

Time and Learning in Schools: A National Profile

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Calling it “the unacknowledged design flaw in American education,” the 1994 National Commission on Time and Learning explained that the fairly rigid and relatively short American school day and year “will frustrate our aspirations” for universal educational excellence. The Commission argued forcefully that unless students and teachers are provided more time in school, many will simply be unable to reach our high expectations for educational achievement.

While the Commission report may have been largely forgotten, over the last several years, more and more policy-makers have implemented initiatives to support the expansion of school time well beyond what we now consider the conventional. Likewise, an increasing number of practitioners have either established new or converted existing schools to ones with considerably more time than the norms that have been in place since the early 20th century.¹

In the midst of this movement to break from the standard, and as a follow up to [our report](#) on school time trends in the United States published in 2011, we consider two questions:²

1. What do the standard school day and year in America look like today?
2. As efforts to build in more school time have intensified, have there been changes in the amounts of time students are required to spend in school?

To answer these questions, the following report presents findings from analysis of the Schools and Staffing Survey (SASS), the only nationally representative data source available for identifying variations in time across schools. We include data from both the most recent administration (2011-12 school year), as well as comparisons to data from three previous administrations of the survey (99-00, 03-04, and 07-08). SASS is conducted by the National Center for Education Statistics of the U.S. Department of Education.

The School Year and Day

SASS asks school principals to report the start and end time of their school day, as well as the number of instructional days in the school year. Based on their responses, we found that:

- Among non-charter public schools, over the last 12 years, there has been little change in the number of instructional days in the school year, with the average remaining constant at 179 days per year. Further, there is little deviation from this mean, with only four days separating schools in the 25th and 75th percentiles. (Figure 1.1)
- In 2011 – 12, the average length of the school year for charter schools was 180 days, as it has been for the last dozen years. Among charter schools, too, only a few days separate schools in the 25th and 75th percentiles. (Figure 1.2)
- Since the 1999 – 2000 school year, the average amount of time in the non-charter public school day has increased by about 12 minutes (0.2 hours). At both the 25th and 75th percentiles, the school day has similarly increased. (Figure 2.1)

- Since the 1999 – 2000 school year, the amount of time in the average charter school day has increased by 24 minutes (0.4 hours). The greatest growth in the length of day has taken place at the 75th percentile. (Figure 2.2)
- In the 2011 – 12 school year, the average number of annual instructional hours in non-charter public schools was about 1,209, while the average for charter schools was 1,270.³ (Figure 3.1)
- In the 2011 – 12 school year, at the 75th percentile, the typical charter school had nearly 70 more hours in the school schedule than non-charter public schools, a quantity roughly equivalent to two weeks more instructional time. (Figure 3.1)
- In the 2011 – 12 school year, among non-charter public schools, elementary schools had, on average, fewer annual instructional hours than middle and high schools. (Figure 3.2)

Figure 1.1
Number of Instructional Days per Year
Public, Non-Charter
Mean, 25th and 75th Percentiles

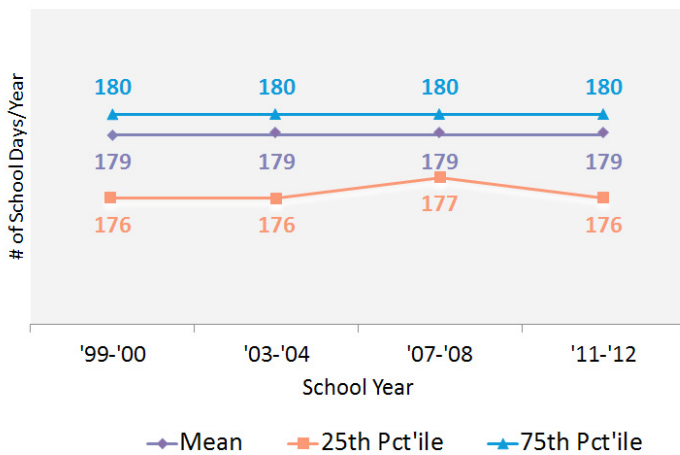


Figure 1.2
Number of Instructional Days per Year
Public, Charter
Mean, 25th and 75th Percentiles

