TIME FOR LEARNING: STATES AND DISTRICTS

An Exploratory Analysis of NAEP Data

PREPARED FOR THE NATIONAL ASSESSMENT GOVERNING BOARD

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ABSTRACT

This report on time for learning in individual states and urban districts participating in NAEP extends a prior national-level report to the National Assessment Governing Board (NAGB). The data in this report are for 2011 and cover grades 4 and 8 in terms of: (1) student days absent from school per month; (2) weekly hours of instructional time in reading-English language arts and mathematics; and (3) daily assigned homework time in mathematics.

Key findings include:

- The relationship previously found at the *national level associating higher student absenteeism with lower student achievement in reading also holds for mathematics at grades 4 and 8 nationally, and in each of the 52 state-level jurisdictions and 21 urban districts participating in NAEP*.
    - On average, NAEP mathematics scores for students with 3 or more days absent the prior month are below students with perfect attendance by 18 points—equivalent to almost 2 years of growth between grades 4 and 8.
    - Excessive days absent (3 or more days a month) at grade 4 predicts excessive absenteeism at grade 8 across states and urban districts with a high correlation of .8, suggesting that early intervention is important to stem later absenteeism problems.
- A necessary starting point in understanding how much the Common Core State Standards will affect instructional time in reading and mathematics is to obtain baseline measures of current instructional time in these subjects. *Across states and urban districts at grade 4, most students receive at least an average of an hour a day of instruction in reading and mathematics. However, at grade 8 in most states and many urban districts, a majority of students are receiving less than an hour a day (under 5 hours a week) of reading or mathematics instruction.*
    - For reading-English language arts at grade four, all 52 state–level jurisdictions provide a majority of students with 7 or more hours of weekly instruction, but at grade eight only Louisiana does. In fact, *29 state-level jurisdictions expose a majority of their grade 8 students to under 5 hours a week of reading-English language arts instruction.* In Wyoming 76 percent of eighth graders receive less than 5 hours a week of reading-English language arts compared to only 17 percent with so little instructional time in Louisiana.

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- For mathematics at grade four, all states provide about a majority of their students with at least 5 hours of mathematics instruction. *At grade 8, 41 states provide a majority of their students with less than 5 hours of weekly mathematics instruction.* The range is from 88 percent of Iowa students receiving less than 5 hours a week of mathematics to 31 percent in the District of Columbia.

- *Urban districts, on average, are responding to their greater concentrations of at-risk and low achieving students by providing greater than the national average weekly hours of instructional time in reading at grade 8 and mathematics instruction at grade 4 and 8. They also provide more than the national average of teacher-assigned homework each day.*

- It is important in allocating instructional time to *give priority to the lowest achievers, a priority consistent with the intent of the federal Title I, ESEA funding provisions.* This report defines a target group of low achievers as students below the Basic achievement level in NAEP reading or mathematics.

  - For example, *in Fresno, inconsistent with the intent of Title I, ESEA, 23 percent of students scoring below Basic receive less than 5 hours a week of instruction in reading-English language arts and 35 percent receive less than 5 hours per week in math.* On the other hand, in Baltimore nearly all below-Basic students receive more than 5 hours a week of instruction in reading and in mathematics.

These quantitative findings on time for learning at the state and district level demonstrate the value of NAEP as a unique national and subnational database for associating school processes with students' educational outcomes. Building on these analyses, it is recommended:

- NAGB explore issuing a compendium of key NAEP background indicators for states and urban districts. As a first step, a proposed list of indicators should be produced with a strong research base and drawing on current questionnaires [recommendation 4b in 2012 Expert Panel report]. Additional questions to fill in gaps should be proposed.

- Also, states and districts would benefit in making instructional decisions, including implementation of the Common Core, from research by the Institute for Education Sciences (IES) on effective strategies for reducing excessive absenteeism and on the most effective amounts of time for classroom instruction and homework.

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EXECUTIVE SUMMARY

1. Introduction

This report to the National Assessment Governing Board (NAGB) on *Time for Learning: States and Districts* extends the national-level findings in *Time for Learning*, a 2012 report to NAGB. The current report draws upon the NAEP student and teacher background questionnaires to quantify learning time in the 52 state-level jurisdictions and 21 urban districts participating in the 2011 National Assessment of Educational Progress in reading and mathematics. The data are for the two grades, 4 and 8, for which NAEP regularly collects subnational information.

As with the national-level report, three aspects of student learning time are explored:

- Student days absent from school per month
- Instructional time in school for reading-English language arts and mathematics
- Daily amount of assigned homework time in mathematics

Unfortunately, the NAEP background questionnaires do not collect information on several important aspects of students' learning time. Omitted is information on the length of the school year and length of the school day. It is recommended that future NAEP assessments address these information gaps.

2. Days Absent from School

Days absent is measured by student responses to a question about the number of days absent the prior month as reported in three intervals: none, 1-2 days, and 3 or more days.

Student achievement and days absent*. An increase in the number of days students are absent a month is consistently associated with lower achievement on the 2011 NAEP mathematics assessment. This relationship holds at both grades 4 and 8 within each of the 52 state-level jurisdictions, and also within each of the 21 urban NAEP districts.* These data extend similar findings at the national level showing a negative association between reading achievement and days absent.

Exhibit E1

Average NAEP scores for mathematics, grade 8, by days absent from school in the last month, urban districts: 2011

Jurisdiction	None	1-2 days	3 or more days	Diffc. In scale scores: None minus 3 or more days abs a month
	Average scale score	Average scale score	Average scale score	
National	**289**	**285**	**271**	**18**
Large city schools	**281**	**275**	**260**	**21**
Albuquerque	280	278	262	19
Atlanta	**270**	**268**	**252**	**18**
Austin	292	291	271	21
Baltimore City	**268**	**261**	**252**	**17**
Boston	291	279	270	21
Charlotte	**290**	**289**	**272**	**18**
Chicago	278	266	254	24
Cleveland	**260**	**258**	**250**	**9**
Dallas	280	272	265	14
Detroit	**252**	**249**	**241**	**11**
District of Columbia (DCPS)	268	256	244	24
Fresno	**264**	**256**	**244**	**20**
Hillsborough County (FL)	289	284	269	21
Houston	**285**	**280**	**266**	**19**
Jefferson County (KY)	280	275	262	18
Los Angeles	**268**	**258**	**249**	**19**
Miami-Dade	277	271	256	21
Milwaukee	**263**	**255**	**246**	**17**
New York City	283	273	258	25
Philadelphia	**272**	**267**	**253**	**19**
San Diego	284	280	268	16

Note: 10 NAEP points approximate one grade year of growth in mathmematics.
Source: NCES NAEP Data Explorer

Exhibit E1 illustrates this negative association between students' days absent and grade 8 mathematics achievement for each of the 21 urban NAEP districts:

- Within each of the 21 urban districts, increased absenteeism is associated with lower scores on the NAEP mathematics assessment. The average NAEP mathematics score for large city schools declines 21 points between the average score of students with perfect attendance and the average score of students with "3 or more" days absent (final column in Exhibit 1). Twenty points is equivalent to student growth of about two grades on the NAEP assessment between grades 4 and 8. (Similar findings are computed for the states in the full report, Exhibit 2a)

- The decline in NAEP mathematics achievement is particularly steep between days absent intervals of "1-2 days" and "3 or more days." Data for large city schools throughout the country show a decline of 6 points in the average NAEP mathematics score going from none to "1-2 days" absent per month; the decline is 15 points going from "1-2 days" to "3 or more" days absent.

This supports designating "3 or more" days absent a month (equivalent to about five weeks a year) as a benchmark number for excessive absenteeism (Exhibit E1).

Exhibit E2

High and low percentages of students absent 3 or more days prior month, all students and below-Basic on the grades 4 and 8 NAEP mathematics assessment, state and district: 2011

Jurisdiction	Grade 4		Grade 8	
	3 or more days absent prior month	3 or more days absent prior month and below-Basic	3 or more days absent prior month	3 or more days absent prior month and below-Basic
	% of all students	% of all students	% of all students	% of all students
National	19	5	19	8
State				
• Highest percentage of students 3 or more days absent prior month	• DC (state):31 • Arizona:24 • Arkansas:24 • Louisiana: 24 • New Mexico: 24	• DC:16 • Louisiana: 9 • New Mexico: 9 • Alabama: 8 • Mississippi: 8	• DC (state): 33 •New Mexico: 28 • Wyoming: 27 • Arizona: 26 • Colorado:26	• DC (state): 20 • New Mexico: 13 • Alabama: 11 • Arizona: 11 • Hawaii: 11 • Louisiana: 11 • Michigan: 11 • New York: 11 • West Virginia: 11
• Lowest percentage of students 3 or more days absent prior month	• California: 17 • Massachusetts: 17	• Massachusetts:2 • New Hampshire: 2	• Massachusetts: 16 • New Jersey: 16 • Vermont: 16	• Massachusetts: 4 • Minnesota: 5 • New Jersey: 5 • North Dakota: 5 • South Dakota: 5 • Vermont: 5
Large city schools	21	8	22	11
Districts				
• High percentage of students 3 or more days absent prior month	• Detroit: 35 • DCPS: 32 • Boston: 28 • Milwaukee: 28	• Detroit: 24 • DCPS: 17 • Cleveland: 14 • Milwaukee: 14	• Detroit: 42 • DCPS: 32 • Milwaukee: 32 • Cleveland: 31	• Detroit: 33 • DCPS: 23 • Milwaukee: 22 • Cleveland: 20
• Low percentage of students 3 or more days absent prior month	• Houston: 14 • Atlanta: 16 • Dallas: 16 • Miami-Dade: 16 • Austin: 17	• Charlotte: 3 • Austin: 4 • Houston: 4 • Dallas: 5 • Hillsborough: 5 • Jefferson Cty: 5	• Chicago: 13 • Miamia-Dade: 16 • Atlanta: 18 • Los angeles: 18	• Chicago: 8 • Austin: 9 • Charlotte: 9 • Dallas: 9 • Houston: 9 • Miamia-Dade: 9

Source: NCES NAEP Data Explorer

Across states and districts rates of excessive absenteeism (3 or more days a month) at grade 4 predict rates of excessive absenteeism at grade 8 (correlation of .8). This suggests the importance of early correction of excessive absenteeism.

State-level student absenteeism rates*. With respect to excessive absenteeism rates of 3 or more days a month, in general, states with higher or lower rates of excessive absenteeism at grade 4 also have higher or lower rates of excessive absenteeism at grade 8 (the correlation is .8). Louisiana, New Mexico, and the District of Columbia consistently exhibit high absenteeism rates at grades 4 and 8, while Massachusetts has low absenteeism at both grades (Exhibit E2).*

With respect to rates of *excessive days absent* (Exhibit E2):

- Nationally, 19 percent of all students at grades 4 and 8 experience excessive absenteeism, defined as 3 or more days absent a month or the equivalent of 5 weeks a year.
- The District of Columbia, Arizona and New Mexico have about a quarter or more of their grade 4 and grade 8 students excessively absent.

States may want to pay special attention to a doubly at-risk group of students who experience excessive absenteeism and are also very low achievers (below Basic) on the 2011 NAEP mathematics assessment (Exhibit E2).

- At grade 4 nationally 5 percent of all students are both excessively absent and below-Basic achievers. They account for more than a quarter of the 19 percent of all students absent 3 or more days per month. The District of Columbia has the highest proportion of students in this doubly at-risk group: 16 percent of its fourth graders have both excessive absenteeism and score below Basic in math. Massachusetts has the lowest proportion at 2 percent of fourth grade enrollment.

- At grade 8 nationally 8 percent of all students are absent 3 or more days a month and below-Basic on the 2011 NAEP mathematics assessment. Eight states and the District of Columbia have more than 10 percent of their grade 8 students falling into the high absenteeism and low-achievement target group: DC, New Mexico, Alabama, Arizona, Hawaii, Louisiana, Michigan, New York, and West Virginia. Massachusetts has the lowest rate of doubly at-risk students at 4 percent of eighth graders.

Urban district student absenteeism rates*. The 21 urban districts participating in the 2011 NAEP assessment typically have a higher proportion of low-income and low-achieving students than the national average. Yet, these districts have only slightly higher rates of excessive absenteeism than schools nationwide. They also exhibit considerable variation. Detroit, District of Columbia Public Schools (DCPS), Milwaukee and Cleveland have the highest rates of 3 or more days absent the prior month; Chicago and the three Texas districts (Austin, Dallas and Houston) are among the lowest. In general, districts with higher or lower rates of excessive absenteeism at grade 4 also have higher or lower rates of excessive absenteeism at grade 8 (the correlation is nearly .9). (Exhibit E2)*

- At grade 4, large city districts have 21 percent of their students with 3 or more days absent a month similar to the national average of 19 percent. At grade 8, large city districts have 22 percent of their students with 3 or more days absent a month compared with 19 percent nationally.

