Expanding Time for Learning Both Inside and Outside the Classroom: *A Review of the Evidence Base*

Executive Summary

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Education in Context

The educational achievement and attainment of young people in the United States has been a long-standing issue of concern. While analyses of long-term trend data from the National Assessment of Educational Progress (NAEP)[i] show that students in the United States have made gains in reading and mathematics over the past few decades, a sizeable proportion of students in this country fail to demonstrate mastery of basic reading and writing skills, lack knowledge about U.S. history or geography, and perform at below-basic levels in mathematics and the sciences.[ii]

Moreover, despite the gains in educational achievement made by most U.S. students over the past two decades, educational gaps in proficiency in reading and other subjects persist across income and racial groups. In addition to the achievement gap,[iii] widespread differences persist in the levels of educational attainment across racial/ethnic and income groups.[iv] These differences are highlighted in a recent report that presents national, state, and local data on graduation rates for males in the United States. The report found that the overall graduation rate for black male students attending public schools in the 2007-2008 school year was 47 percent, compared with 78 percent for their white male counterparts.[v] Another report presents results of a similar analysis of high school graduation rates in cities. That report provides evidence of an urban-suburban "geographic" gap, with an 18 percentage-point difference found between the on-time high school graduation rates of public school students in urban districts in comparison to public school students in suburban districts.[vi] The same report cited an analysis of graduation rates by racial and ethnic background for public school students

in the 2004-2005 school year, which found that Native American, Black, and Hispanic public school students had four-year graduation rates ranging from 50 to 58 percent, with students from each group graduating at rates well below the national average of 71 percent.

Educators and others have identified multiple reasons for such gaps in student achievement and attainment. Some have pointed to the historically uneven access that young people from different backgrounds have to quality schools. Others point to different levels of resources available to children at home and through quality programs that can promote student learning outside of school and in the home.

Why Education Matters

One of the more obvious reasons that education matters is the well-documented link between a person's educational status and his or her economic well-being. According to the U.S. Department of Education's *Condition of Education 2010* report, higher levels of educational attainment are consistently found to be related to higher earnings. For instance, the report notes that the median earnings for young adults ages 25-35 with a bachelor's degree who were employed full time was $46,000; by comparison, the median earnings for young adults employed full time was $30,000 for those with a high school diploma or an equivalency degree, and $23,500 for those without a high school diploma or an equivalency degree.[vii]

Furthermore, numerous studies have found that the benefits of education extend beyond the improved economic well-being for individuals and into other areas. Research conducted by economists and other scholars documents the high public and private costs of high school dropout as well as the societal and private economic and noneconomic benefits of attaining higher levels of education.[viii] For instance, studies have shown that greater educational attainment is related to reduced involvement in crime and the criminal justice system, improved health outcomes, and higher rates of civic participation.[ix]

Funding and Policy Context

President Obama has voiced support for expanded learning as a means to help promote achievement and "even the playing field" between the United States and other nations. U.S. Secretary of Education Arne Duncan has been a particularly strong advocate for this approach. He has been quoted as saying, "I think the school day is too short, the school week is too short and the school year is too short…You look at all the creative schools that are getting dramatically better results. The common denominator of all of them is they're spending more

time…" (April 15, 2009). In his previous position as chief executive officer of the Chicago Public Schools, Duncan promoted the growth of the city's community school models and other school-based and out-of-school time (OST) models that support learning beyond the typical school day and into the after-school hours, weekends, or summer months.

Beyond expressing support for expanded learning time, the new federal efforts to improve education have elevated the importance of innovations that test and evaluate various education reforms, including those that increase learning time. Below is a short summary of a few funded education programs and policies that seek to expand learning opportunities by increasing the time available for students to learn.

- Through the American Recovery and Reinvestment Act of 2009 (ARRA), the Race to the Top[x] competition emphasized the federal government's interest in creating opportunities to increase learning time. For instance, Priority 6 of the award notice invited potential grantees to engage community partners to expand learning opportunities offered by schools, to engage families to support student learning, and to implement "new structures and formats for the school day or year that result in increased learning time." Each of the 10 phase II winners of the Race to the Top competition responded with a combination of proposed innovations and reforms to expand learning time, with seven of the 10 proposing to implement expanded learning day models; seven proposing expanded year models; six proposing summer programs; seven proposing after-school programs; and two proposing full-day kindergarten.

