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## Expectations and Reports of Homework for Public School Students in the First, Third, and Fifth Grades

A recent meta-analysis by Cooper, Robinson, and Patall (2006) indicated a positive relationship between educational outcomes and homework. However, the strength of the relationship varied by the student's grade level and the frequency of and amount of time allocated to homework. Many educators and policymakers see benefits of homework beyond improved test scores and advocate its assignment to students in all grades. For example, homework may be used to reinforce learning by giving students the opportunity to practice material presented in class or to prepare for new material (Epstein and Van Voorhis 2001). It can also be used for noninstructional purposes to promote parent-child interaction or facilitate parent-teacher communication. These different functions for homework will vary depending on the characteristics and needs of the students, teachers, and schools.

Previous research from the National Assessment of Educational Progress (NAEP) presents student reports of time spent on homework and teacher reports of amount of homework assigned (Perie, Moran, and Lutkus 2005; Braswell et al. 2001). However, no research using recent, nationally representative data has investigated the amount of homework expected of and completed by a cohort of students as they progress through school. This Issue Brief offers a unique look into children's homework experiences as they progress through the elementary grades. The brief uses longitudinal data to examine (1) the amount of time that students' public school teachers expected them to spend on reading/language arts (referred to as "reading" in this brief) and mathematics homework in first, third, and fifth grades; and (2) reports from parents of public school children of how often children did homework at home in the first, third, and fifth grades.<sup>1,2,3</sup> Previous research has shown differences in children's reading and mathematics achievement by race/ethnicity (Rathbun and West 2004). Thus, this brief investigates whether differences exist in expectations and reports of homework by these variables. Teachers' expectations are reported by the percentage of minority students in the student's school and parents' reports are reported by the child's race/ethnicity.<sup>4</sup>

Data for this analysis are drawn from the Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K), conducted by the U.S. Department of Education, Institute of Education Science's National Center for Education Statistics. The ECLS-K data are nationally representative of children who were first-graders in the 1999-2000 school year.<sup>5</sup> The analysis in this Issue Brief follows this cohort of children and uses data from spring 2000, spring 2002, and spring 2004. The analysis is restricted to children who were first-time kindergartners in 1998-99, first-graders attending public school in spring 2000, third-graders attending public school in spring 2002, and fifth-graders attending public school in spring 2004.<sup>6,7,8</sup>

### Expectations for Time Spent on Homework, as Reported by Teachers

In general, students' teachers expected them to do more homework as they moved from first grade to fifth grade (table 1).<sup>9</sup> For example, in spring 2000, some 21 percent of public school first-graders had teachers who expected their students to spend at least 30 minutes on reading homework on a typical evening (17 percent for 30 minutes and 4 percent for more than 30 minutes). The percentage of students who had teachers with similar expectations increased to 31 percent in third grade (spring 2002), and 53 percent in fifth grade (spring 2004).

Similarly, students' teachers' expectations for the amount of time spent on mathematics homework generally increased between first and fifth grade. For example, 7 percent of first-graders had teachers who expected their students to spend at least 30 minutes on mathematics homework on a typical evening (6 percent for 30 minutes and 1 percent for more than 30 minutes). Eighteen percent of third-grade students and 43 percent of fifth-grade students had teachers with similar expectations for mathematics homework.

*Differences by percent minority enrollment.* In first, third, and fifth grade, children in higher percent minority schools had teachers who expected more homework on a typical evening, whereas generally children in lower minority schools had teachers who expected less homework.

Specifically, a smaller percentage of first-graders in schools with less than 10 percent minority enrollment (the lowest minority schools) had teachers who expected their students to spend 30 minutes on reading homework than did children in schools with 25-49 percent, 50-74 percent, and 75 percent or more minority enrollment (10 percent vs. 18, 21, and 27 percent, respectively). Similarly, a smaller percentage of first-graders in the lowest minority schools had teachers who expected their students to spend 30 minutes on mathematics homework than did their peers in higher minority schools (1 percent vs. 4-15 percent).