- There is considerable variation among urban districts in the rates of excessive absenteeism. At grade 8, the proportion of students absent 3 or more days the prior month was 42 percent in Detroit, 32 percent in Milwaukee and DCPS, and 31 percent in Cleveland. Excessive absenteeism rates were half as high or less in Chicago, 13 percent, and Miami Dade, 16 percent.

Because urban districts have a greater proportion of low-achieving students, they also have a greater portion of all their students who experience both excessive absenteeism and low achievement (Exhibit E2).

- At grade four, 8 percent of the students in large city schools experience both excessive absenteeism and below-Basic achievement compared with 5 percent of all students nationwide. Among specific urban districts, Detroit has 24 percent of its grade 4 students doubly at risk by both excessive absenteeism and very low achievement: District of Columbia Public Schools has 17 percent. This target group is smallest in Charlotte, where it accounts for only 3 percent of fourth-graders and in Austin and Houston, 4 percent.

- At grade 8, a greater proportion of students are doubly disadvantaged by excessive absenteeism and below-Basic achievement. In large cities nationwide 11 percent of all eighth-graders are in this category compared to 8 percent nationally. Four of the districts in the NAEP Trial Urban District Assessment (TUDA) have over 20 percent of their grade 8 students with both risk factors: Detroit, DCPS, Milwaukee and Cleveland. Among these, Detroit has the most serious situation: one-third of its students are doubly at-risk. By contrast, the proportion in six other cities is under 10 percent: Chicago, the three Texas TUDA districts (Austin, Dallas and Houston), Charlotte, and Miami-Dade.

3. Reading-English Language Arts and Mathematics Instructional Time

The amount of instructional time spent on the core subjects of reading-English language arts and mathematics coupled with the quality of that instruction determine students' opportunity to learn these subjects in school. Research shows that instructional time of high quality is consistently related to student achievement, especially for low-income or low-achieving students who require greater assistance to catch-up to do well in school (Patall, Cooper, & Allen, 2010).

States

Reading-English language arts. *The amount of instructional time spent on reading-English language arts is considerably greater at grade 4 than grade 8. At grade 4, the modal (most frequent)interval in every state for the amount of time spent on reading-English language arts instruction is 7 or more hours a week; at grade 8 the modal instructional time diminished to less than 5 hours a week.*

With respect to students receiving less than five hours a week of reading-English arts instruction (Exhibit E3):

- At grade 4, only 10 percent of all students nationally received less than 5 hours a week of reading instruction. Across states, Louisiana and Texas at 16 percent have the highest percentage of students with less than 5 hours of reading instruction weekly.

  Focusing on grade 4 students who are below Basic in achievement and also receive less than 5 hours of reading instruction a week indicates a priority group nationally comprised of 4 percent of all students. In Louisiana, about 7 percent of all fourth graders are in this priority group.

Exhibit E3

States with the highest and lowest percentages of students with less than 5 weekly hours of reading-English language arts and mathematics instruction, all students and below-Basic students, grades 4 and 8: 2011

	Instruction: Grade 4		Instruction: Grade 8	
	less than 5 hours	less than 5 hours & below basic	less than 5 hours	less than 5 hours & below basic
	Percentage	Percentage	Percentage	Percentage
National: Reading	**10**	**4**	**47**	**9**
State: Reading				
•Highest percentage:	• Louisiana: 16 • Texas: 16 • Georgia: 14	• Louisiana: 7 • Arizona: 6 • Mississippi: 6 • DC: 6 • Texas: 6	• Wyoming: 76 • Hawaii: 76 • Utah: 70	• Hawaii: 23 • Arkansas 15 • Oregon 15 • West Virginia: 15
•Lowest percentage	• NewJersey: 4 • Hawaii: 4 • Massachusetts: 5	• Deleware: 1 • Massachusetts: 1 • NH: 1 • New Jersey: 1	• South Carolina: 16 • Louisiana: 17 • North Carolina: 17	• New Jersey: 3 • Georgia: 4 • North Carolina: 4 • South Carolina: 4
National: Mathematics	**12**	**2**	**63**	**14**
State: Math				
•Highest percentage:	• New York: 21 • North Dakota: 19 • Oregon: 18	• Oregon: 4	• Wyoming: 89 • Connecticut:89 • Utah: 88 • Iowa: 88	• Alabama: 22 • California: 22 • Oregon: 22 • Utah: 22
•Lowest percentage	• Maryland: 2 • Massachusetts: 4 • Washington: 5	• Maryland: 0 • Massachusetts: 0	• North Carolina: 28 • Georgia: 29 • DC (state): 31	• Massachusetts: 5 • New jersey: 6 • North Carolina: 6

Note: See Exhibits 3a-3d in main paperfor full set of data
Source: NCES NAEP Data Explorer

- At grade 8, by contrast, a substantial 47 percent of all students nationally receive less than 5 hours of week on reading-English language arts. In Wyoming and Hawaii the proportion is over 75 percent. (Exhibit E3)

  Focusing on grade 8 students who are below Basic in achievement and also receive less than 5 hours a week of reading-English language arts instruction indicates a priority group nationally of about 9 percent of all students. However, in Hawaii, nearly a quarter (23 percent) of all students fall below Basic and receive under 5 hours per week of reading-English language arts instruction.

Mathematics. *The amount of instructional time spent on mathematics is uniformly less than for reading-English language arts at both grades 4 and 8*. As with reading-English language arts, mathematics instructional time declines between grades 4 and 8.

- At grade 4, the modal amount of mathematics instructional time per week in every state is 5 to 6.9 hours. In reading-English language arts, the modal instruction time interval is 7 or more hours in every state. Seventy-seven percent of grade 4 students received 7 or more hours of reading instruction compared with only 22 percent in mathematics.

- At grade 8, the modal instructional time for mathematics is less than 5 hours per week with 63 percent of all U.S. students receiving less than an average of an hour of math a day.

Focusing on the high-need group of students who are below Basic in mathematics and receive less than 5 hours a week of mathematics instruction (Exhibit E-3)

- At grade 4 no state has more than 4 percent of its students in this double-risk category.

- At grade 8, on the other hand, 44 state-level jurisdictions have more than 10 percent of their students who are below Basic and receiving less than 5 hours of mathematics instruction per week. The proportion in this double-risk category reaches 22 percent of eighth graders in four states: Alabama, California, Oregon and Utah. (Exhibit E3).

Districts

Urban districts serve an economically needier and academically lower-performing student body compared to the nation. It is the intent of the nearly $15 billion annually in federal Title I, ESEA funds to provide additional resources to districts with high concentrations of such at-risk students. The funds are meant to be

targeted at improving the achievement of lower-performing students in high-poverty schools.

Compared to the national averages, urban districts do offer more instructional time in reading-English language arts at grade 8 but not at grade 4, and more time for mathematics instruction at both grades 4 and 8. However, some urban districts have significantly more than 20 percent of their students who are both below-Basic and receive less than 5 hours a week of reading or mathematics instruction. This is contrary to the intent of Title I, whose funds disproportionately go to urban districts.

Reading-English Language Arts

At grade 4 (Exhibit E4):

- The modal interval at grade 4 for the nation and urban districts is 7 hours or more per week of reading-language arts instruction. About 77 percent of students nationally and a similar 80 percent of the students in large cities receive 7 or more hours of such instruction per week.

  The range among urban NAEP districts is from a high 87 percent of Los Angeles students receiving 7 or more hours of weekly instruction in reading-language arts to a low of 43 percent in Atlanta.

- About 11 percent of grade 4 students in large city schools are exposed to less than 5 hours of reading-English language arts instruction, about the same as the 10 percent nationally. (Exhibit E4)

At grade 8 (Exhibit E4)

- The large cities at grade 8 provide greater instructional time in reading-English language arts compared with the national average.

- Nearly half (46 percent) of all students nationally receive less than 5 hours of reading-language arts instruction a week compared to only 34 percent of all students in large city schools.

- There is quite a range among urban districts. In Baltimore only 7 percent of students receive less than 5 hours weekly of reading-English language arts instruction. In Austin and Hillsborough County (Tampa) the proportion is around 60 percent.

- Focusing only on below-Basic students, those receiving 5 hours or less of reading-English language instruction per week account for just 3 percent of

enrollment in Charlotte and 4 percent in Baltimore and Philadelphia but rise to 21 percent of enrollment in Dallas and 24 percent in Fresno.

Exhibit E4

Districts with the highest and lowest percentages of students with less than 5 weekly hours of reading-English language arts and mathematics instruction, all students and below-Basic students, grades 4 and 8: 2011

	Instruction: Grade 4		Instruction: Grade 8	
	less than 5 hours	less than 5 hours & below basic	less than 5 hours	less than 5 hours & below basic
	Percentage	Percentage	Percentage	Percentage
National: Reading	10	4	46	9
Large city schools	11	5	34	11
Urban district: Reading				
•Highest percentages	• Atlanta: 32 •Dallas: 20 •Hillsborough: 17	• Atlanta: 15 • Fresno: 11 • Baltimpore: 10 •Dallas: 10	• Hillsborough: 60 • Austin: 58 • Dallas: 53 • Fresno: 52	• Fresno: 24 • Dallas: 21
•Lowest percentages	• Albuquerque: 5 • Boston: 5 • Charlotte: 5	• Albuquerque: 2 • Boston: 2 • Charlotte: 2	• Baltimore: 7 • Charlotte: 9 • Philadelphia: 10	• Baltimore: 4 • Charlotte: 3 • Philadelphia: 4
National: Mathematics	12	2	63	14
Large city schools	9	2	45	14
Urban district: Math				
•Highest percentages	• Chicago: 17 • Philadelphia: 14 • Fresno: 12	• Chicago: 6	• Hillsborough: 80 • Fresno: 68 • Los Angeles: 56	• Fresno: 36 • Los Angeles: 27 • Hillsborough: 20
•Lowest percentages	• Detroit: 3 • Boston: 4 • Jefferson Cty: 5	•Albuquerqu: 1 • Boston: 1 • Charlotte: 1 • Hillsborough • Houston: 1	• Baltimore City: 7 • Philadelphia: 12 • Charlotte: 13	• Boston: 2 •Baltimore City: 4 • Charlotte: 4

Note: See Exhibits 3e-3h in main paperfor full set of data
Source: NCES NAEP Data Explorer

Mathematics. For mathematics instruction, consistent with Title I, ESEA supplementation goals, students in large city districts are more likely than others to receive more mathematics instructional time (Exhibit E4). However, there is considerable variation, and in some districts more than a quarter of below-Basic students receive less than 5 hours a week of mathematics.

- At grade 4, about 40 percent of large city students are exposed to 7 or more hours a week of mathematics instruction compared with only 29 percent nationally.

- At grade 8, 45 percent of all students in large cities receive less than 5 hours a week of mathematics instruction compared with 63 percent of eighth graders nationwide.

  However because urban districts have a higher proportion of below Basic students, 14 percent of all grade 8 students in both large cities and the nation

are below Basic and receive less than 5 hours of mathematics instruction a week. Inconsistent with the intent of Title I, ESEA, Fresno (at 35 percent) and Los Angeles (at 26 percent) have particularly large percentages of eighth graders who are below-Basic in mathematics achievement but receive less than 5 hours a week of mathematics instruction.

4. Assigned Daily Homework Time

Research shows that students benefit from homework beginning with the middle elementary grades, provided that homework is not mindlessly repetitive and that teachers grade it and provide feedback to help students improve. (Hoover-Dempsey et al. 2001). The NAEP background questionnaires at grade 4 measure teacher-assigned daily homework time in 15 minute segments from none to an hour or more. At grade 8, unfortunately, the measure is not as fine and lists only three time intervals: no homework, less than an hour, and one hour or more.

Across states:

- At grade 4, the modal assigned daily homework time in mathematics is 15 minutes in 44 of the state-level jurisdictions and 30 minutes in the eight others. The District of Columbia and Massachusetts are the two jurisdictions with greatest daily amounts of assigned math homework with 60 percent of their grade 4 students receiving 30 minutes a day.

- At grade 8, the modal homework time was less than an hour, with 17 percent of the students nationally receiving 1 hour or more of daily assigned mathematics homework. States with approximately a quarter or more of grade 8 students assigned an hour or more a day of mathematics homework are California, District of Columbia, Florida, Hawaii, Illinois, and Department of Defense Schools.

Across urban NAEP districts (Exhibit E5):

- Students in urban districts are more likely to receive a greater amount of assigned homework time than students nationally at grades 4 and 8.

