U.S. Department of Education (www.ed.gov) were also consulted for resources on best practices for summer learning programs. To inform the identification of practices that characterize promising programs, programs were selected if they met any of the following criteria: (a) they were evaluated using an quasi-experimental, pre-experimental, or qualitative research design; (b) they had been selected as a promising program by field experts; (c) they were delivered in the summer and targeted educational outcomes; and (d) they included a summer component which was evaluated separately from the school-year program.

Findings of Programs with Non-Experimental Evaluations

We were able to identify non-experimental evaluations for only 17 out of the 32 remaining programs. Of these, 7 studies were quasi-experimental, 8 were pre-experimental, and 2 were qualitative. (The other 14 programs were identified because they were noted in a report, nominated for an award, or received an award for being a promising summer learning program). While these less rigorous evaluations cannot definitively address causality, we share these findings to provide a more comprehensive review of summer learning programs and to suggest directions for future evaluations.

Findings from these 17 non-experimental studies suggest:

- **Improvements in reading were likely to occur.** Six out of the 10 non-experimental studies of reading improvement were consistently associated with positive outcomes, three programs appeared to work better for students who are at greater risk for reading loss, and one program worked better for younger children. (Because these programs worked for certain subgroups better than others their findings were rated as *mixed*).
  - *Quasi-experimental studies* of reading outcomes generally yielded mixed findings. One program (*Voyager Summer Reading Program*)[28] consistently found positive associations with reading test scores. While others programs found

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positive impacts for low-achieving or low-income students (*Horizons,*[29] *Children's Defense Fund Freedom Schools Initiative,*[30] *Chicago Public Schools Summer Bridge Program*).[31]

- o *Pre-experimental* and *qualitative studies* found positive associations with reading outcomes. Positive impacts on letter naming and dictation (*Girls Creating Games*),[32] guided reading (*Summer Literacy Program*),[33] reading achievement (*Energy Express*[34] and *REAL Kids*[35]), and reading skills (*SuperKids*)[36] were found. Associations with reading performance varied for one program (*Summer Scholars*)[37] –appearing to benefit younger children more than older children.

- **Positive associations with career development and college preparation were generally found.** All four programs evaluating career development and college preparation outcomes found positive associations. Associations with the following outcomes were identified:

  - o *Quasi-experimental studies* found improvements in participants' efficacy for career planning and exploration and ability to select careers that match their interests (*Career Horizons*),[38] as well as an increased comfort with the use of technology and improved technical skills (*InfoLink*).[39]

  - o *Pre-experimental studies* found an increased interest in pursuing a career in science, math, engineering or technology (*RISE*)[40] and increased college preparation skills (*Gain the Edge*).[41]

- **Positive associations with math outcomes were generally found**. Four studies evaluating math outcomes were found: 3 had positive findings and 1 had mixed findings.

  - o *Quasi-experimental studies* of *Chicago Public Schools Summer Bridge Program*[42] and the *Voyager Reading Intervention Program*,[43] found different results. In the *Voyager Reading Intervention Program* similar improvements in math test scores were found for all students. In the *Chicago Public Schools Summer Bridge*[44] program, improvements varied according to the age and risk status of the student. Older students made larger gains than younger students. Low-risk sixth graders experienced larger gains than moderate- and high-risk sixth graders in math.

  - o A *pre-experimental study* of the *SuperKids*[45] program was associated with better arithmetic skills.

- **Associations with youth development outcomes, where evaluated, are not consistent**. Four studies (3 quasi-experimental and 1 qualitative) reported varied youth development outcomes - 2 programs had positive findings and 2 programs had mixed findings.

  - o One *quasi-experimental study* of the *Children's Defense Fund Freedom Schools Initiative* found positive associations with love of learning, community involvement, conflict resolution skills, acceptance of responsibility, and social adjustment. Another quasi-experimental study of the *Ascend Summer Youth Program*[46] had mixed findings in that an association with increased self-efficacy was found for younger children more than for older children. The *Grand Slam Program*[47] also had mixed findings: positive associations with compliance and

self control were only found for youth "who were less likely to value the program for learning new things".

- o A *pre-experimental study* of the *RISE (Raising Interest in Science and Engineering)*[48] program was associated with girls deciding to pursue a career in science, math, engineering, or technology.

Some programs found positive associations with concrete skills such as learning how to travel by metro and learning how to use a debit account (*Ascend*)[49] and others found increases for measures such as an interest in taking algebra and geometry courses, a desire to become more fluent in technology, and an interest in pursuing a career in technology (*Build IT*).[50] In their 2007 Annual Report, *Bridges to a Brighter Future*[51] found that, out of the 18 participants who were in 12th grade in 2006, all 18 graduated or received a GED and 17 enrolled into a four-year college.[52]

Characteristics of Promising Summer Learning Programs

Not surprisingly, studies using quasi-experimental, pre-experimental, and qualitative methods were found to produce more positive associations, compared with those using experimental methods. Due to the limited variation with respect to the outcomes of these studies (for example, 4 out of 4 programs were associated with gains in college preparation and career development, 8 out of 11 programs were associated with improvements in reading, and 3 out of 4 programs were associated with improvements in math), our ability to identify promising practices was greatly diminished. And generally speaking, non-experimental studies lack the level of rigor necessary for extracting convincing evidence to support or deny the effectiveness of one intervention strategy over another.