- In the background materials for applicants to the Investing in Innovation (i3) Fund[xi] and the Promise Neighborhoods,[xii] efforts to expand learning time implemented through school-based and out-of-school time models are noted as one of several reform strategies eligible for funding.

- The new ARRA programs use a broad definition of expanded learning that includes models that extend the school day, extend the school year, or that support learning beyond the regular school day, such as through community school programs, before- and after-school programs, weekend programs, and summer learning programs.

- The federal government has shown increased support for programs designed to expand learning opportunities outside of school and to provide supports for working parents. This commitment is most clearly illustrated through an examination of the rapid growth in funding for after-school and summer programs through the 21st Century Community Learning Center (21st CCLC) program. Since its inception in 1996, the program has expanded from an allocated budget of less than $1 million to an allocated budget of

more than $1 billion. 21st CCLC funds are now able to be used flexibly, through waivers, to support different types of expanded learning, including extended school day and extended school year models.

- The Supplemental Educational Services (SES) program provides free academic remediation help through tutoring and other activities. SES programs generally provide extra time for learning outside of the regular school day for disadvantaged students from Title 1 schools that serve predominantly low-income students.

- In September 2011, Secretary Duncan invited states to apply to receive waivers to specific requirements of the No Child Left Behind Act of 2001 in exchange for rigorous and comprehensive state education plans. Through this process, states may request the flexibility to allow districts to use 21st CCLC funds for extended school day or year initiatives. Similarly, districts may also use Title I funds previously set aside for SES tutoring or professional development for expanded learning initiatives, such as after-school or summer learning.

Given the current policy and funding context, along with the widespread implementation of different types of expanded learning time (ELT) programs, it is important to determine whether a solid body of research exists to support these initiatives or whether the implementation of ELT programs has outpaced the evidence of their impact.

About This Report

A Systematic Review of the Evidence

This report synthesizes what is known about the effectiveness of school and program interventions that aim to address deficiencies and inequities in academic achievement and attainment by expanding learning opportunities for students both inside and outside of school.

This report is based on an extensive review of more than 80 evaluation studies of different models for increasing learning time, including extended school day (ESD) models that aim to improve student learning outcomes by adding more hours to the school day; extended school year (ESY) models that add more days to the school year; and expanded learning opportunities (ELO) models that provide educational and enrichment services in school-based and community-based settings during nonschool hours.

In addition, studies that met the following additional criteria were included in the report:

- evaluations using random assignment, quasi-experimental, or nonexperimental designs;

and

- evaluations that examined, using statistical tests, whether the program was effective in increasing academic achievement or educational attainment outcomes, among others.