- At grade 4, 65 percent of the students in large city districts receive at least 30 minutes of daily mathematics homework compared with 48 percent of students nationally. In Boston, 86 percent of all students are assigned 30 minutes or more of daily mathematics homework compared with only 55 percent in Albuquerque and 56 percent in Jefferson County (Louisville, KY).

- At grade eight, 28 percent of large city students are assigned an hour or more of daily mathematics homework compared with 17 percent nationally. In

Chicago and Miami-Dade 47 percent of the students receive an hour or more a day and in Fresno only 11 percent.

Exhibit E5

Percentages of students by mathematics homework time teacher assigns per day at grades 4 and 8 urban districts: 2011

Jurisdiction	Grae 4					Grade 8		
	None	15 minutes	30 minutes	45 minutes	1 hr or more	None	ss than 1 hour	1 hr or more
	Percentage	Percentage	Percentage	Percentage	Percentage	Percentage	Percentage	Percentage
National	**4**	**48**	**43**	**4**	**1**	**2**	**81**	**17**
Large city schools	**2**	**33**	**52**	**10**	**3**	**2**	**70**	**28**
Albuquerque	1	45	47	6	2	4	82	14
Atlanta	**0**	**32**	**58**	**8**	**2**	**1**	**61**	**38**
Austin	0	41	47	9	2	4	69	27
Baltimore City	**2**	**23**	**55**	**15**	**6**	**0**	**59**	**41**
Boston	0	13	62	15	9	0	61	39
Charlotte	**0**	**38**	**52**	**7**	**3**	**1**	**81**	**18**
Chicago	0	12	62	21	5	0	53	47
Cleveland	**1**	**34**	**53**	**5**	**6**	**0**	**67**	**33**
Dallas	1	36	52	6	5	3	70	27
Detroit	**1**	**31**	**51**	**12**	**6**	**0**	**55**	**45**
District of Columbia (DCPS)	1	22	60	12	5	1	70	29
Fresno	**1**	**36**	**54**	**7**	**2**	**3**	**86**	**11**
Hillsborough County (FL)	1	39	56	3	#	6	81	12
Houston	**0**	**28**	**60**	**8**	**4**	**2**	**72**	**26**
Jefferson County (KY)	1	44	49	5	2	1	85	14
Los Angeles	**0**	**20**	**61**	**14**	**4**	**1**	**59**	**40**
Miami-Dade	0	16	60	17	7	0	53	47
Milwaukee	**1**	**33**	**58**	**4**	**4**	**0**	**57**	**43**
New York City	1	19	58	16	5	0	74	26
Philadelphia	**0**	**25**	**60**	**11**	**4**	**0**	**73**	**27**
San Diego	0	24	64	10	2	0	88	12

Source: NAEP Data Exploer Feb 2013

5. Implications

This report documents considerable variation in time for learning among states, among urban districts, and between states and urban districts. The variations show the importance of breaking out and reporting sub-national data on NAEP background variables. Moreover, individual states and urban NAEP districts benefit from having time for learning indicators specific to their particular jurisdiction and being able to compare themselves with others.

While the NAEP background questionnaires collect information on the nature of reading and mathematics instruction, they do not report on the characteristics of homework. The Governing Board should consider the merits of:

- Adding brief additional questions based on research that serve as indicators of the quality of homework time, such as whether students complete the

homework and whether teachers grade it and provide feedback to help students improve.

The disaggregated state and district time for learning data offer these jurisdictions useful indicators to compare across their systems on instructionally related practices. It is recommended that NAGB consider implementing the indicator-related recommendation 4b in the Expert Panel Report, *NAEP Background Questions: An Underused National Resource (2012):*

- Prepare an online compendium of key background indicators for States and participating urban districts.

The first step would be to move forward with an analysis and design study.

Two implications for organizations and agencies other than NAGB are:

- States and districts should consider collecting and publishing their own up-to- date data on time for learning by district and school. A key area to explore is data on the proportion of students with high rates of absenteeism. Research indicates that most states and many districts currently do not generate that information (Attendance Works, 2013; Gottfried, 2011).

- The Institute of Education Sciences should consider synthesizing through their *What Works Practice Guides* what is known about effective strategies for reducing excessive absenteeism, allocating reading and mathematics instructional time, and establishing optimal amounts of homework at different grades.

In addition, it is worth repeating the recommendation in the earlier national report on time for learning that NAEP collect information on the length of the school day and on other important out-of-school learning activities besides homework.

- NAGB should begin a formal discussion with NCES on strengthening the time for learning background variables based on the recommendations in the two data analysis reports.

TIME FOR LEARNING: STATES AND DISTRICTS

1. Introduction

This report to the National Assessment Governing Board (NAGB) *Time For Learning: States and Districts* extends to states and districts the national level findings in *Time for Learning: An Exploratory Analysis of NAEP Data*, a December 2012 report to NAGB (Ginsburg and Chudowsky, 2012). This current report covers the 52 state-level jurisdictions and 21 urban districts participating in the 2011 National Assessment.

The National Center on Time and Learning (http://www.timeandlearning.org/) clarifies the underlying theory of why greater amounts of instructional time of high quality can improve student learning including:

- "Longer classes allow teachers to cover: more material and examine topics in greater depth; build-in more project-based and hands-on learning; individualize and differentiate instruction; and answer students' questions.
- Setting aside whole periods each day to focus on small-group instruction to address and overcome student learning deficits.
- With more time, schools do not have to cut back class time in science, social studies, music, art and physical education in order to give more time to the heavily tested subjects of English Language Arts and math."

Research also consistently finds that excessive absenteeism reduces student achievement, but that many states and districts don't track excessive absenteeism (Attendance Works, 2013; Gotfried, 2011). Further, that meaningful homework completed by students, with corrective feedback to students improves learning, especially beyond the very early primary grades (Hatie & Timperley, 2007; Walberg, 1999).

This report documents student absenteeism, instructional time, and homework time in the states and urban districts participating in NAEP. It does so by drawing upon NAEP'S unique national resource to quantify student achievement and learning time from the background variables (Smith, et. al., 2012) over a representative survey of students in individual states and 21 major urban districts participating in the 2011 reading and mathematics national assessment.

States cover 52 state-level organizations and include the 50 states, the District of Columbia and the Department of Defense schools. Note that the District of Columbia as a state includes public charter schools in addition to the regular pubic schools under the supervision of the DCPS Chancellor. The state District of Columbia has

about 40 percent of its students attending public charter schools, so the inclusion of charters represents a significant population.

The urban district analyses separately report NAEP time for learning findings for the 21 districts that participated in the 2011 NAEP assessment. These districts comprise: Albuquerque, Atlanta, Austin, Baltimore City, Boston, Charlotte, Chicago, Cleveland, Dallas, Detroit, District of Columbia (DCPS which excludes charters), Fresno, Hillsborough County, Houston, Los Angeles, Miami-Dade, Milwaukee, New York City, Philadelphia, and San Diego. The urban NAEP district analyses also summarize time for learning results for all large city schools as a group.

As with the national-level report, three aspects of students' learning time at the state and urban NAEP district level are explored:

- Students' average days absent per month
- Average reading-English Language arts and mathematics weekly instructional time during school
- Teacher-assigned average daily homework time in mathematics

As noted in the national *Time for Learning* report, the NAEP background questionnaires do not collect information on several important aspects of students' learning time including the length of the school year and length of the school day. Also not collected are data on out-of-school learning time other than homework, such as time participating in afterschool education programs. It is recommended to NAGB that future NAEP assessments address these information gaps on students' learning time.

The state and district data are drawn from the 2011 NAEP. They cover grades 4 and 8, which are the grades for which NAEP collects subnational information on states and urban districts.

2. Days Absent from School

Research consistently shows excessive student absenteeism is associated with lower school performance (Gottfried, 2011; Chen & Stevenson, 1995; Nichols, 2003). While this may seem an obvious finding, most state and many local data systems fail to monitor and report on rates of excessive absenteeism, as contrasted to average attendance rates (Gottfried, 2011, Attendance Works).

The prior national report on *Time for Learning* confirmed a national association between increasing numbers of student days absent and decreasing student achievement on the NAEP reading assessment at grades 4, 8 and 12. This new report demonstrates that the negative association also holds at grades 4 and 8 for each state and urban NAEP school district.

The negative association may reflect a two-way relationship of more days absent causing lower performance and of low performance causing greater absenteeism. This reinforcing two-way, negative feedback loop warrants corrective action when it seriously interferes with student learning.

The data on days absent are collected through student responses to the following background question:

> Question: How many days were you absent from school last month?
> Responses: None, 1-2 days, 3-4 days, 5 -10 days, More than 10 days

The upper two most days absent categories have relatively low percentages of students in them. They have been merged for reporting purposes with the prior absenteeism category to form a collapsed interval of 3 or more days.

Note the analyses highlight state-by-state and for urban NAEP districts, the percentage of students absent three or more days a month or over 5 weeks a year. While reducing absenteeism at any level can be beneficial to students, it is higher-levels of absenteeism that can do serious harm to students' opportunity to learn. Three days a month over a school year amounts to missing over five weeks a year of school, a level of absenteeism that impairs opportunity to learn. *Moreover, the NAEP results confirm a sharp decline in student achievement for students falling in the three or more days absent category.*

State and district efforts to reduce absenteeism are be informed by analyses to quantify the size of the high-absenteeism group who are also disadvantaged by low achievement. High absenteeism is a special problem for low-achieving students who need adequate school time to catch up. Hence, this report displays state-by-state and for urban NAEP districts, *the percentage of students who are absent three or more days a month and who are very low NAEP achievers, as measured by the below Basic-level on the 2011 NAEP mathematics assessment.*

To reflect these considerations, the state-level and urban NAEP district analyses of average monthly days absent for each state and 21 urban NAEP districts address three questions.

- What is the association at grades 4 and 8 between students' number of days absent the prior month and students' scores on the NAEP mathematics assessment?

- What is the percentage distribution of students by monthly days absent at grades 4 and 8 for states and districts? Days absent responses as noted above are arrayed into three time intervals of: none, 1-2 days or 3 or more days absent.

- What proportion of the students who are absent 3 or more days (the equivalent of over 5 weeks a school year) are achieving below basic? These students are most at-risk of education failure and hence could be considered of highest priority for corrective action.

Note than individual state and district findings about days absence and achievement broken out by NAEP achievement levels are presented in the Appendix.

Days Absent By State

Students' monthly days absent and mathematics achievement. This analysis extends to mathematics at the state level the findings in the national report linking excessive absenteeism with lower reading achievement. Exhibit 2a presents the results for mathematics at grade 8.

The grade 8 table (Exhibit 2a) shows that nationally and within each of the 52 state-level jurisdictions, the average grade 8 score on the 2011 NAEP mathematics assessment declines with successively higher rates of average days absent each month.

- Across all the states, there is an 18-point difference in mathematics scores between students with perfect attendance the prior month and students with 3 or more days absent. This differential is equivalent to growth of almost 2 years on the NAEP mathematics assessment between grades 4 and 8.

  Across States, the minimum mathematics score difference between no absences and three or more a month is 11 percentage points in South Carolina, which still represents about one year of growth on the NAEP mathematics scale between grades 4 and 8. The maximum score difference between perfect monthly attendance and three or more days absent is Connecticut's 27 points or about two and three quarter grade equivalents of growth on the NAEP scale. Further research exploring the reasons for the differential impacts across states of days absent on achievement could yield incites to controlling the negative effects of absenteeism.

