

U.S. Department of Education
Institute of Education Sciences
NCES 2006-056

Instructional Focus in First Grade

First grade is generally the first year of mandatory full-day schooling in the United States and is thus, for many students, the first time that they will be attending school in a full-day setting (Education Commission of the States 2005). In addition to continuing the socialization into school that began in kindergarten or preschool, first grade curricula are expected to expose children more formally to instruction in reading and language arts, mathematics, and other subjects, focusing on such skills as identifying the beginning and ending sounds of words and adding and subtracting (Denton and West 2002). Learning in first grade helps lay the foundation for future learning. Research has shown, for example, that the progress that first grade students make in learning to read is a strong predictor of their later reading outcomes through high school (Cunningham and Stanovich 1997). Despite the importance of first grade as a crucial period in a young student's academic development, little is known nationally about how much time first-graders actually spend in class on various subjects or about the kinds of activities and skills that they work on in class.

This Issue Brief details how often per week and how much time per day first-graders were instructed in subjects such as reading, mathematics, and science during the 1999-2000 academic year. It then focuses in more detail on students' in-class work on reading and language arts. Results are based on data from the Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K). This study involved a sample of 16,165 first grade students that is representative of the 3.8 million first-graders enrolled in the United States in spring 2000. Data are based on first grade teacher reports from spring 2000.

In this Issue Brief, the measure of frequency of instruction in different subjects is based on teacher reports of how often per week children in their class usually worked on lessons or projects in various subjects, whether as a whole class, in small groups, or in individualized arrangements. Available response categories were as follows: never, less than once a week, one to two times per week, three to four times per week, and daily. The measure of duration of instruction in different subjects is based on teacher reports of how much time children in their class spent per day on various subjects. Available response categories were as follows: 1-30 minutes a day, 31-60 minutes a day, 61-90 minutes a day, and more than 90 minutes a day. For each subject, the analysis of duration excludes those students whose teachers reported that they never worked on lessons or projects in the subject. Taken together, the measures of frequency and duration of instruction used in this Issue Brief provide information on how much instruction students received in various subjects in first grade.

How often do first-graders work on different subjects and for how much time?

Ninety-eight percent of students worked on reading or language arts lessons or projects daily, and 95 percent of students worked on mathematics daily (table 1). The percentages of first-graders who worked on lessons or projects in these subjects daily were more than five times the percentages of students who worked daily on each of the other subjects reported on by ECLS-K teachers (table 1). Fifteen percent of students had teachers who reported that they worked on social studies every day, and 13 percent had teachers who said that they worked daily on science. Less than 10 percent of students received daily instruction in music, art, dance, theater, and foreign language. Subjects taught less than daily may still have been taught on a regular basis. For example, 73 percent of students had teachers who reported that they worked on art lessons or projects one or two times per week. This statistic was 72 percent for music and 19 percent for dance.

The amount of time devoted daily to different subject areas varied as well. Some 60 percent of first grade students receiving reading instruction spent more than 90 minutes a day working on lessons or projects in reading and language arts, more than 10 times the percentage for any other subject, including mathematics; comparable figures for each of the other subject areas were less than 5 percent. For most students receiving mathematics instruction (62 percent), mathematics lessons were 31-60 minutes in duration.

What reading and language arts activities and skills do first-graders work on daily?

With respect to in-class reading and language arts activities and skills, first-graders were categorized according to whether or not their teachers reported that their students worked in class daily on specific reading and language arts activities and skills. An "activity" is a pursuit that students engage in to build their skills, whereas a "skill" is defined as a student competency. This Issue Brief reports on the percentage of students performing the following activities in class daily: working on phonics, reading silently, reading student-chosen books, reading aloud, discussing new or difficult vocabulary, practicing writing letters of the alphabet, and writing with invented spellings. This Issue Brief also reports on the percentage of students who worked daily in class on the following skills: capitalization and punctuation, communicating ideas orally, composing and writing sentences, reading aloud fluently, and using vocabulary. Findings regarding student reading and language arts activities and skills are broken out by