Characteristics of Effective and Promising Programs Based on All Evaluations, Research Studies, and Reviews

In 2006, the *National Center for Summer Learning* [53] and the *Harvard Family Research Project*[54] each issued reports that outlined practices, challenges, and strategies that effective and promising summer learning programs share in common. Both emphasized the early formation of collaborative partnerships with key stakeholders (e.g., community-based organizations, local- and state- government entities), to inform program planning and design. If formed effectively, partnerships benefit all involved and enable stakeholders to reach their goals more efficiently and effectively. Also, both reports highlighted the importance of designing programs with specific goals and objectives, recruiting qualified staff, and providing them with high-quality training and staff development.

To boost participation rates and ensure program success, the *Harvard Family Research Project* recommends that programs develop strong, positive connections with youth participants and their families and form ongoing, mutually supportive relationships with schools.[55] In addition, a proactive approach to summer learning could incorporate a variety of fun and engaging program activities, complement what is being learned during the academic year, and hold students to high standards with an intentional focus on accelerated learning.

A report by the *National Center for Summer Learning*[56] notes that successful summer learning programs gather evaluation data in a rigorous and ongoing way and use these data to inform

program implementation and development. These programs also maintain a clear focus on sustainability and cost-effectiveness throughout program planning and implementation.

This White Paper seeks to build upon the set of practices identified in previous reviews in two ways. First, it draws from the best available research on summer learning programs and other out-of-school time programs, to identify practices that promote educational/cognitive, youth development, career development, and health and fitness outcomes. And second, it highlights program practices that work best for involving economically disadvantaged youth and their families.

What Do Experimental and Non-Experimental Studies of Summer Learning Programs Tell Us?

Based on our review of 43 summer learning programs and on the literature on summer learning programs, effective and promising summer learning programs for disadvantaged youth share three critical characteristics:

➢ **They are affordable and accessible.** Programs generally offered their programs free of cost. Most were offered over a full day, or approximately 6 to 8 hours (providing a free source of child care for families). During family events, parents were offered child care on site. Transportation to and from the program location was generally available to participants. In addition, programs offered breakfast and lunch to participants.[57]

➢ **They involve parents.** Most effective and promising programs for children involved parents. Programs that involve parents in the community (for example, as volunteers or as decision makers) may be more likely to have positive impacts on children.[58] :Programs that encourage parents to support their children's reading over the summer – either through teaching or by encouraging the reading of at least four books – may also be effective. [59, 60] However, many programs lack parental involvement. A 2004 Public Agenda survey[61] on out-of-school time suggests that, although parents in low-income communities are very concerned about summer learning loss (about two-thirds, according to this survey), many have concerns about the lack of quality, affordable summer activities for their children. Evaluations to date have not tested whether involving parents in summer programs increases the participation rates of low-income children and youth.

➢ **They involve the community.** Effective and promising programs had strong community partnerships. Making sure that information about summer learning programs is accessible to the community – at schools, community centers, and public libraries, for instance – is one way to increase awareness of these programs among parents and children. School and community events could be held to inform community members about the program and community volunteers may interact with family members to increase the visibility and credibility of the program. In addition, community partners can offer resources such as money, volunteers, technical assistance, and in-kind contributions. In sum, forming long-term, community partnerships are critical to insuring and sustaining program success.[62]

To augment these points, we share additional findings from a review of the larger literature on out-of-school time programs in which Moore (2008) identified several other promising practices (see Appendix C).

What Do Experimental Studies of School-Year, Out-of-School Time Programs Tell Us About Improving Youth Development Outcomes?

Although many summer learning programs integrate activities to promote positive youth development, few evaluations to date have examined impacts on youth development outcomes. Thus, to identify practices associated with improved youth development outcomes, this section draws from experimental studies of effective, school-year, out-of-school time programs.

➢ **Improve social problem solving (*social cognitive*) skills**. Skills training programs are best suited for children, since they are developing abstract thinking skills and need guidance when it comes to social problem solving.[63]

➢ **Promote character development**. Infusing the values of fairness, respect, and nonviolence into school routines appears to decrease the display of negative classroom behavior in children.[64]

➢ **Promote life skills**[65]. This strategy is particularly effective with adolescents, who must become better decision makers as they obtain greater autonomy from their parents.