- There is a sharp falloff in the NAEP grade 8 mathematics score of 14 points nationally between 1-2 days absent and 3 or more monthly days absent. This compares with a much smaller decline of 4 points on NAEP between no days absent and 1-2 days absent. *This sharp test-score decline for students with 3 or more days absent supports using a benchmark of 3 or more days to demark excessive absenteeism.*

Exhibit 2a

Average NAEP scores for mathematics, grade 8, by days absent from school in the last month, States: 2011

Jurisdiction	None	1-2 days	3 or more days	scores: None minus 3 or more days abs a month
	Average scale score	Average scale score	Average scale score	
National	**289**	**285**	**271**	**18**
Alabama	274	271	256	18
Alaska	NA	NA	NA	NA
Arizona	286	281	268	18
Arkansas	284	279	269	15
California	279	271	260	19
Colorado	299	294	279	20
Connecticut	295	285	268	27
Delaware	289	283	270	19
District of Columbia	270	264	250	20
Florida	282	280	268	14
Georgia	282	279	265	17
Hawaii	286	277	265	21
Idaho	291	288	277	14
Illinois	288	283	270	18
Indiana	291	285	272	18
Iowa	291	283	274	17
Kansas	294	290	281	13
Kentucky	286	282	271	16
Louisiana	277	275	264	13
Maine	294	290	278	16
Maryland	295	289	270	25
Massachusetts	304	299	283	21
Michigan	288	282	265	23
Minnesota	298	297	284	15
Mississippi	273	270	258	14
Missouri	287	282	269	18
Montana	298	295	282	17
Nebraska	288	283	271	17
Nevada	283	280	266	17
New Hampshire	297	293	280	17
New Jersey	300	294	279	21
New Mexico	280	277	265	15
New York	289	281	265	25
North Carolina	289	289	275	15
North Dakota	297	292	281	16
Ohio	294	289	275	19
Oklahoma	285	280	268	17
Oregon	287	285	273	14
Pennsylvania	294	286	271	23
Rhode Island	292	282	267	25
South Carolina	284	282	273	11
South Dakota	295	291	278	17
Tennessee	279	275	261	18
Texas	295	292	278	17
Utah	288	286	273	16
Vermont	298	295	280	18
Virginia	295	291	273	22
Washington	296	290	272	24
West Virginia	278	274	262	17
Wisconsin	294	289	276	19
Wyoming	292	290	280	12
DoDEA	291	290	277	14

Note: 10 NAEP points approximate one grade year of growth in mathmematics on the NAEP scale.
Source: NCES NAEP Data Explorer

Incidence of monthly days absent by state. *Exhibit 2b* displays for each state the proportion of students absent at the three frequency intervals per month of: none, 1-2 days and 3 or more days. Key aspects of the monthly days absent data at the state level for grades 4 and 8 are:

- With respect to perfect attendance the last month, most states fall within five percentage points of the national average of 50 percent of grade 4 students and 45 percent of grade 8 students with perfect attendance.

- The national average rate of students absent 3 or more days a month is 19 percent at both grades 4 and 8. *With respect to excessive absenteeism rates of 3 or more days a month, in general, states with higher or lower rates of excessive absenteeism at grade 4 also have higher or lower rates of excessive absenteeism at grade 8 (the correlation is .8).*

  - Among states with substantially higher percentages of excessive absenteeism compared with the national average: the District of Columbia was 31 percent at grade 4 and 33 percent at grade 8, Arizona 24 percent at grade 4 and 26 percent at grade 8; Arkansas 24 percent at grade 4 and 22 percent at grade 8; Louisiana 24 percent at grade 4 and 23 percent at grade 8; and New Mexico 24 percent at grade 4 and 28 percent at grade 8.

  - Among states with substantially lower percentages of students absent 3 or more days the prior month compared with the national average: California was 17 percent at grade 4 and 18 percent at grade 8, and Massachusetts 17 percent at grade 4 and 16 percent at grade 8.

Note that all types of states exhibit lower rates of excessive absenteeism, so that it should be feasible for all states to achieve equally low percentages of students who are absent 3 or more days a month. At grade 8, states with lower percentages of excessive absenteeism include urban Northeastern states of Massachusetts and New Jersey, mixed urban-rural Illinois in the Midwest, heavily minority California in the West, Georgia in the South, and rural states of Vermont in the northeast and South Dakota in the near west.

States may also want to identify and particularly track a high-need group of students who suffer from excessive absenteeism and are the lowest achievers academically. Lowest achievers are measured as below Basic on the NAEP mathematics assessment.

Exhibit 2b

Percentages of all students in grades 4 and 8 by days absent from school in the prior month, states: 2011

Jurisdiction	None	1-2 days	3 or more days	None	1-2 days	3 or more days
	Percentage	Percentage	Percentage	Percentage	Percentage	Percentage
National	**50**	**30**	**19**	**45**	**35**	**19**
Alabama	**45**	**33**	**22**	**45**	**35**	**20**
Alaska	NA	NA	NA	NA	NA	NA
Arizona	**45**	**32**	**24**	**38**	**36**	**26**
Arkansas	43	33	24	42	36	22
California	**55**	**28**	**17**	**51**	**31**	**18**
Colorado	45	32	23	34	40	26
Connecticut	**51**	**29**	**19**	**50**	**33**	**17**
Delaware	47	31	23	41	39	20
District of Columbia	**40**	**28**	**31**	**32**	**35**	**33**
Florida	50	30	20	41	36	23
Georgia	**53**	**30**	**18**	**50**	**35**	**16**
Hawaii	52	26	22	47	29	24
Idaho	**52**	**29**	**19**	**43**	**36**	**21**
Illinois	52	30	18	47	35	17
Indiana	**50**	**29**	**20**	**46**	**35**	**19**
Iowa	51	30	19	47	34	19
Kansas	**49**	**31**	**20**	**45**	**36**	**19**
Kentucky	49	33	19	42	39	19
Louisiana	**43**	**33**	**24**	**38**	**39**	**23**
Maine	47	32	21	43	36	20
Maryland	**52**	**28**	**19**	**47**	**34**	**19**
Massachusetts	53	30	17	49	35	16
Michigan	**46**	**32**	**22**	**41**	**36**	**22**
Minnesota	50	31	19	45	36	19
Mississippi	**47**	**31**	**22**	**48**	**33**	**19**
Missouri	51	30	19	47	34	18
Montana	**45**	**33**	**22**	**38**	**38**	**24**
Nebraska	52	30	18	47	36	18
Nevada	**50**	**31**	**19**	**46**	**33**	**21**
New Hampshire	49	33	18	46	35	18
New Jersey	**48**	**31**	**21**	**46**	**38**	**16**
New Mexico	44	32	24	34	38	28
New York	**46**	**31**	**23**	**42**	**36**	**23**
North Carolina	46	32	22	42	38	20
North Dakota	**51**	**31**	**18**	**43**	**38**	**19**
Ohio	50	30	19	47	34	19
Oklahoma	**47**	**30**	**22**	**40**	**38**	**22**
Oregon	50	31	19	42	34	23
Pennsylvania	**49**	**33**	**18**	**44**	**35**	**21**
Rhode Island	47	31	22	42	37	21
South Carolina	**49**	**30**	**22**	**46**	**34**	**20**
South Dakota	53	29	18	46	37	17
Tennessee	**48**	**30**	**22**	**44**	**37**	**19**
Texas	54	28	18	45	36	19
Utah	**48**	**31**	**21**	**39**	**36**	**25**
Vermont	48	32	20	47	37	16
Virginia	**54**	**29**	**18**	**47**	**34**	**19**
Washington	49	30	21	44	34	22
West Virginia	**43**	**34**	**23**	**38**	**40**	**22**
Wisconsin	48	34	18	45	37	18
Wyoming	**45**	**32**	**23**	**36**	**37**	**27**
DoDEA	49	30	21	45	36	19

Source: NAEP Data Explorer, 2013

Exhibit 2c

Percentages for grade 4 and 8, by of all students who are absent 3 or mays days from school in the last month and achieve below–Basic on the NAEP mathematics assessment, states: 2011

State-level Jusirdiction	Grade 4			Grade 8		
	% of all students absent 3 or more days prior month	% of below Basic students among students who are absent 3 or more days the prior month	% of all students who are absent 3 or more days the prior month and are below Basic	% of all students absent 3 or more days prior month	% of below Basic students among students who are absent 3 or more days the prior month	% of all students who are absent 3 or more days the prior month and are below Basic
National	19	27	5	19	41	8
Alabama	22	34	8	20	54	11
Alaska	NA	NA	NA	NA	NA	NA
Arizona	24	31	7	26	42	11
Arkansas	24	27	6	22	40	9
California	17	37	6	18	54	10
Colorado	23	24	5	26	30	8
Connecticut	19	29	6	17	45	8
Delaware	23	25	6	20	41	8
District of Columbia	31	50	16	32	65	21
Florida	20	22	4	23	42	10
Georgia	18	30	5	16	45	7
Hawaii	22	33	7	24	46	11
Idaho	19	23	4	21	32	7
Illinois	18	31	6	17	41	7
Indiana	20	22	4	19	35	7
Iowa	19	23	4	19	35	7
Kansas	20	16	3	19	28	5
Kentucky	19	22	4	19	40	8
Louisiana	24	37	9	23	48	11
Maine	21	19	4	20	35	7
Maryland	19	22	4	19	45	8
Massachusetts	17	13	2	16	25	4
Michigan	22	31	7	22	48	11
Minnesota	19	20	4	19	27	5
Mississippi	22	36	8	19	53	10
Missouri	19	26	5	18	43	8
Montana	22	22	5	24	26	6
Nebraska	18	24	4	18	37	7
Nevada	19	31	6	21	47	10
New Hampshire	18	13	2	18	31	6
New Jersey	21	17	4	16	30	5
New Mexico	24	36	9	28	47	13
New York	23	30	7	23	47	11
North Carolina	22	16	4	20	35	7
North Dakota	18	17	3	19	27	5
Ohio	19	23	4	19	35	7
Oklahoma	22	25	5	22	39	8
Oregon	19	31	6	23	38	9
Pennsylvania	18	23	4	21	41	9
Rhode Island	22	27	6	21	43	9
South Carolina	22	29	6	20	39	8
South Dakota	18	20	4	17	31	5
Tennessee	22	33	7	19	51	10
Texas	18	24	4	19	31	6
Utah	21	21	4	25	38	9
Vermont	20	17	3	16	29	5
Virginia	18	21	4	19	38	7
Washington	21	23	5	22	38	8
West Virginia	23	32	7	22	48	11
Wisconsin	18	24	4	18	35	6
Wyoming	23	16	4	27	28	8
DoDEA	21	20	4	19	29	6

Source: NAEP Data Explorer, 2013

Exhibit 2c calculates for each state the percentage of all students who are absent three or more days (column one); the percentage of those absent three or more days who are below Basic in achievement (column 2); and the proportion of all students who are below Basic on NAEP mathematics and absent three or more days (column 3). Note that column 3 is obtained as the product of the first two columns.

From Exhibit 2c, those students who are below Basic and who are absent three or more days a month represent nationally about 5 percent of all grade 4 students and 8 percent of all grade 8 students. Looking, for example, at grade 8:

- Massachusetts, with an already low excessive absenteeism rate of 16 percent of its students absent 3 or more days the prior month, has 4 percent of these students who are also below Basic.
- New Mexico, with a high rate of 28 percent of all its grade 8 students absent three or more days the prior month, has 13 percent of its students who are also below Basic.

Exhibit 2d

Average NAEP scores for mathematics, grade 8, by days absent from school in the last month, urban districts: 2011

Jurisdiction	None	1-2 days	3 or more days	Diffc. In scale scores: None minus 3 or more days abs a month
	Average scale score	Average scale score	Average scale score	
National	**289**	**285**	**271**	**18**
Large city schools	**281**	**275**	**260**	**21**
Albuquerque	280	278	262	19
Atlanta	270	268	252	18
Austin	292	291	271	21
Baltimore City	268	261	252	17
Boston	291	279	270	21
Charlotte	290	289	272	18
Chicago	278	266	254	24
Cleveland	260	258	250	9
Dallas	280	272	265	14
Detroit	252	249	241	11
District of Columbia (DCPS)	268	256	244	24
Fresno	264	256	244	20
Hillsborough County (FL)	289	284	269	21
Houston	285	280	266	19
Jefferson County (KY)	280	275	262	18
Los Angeles	268	258	249	19
Miami-Dade	277	271	256	21
Milwaukee	263	255	246	17
New York City	283	273	258	25
Philadelphia	272	267	253	19
San Diego	284	280	268	16

Note: 10 NAEP points approximate one grade year of growth in mathmematics.
Source: NCES NAEP Data Explorer

Days Absent By Urban NAEP Districts

Students' days absent per month and mathematics achievement. *Exhibit 2d* shows that within each urban NAEP district, the average scores on the grade 8 NAEP mathematics assessment are negatively related to students' monthly days absent across the three intervals of none, 1-2 days and 3 or more days. The specific findings include:

- For large city districts as a group, students with perfect attendance the prior month score 21 points higher on the grade 8 NAEP mathematics assessment than students with 3 or more days absent the prior month. Twenty points is roughly equivalent to growth of about two years on the NAEP achievement scale between grades 4 and 8.