In third grade, greater percentages of children in schools with 75 percent or more minority enrollment (the highest minority schools) had teachers who expected their students to spend either 30 minutes or more than 30 minutes on reading homework nightly than did children in the lowest minority schools (32 vs. 16 percent for 30 minutes; 17 vs. 1 percent for more than 30 minutes). Expectations for time spent on mathematics homework followed a similar pattern: greater percentages of children in the highest minority schools had teachers who expected their students to spend either 30 minutes or more than 30 minutes on mathematics

**Table 1. Percentage distribution of public school students in the kindergarten class of 1998–99, by the amount of time their teachers expect them to spend on homework on a typical evening, grade, subject, and school characteristic: 1999–2000, 2001–02, and 2003–04**

Subject and school characteristic	1st grade (1999–2000)					3rd grade (2001–02)					5th grade (2003–04)				
	None	10 min	20 min	30 min	More than 30 min	None	10 min	20 min	30 min	More than 30 min	None	10 min	20 min	30 min	More than 30 min
<b>Reading/language arts</b>															
<b>Total</b>	<b>2.2</b>	<b>28.1</b>	<b>48.6</b>	<b>17.3</b>	<b>3.8</b>	<b>1.2</b>	<b>16.1</b>	<b>52.0</b>	<b>24.2</b>	<b>6.5</b>	<b>1.4</b>	<b>6.7</b>	<b>38.0</b>	<b>38.6</b>	<b>14.9</b>
Percent minority															
Less than 10	4.7	35.2	48.8	10.0	1.3!	1.4!	25.7	56.2	15.7	1.1!	2.5!	9.8	52.1	28.8	6.5
10–24	1.2!	34.3	48.2	14.6	1.7!	0.5!	13.4	59.8	23.6	2.8!	1.0!	8.3	43.9	36.3	9.7
25–49	0.8!	29.9	47.7	18.0	3.5	0.7!	14.5	49.9	29.4	5.5	0.7!	6.6	35.8	40.6	15.7
50–74	2.9!	21.3	52.5	20.9	2.5!	0.6!	9.6	50.8	28.8	10.2	1.6!	5.6	35.5	45.1	12.1
75 or more	0.5!	18.5	45.1	26.9	8.9	2.2!	10.0	39.6	31.5	16.7	0.9!	3.0!	21.8	45.5	28.4
<b>Mathematics</b>															
<b>Total</b>	<b>12.4</b>	<b>55.9</b>	<b>24.2</b>	<b>6.3</b>	<b>1.2</b>	<b>2.8</b>	<b>36.4</b>	<b>43.2</b>	<b>15.0</b>	<b>2.6</b>	<b>1.4!</b>	<b>10.7</b>	<b>44.9</b>	<b>34.0</b>	<b>8.7</b>
Percent minority															
Less than 10	25.1	58.7	14.3	1.3!	0.7!	4.5!	50.9	36.3	8.3	#	2.0!	16.3	54.3	25.1	2.3!
10–24	13.5	68.2	13.3	4.0	1.0!	1.8!	44.4	44.8	8.7	0.3!	1.9!	10.8	57.2	26.2	3.8
25–49	5.6	58.7	30.3	5.2	0.3!	0.7!	30.0	52.6	15.7	0.9	1.9!	8.4	47.4	34.5	7.0
50–74	6.7	54.4	30.6	7.6	0.7!	4.3!	24.7	48.3	20.4	2.4	0.1!	8.3!	40.6	45.1	5.8
75 or more	3.1!	42.7	37.6	14.5	2.2	1.8!	18.1	42.5	27.4	10.2	0.7!	7.8	25.6	42.7	22.7

# Rounds to zero.

! Interpret data with caution. Standard error is more than one-third the estimate.

NOTE: Teachers were asked how much time they expect children to spend on reading or mathematics homework in a typical evening. They could choose among 5 categories: none, 10 minutes, 20 minutes, 30 minutes, or more than 30 minutes. Detail may not sum to totals because of rounding. Standard errors can be found at <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2009033>.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), "Spring Teacher Questionnaire," spring 2000, spring 2002, and spring 2004.

homework than did children in the lowest minority schools (27 vs. 8 percent for 30 minutes; 10 vs. less than 0.5 percent for more than 30 minutes).

In fifth grade, higher percentages of children in the highest minority schools had teachers who expected their students to complete either 30 minutes or more than 30 minutes of reading or mathematics homework than did children in the lowest minority schools (reading: 46 vs. 29 percent for 30 minutes, and 28 vs. 6 percent for more than 30 minutes; mathematics: 43 vs. 25 percent for 30 minutes, and 23 vs. 2 percent for more than 30 minutes).