➢ **Foster positive relationships with caring adults**.[66, 67] This strategy has proven effective with both children and adolescents when it comes to preventing and deterring problem behaviors, such as aggression and drug and alcohol use, and promoting academic success.

➢ **Foster relationships with pro-social peers.** Research has found that putting a number of high-risk children or youth together in one group is an ineffective strategy that is likely to produce deleterious effects – worsening rather than improving behavior. Intervention strategies that are organized around positive interactions with pro-social (and preferably well-liked) peers have had positive impacts. For example, interventions that use peer leaders who are nominated by teachers and peers and interventions that involve interactions between small groups of heterogeneous children have been found to be successful.[68, 69]

➢ **Reward good behavior.** Interventions that reward good behavior, whether they involve teachers rewarding good behavior in the classroom or parents rewarding good behavior at home, have high success rates.[70, 71]

➢ **Support the development of effective parenting skills**.[72] This strategy has proven effective with both children and adolescents when it comes to preventing and deterring problem behaviors.

➢ **For disadvantaged and high-risk youth, intensive multi-element programs may be needed.** With a few exceptions, children and adolescents who are exposed to higher levels of risk are more likely to benefit from longer-term interventions targeting multiple

social domains. [73] This might involve combining a summer program with a school-year program.

Of course, for these strategies to be successful, they must be applied in tandem with the general practices of effective summer learning programs highlighted above. Research indicates that poor implementation, lack of accessibility, poor recruitment and retention, staffing issues, and a lack of organizational support can undermine any program, no matter how much evaluation evidence there is for its effectiveness under optimal conditions.

What Do Experimental Studies of School-Year, Out-of-School Time Programs Tell Us About Improving Health and Fitness Outcomes?

During the summer months, children (especially minority and overweight children) are vulnerable to excessive weight gain due to inactivity and limited access to healthy meals and snacks.[74] Due to the lack of summer learning programs measuring impacts on health and fitness outcomes, we could not identify effective practices and approaches in summer learning. Thus, listed below are effective practices identified from our recent synthesis of experimental, intent-to-treat studies (identified in the LINKS[75] database) with positive impacts on health and fitness.

➢ **Hire professionally-trained staff.** Having staff with training in physical education and nutrition is important due to the level of sensitivity and expertise needed for working with children and youth who are experiencing weight problems.

➢ **Involve parents as role models**. Using parents as role models can maximize the short-term impact of the program, as well as increase the likelihood that new exercise and nutrition routines learned over the summer will be maintained during the school year.

➢ **Teach self-regulatory skills.** Examples of self-regulatory nutrition skill-building include teaching children how to prepare healthy snacks and how to ask for fruits and vegetables at fast food restaurants. Helping participants identify stimuli that trigger unhealthy eating habits is another self-regulation strategy.

➢ **Support the development of healthy exercise routines**. Teaching children and adolescents how to incorporate exercise into their daily lives and on how to make physical activity fun and personalized is critical to increasing physical activity.

Using these strategies in combination with each other is particularly likely to produce positive impacts on weight loss, exercise, and nutrition. Moreover, a three-pronged prevention approach that combines health and fitness activities with youth development and summer learning activities might help reduce risk of academic failure, obesity, drug use, and delinquency in children and youth from low-income families. To date, few, if any, summer programs have applied this approach. However, we caution against conducting a summer program with the expectation that it will improve youth development outcomes, unless children continue to participate during the school year. Evidence from previous studies indicates that behavioral improvement is unlikely to result from short-term social interventions that are implemented over a span of only few weeks or months.

Knowledge gaps

This review of the literature on summer learning programs revealed several areas of research and evaluation that warrant further investigation.

- **Understanding how to reach low-income populations.** Several strategies can and have been used to reach low-income populations (such as subsidizing or waiving application fees, offering transportation to students who need it, involving parents in the program, and offering incentives). Despite this, low-income students are less likely to participate in summer programs than higher-income students. They are also less likely to participate in summer programs than in school-year, out-of-school time programs. The reasons for these varied participation rates are unclear. Understanding (and addressing) the factors that limit summer program participation in low-income children and youth would increase the power of summer learning programs to bridge the achievement gap between economically disadvantaged and advantaged students by reducing summer learning loss.

- **Assessing the impacts of dosage and duration.** We could not discern from these studies whether more intensive participation or a longer duration of exposure to the program would improve program benefits. Ten out of 11 experimentally-evaluated studies with mixed or positive impacts were delivered over a period of at least five weeks, for 6 to 8 hours per day. In addition, studies that examine summer learning versus school-year plus summer programs are needed.