Typology of Expanded Learning Time Models

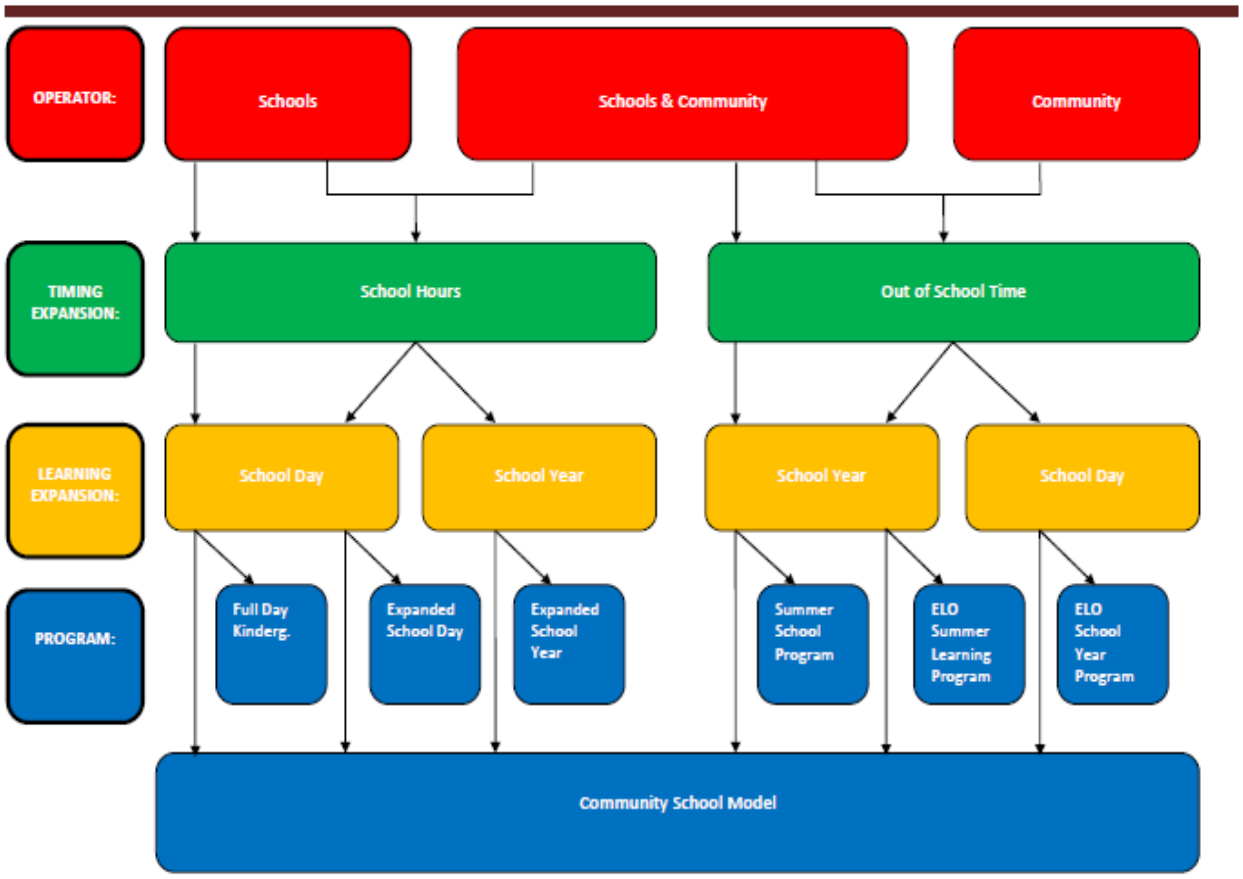
This report reviews the effects of three different types of expanded learning time (ELT) models for children and youth in grades K-12. Figure 1 describes and defines the different types of ELT models.

Figure 1: Types of Expanded Learning Time Programs
Extended School Day (ESD) program models: • lengthen the school day beyond the standard 6.5 hours offered in most public schools in the United States.   ○ **Full-Day Kindergarten** programs are categorized in this report as extended school day models because much of the research on full-day kindergarten focuses on its differential effects, as compared with half-day kindergarten.
Extended School Year (ESY) program models: • lengthen the school year beyond the standard 180 school days offered in most public schools in the United States.

Expanded Learning Opportunities (ELO) program models:
• provide academic and other learning supports to young people and their families during or outside of schools or outside of regular operating school-day hours (often to supplement in-school learning). In some cases, ELO programs are social intervention programs that may offer services during the school day as well as outside of the school day. ELO models may be school-based, community-based, or they may provide additional supports for student learning in varied locations both during and outside of school, including students' homes.
  ○ Examples of ELO programs include academic-oriented social interventions that provide services through before- and after-school programs, summer learning and summer school programs,[xiii] weekend programs, youth development programs, service learning programs, vocational programs, academic-oriented mentoring programs, multi-service programs, and multi-component programs that provide a large range of youth development and prevention services to young people.
  ○ **Community School Models** also fall under the ELO category because of their focus on partnering with community organizations and extending the hours of operation to offer academic and other services and supports for students and their families.

Figure 2 graphically depicts differences and similarities among the various types of ELT models. For instance, the chart shows that Community School Models can be operated by schools and community-based organizations, during school and out-of-school time hours. In terms of their mode of learning expansion, Community School Models might offer extended school days or years, and they may also offer out-of-school services during and beyond the school year. In contrast, summer school programs can be operated by schools and community organizations during days that are typically outside of the traditional school year. These programs involve the expansion of school-year learning, as opposed to expansion of the school day.