## Time Spent Doing Homework, as Reported by Parents

The percentage of public school children whose parents reported that their children never did homework or did it less than once a week decreased from 8 percent in first grade to 3 percent in third grade and 3 percent in fifth grade (table 2). Similarly, the percentage of children whose parents reported that their children did homework 1 to 2 times a week decreased from 14 percent in first grade to 9 and 8 percent in third grade and fifth grade, respectively. There were no measurable differences in the percentage of children whose parents reported that their first-, third-, or fifth-graders did homework 3 to 4 times a week. However, the percentage of children whose parents reported that their children did homework 5 or more times a week increased from 38 percent in first grade to 47 percent in third grade to 51 percent in fifth grade.

*Differences by race/ethnicity.* In all three grades, greater percentages of Black, Hispanic, and Asian public school children had parents who reported that their children did homework 5 or more times a week than did White children. For example, in first grade, 42, 49, and 51 percent of Black, Hispanic, and Asian children, respectively, had parents who reported that their children

did homework 5 or more times a week compared to 32 percent of White first-grade children. In fifth grade, 55, 65, and 70 percent of Black, Hispanic, and Asian children, respectively, had parents who reported that their children did homework 5 or more times a week compared to 45 percent of White children.

## Summary

In general, the amount of reading and mathematics homework that students' teachers expected them to complete on a typical evening increased from first grade to fifth grade. For example, 21 percent of first-graders had teachers who expected their students to complete at least 30 minutes of reading homework, compared to 31 percent of third-graders and 53 percent of fifth-graders. In both subjects and in all grades, differences were found by the minority enrollment of the school. Children in schools with higher percentages of minority students had teachers who expected more homework on a typical evening, whereas generally children in lower minority schools had teachers who expected less homework.

The percentage of public school children whose parents reported that their child did homework 5 or more times a week increased from 38 percent among children in first grade to 47 percent among children in third grade. By fifth grade, 51 percent of children had parents who reported that their child did homework 5 or more times a week. In all three grades, larger percentages of Black, Asian, and Hispanic children than White children had parents who reported that their child did homework 5 or more times a week.

## References

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**Table 2. Percentage distribution of public school students in the kindergarten class of 1998–99, by parent reports of how often their child does homework at home, grade, and student characteristic: 1999–2000, 2001–02, and 2003–04**

Student characteristic	1st grade (1999–2000)				3rd grade (2001–02)				5th grade (2003–04)			
	Never/less than once a week	1 to 2 times a week	3 to 4 times a week	5 or more times a week	Never/less than once a week	1 to 2 times a week	3 to 4 times a week	5 or more times a week	Never/less than once a week	1 to 2 times a week	3 to 4 times a week	5 or more times a week
<b>Total</b>	<b>8.2</b>	<b>13.8</b>	<b>40.1</b>	<b>37.9</b>	<b>3.4</b>	<b>8.5</b>	<b>40.7</b>	<b>47.4</b>	<b>3.0</b>	<b>8.0</b>	<b>37.6</b>	<b>51.3</b>
Race/ethnicity <sup>1</sup>												
White	10.7	16.5	40.5	32.3	3.9	10.2	45.7	40.2	3.2	10.0	42.1	44.7
Black	4.4	10.0	43.7	41.9	2.2!	4.4	39.2	54.2	2.8!	4.4	37.3	55.4
Hispanic	4.3	10.0	36.4	49.3	1.6!	6.7	28.3	63.4	2.1	4.5	28.8	64.5
Asian	5.3	11.0	32.3	51.5	3.2	6.3	33.8	56.7	0.8!	4.9	24.5	69.8
Other	13.7!	16.3	45.5	24.5	11.9!	12.8	45.4	29.8	8.0!	14.4!	34.5	43.0

! Interpret data with caution. Standard error is more than one-third the estimate.

<sup>1</sup> Race categories exclude persons of Hispanic ethnicity. Black includes African American. Asian includes Native Hawaiian and Pacific Islander. Other includes American Indian, Alaska Native, and non-Hispanic children of more than one race.

NOTE: Detail may not sum to totals because of rounding. In this table, homework refers to work assigned by the school and not extra work provided by the parent. Standard errors can be found at <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2009033>.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), "Spring Teacher Questionnaire," spring 2000, spring 2002, and spring 2004.