- **The need to widen the scope of the evaluation.**
  - *Mathematics.* Only 3 out of the 7 experimentally-evaluated programs that targeted math outcomes evaluated whether students made improvements in this domain *(Building Educated Leaders for Life, Louisiana State Youth Opportunities Unlimited, and Summer Training and Education Program)*.
  - *Youth development*. Only 2 out of 4 experimentally-evaluated programs that target youth development outcomes (the *Summer Training and Education Program* and *Building Educated Leaders for Life*) evaluated these outcomes.
  - *Science and technology*. None of the experimentally-evaluated programs that integrated science and technology evaluated new knowledge gained in these areas.
  - *Health and Fitness.* Although almost all experimentally-evaluated programs included physical activities and sports, none of the studies evaluated this domain.

  Knowing whether summer learning programs are able to improve math skills, decrease children's weight gain over the summer, or improve social skills, for instance, would be valuable information to parents, teachers, administrators, program providers, and policymakers.

- **Few programs have been adapted for various ethnic and gender subgroups.** Of all programs included in this review, only three programs (*Girls Creating Games*[76], *BuildIT*[77], and *Oceanography Camp for Girls*[78]), were gender-specific[79]. Only one culturally-adapted program was identified (the *Children's Defense Fund Freedom Schools Initiative*). One program, the *Voluntary Summer Reading Program*, was effective for black youth but not for any other ethnic or racial group.

Discussion

Children and youth who reside in economically disadvantaged households and reside in low-resource, urban neighborhoods are more likely to lose ground in math and reading over the summer than their middle- and higher-income peers. This achievement gap widens as children grow older, creating a social inequity that can be prevented. Summer learning programs can be an important strategy for narrowing this gap.

This paper has outlined findings from a wide range of summer learning programs and highlighted common and outcome-specific characteristics of promising and effective programs. The paper concludes by offering recommendations for practice and recommendations for research and evaluation. These recommendations might be used to guide funders and policymakers in decisions about how and where to allocate resources to help reduce summer learning loss.

Recommendations for Practice

Four approaches might be used to improve how schools and communities address summer learning loss. First, effective school-year programs can be extended to serve children and youth year-round. Second, effective summer learning programs could be identified and more widely disseminated. Third, existing summer learning programs could be improved, by applying what we know from evaluation studies, basic research, and wisdom from the field. Fourth, extended-year or year-round schools could be established. We have outlined strategies for each of these approaches below.

Approach A: Identify Effective Summer Learning Programs

With the limited number of experimental studies, identifying effective summer learning programs, especially ones that impact academic outcomes, is a challenging task. This review identified only 3 out of the 7 programs that evaluated impacts on reading that improve reading achievement:

- *Louisiana Summer Youth Opportunities Unlimited (LSYOU)* is a 6-8 week, residential, dropout prevention program for at-risk, 14- to 16-year-old students designed to improve academic achievement, increase high school completion rates, and improve college enrollment. The random assignment study evaluated the summer program and found it to be effective at post-test. We should add a caveat that a follow-up study has not yet been done. Therefore, evidence for the long-term benefits for this program is inconclusive.

- *Building Educated Leaders for Life (B.E.L.L)* is a 6-week academic enrichment program that seeks to prevent summer learning loss among low-income, elementary school students of color.

- *Read to Achieve* is a 7-week literacy promotion day camp for first-grade students from low-income families. Two hours of camp time each day are devoted to literacy activities, and the remainder of each day was devoted to typical camp activities.

In addition, only 1 out of the 3 experimentally-evaluated programs that evaluated impacts on math, *Louisiana State Youth Opportunities Unlimited,* improve math skills.

Approach B: Extend Effective School-Year Programs

The new Administration recognizes the need for expanded learning time. Extending school-year programs through the summer is one strategy for helping the most at-risk children succeed in school. The new sociopolitical context may make it possible to support the extension of effective, school-year, out-of-school time programs into the summer months. The ability to provide services over the summer months fills an unmet need for out-of-school time programs that seek to enhance positive relationships with caring adults.

For example, extending after-school mentoring programs into the summer would allow positive mentor-mentee relationships, which take time to develop, to mature and decrease the chances that the mentoring relationship would end prematurely, before children are able to reap the benefits of this relationship[80], such as in increased school engagement and behavioral improvement. Extending programs like the *Linking the Interests of Families and Teachers (LIFT)* program, which seek to build positive teacher-parent relationships, into the summer would also be beneficial. Extending school-year programs that positively impact reading outcomes – such as *Reading One to One* and *Schools and Families Educating Children (SAFEChildren)* – might also help to reduce summer learning loss.

Interestingly, all effective, experimentally-evaluated programs included in this review offered school-year components. For example, during the school year:

- ***Building Educated Leaders for Life*** offers an afterschool program – delivered three hours per day for 30 weeks – focused on improving math and reading skills, academic self concept, and social skills;

- ***Career Beginnings*** offers: (a) monthly academic advising; (b) career counseling; (c) information about post-secondary alternatives & financial aid; (d) 12 months of mentoring; and (e) workshops in life skills, diversity, and pregnancy prevention;

- ***Louisiana State Youth Opportunities Unlimited*** offers tutoring, exit test preparation, mentoring, personal and family counseling, and weekend retreats to the LSU campus;

- ***Upward Bound*** offers tutoring services.