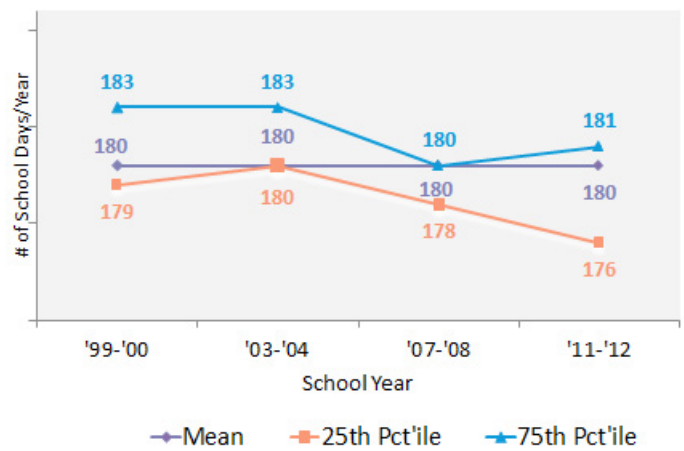


Figure 2.1
Number of Operational Hours per Day
Public, Non-Charter
Mean, 25th and 75th Percentiles

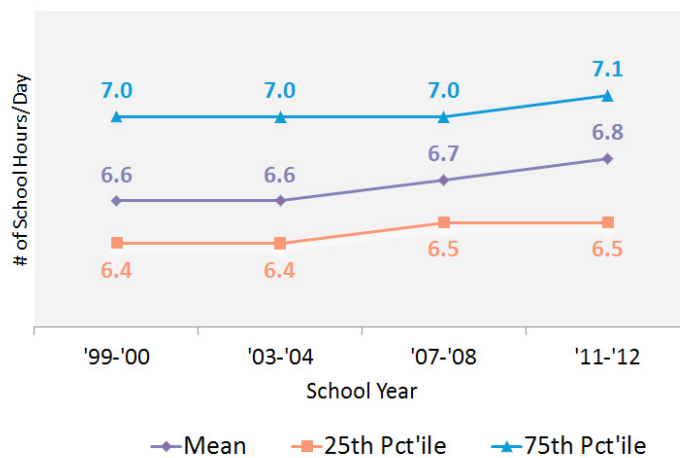


Figure 2.2
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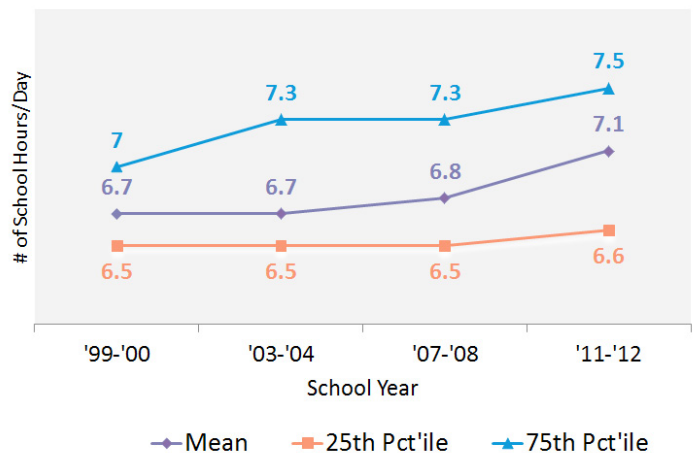