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## Endnotes

<sup>1</sup> Teacher data are drawn from the Teacher Questionnaire and parent data are drawn from the Parent Interview. In both cases, the data are linked to individual students by the student's ID number. Thus, information from teachers and parents should be interpreted with the student as the unit of analysis (i.e., as the percent of students whose teachers or parents expected or reported a given amount of homework). For detailed methodology information, see *Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), Fifth-Grade Methodology Report* (Tourangeau, Le, and Nord 2005).

<sup>2</sup> Comparisons cannot be made between teacher expectations and parent reports of homework. The questionnaire asked teachers how many minutes per day they expected children to spend on homework on a typical evening for two subjects separately: reading/language arts and mathematics. They could choose among 5 categories: none, 10 minutes, 20 minutes, 30 minutes, or more than 30 minutes. Parents were asked how often their child did homework at home. They could choose among 4 categories: never/less than once a week, 1 to 2 times a week, 3 to 4 times a week, or 5 or more times a week. Parent responses were not separated by subject.

<sup>3</sup> ECLS-K does not ask students in first-, third-, or fifth-grade the amount or frequency of their homework. However, readers are cautioned that homework data reported by parents may not be consistent with what students would report.

<sup>4</sup> Teacher expectations are reported by the percent minority enrollment of the school because teachers typically assign homework on a classwide basis, rather than to individual students, sometimes based on school or district homework policies (Epstein and Van Voorhis 2001).

<sup>5</sup> Although the ECLS-K study started in kindergarten in 1998–99, the first-grade sample was refreshed with students who had not attended kindergarten in the United States in the previous year.

<sup>6</sup> The ECLS-K sample includes 7,100 first-graders, 6,820 third-graders, and 6,660 fifth-graders who attended public school and for whom parent questionnaire data are available. The analysis weighted cases using the child-level longitudinal C456PW0 weighting variable.

<sup>7</sup> Since the sample of children fielded in 2002 or 2004 was not refreshed with third- or fifth-graders who did not have a chance to be sampled in first grade (e.g., because they were out of the country during their first-grade year), this sample of children does not represent all third-graders in 2002 or all fifth-graders in 2004. In addition, the analytic sample includes only those children for whom parent interviews or teacher questionnaires were complete in each of the following data collections: spring of first, third, and fifth grade. Furthermore, the sample does not include students who repeated a grade and did not advance to the next grade on schedule. For these reasons, readers are cautioned against drawing conclusions about all third-graders or all fifth-graders based on this analysis.

<sup>8</sup> The analysis was restricted to public school children to avoid confounding differences in homework between public and private schools with differences due to other characteristics also related to school type (e.g., percent minority enrollment and race/ethnicity). The brief does not examine students during the kindergarten year because the items pertaining to homework in the kindergarten year differed from those in the first-, third-, and fifth-grade years.

<sup>9</sup> It is possible that expectations for the amount of time spent on homework increased for all grade levels between spring 2000 and spring 2004, and not as a result of the children's progression from first to fifth grade. The longitudinal data used in this Issue Brief cannot distinguish between these possibilities.

The Issue Brief series presents information on education topics of current interest. All estimates shown are based on samples and are subject to sampling variability. All differences discussed are statistically significant at the .05 level; this means a difference is discussed only if the probability that it is due to chance (i.e., sampling variability) is less than 1 in 20. No adjustments were made for multiple comparisons. In the design, conduct, and data processing of National Center for Education Statistics (NCES) surveys, efforts are made to minimize the effects of nonsampling errors, such as item nonresponse, measurement error, data processing error, or other systematic error. For more information on the Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), visit <http://nces.ed.gov/ecls>.