- *As was true for states, the NAEP mathematics score falloff for large city schools of 15 points between students absent 1-2 days and 3 or more days the prior month is substantially greater than the 6 point decline between students with perfect attendance the prior month and those with 1-2 days absence. As with the states, this greater test score decline for 3 or more days absent supports using it as a benchmark for excessive absenteeism.*

Exhibit 2e

Percentages of all students in grades 4 and 8 by days absent from school in the prior month, NAEP urban districts, 2011

Jurisdiction	Grade 4			Grade 8		
	None	1-2 days	3 or more days	None	1-2 days	3 or more days
National	**50**	**30**	**19**	**45**	**35**	**19**
Large city schools	**50**	**29**	**21**	**44**	**34**	**22**
Albuquerque	47	30	23	40	38	22
Atlanta	**58**	**25**	**16**	**51**	**30**	**18**
Austin	54	30	17	40	38	21
Baltimore City	**47**	**28**	**25**	**40**	**33**	**27**
Boston	44	28	28	44	33	23
Charlotte	**50**	**29**	**21**	**40**	**37**	**23**
Chicago	52	28	20	53	34	13
Cleveland	**41**	**32**	**27**	**34**	**35**	**31**
Dallas	58	26	16	47	33	20
Detroit	**34**	**31**	**35**	**27**	**31**	**42**
District of Columbia (DCPS)	40	28	32	33	35	32
Fresno	**51**	**28**	**21**	**45**	**32**	**23**
Hillsborough County (FL)	50	29	21	40	35	25
Houston	**62**	**24**	**14**	**46**	**33**	**21**
Jefferson County (KY)	48	32	20	49	32	19
Los Angeles	**55**	**27**	**18**	**48**	**34**	**18**
Miami-Dade	59	25	16	51	33	16
Milwaukee	**43**	**29**	**28**	**34**	**34**	**32**
New York City	45	30	25	38	35	28
Philadelphia	**39**	**33**	**27**	**40**	**34**	**26**
San Diego	53	27	19	46	31	23

Source: NAEP Data Explorer, February 2013

Incidence of days absent in urban NAEP districts. *The 21 urban NAEP districts draw from a disproportionately greater population of below poverty and minority families, who reside in large city districts. Yet most urban NAEP districts do not have a higher proportion than the national average of their students with excessive absenteeism of 3 or more days. However, they do have a higher proportion of students who are both absent 3 or more days and are also very low achievers (below basic) on the NAEP mathematics assessment.*

Exhibit 2e displays the distribution of average days students are absent per month for the large city average and the 21 urban NAEP districts.

- *At grades 4 and 8, the large cities average rates of perfect attendance are similar (within one percentage point) of the national average.*

- *However, some large differences in excessive absenteeism rates occur among the 21 urban districts. In general, districts with higher or lower rates of excessive absenteeism at grade 4 also have higher or lower rates of excessive absenteeism at grade 8 (the correlation is .8 across districts between rates of excessive absenteeism at grade 4 and rates at grade 8). This suggests that early intervention at grade 4 may affect absenteeism at grade 8.*

  At the upper end of excessive absenteeism rates, the proportion of grade 4 students absent 3 or more days is 35 percent in Detroit and 32 percent in the District of Columbia. At grade 8, the percentage of students absent 3 or more days in Detroit increases to over four in ten students (42 percent) while the District of Columbia remains at approximately one-third (32 percent) of its students.

  At the lower end of excessive absenteeism rates, the proportion of grade 4 students absent 3 or more days a month is low in all three Texas urban districts of Houston 14 percent, Dallas 16 percent, and Austin 17 percent, along with Atlanta 16 percent. At grade 8, Chicago has a relatively low 13% of its students with 3 or more daily absences a month and Miami-Dade is 16%.

Table 2f identifies the size of high-need population, who experiences both excessive absenteeism and are below-Basic on the NAEP mathematics achievement levels at grades 4 and 8. Focusing on the more targeted high-need group of doubly at-risk students would, for example:

- Reduce the size of the grade 8 target group in Detroit from 42% for all students with 3 or more days absent to 33% of all those students who are also below basic in achievement. The District of Columbia comparable grade

4 rates are 32% for all students with excessive absenteeism and 23% for those who are also below basic.

In summary, the individual state and district distributions of monthly days absence provide benchmarks against which states and districts can compare each other. The results show considerable variation across states and across districts in their effectiveness in controlling excessive absenteeism. The good news is that states and districts with all types of characteristics fall at the lower range of excessive absenteeism rates including urban areas with high concentrations of students from low-income and minority families. If these places can achieve these lower rates so can other states and districts.

Exhibit 2f

Percentages grade 4 and 8 of all students who are absent 3 or more days in the last month and achieve below-Basic on the NAEP mathematics assessment, NAEP urban districts 2011

Jurisdiction	Grade 4			Grade 8		
	% of all students absent 3 or more days prior month	% of below-Basic students among students who are absent 3 or more days the prior month	% of all students who are absent 3 or more days and are below Basic	% of all students absent 3 or more days prior month	% of below-Basic students among students who are absent 3 or more days the prior month	% of all students who are absent 3 or more days and are below Basic
National	**19**	**27**	**5**	**19**	**41**	**8**
Large city schools	**21**	**37**	**8**	**22**	**52**	**11**
Albuquerque	23	37	9	22	54	12
Atlanta	**16**	**47**	**8**	**18**	**64**	**12**
Austin	17	21	4	21	43	9
Baltimore City	**25**	**40**	**10**	**27**	**64**	**17**
Boston	28	25	7	23	42	10
Charlotte	**21**	**16**	**3**	**23**	**40**	**9**
Chicago	20	49	10	13	62	8
Cleveland	**27**	**52**	**14**	**31**	**65**	**20**
Dallas	16	31	5	20	45	9
Detroit	**35**	**69**	**24**	**42**	**78**	**33**
District of Columbia (DCPS)	32	52	17	32	73	23
Fresno	**21**	**57**	**12**	**23**	**74**	**17**
Hillsborough County (FL)	21	24	5	25	43	11
Houston	**14**	**31**	**4**	**21**	**43**	**9**
Jefferson County (KY)	20	27	5	19	54	10
Los Angeles	**18**	**45**	**8**	**18**	**65**	**12**
Miami-Dade	16	36	6	16	56	9
Milwaukee	**28**	**50**	**14**	**32**	**68**	**22**
New York City	25	34	9	28	59	16
Philadelphia	**27**	**47**	**13**	**26**	**65**	**17**
San Diego	19	29	6	23	43	10

Source: NAEP Data Explorer, February 2013

3. Reading-Language Arts and Mathematics Instructional Time

Instructional time spent during the school day in combination with the quality of instructional time determine students' opportunity to learn at school.

Research consistently finds that exposure to high-quality instructional time that engages students in learning improves student achievement (Aronson, et.al., 1999; Silva, 2007). The time students spend in instruction and on homework, along with the quality of that instructional and homework time, are key elements of students' opportunity-to-learn to achieve to high academic standards. This connection between time and learning is particularly strong for students who are most at-risk of school failure (Dobbie and Fryer 2011; National Center on Time and Learning, 2011).

The many states adopting the challenging Common Core State Standards makes state and district provision of adequate instructional time in reading and mathematics an urgent priority. To inform states and urban NAEP districts about their instructional time compared with others, this section provides disaggregated state and urban NAEP district data on reading and mathematics instructional time to build on the prior national-level Time for Learning report.

The NAEP background question for instructional time on reading –English language arts for grades 4 and 8 is:

> Question: "About how much time in total do you spend with this class on language arts instruction in a typical week? Language arts refers to reading, writing, literature, and related topics."
> Teacher reported response categories: Less than 3 hours, 3-4.9 hours, 5-6.9 hours, 7-9.9 hours, 10 hours or more

There are relatively few responses at the lower and upper time intervals. Therefore, the interval of "Less than 3 hours" (2 percent of the students for grade 8 reading) is collapsed with the adjacent interval of 3-4.9 hours. The interval for 10 hours or more (6 percent of grade 8 students) is collapsed with the adjacent time interval of 7-9.9 hours. Thus, this report displays three time intervals for instructional hours of reading-language arts and mathematics: *less than 5 hours, "5-6.9 hours, and 7 or more hours*.

The NAEP background question for instructional time on mathematics for grades 4 and 8 is:

> Question: "How many hours of mathematics instruction do your students receive in a typical week? "
> Teacher reported response categories: Less than 3 hours, 3-4.9 hours, 5-6.9 hours, 7 hours or more.

As with reading-English, the small percent of students in the less than 3 hours category is collapsed with the adjacent 3-4.9 hours interval.

In analyzing the responses to these questions, the analyses consider that extended instructional time can be especially important to help lower-achieving students perform better (Dobbie and Fryer 2011; National Center on Time and Learning, 2011)). Students who would otherwise fall behind academically can benefit from the extra assistance to clarify concepts, identify and attack their particular learning difficulties, or apply what they have learned in structured settings. Research provides examples of successful schools with at-risk students, such as the KIPP Academies, which imbed extended instructional time strategies into their school day.

Accordingly, this analysis of instructional time focuses particularly on measuring and reporting the extent to which states and urban districts participating in NAEP expose students to less than an hour a day (less than 5 hours a week) of reading and mathematics instruction and on the proportion of low-achieving students who are exposed to this lower-level of instruction. Lower-achieving students are identified using the same definition as for days absent, as the below-Basic students.

The focus on instructional time for lower achievers is consistent with the intent of the $15 billion annually of federal Title I, ESEA funds to provide extra assistance in instructional time and quality to students at-risk of school failure. Hence, also to meet the intent of Title I, ESEA, states and districts may want to give priority to targeting below-Basic students who receive less than an hour a day of reading or mathematics instruction. This analysis provides them with an estimate of the comparative size of this priority group in their jurisdictions.

Providing adequate instructional time across grades will also be important if students are to meet the new Common Core standards. These standards reflect a strong continuum of learning so that the standards at both grades 4 and 8 are challenging and require adequate instructional time.

Because reading English-language arts has traditionally focused attention on developing a foundation of early reading skills, grade 4 has been characterized as the grade where reading is transformed from learning to read to reading to learn. Consequently, the expectation is that the NAEP grade 4 responses would show considerable amount of weekly instructional time spent on reading.

However, reading-language arts development is also a continuous learning process in which important foundation building continues in middle school. In fact, on the NAEP 2011 reading assessment, 42 percent of the students nationally were proficient at grade 4 but only 37 percent at grade 8. Based on a criterion of proficiency on NAEP, it is important that grade 8 students also receive adequate instructional time in reading-language arts.

The demanding Common Core standards (CCSSO and NGA) also support the need for all students to have adequate opportunities to learn to the challenging Common Core standards in English Language Arts (ELA) at both grades 4 and 8. As an example of the challenges in ELA, the Common Core standards at grade 8 require students to be able to interpret and analyze what they read and justify any conclusions they draw from their reading. This is contrasted with the lesser skill of determining text meaning at grade 4.

For mathematics the standards are clearly demanding at both grades 4 and 8. With respect to numbers, grade 4 completes much of the foundation of arithmetic and introduces the basics of fractions. Grade 8 completes the foundation of fractions including ratios and percentages, and provides an introduction to pre-algebra to prepare students for algebra in grade 9. Hence, meeting the Common Core supports the focus in this report on the size of the student population with less than five hours a week of instruction in reading-English language arts or mathematics at both grades 4 and 8.

Given these considerations, the following data tables on instructional time for reading-English language arts and mathematics focus on two questions:

- What is the distribution of students by amount of instructional time for reading (at grades 4 and 8?
- What percent of students who receive less than five hours of instruction are also among the educationally neediest students as measured by achieving at the below basic level of NAEP performance on reading-language arts?

The analyses of the NAEP background variables to answer these questions are first presented at the state level for reading-English language arts and mathematics at grades 4 and 8. The same analysis structure is then repeated for the 21 urban NAEP districts.

States

Reading-English Language Arts. Exhibit 3a displays for the 50 states, the District of Columbia and the Department of Defense schools the percent of students by reading-English language arts instructional time per week for the three time intervals of less 5 hours, 5-6.9 hours and 7 or more hours.

In each state, students weekly instructional time spent on reading-English language arts is significantly less at grade 8 than at grade 4 (Exhibit 3a).

- At grade 4, the modal amount of instructional time in reading-English language arts is 7 or more hours in each state.