Figure 3.1

**Number of Operational Hours per Year
Public Non-Charter vs. Public Charter**
Mean, 25th and 75th Percentiles

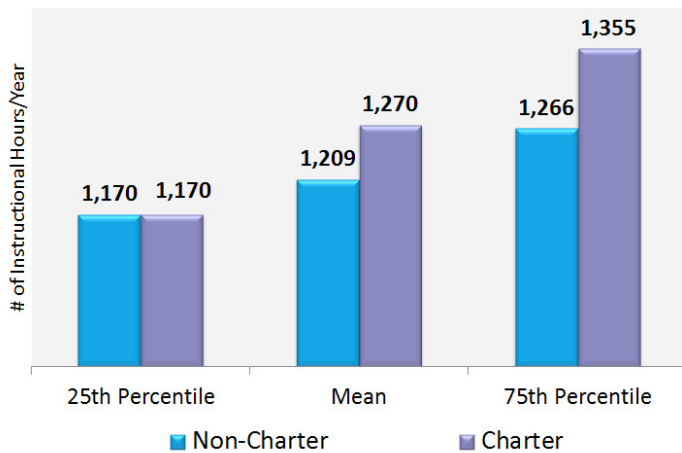
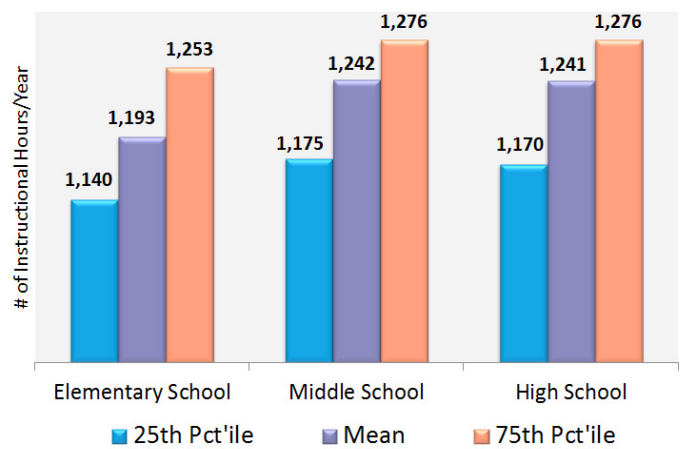


Figure 3.2

**Number of Instructional Hours/Year
By School Level, Public Non-Charter**
Mean, 25th and 75th Percentiles



Schools with Extended Days and Years

In order to better describe schools with longer days and/or years, we examined schools with seven or more daily hours, those with 181 more instructional days, or both, to identify trends among so-called “extended-time schools.” Within this sample, we found that:

- The share of non-charter public schools with seven or more hours has grown. In the 2011 – 12 school year, nearly 40 percent of public schools had a school day with at least seven daily hours, an increase of nearly 9 percent since 1999 – 2000. (Figure 4.1)
- The share of charter schools with seven or more hours has increased at an even faster pace. In 2011 – 12, nearly 65 percent of charters had a school day with at least seven daily hours, a rise of 16 percent since 1999 – 2000. (Figure 4.2)