Table 1. Percentage of first-graders whose teachers reported they worked on lessons or projects, by number of times per week, minutes per day, and general topic area: 1999-2000

General topic area	How often per week					Minutes per day ¹			
	Never	Less than 1 time	1-2 times	3-4 times	Daily	1-30	31-60	61-90	More than 90
Reading and language arts	#	#	0.6	1.2	98.2	1.3	10.0	28.4	60.3
Mathematics	0.1	0.3	0.6	3.9	95.1	4.9	62.4	29.2	3.4
Social Studies	0.5	5.4	47.3	32.0	14.7	54.0	43.5	2.2	0.3
Science	0.6	5.7	47.3	33.1	13.4	49.1	47.7	2.8	0.4
Music	2.6	11.6	71.7	6.9	7.2	63.6	35.7	0.6	#
Art	0.9	11.3	72.5	10.7	4.6	39.1	58.5	2.3	0.1
Dance/creative movement	39.5	37.3	18.6	2.6	2.1	85.6	13.8	0.6	#
Theater/creative dramatics	40.9	47.6	10.0	0.8	0.6	89.3	10.1	0.6	#
Foreign language	76.1	9.6	9.7	1.3	3.3	76.4	19.8	1.6	2.2

¹ For each general topic area, the analysis of minutes per day excludes those students whose teachers reported that they never worked on lessons or projects in the general topic area.

Rounds to zero.

NOTE: Detail may not sum to totals because of rounding. Not all apparent differences in this table are statistically significant. Standard errors are available at <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2006056>.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K), First Grade Public Use Data File, Spring 2000.

teacher experience, the number of college courses taken by teachers in teaching reading, school type, and the percentage of a school's students eligible for free or reduced-price lunch.¹

All of the reading and language arts activities investigated in this Issue Brief were practiced daily by over half of the first grade student population (table 2). While the largest percentage of first-graders worked on phonics daily, the smallest percentages of first-graders practiced writing letters of the alphabet and writing (with invented spelling as needed) on a daily basis. Eighty-three percent of first-graders had teachers who reported working on phonics daily, compared with 77 percent for reading silently, 74 percent for reading student-chosen books, 68 percent for reading aloud, 62 percent for writing letters of the alphabet, and 61 percent for writing with invented spellings. In terms of skills, the greatest percentage of students received daily instruction in capitalization and punctuation, although each of the skills investigated in this Issue Brief were worked on daily by over half of the first grade student population. Some 81 percent of students had teachers who reported that they practiced capitalization and punctuation with their classes daily, compared with 68 percent for communicating ideas orally, 67 percent for composing and writing complete sentences, 63 percent for reading aloud fluently, and 61 percent for vocabulary.

The frequency with which activities and skills were taught daily varied with several teacher and school characteristics, including teacher experience. Students with teachers who had 20 or more years of experience were more likely to be taught phonics daily and to discuss new or difficult vocabulary daily than

were students with teachers who had less experience. Students with teachers who had three or fewer years of experience or four to nine years of experience were more likely to read student-chosen books daily than students with teachers who had 10 years of experience or more. Students with teachers who had three or fewer years of experience were more likely to be encouraged to write with invented spelling as needed than were students with teachers in any of the other categories of teacher experience.

The number of college courses in reading pedagogy (i.e., teaching reading) taken by teachers was related to the reading and language arts activities and skills worked on in first grade classes. With respect to number of reading pedagogy courses taken, students whose teachers had taken two or fewer courses were the least likely to discuss new or difficult vocabulary and to practice writing alphabet letters, whereas students whose teachers had taken six or more courses were the most likely to do so. Seventy-eight percent of first-graders whose teachers had taken six or more reading pedagogy courses discussed new or difficult vocabulary daily, compared with 65 percent of those whose teachers had taken three to five courses, and 60 percent of those whose teachers had taken two or fewer courses. Sixty-nine percent of first-graders whose teachers had taken six or more courses practiced writing alphabet letters daily, compared with 62 percent of those whose teachers had taken three to five courses, and 56 percent of those whose teachers had taken two or fewer courses.