Exhibit 3a

Percentages of students by weekly hours of reading–language arts instruction for grades 4 and 8, states:2011

Jurisdiction	Grade 4			Grade 8		
	less than 5 hours	5-6.9 hours	7 or more hrs	less than 5 hours	5-6.9 hours	7 or more hrs
	Percentage	Percentage	Percentage	Percentage	Percentage	Percentage
National	**10**	**13**	**77**	**47**	**32**	**22**
Alabama	14	9	77	42	39	19
Alaska	8	14	78	65	23	12
Arizona	10	10	79	25	49	26
Arkansas	12	18	71	56	29	15
California	10	7	83	44	30	26
Colorado	10	6	84	42	36	22
Connecticut	6	11	83	64	21	15
Delaware	4	10	87	23	59	18
District of Columbia	11	9	81	27	41	33
Florida	12	8	80	51	31	19
Georgia	14	17	70	19	58	23
Hawaii	4	16	79	76	15	9
Idaho	9	15	76	62	26	12
Illinois	7	12	82	39	27	34
Indiana	6	8	85	66	20	15
Iowa	10	10	80	63	21	16
Kansas	9	12	80	60	20	20
Kentucky	13	18	69	46	44	11
Louisiana	16	10	73	17	28	55
Maine	6	11	83	41	41	17
Maryland	6	10	85	35	34	31
Massachusetts	5	10	85	51	37	12
Michigan	6	15	80	43	47	10
Minnesota	9	11	81	63	27	9
Mississippi	13	22	65	44	37	20
Missouri	9	12	79	57	26	17
Montana	9	16	75	64	27	10
Nebraska	8	6	86	68	21	11
Nevada	6	4	90	52	37	11
New Hampshire	6	13	81	65	25	10
New Jersey	4	10	86	39	29	32
New Mexico	8	11	81	42	37	21
New York	7	12	81	64	19	17
North Carolina	8	14	78	17	55	28
North Dakota	9	8	83	66	20	14
Ohio	8	20	72	42	28	31
Oklahoma	13	21	66	50	40	10
Oregon	6	12	82	59	27	14
Pennsylvania	7	9	85	52	26	22
Rhode Island	8	12	80	55	35	10
South Carolina	7	19	74	16	61	24
South Dakota	9	12	79	69	20	11
Tennessee	9	14	76	34	36	30
Texas	16	12	72	47	32	21
Utah	8	9	83	70	20	10
Vermont	8	20	72	62	30	9
Virginia	6	18	77	54	23	23
Washington	7	17	76	41	39	20
West Virginia	7	10	83	48	24	28
Wisconsin	7	11	83	59	27	14
Wyoming	7	6	88	76	12	12
DoDEA	7	16	77	65	17	18

Sources: NAEP Data Explorer, February 2013

- At grade 8, the modal amount of instructional time in reading-English language arts in 44 of the 52 state-level jurisdictions is five hours a week or less than an hour a day. Overall, in 29 of the 52 state-level jurisdictions more than half the grade 8 students receive less than 5 hours of weekly reading-English language arts instruction.

There is considerable variation across states in the amount of weekly instructional time in reading- English language arts, at grade 8, but less so at grade 4 (Exhibit 3a*)*:

- At grade 4, every state but Mississippi, Oklahoma and Kentucky has over 70 percent of its grade 4 students receiving seven or more hours of weekly instruction in reading-language arts. At the low end of instructional time, the range among states in the percentage of students receiving less than five hours of reading-English language arts instruction is from a high of 16 percent of all students in Louisiana and Texas to a low of only 4 percent in Delaware, Hawaii and New Jersey.

- *At grade 8, by contrast, there is a greater range among states in the percentage of students at both upper and lower time intervals.* At the upper end of the instructional time range, the proportion of students receiving 7 or more hours of reading-English language arts instruction ranges from only 9 percent in Hawaii, Minnesota and Vermont to 55 percent in Louisiana. At the lower end of the instructional time range, the proportion of grade 8 students receiving less than 5 hours of instruction ranges from a high of 76 percent in Hawaii and Wyoming to a low of 16 percent in South Carolina.

Given the financial and instructional opportunity costs of adding instructional time in reading-English language arts, *Exhibit 3b* focuses on a potential priority subgroup of students who receive less than five hours a week of reading-English language arts instruction and are below Basic on the 2011 NAEP reading assessment

- At grade 4 nationally, 10 percent of all students receive less than 5 hours a day of reading-language arts instruction, but focusing on the below-Basic portion reduces the priority target group to 4 percent of all students.

- At grade 8, the percentage point differential from focusing on the below-Basic students with under five hours of reading-English language arts instruction is substantially greater than at grade 4. Nationally, 47 percent of all grade 8 students receive less than 5 hours a week of reading-English language arts instruction, but only 19 percent of these students are below-basic on NAEP reading. This leaves a priority target group of 9 percent of all grade 8 students who are below-basic on NAEP reading and receive less than 5 hours a week of reading-English language arts instruction.

Exhibit 3b

Percentages of all students and below-Basic students who receive less than 5 hours weekly of reading-English language arts instruction for grades 4 and 8, states:2011

Jurisdiction	Reading-language arts: Grade 4			Reading-language arts: Grade 8		
	Less than 5 hours			Less than 5 hours		
	% of All students with less than 5 hours of read-Engl arts instr	% below Basic among all students with less than than 5 hrs of reading-Eng lang arts instr	% of all students who are less than 5 hrs of read-Eng. Lang arts instr and below Basic	% of All students with less than 5 hours of read-Engl arts instr	% below Basic among all students with less than than 5 hrs of reading-Eng lang arts instr	% of all students who are less than 5 hrs of read-Eng. Lang arts instr and below Basic
National	**10**	**39**	**4**	**47**	**19**	**9**
Alabama	14	40	6	42	29	12
Alaska	8	55	4	65	22	14
Arizona	10	58	6	25	25	6
Arkansas	12	40	5	56	27	15
California	10	57	6	44	27	12
Colorado	10	38	4	42	14	6
Connecticut	6	40	2	64	14	9
Delaware	4	21	1	23	22	5
District of Columbia	11	46	5	27	34	9
Florida	12	34	4	51	23	12
Georgia	14	39	5	19	19	4
Hawaii	4	61	2	76	31	24
Idaho	9	42	4	62	19	12
Illinois	7	45	3	39	21	8
Indiana	6	37	2	66	21	14
Iowa	10	41	4	63	22	14
Kansas	9	33	3	60	19	12
Kentucky	13	28	4	46	22	10
Louisiana	16	47	8	17	28	5
Maine	6	30	2	41	19	8
Maryland	6	38	2	35	15	5
Massachusetts	5	28	1	51	12	6
Michigan	6	40	2	43	22	9
Minnesota	9	37	3	63	17	11
Mississippi	13	45	6	44	30	13
Missouri	9	41	4	57	20	11
Montana	9	41	4	64	13	8
Nebraska	8	34	3	68	19	13
Nevada	6	42	2	52	28	15
New Hampshire	6	22	1	65	17	11
New Jersey	4	27	1	39	9	3
New Mexico	8	47	4	42	33	14
New York	7	32	2	64	18	11
North Carolina	8	36	3	17	25	4
North Dakota	9	29	3	66	17	11
Ohio	8	32	3	42	18	8
Oklahoma	13	39	5	50	27	13
Oregon	6	43	3	59	25	15
Pennsylvania	7	30	2	52	18	9
Rhode Island	8	41	3	55	21	11
South Carolina	7	44	3	16	25	4
South Dakota	9	35	3	69	16	11
Tennessee	9	44	4	34	27	9
Texas	16	38	6	47	22	10
Utah	8	48	4	70	19	13
Vermont	8	33	3	62	18	11
Virginia	6	37	2	54	17	9
Washington	7	38	3	41	21	8
West Virginia	7	50	4	48	31	15
Wisconsin	7	37	3	59	18	10
Wyoming	7	41	3	76	18	13
DoDEA	7	33	2	65	12	8

Sources: NAEP Data Explorer, February 2013

- However, in Hawaii 23 percent of its below basic students receive less than 5 hours a week of reading instruction. In Arizona, Oregon and West Virginia the percentage is 15 percent. *Providing less than 5 hours of reading-English language arts instruction to 15 percent of the students or more who are below Basic is likely to be inconsistent with the intent of Title I, ESEA*.

Mathematics. *The distribution of weekly mathematics instructional time at grades 4 and 8 is striking in that modal times are consistently less than those for reading-English language arts at the same grade. As with instructional time for reading-English language arts, there is a falloff in the modal mathematics instructional time exhibited between grades 4 and 8. (Exhibit 3c)*

At grade 4

- The modal grade 4 weekly instructional time on mathematics among the states is *5-6.9 hours rather than 7 or more hours for reading-English language arts.* However, the Southern and border states of Mississippi, New Mexico and Texas along with the District of Columbia have a majority of students receiving 7 or more hours of weekly mathematics instructi
- Similar to reading-English language arts, only about 12 percent of the grade 4 students receive less than 5 hours a week of mathematics instruction. In New York, however, the percentage is 21 percent.

At grade 8

- *By grade 8, almost two-thirds (63 percent) of students across the states receive under 5 hours a week or an hour a day of mathematics instruction.*

- At grade 8, only the District of Columbia at 27 percent has more than a quarter of its students exposed to 7 or more hours of weekly mathematics instruction. Thirty-six state-level jurisdictions have a majority of their students receiving under 5 hours a week of mathematics instruction. The percentage is over 85 percent of their grade 8 students in Connecticut, Iowa, Nebraska, Utah, and Wyoming.

Exhibit 3d displays a targeted group of students who receive less than 5 hours of weekly instruction and who score at the lowest NAEP achievement category of below Basic. Focusing on the subgroup receiving less than five hours of mathematics instruction and who are below-Basic in mathematics sharply reduces the size of the group to expand mathematics instruction to at least 5 hours.

- At grade 4, only 2 percent of all students are below basic and receive less than 5 hours of weekly mathematics instruction.

Exhibit 3c

Percentages of students by weekly hours of mathematics instruction for grades 4 and 8, states:2011

Jurisdiction	Grade 4			Grade 8		
	less than 5 hours	5-6.9 hours	7 or more hrs	less than 5 hours	5-6.9 hours	7 or more hrs
	Percentage	Percentage	Percentage	Percentage	Percentage	Percentage
National	**12**	**59**	**29**	**63**	**28**	**9**
Alabama	7	62	31	60	31	9
Alaska	11	58	31	72	25	3
Arizona	8	57	35	48	42	10
Arkansas	8	43	49	72	19	8
California	9	61	30	69	23	8
Colorado	10	60	30	58	30	13
Connecticut	10	78	12	89	10	1
Delaware	9	71	20	37	51	11
District of Columbia	8	38	54	31	42	27
Florida	8	73	20	73	22	5
Georgia	8	51	41	29	55	16
Hawaii	6	46	48	79	17	4
Idaho	9	65	26	79	18	3
Illinois	13	74	13	70	22	8
Indiana	9	64	27	76	19	6
Iowa	17	66	17	88	9	2
Kansas	8	50	42	70	18	12
Kentucky	9	66	26	49	41	10
Louisiana	10	62	28	40	40	20
Maine	10	71	18	63	34	2
Maryland	2	64	34	44	35	21
Massachusetts	4	61	35	58	32	10
Michigan	13	65	22	56	41	4
Minnesota	7	65	28	75	22	3
Mississippi	6	38	56	63	28	9
Missouri	10	68	22	72	22	5
Montana	8	56	36	79	18	2
Nebraska	12	72	16	85	11	4
Nevada	7	58	35	69	29	2
New Hampshire	11	67	23	83	16	1
New Jersey	11	57	32	57	28	14
New Mexico	6	41	53	49	37	14
New York	21	53	26	67	24	10
North Carolina	10	53	37	28	56	16
North Dakota	19	71	10	77	16	6
Ohio	10	64	26	70	21	9
Oklahoma	13	45	42	57	38	5
Oregon	18	69	12	78	20	2
Pennsylvania	7	61	32	70	20	10
Rhode Island	6	60	33	77	21	2
South Carolina	8	58	34	32	55	14
South Dakota	18	60	22	80	17	3
Tennessee	9	63	28	45	40	14
Texas	11	33	56	56	32	12
Utah	13	54	33	88	12	1
Vermont	6	73	21	72	26	1
Virginia	11	77	12	58	26	16
Washington	5	54	42	62	32	5
West Virginia	7	61	32	60	19	20
Wisconsin	10	70	20	74	22	4
Wyoming	9	63	29	89	10	1
DoDEA	17	68	15	84	12	5

Sources: NAEP Data Explorer, February 2013

Exhibit 3d

Percentages of all students and below-Basic students who receive less than 5 hours weekly of mathematics instruction for grades 4 and 8, states:2011