Although the summer components of these programs were evaluated separately, offering year-round, youth development and learning opportunities to students makes sense for several reasons. Children and adolescents, especially children from low-income backgrounds, need youth development opportunities over the summer as much, or perhaps more, than they do over the school year, when there is more structure and routine in their lives. Although policymakers and funders could remedy this by funding summer learning programs that address youth development, this could be deleterious rather than effective. What we have learned from evaluating effective youth development programs is that programs that intervene for a short period of time are less likely to produce behavioral change. Social interventions can take more time than many medical or academic interventions and require a great degree of investment. Indeed, relationships that are truncated can be harmful to children. Thus, extending school-year, out-of-school time programs with an academic focus into the summer would appear to be a very good idea.

Approach C: Improve Existing Summer Learning Programs

Although preliminary research suggests that summer learning programs can yield benefits for children and youth, more can be done to improve existing programs. Below, we list several recommendations we have gleaned from the research, for improving summer learning programs:

- *Increase participation among at-risk children and adolescents.* This can be achieved by making programs affordable (e.g., by subsidizing them or waiving fees where necessary) making them accessible (e.g., offering transportation to children and youth who need it), involving parents, offering incentives to both children and parents, and asking community-based organizations for assistance with recruitment. Increasing the ability of low-income families to send their children to summer learning programs can help to reduce the stress of finding child care over the summer months and reduce the burden placed on extended family members.

- *Differentiate summer learning from school-year learning*. Unlike school-based instruction, which is often lecture-based, summer learning activities should be interactive, fun, hands-on, relate to real-world experiences, and incorporate cultural enrichment as well as group activities to keep students engaged and interested. Moreover, academic content should complement academic standards but not re-hash material covered during the school year.

- *Differentiate summer learning from summer camp.* Although summer learning programs may often be referred to as camps, they are not the same as most recreational summer camps. The primary reason is that the primary goal of summer learning programs is academic improvement and most activities are carried out with this goal in mind.

- *The same principles that guide effective out-of-school time programs apply to summer learning programs*. Thus, summer learning programs should:
  o Form collaborative partnerships with key stakeholders;
  o Involve families and communities;
  o Utilize well-trained, experienced staff;
  o Offer ongoing staff development;
  o Plan programs deliberately;
  o Make programs affordable and accessible;
  o Promote positive relationships with caring adults;
  o Provide positive role models;
  o Reward good behavior;
  o Teach social cognitive skills, life skills, and character development;
  o Make learning fun and hands on;
  o Intervene more intensively with at-risk students; and
  o Evaluate programs continually to inform design and implementation

- *Integrate non-academic, physical, recreational, and cultural enrichment activities.* Since summer learning programs are generally full-day programs, participants need physical exercise and other non-academic activities like photography and drama, built into the day.

- *Hire trained, experienced teachers for academic components.* Limited evidence indicates that academic instruction should be conducted by professional, trained,

experienced teachers. Other activities may be staffed by community volunteers. Students from organizations like AmeriCorps can serve as Teaching Assistants.

- *Utilize settings that are safe and inspire learning.* The ideal location for summer learning programs should be safe and inspire learning. College campuses and rural settings appear to be good options. Alternatively, many recommend the use of the schools that students attend during the school year, viewing schools as "community learning centers" that should be open to the community year-round.[81]

Approach D: Establishing Extended-Year or Year-Round Schools

This approach is beginning to grow in popularity, but states are still a long way away from executing this approach. Some school districts, like Cincinnati Public Schools, have added a "fifth quarter" to the school year; students attend school over 40 weeks instead of the traditional 36 weeks. Other school districts are entertaining the possibility of year-round schools. School would start in August and every 9 weeks there would be a 2-week intercession until the end of June; summer vacation would then be 5 weeks instead of 10 weeks in duration. This approach would offer 9 more weeks of classes than what is offered in the typical school year. Such efforts often make sure to provide, during the summer months, hands-on learning experiences and an array of engaging, educational activities. This approach may be more feasible solution for communities that lack organizations that are able to offer summer programs at no cost.

Recommendations for Research and Evaluation

- **Collect data on program participation.** Few evaluation studies collected data on student attendance or looked at participation patterns and trends.

- **Collect data on program implementation.** Evaluation data should be collected to examine whether program implementation characteristics impact program outcomes.

- **Broaden the range of outcomes evaluated.** Few evaluation studies measured youth development outcomes, and none of the programs reviewed examined impacts on how summer learning programs impact school engagement, curiosity, and love of learning – characteristics and behaviors we often associate with high-achieving students. Moreover, data should be collected from multiple sources (parent and teacher) – not just the child.