Figure 2. ELT Typology



Key Findings

Extended School Day Models

Extended school day (ESD) models incorporate additional instructional time into the traditional 6.5 hour school day offered in most schools in the United States. In most cases, this approach entails the expansion of instructional time across classes, or the addition of classes or programs that supplement an existing course in a core academic area, such as intensive tutoring or small-group study sessions for math or English/language arts. In some cases, the extra time is used to expand noncurricular offerings, such as arts and sports activities, that many schools have elected to cut in order to provide additional instructional time to improve student test scores.

Below is a summary of key findings based on our review of evaluations focusing on ESD program models.

Outcome Study Findings:

- The majority of studies that have examined ESD program outcomes indicate that the programs are positively related to improved student outcomes, but these studies focus mostly on models that bundle ESD with other reforms, such as the Knowledge is Power Program (KIPP).
- The available research is not clear about whether or not gains in test scores are a direct result of an extended school day component within these school reform models.
- ESD programs seem to benefit students who are at increased risk of academic failure or dropout.
- There is no evidence that these programs seem to benefit students in a specific age group.
- Participation in full-day kindergarten (FDK) has a significant, positive effect on the acquisition of reading and math knowledge during the kindergarten year, compared with participation in half-day kindergarten.
- However, the positive achievement gains made by FDK participants rapidly dissipated over time; in fact, no study found significant, positive impacts of FDK beyond first grade.
- Strong academic gains were shown in FDK classes with high proportions of minority students.

Implementation Study Findings:

- ESD studies seem to suggest that the quantity and use of time is important in

predicting student outcomes.

- ESD models appear to be more effective when they allow for greater academic engagement.

Extended School Year Models

Extended school year (ESY) programs typically operate on a longer academic school-year calendar than the traditional 180-day calendar used by most schools in the United States. However, significant variation exists across states and districts in their policies affecting public schools, including requirements about the minimum length of the school year or mandated start-dates or end-dates for public school districts. As a result, the actual number of days in which school is open varies somewhat across states and districts, which have experimented with different school reforms over the past several decades, including reform efforts involving the expansion of the school day or year.

Below is a summary of key findings based on our review of evaluations focusing on ESY program models.

Outcome Study Findings:

- Most of the studies found that attending a school with a longer school year is associated with at least one positive achievement outcome, usually as measured through test scores.
- While evaluations of ESY models do not *consistently* show that programs are more likely to be associated with students' improved academic outcomes in math or reading, a few studies suggest that programs may be more effective when targeting elementary school students (rather than secondary school students) and young people with higher levels of academic risk (rather than young people with lower levels of academic risk).
- Results from one study suggest that being in a school that operates on an extended year calendar is associated with improved science achievement, whereas another study found no such connection.
- Two studies found that being in a school with a longer school year is associated with improved academic outcomes in the communication arts.
- Two studies that examined whether kindergarteners would benefit from attending an extended school year both found short-term effects that faded out over the summer, a conclusion that mirrors the findings reported in the section on Full-Day Kindergarten.

Implementation Study Findings:

- Findings from multiple studies suggest that program implementation and quality are important predictors of whether an ESY program will be effective.
- A number of studies find that ESY programs can be challenging to operate. Several reports point to the higher costs associated with implementing ESY programs. Some of these costs are related to the higher utility-bill rates associated with operating into the summer months and the need to compensate teachers and staff adequately for the additional work hours.
- It is important to take into account the perceptions of teachers, students, and parents when implementing ESY models. Initiatives that were implemented without the buy-in and support of these key stakeholders were not found to be successful.
- Studies show that schools operating using extended year-round models may be more effective when they make use of intercession time to target students who need the extra time the most.

Expanded Learning Opportunities Models

Expanded learning opportunities (ELO) models provide educational supports as well as enrichment and recreational opportunities to young people and their families during nonschool hours. For the purposes of this review, ELO models include a wide range of social interventions. They may school-based or community-based, but they must provide at least one academic component that targets student learning outcomes.

Below is a summary of key findings based on our review of evaluations focusing on ELO program models.

Outcome Study Findings:

- Impacts varied considerably across the evaluated programs, but the review found that ELO programs have the *potential* to positively impact a range of educational outcomes.
- Overall, the ELO programs included in this review tended to be more effective in improving predictors of academic achievement, such as educational expectations and scholastic behaviors, than in improving academic achievement outcomes.
- The ELO programs included in this review were more often than not effective in improving scholastic behaviors, such as academic skills, homework completion, and study habits.