Figure 4.1

**Percentage of Schools with At Least 7 Hours Daily
Public Non-Charter**
By Year

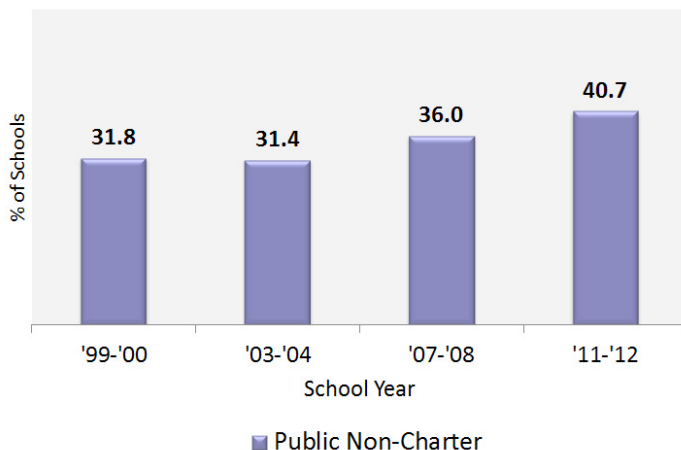
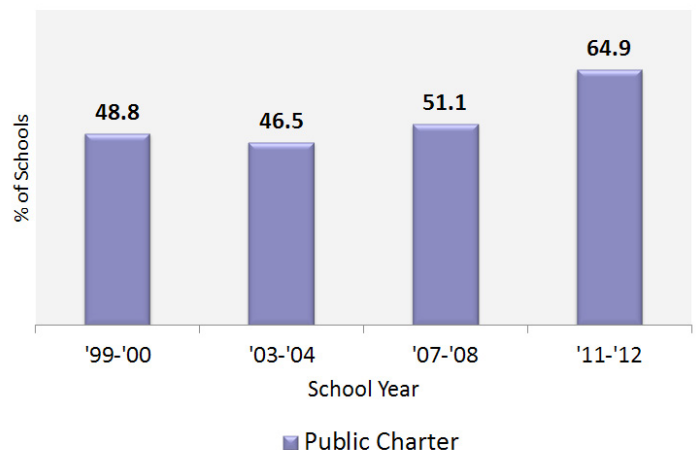


Figure 4.2

**Percentage of Schools with At Least 7 Hours Daily
Public Charter**
By Year



- Since 2007 – 08, the share of both charter and non-charter schools with days of at least 7.5 daily hours has increased somewhat, even as the vast majority of schools of both types operate with less than 7.5 hours daily. (Figures 5.1 and 5.2)
- Since 2007 – 08, the share of non-charter public and charter schools with more than 180 days has decreased slightly. (Figures 6.1 and 6.2)
- During the 2011-12 school year, non-charter public schools with a substantially longer day (at least 7.5 hours), as compared to schools with less daily time, were more likely to serve a student population that is predominantly non-white and low-income. For example, 45 percent of public schools with eight or more hours were high-minority and 41 percent were high-poverty.⁴ (Figure 7.1)