- **Increase the number of rigorous research designs employed by evaluation studies.** Given the lack of random assignment, intent-to-treat studies with long-term follow ups, identifying effective programs is challenging at best. Moreover, studies comparing modified versions of interventions –those of different durations and with fewer components perhaps– are needed in order to ensure that programs are cost-effective and sustainable.

- **Replicate programs with different populations and test whether program impacts vary for different subgroups.** For instance, does a summer learning program that works in Iowa with rural white children also work with Latino children in Brooklyn? Among the children who participated in this program, did the program result in similar gains between girls and boys, white children and black children? Are some interventions more effective with younger adolescents than they are for older adolescents?

Conclusion

There is a dearth of experimental research to measure the impacts of summer learning programs on children and youth. At the same time, some preliminary evidence exists that suggests that good summer learning programs can improve the educational outcomes of economically disadvantaged students. Strategies for preventing summer learning loss include: (a) extending effective school-year, out-of-school time programs that have academic components through the summer; (b) identifying effective summer learning programs and approaches; (c) improving existing programs by incorporating characteristics of effective and promising programs; and (d) developing models of extended-year or year-round schooling.

The literature reviewed, though limited, indicates that programs leading to academic improvement include the following characteristics: making learning fun, interactive, and hands-on, relating academic content to a real-world context, using a curriculum that complements curricular standards, hiring experienced and trained teachers, and keeping class sizes small. For disadvantaged students, making programs affordable and accessible, involving parents, and involving the community appears to be aligned with best practices.

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Appendix A

Table 3: Summary of Evaluated Programs (N=43)

	Non-experimental (32)	Experimental (11)
Educational/ Cognitive (19)	<u>Quasi-experimental</u> Ascend Summer Youth Program Chicago Public Schools Summer Bridge Program Children's Defense Fund Freedom Schools Initiative* Grand Slam Horizons Voyager Summer Reading Intervention Program <u>Pre-experimental</u> Bridges to a Brighter Future* Build IT Energy Express* Morry's Camp* RISE (Raising Interest in Science and Engineering) Summer Literacy Program Summer Extravaganza* Summer Scholars* SuperKids Day Camp* <u>Qualitative</u> Gain the Edge Girls Creating Games <u>Other/Report</u> Aim High* Beyond the Bell Camp UPSC (formerly known as Summer READS SWARM) Discovery Creek Summer Nature Adventure Programs Higher Achievement Program Summer Academy* Reading Reaps Rewards (R3) -Philadelphia Reads* Redhound Enrichment Program* Summerbridge Pittsburgh*	Interactive Strategy Trainer for Active Reading and Thinking (i-Start) Read to Achieve Summer Day Camp Summer Training and Education Program (STEP) Teach Baltimore Voluntary Summer Reading Program KindergARTen Camp
Career Development (4)	<u>Quasi-experimental</u> Career Horizons <u>Pre-experimental</u> InfoLink	Career Beginnings Summer Career Exploration Program (SCEP)
Multi-element (7)	<u>Pre-experimental</u> Reading and Enrichment Academy for Learning (REAL) Kids) - Harlem RBI* <u>Other/Report</u> Centro Nia* Oceanography Camp for Girls Trail Blazers Summer Program*	Building Educated Leaders for Life (BELL) Accelerated Learning Summer Program* Louisiana State Youth Opportunities Unlimited (LSYOU) program Upward Bound

Note: Starred (*) programs were awarded the *Summer Learning Award* by the National Center for Summer Learning at Johns Hopkins University, School of Education.

Appendix B

Table 4: Effective Experimentally-Evaluated Programs with At Least One Positive Impact

	Read to Achieve Summer Literacy Day Camp (for children)	**Building Educated Leaders for Life (BELL) (for children)**
Reference	Schacter & Jo (2005)	Chaplin & Capizzano (2006)
Program Goals	To improve literacy skills – reading comprehension, decoding, and vocabulary.	To improve the following academic performance, self concept, and social skills.
Target Population	Low-income, children of color exiting 1st grade (aged 6-7)	Urban, low-income or low-performing elementary school children of color (Grades 1-7)
Duration and Dosage	7 weeks, 5 days per week, from 8 am to 5 pm (315 hours)	6 weeks, 5 days per week, 8 hours per day (240 hours)
Intervention Description	Two hours per day devoted to literacy activities that teach: 1) decoding, 2) comprehension, 3) vocabulary, and 4) writing skills using the Open Court curriculum. The rest of the day included summer camp activities, such as swimming, organized sports, art, dance and music. Participants go on weekly field trips.	Intervention components are: (a) academic instruction: two hours of literacy and one hour of math per day, four days/week; (b) parent involvement and participation; (c) two hours per day of enrichment activities and physical education; community service projects; and group mentoring by community leaders.
Select Impacts	• Reading comprehension scores 41% better at 3-, 39% better at 6-, and 18% better at 9-month follow ups than the control group. • Decoding abilities better at post-test and the 3-month follow-up, but no impacts were found at the 9-month follow-up.	• Improved reading skills • Improved reading test scores • Increased time spent reading books • Increased parental involvement • Did not improve academic self concept or social skills. • Did not improve children's effort to solve math problems independently.