- The ELO programs included in this review varied in their effectiveness in improving school engagement and attendance.
- While some ELO programs were able to improve academic achievement outcomes, it was not common for experimentally evaluated programs to produce consistently positive and lasting improvements in academic achievement.
- Programs varied in their effectiveness in improving educational attainment outcomes, with some studies finding impacts only on students who were at higher levels of initial academic risk.
- In studies that examined subgroup effects, findings suggested that effects were larger and stronger for lower-income students, lower-performing students, and students in other more disadvantaged subgroups.

Implementation Study Findings:

- Several of the programs that were ineffective in improving most of the outcomes that they examined suffered from low participation rates. This situation was especially true for some of the after-school programs that provide primarily academic and recreational activities.
- Programs that were of low quality or that were poorly implemented tended to be less effective.

Implementation studies of ELO models document a number of program quality features that seem to be common across more effective programs. For example, such programs:

- Hire qualified, committed staff. High staff turnover rates can lead to inconsistency in programming or can be harmful if students bond with staff members who then disappear from their lives.
- Are intentional and focused, such as programs that follow a manual or that use a curriculum.
- Provide individualized attention to students through tutoring or mentoring.
- Use senior directors and staff to conduct observations regularly to ensure that programs are operating with quality.
- Are highly targeted and provide age-appropriate programming.
- Provide a certain amount of structure and are clear about expectations of participants.
- Use culturally appropriate materials.
- Monitor performance.

An important caveat: Our assessments of the potential effectiveness of ESD, ESY, and ELO models were based on the best available evidence for each type of program. It may be tempting to try to compare the findings for the ESY, ESD, and ELO program model types.

However, it is important to recognize that the findings for the ELO program models—which appear to be less promising than those reported for the ESD and ESY models—are based on a higher evidence standard than that used for the ESD and ESY models, given the availability of experimental evaluations of ELO program models.

Common Study Limitations

Despite the growing popularity of ELT programs, there is a shortage of evidence showing clear links between ESD, ESY, and ELO programs and positive academic outcomes for students in grades K-12. There are several reasons for this dearth of information.

- Few studies have examined whether a longer school day or year positively impacts academic performance using rigorous experimental or quasi-experimental methods. Establishing whether extending the school day or year is the cause of improved academic outcomes is challenging without an experimental evaluation design. Unfortunately, based on the studies that we have been able to identify, most of the evidence base for ESD and ESY programs is derived from nonexperimental research. The majority of studies on this subject have relied on pre-test, post-test analyses or evidence that can only identify a *correlation* between ESD and ESY programs and academic outcomes.
- The specific effects of extending the school day or year are also difficult to ascertain because of what some researchers have called the "packaging" of ESD and ESY initiatives with other types of school reform. Schools that serve a substantial percentage of academically and economically disadvantaged students are more likely to adopt ESD and ESY programs as one component of a broader school improvement plan.
- The vast majority of studies that we examined, especially the evaluations focusing on ESD and ESY programs, focused solely on academic outcomes, particularly standardized test scores. While performance on standardized tests is obviously a key outcome of interest to stakeholders and is easy to compare across schools, other key outcomes that are related to academic performance should also be examined. Among these outcomes are school attendance, on-time promotion, scholastic behaviors, school discipline problems, and attitudes towards school.
- Many evaluations of ESD and ESY programs do not specify how the additional time is used. An extended school day may not always translate into more instructional time or more time for students to spend engaged actively in learning than is the case with a traditional school day. As a result, it can be difficult to determine the effects of such programs or to compare the results of an ESD or ESY program across schools.

- Many of the studies, particularly the ELO studies, are based on small samples and when comparison groups are used, they are not often matched. Furthermore, many of the studies provide no baseline information and report on end-of-program results only.
- Some studies rely solely on retrospective reports of outcomes and do not use multiple measures, multiple reporters, or administrative data to test different outcomes.
- Many of the studies are short in duration and therefore do not provide information about long-term outcomes.
- Most of the ELO studies are for geographic-specific programs that target narrow populations, so the general application of findings may be limited.
- A final limitation that is commonly found in the literature focusing on ELO programs is that these programs often suffer from low participation levels, which results in studies that experience high attrition or study dropout rates.