Figure 5.1

Percentage of Schools By Length of School Day
Public Charter

By Year

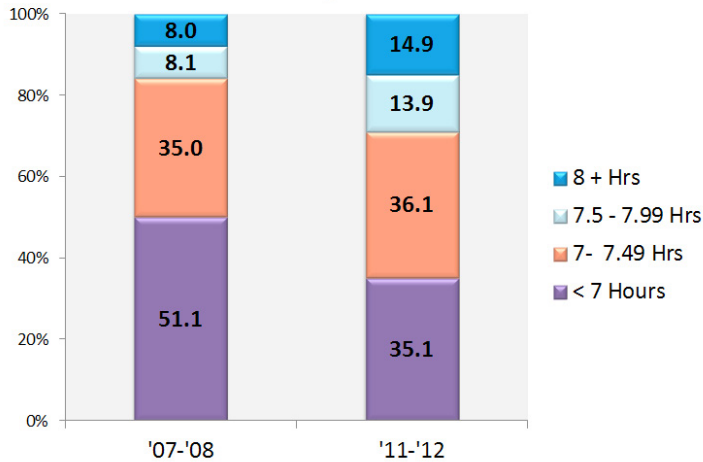


Figure 5.2

Percentage of Schools By Length of School Day
Public Non-Charter

By Year

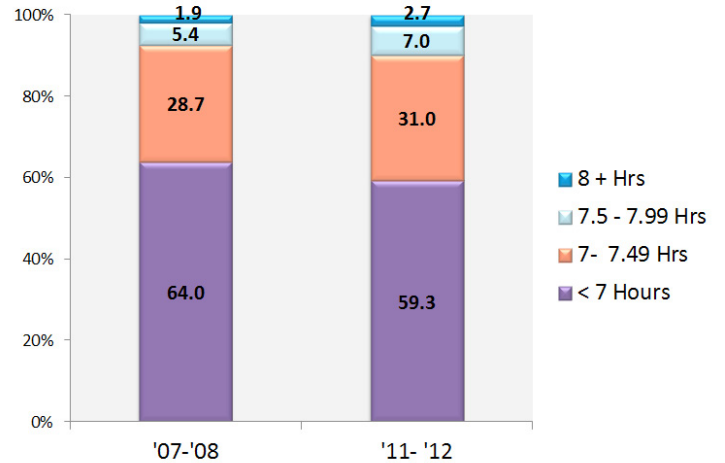


Figure 6.1

Percentage of Schools By Length of School Year
Public Charter

By Year

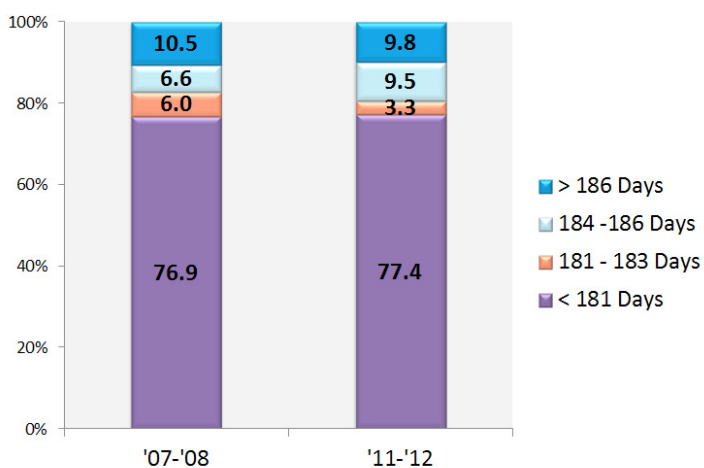


Figure 6.2

Percentage of Schools By Length of School Year
Public Non-Charter

By Year

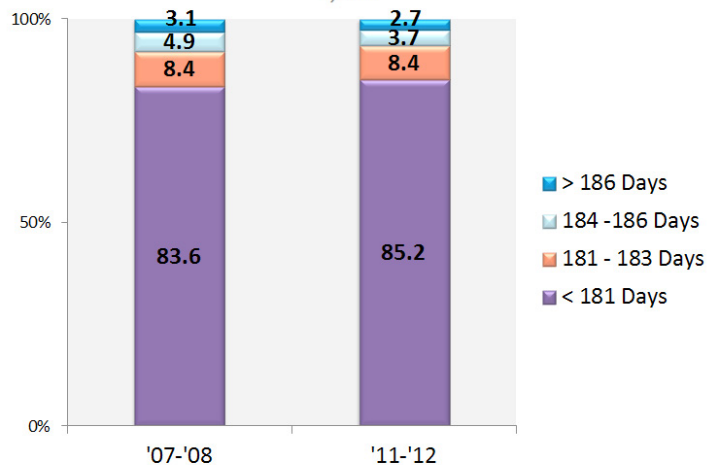
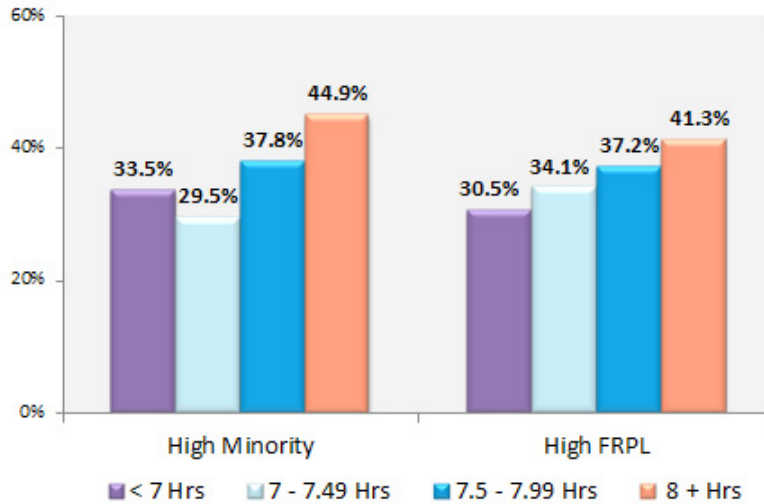