Jurisdiction	Mathematics: Grade 4			Mathematics: Grade 8		
	Less than 5 hours			Less than 5 hours		
	% of All students with less than 5 hours of read-Engl arts instr	% below Basic among all students with less than than 5 hrs of reading-Eng lang arts instr	% of all students who are less than 5 hrs of read-Eng. Lang arts instr and below Basic	% of All students with less than 5 hours of read-Engl arts instr	% below Basic among all students with less than than 5 hrs of reading-Eng lang arts instr	% of all students who are less than 5 hrs of read-Eng. Lang arts instr and below Basic
National	**12**	**17**	**2**	**63**	**23**	**15**
Alabama	7	43	3	60	37	22
Alaska	11	27	3	72	22	16
Arizona	8	38	3	48	28	13
Arkansas	8	25	2	72	28	20
California	9	22	2	69	32	22
Colorado	10	20	2	58	17	10
Connecticut	10	20	2	89	23	20
Delaware	9	22	2	37	23	8
District of Columbia	8	38	3	31	32	10
Florida	8	25	2	73	29	21
Georgia	8	25	2	29	29	9
Hawaii	6	33	2	79	32	25
Idaho	9	22	2	79	22	17
Illinois	13	23	3	70	23	16
Indiana	9	11	1	76	22	17
Iowa	17	12	2	88	22	19
Kansas	8	13	1	70	17	12
Kentucky	9	11	1	49	28	14
Louisiana	10	30	3	40	35	14
Maine	10	20	2	63	21	13
Maryland	2	0	0	44	17	8
Massachusetts	4	0	0	58	9	5
Michigan	13	23	3	56	25	14
Minnesota	7	14	1	75	15	11
Mississippi	6	33	2	63	37	23
Missouri	10	20	2	72	25	18
Montana	8	13	1	79	15	12
Nebraska	12	17	2	85	25	21
Nevada	7	14	1	69	31	21
New Hampshire	11	9	1	83	18	15
New Jersey	11	9	1	57	12	7
New Mexico	6	33	2	49	31	15
New York	21	14	3	67	23	15
North Carolina	10	10	1	28	23	6
North Dakota	19	16	3	77	15	11
Ohio	10	20	2	70	18	13
Oklahoma	13	23	3	57	26	15
Oregon	18	22	4	78	28	22
Pennsylvania	7	29	2	70	22	16
Rhode Island	6	17	1	77	24	19
South Carolina	8	13	1	32	30	10
South Dakota	18	17	3	80	18	14
Tennessee	9	33	3	45	34	15
Texas	11	18	2	56	16	9
Utah	13	15	2	88	27	23
Vermont	6	17	1	72	18	13
Virginia	11	18	2	58	20	12
Washington	5	20	1	62	21	13
West Virginia	7	29	2	60	34	20
Wisconsin	10	10	1	74	18	14
Wyoming	9	11	1	89	19	17
DoDEA	17	12	2	84	19	16

Sources: NAEP Data Explorer, February 2013

- At grade 8, among the 63 percent of students who received less than 5 ours of weekly mathematics instruction, slightly under one quarter (23 percent) were below-basic in mathematics. This leaves 14 percent of the students who in 2011 received under five hours of mathematics instruction and are below-basic on the NAEP mathematics assessment. In the case of Wyoming, which had 89 percent of its students receiving under 5 hours of weekly mathematics instruction, limiting the students to below-basic reduces the Wyoming target population to 17 percent.

Districts

The student population in the 21 urban NAEP districts differs from that of the states

Exhibit 3e

Percentages of students by weekly hours of reading-language arts instruction for grades 4 and 8, urban districts:2011

Jurisdiction	Reading-Language Arts Instruction: Grade 4			Reading-Language Arts Instruction: Grade 8		
	less than 5 hours	5-6.9 hours	7 or more hrs	less than 5 hours	5-6.9 hours	7 or more hrs
	Percentage	Percentage	Percentage	Percentage	Percentage	Percentage
National	**10**	**13**	**77**	**46**	**32**	**22**
Large city schools	**11**	**9**	**80**	**34**	**35**	**31**
Albuquerque	5	13	82	28	47	25
Atlanta	32	26	43	19	55	26
Austin	13	12	76	58	24	18
Baltimore City	13	4	83	7	33	60
Boston	5	11	84	18	54	28
Charlotte	5	16	79	9	39	52
Chicago	8	8	84	24	32	44
Cleveland	10	14	76	25	26	49
Dallas	20	13	66	53	27	20
Detroit	11	3	86	16	23	61
District of Columbia (DCPS)	9	10	81	31	45	25
Fresno	15	6	79	52	22	25
Hillsborough County (FL)	17	3	79	60	25	15
Houston	15	16	69	46	28	26
Jefferson County (KY)	10	16	74	40	51	9
Los Angeles	11	2	87	38	45	17
Miami-Dade	10	8	82	40	50	10
Milwaukee	9	7	84	18	36	46
New York City	8	9	83	16	36	49
Philadelphia	7	7	86	10	19	70
San Diego	15	7	78	33	53	13

Sources: NAEP Data Explorer, February 2013

in that they disproportionately serve students who are economically poorer, have parents with less than average education, and are more likely to score below Basic on NAEP. It is the intent of the nearly $15 billion annually in federal Title I, ESEA funds to provide additional instruction and other student services especially to jurisdictions, such as urban districts, with high concentrations at-risk students. As previously noted, research supports having adequate instructional time, including extending time for lower performers, as particularly critical for this at-risk group.

The analyses of instructional time for the NAEP districts follow the same structure as for states.

Reading-English Language arts. For the 21 urban NAEP districts, the distribution of students by weekly hours of reading-English language Arts instruction for grades 4 and 8 is shown in Exhibit 3e. For comparative purposes, the corresponding student distributions are shown for the nation and all large cities.

At grade 4, the large cities are similar to the national comparisons in that both provide more than three-fourths of their students with 7 or more hours of reading-English language arts instruction.

- The substantial range in the proportion of students receiving 7 or more hours of weekly reading-English language arts instruction is from 87 percent in Los Angeles and 86 percent in Detroit and Philadelphia to only 43 percent in Atlanta.
- The range at the lower end (under 5 hours) of reading-English language arts instructional time is from 32 percent in Atlanta down to 5 percent in Albuquerque, Boston and Charlotte.

At grade 8, the large city schools have a lower percentage (34 percent) of students receiving less than 5 hours a week of reading-English language arts instruction than the national average (46 percent). There is a considerable range around the large city average. Hillsborough has 60 percent of its students exposed to less than 5 hours of reading instruction a week compared with only 7 percent in Baltimore.

Exhibit 3f compares the percentage of all grade 4 and 8 students who are exposed to under five hours of weekly reading instruction to a clearly at-risk disadvantaged group who are also achieving below basic on the NAEP reading assessment.

Exhibit 3f

Percentages of all students and below-basic students who receive less than 5 hours weekly of reading-language arts instruction for grades 4 and 8, urban districts:2011

Jurisdiction	Reading-language arts: Grade 4			Reading-language arts: Grade 8		
	Less than 5 hours			Less than 5 hours		
	% of All students with less than 5 hours of read-Engl arts instr	% below Basic among all students with less than than 5 hrs of reading-Eng lang arts instr	% of all students who are less than 5 hrs of read-Eng. Lang arts instr and below Basic	% of All students with less than 5 hours of read-Engl arts instr	% below Basic among all students with less than than 5 hrs of reading-Eng lang arts instr	% of all students who are less than 5 hrs of read-Eng. Lang arts instr and below Basic
National	**10**	**39**	**4**	**46**	**20**	**9**
Large city schools	**11**	**49**	**5**	**34**	**32**	**11**
Albuquerque	5	47	2	28	39	11
Atlanta	32	46	15	19	32	6
Austin	13	32	4	58	19	11
Baltimore City	13	74	10	7	57	4
Boston	5	45	2	18	33	6
Charlotte	5	42	2	9	33	3
Chicago	8	71	6	24	33	8
Cleveland	10	75	7	25	44	11
Dallas	20	51	10	53	40	21
Detroit	11	75	8	16	63	10
District of Columbia (DCPS)	9	56	5	31	29	9
Fresno	15	71	11	52	46	24
Hillsborough County (FL)	17	28	5	60	22	13
Houston	15	46	7	46	33	15
Jefferson County (KY)	10	32	3	40	33	13
Los Angeles	11	70	8	38	37	14
Miami-Dade	10	37	4	40	25	10
Milwaukee	9	62	6	18	56	10
New York City	8	34	3	16	31	5
Philadelphia	7	57	4	10	50	5
San Diego	15	50	7	33	30	10

Sources: NAEP Data Explorer, February 2013

At grade 8, the corresponding range in the below Basic achieving students who are exposed to under five hours of reading-English language arts instruction is from almost a quarter (24 percent) of all students in Fresno to about 7 percent of the students in Baltimore.

Exhibit 3g

Percentages of students by weekly hours of mathematics instruction for grades 4 and 8, urban districts:2011

Jurisdiction	Mathematics Instruction: Grade 4			Mathematics Instruction: Grade 8		
	less than 5 hours	5-6.9 hours	7 hours or more	less than 5 hours	5-6.9 hours	7 hours or more
	Percentage	Percentage	Percentage	Percentage	Percentage	Percentage
National	**12**	**59**	**29**	**63**	**28**	**9**
Large city schools	**9**	**51**	**40**	**45**	**37**	**18**
Albuquerque	7	49	44	35	53	12
Atlanta	8	61	31	24	67	8
Austin	7	19	74	39	28	33
Baltimore City	9	25	67	7	54	39
Boston	4	56	40	25	62	14
Charlotte	8	52	40	13	49	38
Chicago	17	60	23	33	51	16
Cleveland	10	42	47	31	29	40
Dallas	10	13	77	53	19	27
Detroit	3	25	72	19	27	54
District of Columbia (DCPS)	7	41	52	36	49	16
Fresno	12	33	55	68	17	15
Hillsborough County (FL)	6	84	10	80	18	2
Houston	7	34	59	37	24	39
Jefferson County (KY)	5	71	24	31	63	5
Los Angeles	8	60	32	56	38	6
Miami-Dade	9	75	16	57	40	3
Milwaukee	10	70	20	22	52	26
New York City	9	41	51	17	58	25
Philadelphia	14	28	58	12	22	67
San Diego	10	60	30	51	43	5

Sources: NAEP Data Explorer, February 2013

Mathematics. Consistent with Title I, ESEA aims in mathematics, urban districts tend to provide more instructional time than the national average at both grades 4 and 8. In reading-English language arts the extra time for urban students compared with the national average was only at grade 8. This urban pattern is consistent with their greater proportion of students from low-income and minority families who have greater instructional needs (Exhibit 3g):

- At grade four, 40 percent of the large city students are exposed to 7 or more hours of mathematics instruction compared with 29 percent nationally. However, there are large differences in instructional time among urban NAEP districts. At grade 4, Austin, Dallas and Detroit provide over 70 percent of their students with 7 or more weekly hours of mathematics instruction compared with 20 percent or less for Hillsborough, Miami Dade and Milwaukee.

- *At grade 8, mathematics instructional time advantages for large cities compared with the nation occur over the full range of time intervals.* Large city grade 8 students are 18 percentage points less likely to receive under five

hours a week of mathematics instruction; and they are 9 percentage points more likely to receive each of 5-6.9 hours and over 7 hours of weekly instruction.

A large variation occurs among urban districts in the amount of weekly instructional time provided in grade 8 mathematics. A striking example looking at less than 5 hours a week of mathematics instruction, Baltimore has only 7 percent of its students in this group but Hillsborough 80 percent.

Exhibit 3h displays the proportion of high-need students who are below Basic in urban districts but receive 5 or less hours of weekly mathematics instruction.

- At grade 4, all urban NAEP districts have about 5 percent or less of their students who both receive less than 5 hours a week of mathematics and are below basic in achievement. As an example, Chicago has 17 percent of all students receiving less than 5 hours of mathematics instruction a week, but only 6 percent when the criterion extends to students must also be below basic on the NAEP 2011 mathematics assessment.

- At grade 8, in Hillsborough, only a quarter of the low-instructional time group are also below Basic, so that about 20 percent of the student population is both below Basic and receiving under 5 hours of weekly mathematics instruction.

Exhibit 3h

Percentages of all students and below-basic students who receive less than 5 hours weekly of mathematics instruction for grades 4 and 8, urban districts:2011

Jurisdiction	Mathematics: Grade 4			Mathematics: Grade 8		
	Less than 5 hours			Less than 5 hours		
	% of All students with less than 5 hours of read-Engl arts instr	% below Basic among all students with less than than 5 hrs of reading-Eng lang arts instr	% of all students who are less than 5 hrs of read-Eng. Lang arts instr and below Basic	% of All students with less than 5 hours of read-Engl arts instr	% below Basic among all students with less than than 5 hrs of reading-Eng lang arts instr	% of all students who are less than 5 hrs of read-Eng. Lang arts instr and below Basic
National	**12**	**18**	**2**	**63**	**24**	**15**
Large city schools	**9**	**29**	**3**	**45**	**32**	**14**
Albuquerque	7	21	1	35	30	10
Atlanta	8	38	3	24	56	13
Austin	7	9	1	39	15	6
Baltimore City	9	29	3	7	52	4
Boston	4	33	1	25	9	2
Charlotte	8	15	1	13	34	4
Chicago	17	36	6	33	36	12
Cleveland	10	52	5	31	61	19
Dallas	10	19	2	53	37	19
Detroit	3	66	2	19	56	11
District of Columbia (DCPS)	7	35	2	36	34	12
Fresno	12	37	4	68	53	36
Hillsborough County (FL)	6	14	1	80	26	20
Houston	7	20	1	37	18	7
Jefferson County (KY)	5	36	2	31	32	10
Los Angeles	8	46	4	56	47	27
Miami-Dade	9	21	2	57	34	19
Milwaukee	10	55	5	22	48	11
New York City	9	22	2	17	29	5
Philadelphia	14	37	5	12	50	6
San Diego	10	29	3	51	31	16

Sources: NAEP Data Explorer, February 2013

4. Amount of Homework Time Assigned Daily

One approach to extending students' total learning time is through homework. Other approaches include extending the school day or attending formal afterschool classes, but the NAEP background questionnaires do not ask about these other strategies.