Future research efforts should be designed to address these study limitations.

Conclusions

This review highlights several key findings about programs designed to increase learning for children and youth through longer school days, longer school years, and programs that expand learning opportunities during and into the out-of-school time hours. We reiterate these findings below:

- While the evidence base for ESD and ESY models is quite thin due to the lack of well-designed, rigorous studies focusing on their effectiveness, the available evidence suggests that schools implementing longer school days and longer school years can be effective in raising academic performance, as indicated by test scores.
- However, more research is needed focusing on the unique effect of the longer school day or longer school year over and above other school features and reform efforts. A better understanding of the circumstances under which extended learning time is beneficial is critical, primarily because the findings in the literature indicate that simply adding time is insufficient. A number of possibilities exist for why more time is helpful. It could be that students need more time to engage actively in academic activities, in which case, one would want to avoid ELT approaches that focus primarily on teacher instruction and downplay interactive learning. It could also be that more time in the classroom provides greater opportunities for teachers and students to interact, allowing teachers more opportunity to understand and respond appropriately to a greater number of students in their classroom. Understanding the pathways through which the additional time might be useful will be helpful to educators and policymakers interested in implementing these approaches.

- Because it is difficult to know if findings result from "selection" effects associated with the characteristics of participants who voluntarily choose to attend a certain school or participate in a certain program or from the program itself, more well-implemented, randomized experimental studies are needed.
- Evaluations of extended learning opportunities suggest that they are more effective in improving psychological indicators of educational adjustment that are precursors to educational achievement, such as educational expectations. Although some ELO programs have been found to be effective in improving academic achievement and educational attainment outcomes, most of the programs that targeted and measured these outcomes had no impact.
- ESD, ESY, and ELO programs have all shown positive effects for low-income, low-performing, ethnic minority or otherwise disadvantaged students.
- Program implementation and quality matters. Schools and programs that are well-implemented, that attract strong participation, and that are of high quality tend to have positive effects, while those that suffer from poor implementation have no effects or even negative effects on children and youth.
- Although very few of the studies included in this review provided information on effect sizes, among those studies that did, effects for significant findings ranged mostly from small to moderate. Based on information about percentage-point differences found between students participating in extended-learning schools or programs and comparison students, some models had effects that were medium in size.[xiv]

[i] Rampey, B.D., Dion, G.S., and Donahue, P.L. (2009). *NAEP 2008 Trends in academic progress* (NCES 2009–479). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, D.C. Retrieved from http://nces.ed.gov/nationsreportcard/pdf/main2008/2009479.pdf

[ii] U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. National Assessment of Educational Progress (NAEP) Assessments. Retrieved from http://nationsreportcard.gov/about.asp

[iii] U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. *The Nation's Report Card 2009: National Assessment of Educational Progress at grades 4 and 8. NCES 2010-458. Retrieved from http://nces.ed.gov/nationsreportcard/pdf/main2009/2010458.pdf*

[iv] Aud, S., Fox, M., and KewalRamani, A. (2010). *Status and trends in the education of racial and ethnic groups* (NCES 2010-015). U.S. Department of Education, National Center for Education Statistics. Washington, DC:U.S. Government Printing Office. Retrieved from http://20.132.48.254/PDFS/ED510909.pdf

[v] Holzman, M. "(2011). Yes we can: The 2010 Schott 50 state report on public education and black males." Schott Foundation for Public Education. Retrieved from http://www.blackboysreport.org/bbreport.pdf

[vi] http://www.americaspromise.org/~/media/Files/Resources/CiC09.ashx

[vii] U.S. Department of Education, National Center for Education Statistics. (2010). *The condition of education 2010* (NCES 2010–028).