Figure 7.1

**Percentage of Non-Charter Public Schools Operating with Longer Days
Among High-Minority and High-FRPL Population Schools**

By Time Increments



Year-Round Schools

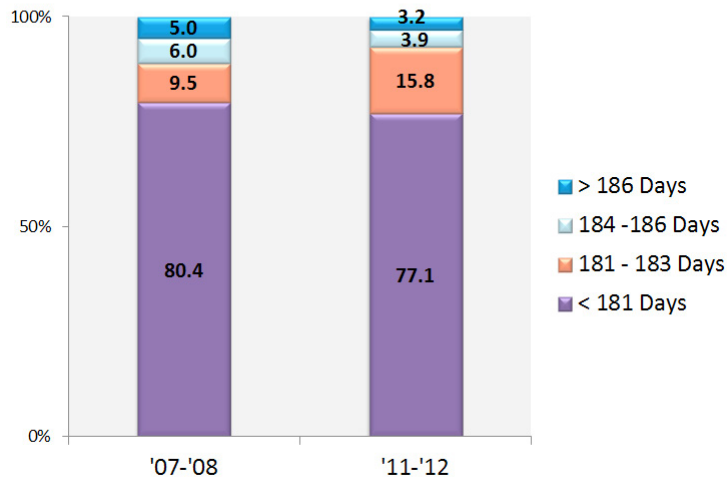
Over the last two decades, some districts have adopted a 12-month school calendar, where students attend a school across the whole calendar year. (Traditionally, the school calendar operates with an extended 10 – 12 week summer break and, thus, is structured around a 9- or 10-month calendar.) In many cases, school districts implement this year-round system as a way to conserve building space, dividing the student body into four groups and housing three of four groups in the school at a time with the fourth on a rotating extended break. Other schools have implemented an alternative calendar to eliminate or shorten the long summer vacation by spreading school days more evenly across the calendar year. This practice may be in response to evidence suggesting declines in proficiency over the summer, (commonly called “learning loss”) especially among struggling and at-risk students.⁵

Data from SASS show that the vast majority of schools that operate with a year-round calendar still require a similar number of school days for their students than the national mean of 179. In both 2007 – 08 and 2011 – 12, nearly 90 percent of schools with a 12-month calendar still operated with a school year of no more than 183 instructional days. (Figure 8.1)

Figure 8.1

**Percentage of Year-Round Non-Charter Schools By
Number of Instructional Days, 2008 and 2012**

By Instructional Day Increments



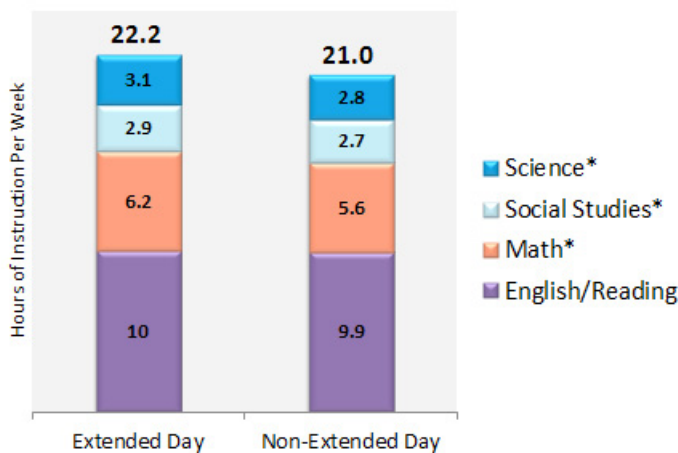
Time Spent on Instruction

As researchers have emphasized, educational efficacy is not just a function of the quantity of time in the overall schedule, but also the ways in which time is used throughout the day and across the year and, in particular, the quality and quantity of “time on task.”⁶ Thus, to achieve its intended effects of increasing student performance, expanded school time should provide more opportunities for teaching and learning. We have examined the SASS data to determine how time spent in non-charter public schools with seven or more daily hours may differ from schools with less time in the school day. We found that:

- During the 2011 – 12 school year, schools with at least a seven-hour instructional day, as compared to schools operating with fewer than seven daily hours, had more time for math, social studies and science at the 3rd and 8th grade levels. In 8th grade, schools with seven or more daily hours also allocated more time for English and reading instruction. (Figures 9.1 and 9.2)
- In 2011 – 12, schools with at least a seven-hour school day were considerably more likely than schools with a shorter instructional day to offer gifted and talented programs. Similar proportions of each type of school offered AP courses, academic assistance and college credit. (Figure 10.1)

Figure 9.1

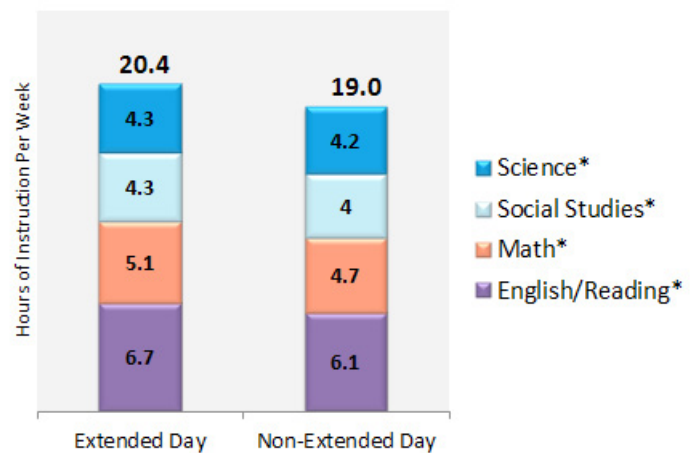
Hours of Instruction Per Week By Academic Subject
Public Non-Charter, Grade 3, 2011-12
Non-Extended Day vs. Extended Day Schools



* Difference is statistically significant at $p < 0.05$.

Figure 9.2

Hours of Instruction Per Week By Academic Subject
Public Non-Charter, Grade 8, 2011-12
Non-Extended Day vs. Extended Day Schools

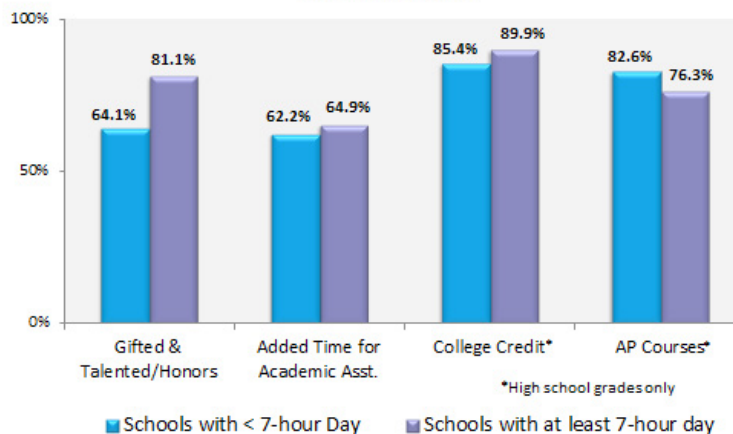


* Difference is statistically significant at $p < 0.05$.