Table 4 continued: Experimentally-Evaluated Programs with At Least One Positive Impact

	Career Beginnings (for teens)	Upward Bound (for teens)	Louisiana State Youth Opportunities Unlimited (LSYOU) program (for teens)
Reference	Cave & Quint (1990)	Seftor, Mamun, & Schirm (2009); Myers, Olsen, Seftor, Young, & Tuttle (2004); Myers, & Schrim (1999)	Shapiro et al. (1986)
Program Goals	To improve the educational and occupational potential of low-income high school students.	Help prepare disadvantaged high school students for college	To improve academic achievement, career maturity, intention to remain in school during the current year, and intention to graduate.
Target Population	Low-income, average-performing high school students who were in their junior year.	High school students aged 13 to 19 (who have completed the eighth grade) from low-income families or who would be the first in their family to attend college.	Urban, at-risk, low-income, low-achieving students aged 14-16, who are at high risk for dropping out of school.
Duration and Dosage	The intervention was implemented across 24 sites, so duration and dosage varied.	6 weeks per summer for up to 4 summers (240 hours per summer).	6-8 weeks, 7 days per week, residential (336-448 hours).
Intervention Description	Intervention includes a paid work/study program, job training, workshops, and courses (in Algebra, English, Geometry, Public Speaking, Reading and Life Skills). Students go on field trips to local businesses and agencies and have access to positive adult mentors in the community.	This summer residential program requires students to take college prep classes in math, laboratory science, literature, composition, and foreign language and other subjects are optional. They also receive academic, financial, or personal counseling, tutorial services, mentoring, participate in academic programs and cultural events. They also receive other college preparatory assistance. Finally, they participate in work study positions.	Intervention components are: (a) academic instruction: two hours of literacy and two hours of math per day; (b) 20-hour/week job placement; (c) counseling; and (d) recreational activities.
Select Impacts	• Increased college enrollment (53% percent of experimental versus 49 percent of control group; p<.05) • Increased the length of stay in college by little over a half a month (p<.05) • Did not increase employment rates over time	• Students with low educational expectations were more likely to attend a postsecondary school 7-9 yrs after scheduled graduation • Increased college employment, hours per week worked in college, receipt of personal counseling and tutoring, and use of skills centers	• Decreased the rate of reading comprehension loss • Increased students' math computation, concepts and applications • Increased high school completion

Table 5: Experimentally-Evaluated Programs with Mixed or Null Findings

	Teach Baltimore (for children)	Voluntary Summer Reading Program (for children)	KindergARTen Sumer Camp (for children)
Reference	Borman & Dowling (2006); Borman, Overman, Fairchild, Boulay, & Kaplan (2004).	Kim (2006)	Borman, Goetz, & Dowling (2007)
Program Goals	To prevent summer learning loss and promote academic achievement.	To improve reading achievement scores	To boost reading achievement among low-income children
Target Population	Low-income students in kindergarten and first grade.	Fourth grade voluntary student participants in 10 schools	Urban, low-income, students exiting Kindergarten.
Duration and Dosage	8 week program, instruction (including breakfast and lunch times) lasts 6 hours per day, 5 days per week (240 hours)	12-13 weeks. Dosage is unknown because children choose how often to read the books that are mailed to them and they may or may not read the book that is mailed.	6 weeks, 5 days per week, 7.5 hours per day (225 hours)
Intervention Description	Three intensive hours of instruction on reading and writing through read-aloud/think-aloud activities and phonics-based instruction (Open Court curriculum). This is followed by physical activities (20 minutes per day), hands-on math and science projects, educational games, recreational activities, arts and crafts, and enrichment activities, such as science investigations, foreign language, music and drama, and arts and crafts.	Instructor-led, reading lessons in June. 8 books mailed to students biweekly, during the months of July and August. Students were encouraged to practice oral reading with a family member and practice reading strategies during independent, silent reading sessions.	Four days per week, almost 3 hours per day (160 minutes) are devoted to building literacy skills and 1 hour and 20 minutes per day is spent on science and art activities. Fridays are usually reserved for field trips.
Select Impacts	• Improved reading achievement but impacts were not statistically significant • Improved learning across three literacy domains for students who attended at an above average rate across at least 2 of the 3 summers.	• Improved black students' reading scores, but not white, Latino, or Asian students' scores. • No significant impacts on oral fluency • Higher effect sizes (ESs) for reading achievement were found for students owning fewer than 100 books and for students with reading fluency below national norms. However, ESs were still small.	• Improved word list scores (a small effect size of .27) • Improved Developmental Reading assessment scores (a small-to-medium effect size of .40) • Did not improve phoneme segment skills, letter naming skills, or dictation skills.