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# Issue Brief

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**Table A1. Standard errors for Table 1: Percentage distribution of public school students in the kindergarten class of 1998–99, by the amount of time their teachers expect them to spend on homework on a typical evening, grade, subject, and school characteristic: 1999–2000, 2001–02, and 2003–04**

Subject and school characteristic	1st grade (1999–2000)					3rd grade (2001–02)					5th grade (2003–04)				
	None	10 min	20 min	30 min	More than 30 min	None	10 min	20 min	30 min	More than 30 min	None	10 min	20 min	30 min	More than 30 min
<b>Reading/language arts</b>															
<b>Total</b>	<b>0.46</b>	<b>1.76</b>	<b>1.59</b>	<b>1.46</b>	<b>0.53</b>	<b>0.24</b>	<b>1.26</b>	<b>1.44</b>	<b>1.17</b>	<b>0.65</b>	<b>0.28</b>	<b>0.67</b>	<b>1.42</b>	<b>1.34</b>	<b>0.92</b>
Percent minority															
Less than 10	1.19	2.46	2.73	2.55	0.48	0.57	1.96	2.64	2.10	0.53	0.95	1.65	3.82	3.30	1.32
10–24	0.67	3.05	3.16	2.37	1.03	0.33	2.90	3.46	2.71	1.20	0.60	2.51	4.43	3.73	1.84
25–49	0.51	4.20	4.50	2.78	1.15	0.38	2.85	3.60	2.97	1.60	0.30	1.62	2.86	3.22	2.20
50–74	1.66	3.12	3.81	3.50	0.91	0.42	2.90	5.02	4.26	2.52	0.81	1.80	3.48	4.10	2.19
75 or more	0.41	3.28	2.85	3.39	1.55	0.86	2.35	3.02	2.45	1.99	0.50	1.00	1.75	2.80	2.65
<b>Mathematics</b>															
<b>Total</b>	<b>1.63</b>	<b>1.78</b>	<b>1.42</b>	<b>0.90</b>	<b>0.29</b>	<b>0.66</b>	<b>1.79</b>	<b>1.57</b>	<b>1.03</b>	<b>0.36</b>	<b>0.56</b>	<b>1.42</b>	<b>1.61</b>	<b>1.82</b>	<b>1.09</b>
Percent minority															
Less than 10	3.39	3.59	1.98	0.50	0.35	3.39	3.59	1.98	0.50	†	0.90	2.79	2.66	2.92	1.58
10–24	2.71	3.08	2.12	1.01	0.63	2.71	3.08	2.12	1.01	0.63	1.61	3.24	4.16	3.43	1.24
25–49	1.65	3.37	3.57	1.69	0.27	1.65	3.37	3.57	1.69	0.27	1.47	1.87	3.61	4.04	2.10
50–74	2.09	4.32	3.95	1.70	0.51	2.09	4.32	3.95	1.70	0.51	0.06	4.04	5.15	5.34	1.91
75 or more	1.05	3.21	3.17	3.35	0.49	1.05	3.21	3.17	3.35	0.49	0.58	2.41	2.25	3.49	4.08

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), "Spring Teacher Questionnaire," spring 2000, spring 2002, and spring 2004.

**Table A2. Standard errors for Table 2: Percentage distribution of public school students in the kindergarten class of 1998–99, by parent reports of how often their child does homework at home, grade, and student characteristic: 1999–2000, 2001–02, and 2003–04**

Student characteristic	1st grade (1999–2000)				3rd grade (2001–02)				5th grade (2003–04)			
	Never/less than once a week	1 to 2 times a week	3 to 4 times a week	5 or more times a week	Never/less than once a week	1 to 2 times a week	3 to 4 times a week	5 or more times a week	Never/less than once a week	1 to 2 times a week	3 to 4 times a week	5 or more times a week
<b>Total</b>	<b>0.79</b>	<b>0.78</b>	<b>1.14</b>	<b>1.11</b>	<b>0.55</b>	<b>0.93</b>	<b>1.12</b>	<b>1.23</b>	<b>0.36</b>	<b>0.66</b>	<b>1.21</b>	<b>1.37</b>
Race/ethnicity												
White	1.17	0.97	1.55	1.64	0.75	1.36	1.49	1.74	0.54	0.97	1.32	1.61
Black	1.23	1.61	2.98	2.75	0.85	1.20	2.99	2.80	1.00	1.22	3.89	4.12
Hispanic	1.06	1.13	2.31	2.10	0.54	1.18	1.65	1.97	0.46	0.97	2.03	2.45
Asian	1.66	1.63	2.90	3.87	1.04	1.71	3.30	2.85	0.44	1.16	2.85	2.98
Other	5.27	3.28	6.84	3.66	4.63	4.16	6.22	4.86	3.23	5.76	5.80	6.82

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), "Spring Teacher Questionnaire," spring 2000, spring 2002, and spring 2004.