Figure 10.1

Percent of Schools Offering Various Academic Programs
Non-Extended Day vs. Extended-Day
Public Non-Charter, All Grades, 2011-12

By Academic Program



Discussion

The data presented in this research brief highlight several important trends in time and learning in U.S. schools. Specifically, over the past two decades:

- There has been a steady increase in the length of the school day, for both non-charter public and charter schools. At the same time, however, there has been little change to the number of instructional days in the typical school year. These trends suggest that school and district leaders typically respond to the need for more learning time by incrementally adding time to the school day, rather than taking on substantial modifications to the school calendar.
- The share of U.S. schools with a day seven or more hours long has grown, particularly among charter schools. Schools with a longer day have been able to increase instructional time for core academic subjects and expand the variety of academic programs available to students.
- Schools that have a longer day are more likely to serve minority and low-income students, presumably providing them with additional opportunities to learn and to engage in academic and non-academic programming.

Beyond the findings that are available from this review of SASS data, the analysis also helps to expose gaps in knowledge about school operational time. For example, other than rudimentary reports on internal time spent (e.g., number of weekly minutes for academic subjects), researchers know very little about how students spend time during the day and throughout the year. Additionally, although SASS data describes a steady increase in the length of the school day, very little is known about educators' motivations to lengthen the school day nor the extent to which this trend is in response to student needs. The spread of a longer school day also opens up questions regarding the impact of efforts to increase learning time on student achievement. Looking forward, researchers might consider linking findings from SASS with data collected through the National Assessment of Educational Progress to determine possible associations between operational time and student outcomes.

Methodology

The data used for the analyses presented in this report were derived from the four most recent iterations of the Schools and Staffing Survey (1999-2000, 2003-04, 2007-08, and 2011-12; SASS) from the National Center on Education Statistics. (See Table A for sample sizes by year.) The SASS database is the most comprehensive nationally representative sample of districts, schools and teachers available, and includes key questions that describe time and learning in schools as well as detailed information on district and school characteristics, including students served, location, and other organizational and demographic characteristics. Data from the restricted-use databases were used for the analysis. Unlike publicly available data, restricted use data permits links between the SASS' district, school and teacher. NCES computed survey weights were applied to account for the survey's complex sample design. Where noted in the text, differences among subgroups and across time periods were tested for significance using appropriate statistical tests.

Table A
SASS Analytics Sample By Year

	1999-2000	2003-2004	2007-2008	2011-2012
Public, Non-charter Schools	7,740	6,720	5,730	5,830
Charter Schools	660	170	170	230



End Notes

¹See (a) “The Growing Field of Expanded-Time Schools” Infographic prepared by the National Center on Time & Learning, 2015, available at http://www.timeandlearning.org/sites/default/files/expanded_time_schools_infographic_mapping_the_field_2015.pdf; and (b) D. Farbman (2015). *Learning Time in America: Trends to Reform the American School Calendar*. Boston, MA: National Center on Time & Learning.

²T. Kolbe, M. Partridge and F. O’Reilly. (2011). *Time and Learning in Schools: A National Profile*. Boston, MA: National Center on Time and Learning and Storrs, CT: Center for Education Policy Analysis.

³Annual hours are calculated by multiplying the number of instructional days by the hours per day. Such a calculation does not account for half-days and other modifications built into the typical school schedule. As such, the calculation of annual hours is intended to be an estimate.

⁴A school is deemed high-minority if at least 75 percent of the student population is non-white. A school is deemed high-poverty if at least 75 percent of the student population qualifies for free or reduced-price lunch.

⁵Harris M. Cooper, et al. (1996). “The Effects of Summer Vacation on Student Achievement Test Scores: A Meta-analytic and Narrative Review,” *Review of Educational Research*, 66:2, pp. 227-268.

⁶See E.A. Patall, H. Cooper and A.B. Allen. (2010). “Extending the School Day or School Year: A Systematic Review of Research (1985 - 2009),” *Review of Educational Research*, 80:3, 401 - 436; and S.G. Rivkin and J.C. Schiman. (2013). “Instruction Time, Classroom Quality, and Academic Achievement,” NBER Working Paper No. 19464.