Table 5 continued: Experimentally-Evaluated Programs with Mixed or Null Findings

	Summer Career Exploration Program (SCEP) (for teens)	Summer Training and Education Program (STEP) (for teens)	Interactive Strategy Trainer for Active Reading and Thinking (i-START) (for teens)
Reference	McClanahan, Sipe, & Smith (2004)	Walker & Vilella-Velez (1992a; 1992b)	McNamara & O'Reilly (2006)
Program Goals	Demonstrate the importance of academic achievement to achieve career success	To minimize academic loss, and prevent high school dropout and pregnancy	To improve reading comprehension.
Target Population	High school students (who have completed Grades 10 -12). The program is open to teenagers who come from families with incomes less than 150% of the federal poverty level.	Low-income upcoming eighth and ninth graders of color performing below grade level.	Sample was low-income, suburban students enrolled in a summer learning program called Learning Bridge, who had just completed Grades 7 and 8.
Duration and Dosage	40 hours per week, for 6 weeks (240 hours). Students may participate in the program for up to three summers.	35 hours per week for 6 weeks (208-228 hours) over two summers. Remediation-90 hrs; PT work-90 hrs; Life Skills-18 hrs; & in-school support-10-30 hrs.	Two sessions on two consecutive days (Mean=104 minutes) –53 minutes of which are spent on practice.
Intervention Description	All students undergo pre-employment training consisting of 1) "soft skills"; 2) interview skills; 3) career choice; 4) maintain a job; 5) demeanor; 6) job readiness; and 7) work place behavior. Student's 25-hour per week work placement is matched with their interests. College monitors serve as role models and provide personal and academic support for students.	Remediation in reading and math skills using computer assisted instruction for part of the lesson, part-time summer work, life skills teaching issues such as sexual behavior, drug use, careers, and community involvement.	i-START is instructional software that can be delivered as part of a summer learning program. It uses animated agents to teach reading strategies for understanding science text. Short tests are given after each strategy has been taught. The software provides students with feedback on performance.
Select Impacts	One year after application to the program, the program: • increased enrollment college-track curricula and visits to a College Center but it did not increase class effort, types of courses elected in high school, the likelihood to graduate, and the likelihood of taking a college entrance exam. • increased confidence in ability to teach or hold a job that requires reading and writing and increased likelihood of school-year employment school year by their summer employers , but they were not more likely to report other career development outcomes.	• At post-test, program increased reading and math grades and contraceptive knowledge, but these impacts were not sustained. • No short- or long-term impact on sexual activity, pregnancy, & contraception use, nor on rates of high school dropout, college attendance (except for Latinos), employment, and welfare receipt.	• Increased comprehension of text-based questions for teens with low prior knowledge of reading strategies • Increased comprehension of bridging–inference questions for teens with high prior knowledge of reading strategies

Appendix C

Lessons from Youth Development Research and Evaluation
Kristin Anderson Moore, Ph.D., Child Trends, April 2008

- At-risk children and youth can be helped by programs; while program impacts are often modest and brief, many programs have been found to have positive impacts.

- Early intervention, including the preschool years, is ideal, but many approaches are effective for older children and youth as well.

- Positive relationships with caring adults are key to feeling connected to a program. This requires committed staff and low staff turnover.

- Didactic lectures increase knowledge but are not very effective at changing behavior. Interactive approaches are more effective.

- Programs that help young people address their own positive goals are more likely to engage adolescents than are programs that focus on suppressing problem behaviors.

- Peer influences are important and are typically positive, and peer leaders can be effective.

- For disadvantaged youth, multi-element programs that are more intensive and long-lasting and address the whole person are promising. However, brief interventions can be effective when they target a specific goal, such as using condoms.

- Some approaches don't work. Short "shock" approaches such as *Scared Straight* are not effective. Also, among delinquents, groups comprised entirely of delinquents are not an effective approach. While mentoring is an effective approach, it appears that brief mentoring may be harmful.

- Engagement of "disinterested" eligible participants and attendance and retention of at-risk individuals represent major challenges to programs.

- Successful programs are safe, accessible, structured yet flexible, provide incentives and rewards such as snacks, and keep parents informed and, if possible, involved. Staff are well-trained and supported and are focused on the needs and development of the children or youth. Successful programs generally have a logic model that guides their work and they know the outcomes they are targeting, either directly or indirectly.

- The STRIDES framework guides Child Trends' Research to Results work:
  Sequencing age appropriate strategies
  Targeting program activities and participants
  Revising and improving programs
  Implementation quality
  Disseminating widely
  Evaluating programs, and
  Sustaining strong programs

  Please visit our websites @ www.childtrends.org and www.childtrendsdatabank.org

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