[viii] Levin, H., Belfield, C., Muennig, P., & Rouse, C. (2006). *The costs and benefits of an excellent education for America's children*. Working Paper. New York, NY: Columbia University.; Oreopoulos, P. (2006). Estimating average and local average treatment effects of education when compulsory schooling laws really matter. *The American Economic Review, 96*(1), 152-175.; Barrow, L., & Rouse, C. (2005). Do returns to schooling differ by race and ethnicity? *The American Economic Review, 95*(2), 83-87.; Rouse,

C. (2005). *The labor market consequences of an inadequate education*. Unpublished Manuscript. Princeton, NJ: Princeton University and the National Bureau of Economic Research.; Kane, T. J., & Rouse, C. (1995). Labor-market returns to two- and four-year college. *The American Economic Review, 85*(3), 600-614.; Kane, T. J., & Rouse, C. (1999). The community college: Educating students at the margin between college and work. *The Journal of Economic Perspectives, 13*(1), 63-84.; Card, D., & Lemieux, T. (2001). Can falling supply explain the rising return to college for younger men? A cohort-based analysis. *The Quarterly Journal of Economics, 116*(2), 705-746.; Miller, P., Mulvey, C., & Martin, N. (1995). What do twins studies reveal about the economic returns to education? A comparison of Australian and U.S. findings. *The American Economic Review, 85*(3), 586-599.

[ix] Grossman, P. (2005). Research on pedagogical approaches in teacher education. In M. Cochran-Smith & K. M. Zeichner (Eds.), *Studying teacher education: The report of the AERA panel on research and teacher education*. Mahwah, NJ: Lawrence Erlbaum Associates Inc.; Lochner, L., & Moretti, E. (2004). The effect of education on crime: Evidence from prison inmates, arrests, and self-reports. *The American Economic Review, 94*(1), 155-189.; Miller, P., Mulvey, C., & Martin, N. (1995). What do twins studies reveal about the economic returns to education? A comparison of Australian and U.S. findings. *The American Economic Review, 85*(3), 586-599.

[x] U.S. Department of Education. (2009, November). Race to the Top executive summary. Retrieved from http://www2.ed.gov/programs/racetothetop/executive-summary.pdf

[xi] Investing in Innovation Fund Federal Register Final Rule and Notice. Retrieved from http://edocket.access.gpo.gov/2010/pdf/2010-5147.pdf

[xii] Synopsis of Promise Neighborhoods program retrieved from http://www.grants.gov/search/search.do?mode=VIEW&oppId=54287

[xiii] With the release of multiple literature reviews focusing on the effects of summer school and summer learning programs, findings for summer programs are not covered extensively in this review on ELT programs. For more information about summer learning programs, please see McCombs, J., Augustine, C., Schwartz, H., Bodilly, S., McInnis, B., Lichter, D., Cross, A. (2011). Making summers count: How summer programs can boost children's learning. Arlington, VA: RAND Corporation. Retrieved from http://www.wallacefoundation.org/knowledge-center/summer-and-extended-learning-time/summer-learning/Documents/Making-Summer-Count-How-Summer-Programs-Can-Boost-Childrens-Learning.pdf and Terzian, M. Moore, K., & Hamilton, K. (2009). Effective and promising summer learning programs and approaches for economically disadvantaged children and youth. Washington, DC: Child Trends. Retrieved from http://www.wallacefoundation.org/knowledge-center/summer-and-extended-learning-time/summer-learning/Documents/Effective-and-Promising-Summer-Learning-Programs.pdf.

[xiv] Because measures of the strength of effects (effect sizes) were not commonly or consistently reported across the set of evaluations, this review focuses largely on the patterning and consistency of outcomes. However, the issue of magnitude of effects is addressed to the extent possible in this report. Cohen (1988) offered guidance for interpreting effect sizes in order to estimate their practical significance. When comparing two groups, he recommended that an effect size of 0.20 should be considered "small," an effect size of 0.50 be considered "medium," and an effect size of 0.80 be considered "large." According to Cohen, these guidelines are somewhat arbitrary and are, therefore, most useful when no other standard is available for understanding the magnitude of an effect. Over the past decade, further work has explored the issue of interpretation of effect sizes in education research and in social experiments more broadly. Bloom and colleagues (2008) articulate the importance of assessing the size of an effect within the context of other key pieces of information, including the effect sizes found for similar interventions, the effect sizes found on outcomes of interest, and the normative range of expectations, such as the amount of growth that might normally be observed in test scores over a certain period of time. Konstantopoulos and Hedges (2005) also stress the importance of evaluating school-level effects within the normative distribution that is expected.