Research suggests the effectiveness of homework time depends upon a student's grade-level and the way homework is delivered (Cooper, et. al., 2006). In the early grades, research fails to show clear benefits from homework. However, research is clearer about the benefits from assigning homework beginning around grade 4 and up. But the kind of homework matters. Homework that involves mindless repeating of the same type of mathematics problems won't add value. Research does suggest that correcting and promptly feeding back homework supports continuous

improvement. The NAEP background variables only provide information about assigned homework time and not the nature of homework assignments.

The grade 4 NAEP 2011 background questionnaire asks about a broad range of daily homework time intervals:

> Question: Approximately how much mathematics homework do you assign to students in this class each day? (teacher -reported).
>
> Responses: None, 15 minutes, 30 minutes, 45 minutes, 1 hour, More than 1 hour

Nationally, only one percent of grade 4 students received one hour or more of assigned daily homework. Therefore, the grade 4 state and urban NAEP district tables collapse the upper two time intervals into a single interval that reports on homework time of one hour or more each day.

At grade 8, the question about time spent on homework is less satisfactory because it does not breakout homework time into intervals between none and one hour. Specifically, the grade 8 2011 background question is:

> Question: Approximately how much mathematics homework do you assign to students in your mathematics class each day? (teacher-reported)
>
> Response: None, Less than 1 hour, About 1 hour, About 2-3 hours, More than 3 hours

Teacher assigned homework time is reported for mathematic by State (Exhibit 4a) and urban NAEP district (Exhibit 4b).

States

Across the states (Exhibit 4a) the modal amount of assigned homework time in 2011 at grade 4 falls in the mid-range of 15 or 30 minutes a day. This concentration of no more than 30 minutes is consistent with research showing that fourth graders are at the front end of the grade range where research shows homework begins improves students test score performance (Cooper, et. al., 2006)..

Exhibit 4a

Percentages of students by mathematics homework time teacher assigns per day at grades 4 and 8, states: 2011

Jurisdiction	Grade 4					Grade 8		
	None	15 minutes	30 minutes	45 minutes	1 hour or more	None	Less than 1 hour	1 hour or more
	Percentage	Percentage	Percentage	Percentage	Percentage	Percentage	Percentage	Percentage
National	4	48	43	4	1	2	81	17
Alabama	4	50	44	2	0	4	85	10
Alaska	5	59	31	3	1	3	74	22
Arizona	2	45	45	7	1	3	78	19
Arkansas	16	57	25	1	0	4	84	12
California	1	26	60	10	3	1	76	23
Colorado	3	53	38	5	1	4	75	21
Connecticut	2	56	38	3	1	1	85	14
Delaware	2	50	46	2	1	#	90	10
District of Columbia	1	23	60	11	5	1	69	30
Florida	1	35	58	5	1	1	75	24
Georgia	2	49	45	4	1	4	81	15
Hawaii	#	26	58	12	3	5	67	28
Idaho	11	57	29	2	1	4	81	15
Illinois	1	48	45	5	1	#	76	24
Indiana	2	47	46	4	1	2	84	14
Iowa	12	67	20	1	1	2	89	9
Kansas	9	60	29	1	0	4	88	9
Kentucky	6	52	41	1	0	8	80	11
Louisiana	3	56	37	3	1	3	88	8
Maine	4	65	29	2	0	2	87	11
Maryland	1	42	50	6	1	#	87	13
Massachusetts	#	34	60	4	1	1	83	16
Michigan	9	54	33	2	1	#	83	16
Minnesota	5	61	31	2	0	1	84	14
Mississippi	3	59	35	2	1	2	83	15
Missouri	10	61	28	1	0	3	86	11
Montana	10	57	31	2	0	2	86	12
Nebraska	8	52	36	3	1	2	80	18
Nevada	2	55	39	3	1	1	82	16
New Hampshire	1	53	43	2	0	#	93	7
New Jersey	#	43	52	4	0	#	84	16
New Mexico	4	47	44	4	1	5	77	17
New York	1	46	45	7	2	1	89	10
North Carolina	2	39	53	5	1	1	87	12
North Dakota	11	60	27	2	0	1	90	9
Ohio	5	58	35	1	1	2	88	10
Oklahoma	17	45	35	3	1	7	77	16
Oregon	8	62	26	3	1	1	88	10
Pennsylvania	#	58	39	2	1	#	90	10
Rhode Island	#	51	45	3	1	1	92	8
South Carolina	3	69	27	1	0	1	90	9
South Dakota	10	65	24	#	0	6	85	9
Tennessee	4	59	33	4	0	6	82	12
Texas	4	54	37	3	1	4	75	21
Utah	4	59	33	3	1	2	81	17
Vermont	3	72	23	2	0	#	92	8
Virginia	2	54	42	3	0	2	81	17
Washington	5	49	41	5	0	4	84	11
West Virginia	7	63	28	1	0	7	79	13
Wisconsin	4	63	31	1	1	1	86	12
Wyoming	11	64	24	1	0	6	89	5
DoDEA	2	48	43	6	1	1	70	29

Source: NAEP Data Explorer Feb 2013

Specifically, at grade 4 (Exhibit 4a):

- Most grade 4 students (96 percent) receive some daily mathematics homework. At the state level, those, with the highest percentages of students with no assigned homework are the rural states of Oklahoma 17 percent, Arkansas 16 percent, Iowa 12 percent, Idaho 11 percent, North Dakota 11 percent and Wyoming 11 percent.
- Forty-four state-level jurisdictions have their modal amount of assigned homework time at 15 minutes, with the remaining six jurisdictions at 30 minutes.
- Hawaii and the District of Columbia are the only state-level jurisdictions with at least 15 or more percent of their students receiving at least 45 minutes of assigned daily mathematics homework.

The NAEP breakouts for the grade 8 assigned homework times are not fined grained so that the only time intervals are none, less than one hour or one hour or more. *In all states about 70 percent or more of grade 8 students fall in the less than one hour of daily assigned mathematics homework.*

- States with one-fifth or more of their students receiving an hour or more of assigned daily mathematics homework are District of Columbia 30 percent, Department of Defense Schools 29 percent, Hawaii 28 percent, Florida 24 percent, Illinois 24 percent, California 23 percent, Alaska 22 percent, and Colorado 21 percent.

Districts

Urban districts with greater than average concentrations of low-achieving students might be more likely to use homework as a means for extending learning time. *Exhibit 4b breaks out the amount of assigned homework for large cities and the 21 urban districts. It shows that urban districts are indeed more homework demanding of their students in mathematics than the nation as a whole at both grades 4 and 8.*

At grade 4:

- Nationally, 65 percent of large city students are assigned 30 minutes or more of daily mathematics homework compared with 48 percent nationally. The modal time for each of the 21 urban districts is 30 minutes of daily assigned mathematics homework, but at the state level the modal time it was only 15 minutes in most states.

- At the upper end of homework time, 5 districts provide at least one-fifth their students with 45 or more minutes of assigned mathematics homework: Baltimore 21 percent, Boston 24 percent, Chicago 26 percent, Miami-Dade 24 percent and New York City 21 percent. By contrast, Hillsborough County

Florida assigns only 3 percent of its grade 4 students 45 minutes or more of daily mathematics homework.

At grade 8 where there is more limited data:

- Nationally, 28 percent of large city students are assigned an hour a day of mathematics homework compared with 17 percent for all students in the Unite
- More than four in ten students receive an hour or more daily mathematics homework in Baltimore 41 percent, Chicago 47 percent, Detroit 45 percent, Los Angeles 40 percent, Miami-Dade 47 percent and Milwaukee 43 percent.
- By contrast only about 10 percent of the students are assigned an hour or mathematics homework in Fresno 11 percent, Hillsborough 12 percent and San Diego 12 percent.

Exhibit 4b

Percentages of students by mathematics homework time teacher assigns per day at grades 4 and 8 urban districts: 2011

Jurisdiction	Grae 4					Grade 8		
	None	15 minutes	30 minutes	45 minutes	1 hr or more	None	ss than 1 hour	1 hr or more
	Percentage	Percentage	Percentage	Percentage	Percentage	Percentage	Percentage	Percentage
National	**4**	**48**	**43**	**4**	**1**	**2**	**81**	**17**
Large city schools	**2**	**33**	**52**	**10**	**3**	**2**	**70**	**28**
Albuquerque	1	45	47	6	2	4	82	14
Atlanta	**0**	**32**	**58**	**8**	**2**	**1**	**61**	**38**
Austin	0	41	47	9	2	4	69	27
Baltimore City	**2**	**23**	**55**	**15**	**6**	**0**	**59**	**41**
Boston	0	13	62	15	9	0	61	39
Charlotte	**0**	**38**	**52**	**7**	**3**	**1**	**81**	**18**
Chicago	0	12	62	21	5	0	53	47
Cleveland	**1**	**34**	**53**	**5**	**6**	**0**	**67**	**33**
Dallas	1	36	52	6	5	3	70	27
Detroit	**1**	**31**	**51**	**12**	**6**	**0**	**55**	**45**
District of Columbia (DCPS)	1	22	60	12	5	1	70	29
Fresno	**1**	**36**	**54**	**7**	**2**	**3**	**86**	**11**
Hillsborough County (FL)	1	39	56	3	#	6	81	12
Houston	**0**	**28**	**60**	**8**	**4**	**2**	**72**	**26**
Jefferson County (KY)	1	44	49	5	2	1	85	14
Los Angeles	**0**	**20**	**61**	**14**	**4**	**1**	**59**	**40**
Miami-Dade	0	16	60	17	7	0	53	47
Milwaukee	**1**	**33**	**58**	**4**	**4**	**0**	**57**	**43**
New York City	1	19	58	16	5	0	74	26
Philadelphia	**0**	**25**	**60**	**11**	**4**	**0**	**73**	**27**
San Diego	0	24	64	10	2	0	88	12

Source: NAEP Data Exploer Feb 2013

5. Implications

This report documents considerable variation in time for learning among states, among urban districts, and between states and urban districts. The variations show the importance of breaking out and reporting sub-national data on NAEP background variables. Moreover, individual states and urban NAEP districts can benefit from having time for learning indicators specific to their particular jurisdiction and being able to compare themselves with others.

While the NAEP background questionnaires collect information on the nature of reading and mathematics instruction, they do not report on the characteristics of homework. The Governing Board should consider the merits of:

- Adding brief additional questions based on research that serve as indicators of the quality of homework time, such as whether students complete the homework and whether teachers grade it and provide feedback to help students improve.

The disaggregated state and district time for learning data offer these jurisdictions useful indicators to compare across their systems on instructionally related practices. It is recommended that NAGB consider implementing the indicator-related recommendation 4b in the Expert Panel Report, *NAEP Background Questions: An Underused National Resource (2012):*

- Prepare an online compendium of key background indicators for States and participating urban districts.

The first step would be to move forward with an analysis and design study.

Two implications for organizations and agencies other than NAGB are:

- States and districts should consider collecting and publishing their own up-to- date data on time for learning by district and school. A key area to explore is data on the proportion of students with high rates of absenteeism. Research indicates that most states and many districts currently do not generate that information (Attendance Works, 2013; Gottfried, 2011).

- The Institute of Education Sciences should consider synthesizing through their *What Works Practice Guides* what is known about effective strategies for reducing excessive absenteeism, allocating reading and mathematics instructional time, and establishing optimal amounts of homework at different grades.

In addition, it is worth repeating the recommendation in the earlier national report on time for learning that NAEP collect information on the length of the school day and on other important out-of-school learning activities besides homework.

- NAGB should begin a formal discussion with NCES on strengthening the time for learning background variables based on the recommendations in the two data analysis reports.

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