In first grade, public school students were more likely than private school students to work on the following activities or skills in class daily: reading silently, reading student-chosen books, reading aloud, discussing new or difficult vocabulary, writing with invented spellings, communicating ideas orally, composing and writing sentences, and working on vocabulary. For example, 63 percent of public school first-graders were encouraged daily to write with invented spellings if needed, compared with 49 percent of private school first-graders.

¹ The free and reduced-price lunch analysis is limited to students in public schools. In cases where missing data on free and reduced-price lunch kept the authors from determining whether or not at least 50 percent of a school's student body was eligible for free or reduced-price lunch, participation in a school-wide Title I program was used as a proxy. In 1999-2000, at least 50 percent of a school's students needed to be eligible for free or reduced-priced lunch for the school to qualify for school-wide Title I funding.

Table 2. Percentage of first-graders whose teachers reported doing activities or working on student skills in reading and language arts daily, by type of activity or skill and selected teacher and school characteristics: 1999-2000

Teacher and school characteristics	Activities						Skills					
	Work on phonics	Read silently	Read student-chosen books	Read aloud	Discuss new or difficult vocabulary	Practice writing alphabet letters	Write with invented spellings	Capitalization and punctuation	Communicating ideas orally	Composing and writing sentences	Reading aloud fluently	Vocabulary
Total	82.6	76.8	73.8	67.9	67.4	61.7	61.0	80.9	68.1	67.2	62.7	61.5
Teacher characteristics												
Years teaching												
3 or fewer years	76.1	78.9	77.9	68.8	62.2	62.1	70.9	80.0	68.2	70.3	66.8	56.1
4-9 years	80.7	77.1	77.6	66.5	62.5	60.3	64.2	82.8	62.4	66.3	62.6	52.7
10-19 years	82.8	75.6	72.1	67.1	68.3	59.8	59.5	81.9	65.3	66.4	58.9	61.4
20 or more years	87.7	76.1	69.9	69.5	73.3	64.8	53.9	79.3	74.9	66.7	63.8	71.7
Number of college courses in teaching reading												
0-2	79.2	75.7	72.6	65.9	60.2	55.8	61.1	79.5	64.8	64.4	62.3	57.1
3-5	82.0	77.5	73.9	67.7	65.1	61.5	59.7	80.3	67.4	65.1	62.9	58.3
6 or more	86.2	77.4	77.2	71.4	77.6	69.2	64.1	83.8	71.3	73.1	64.4	69.5
School characteristics												
School type												
Public	82.3	77.7	75.4	68.9	68.9	62.4	62.8	81.4	69.1	68.5	63.3	62.5
Private	84.2	70.3	63.4	61.2	56.9	56.9	48.7	77.7	61.4	58.4	58.5	54.9
Percentage of school's students eligible for free or reduced-price lunch ¹												
0-49 percent	80.5	76.6	75.9	65.2	67.1	61.1	61.3	81.7	67.8	68.5	60.1	61.4
50 percent or more	84.8	76.6	73.4	73.7	71.4	64.3	60.6	79.8	69.3	66.0	67.4	64.6

¹ The free or reduced-price lunch analysis is limited to students in public schools.

NOTE: Not all apparent differences in this table are statistically significant. Standard errors are available at <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2006056>. SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K), First Grade Public Use Data File, Spring 2000.

Students in higher poverty schools (i.e., those where 50 percent or more of the students qualified for free or reduced-price lunch) were more likely to work on phonics, to read aloud daily, and to work on reading aloud fluently than were students in lower poverty schools. In higher poverty schools, 73 percent of students read aloud daily, compared with 65 percent of students in lower poverty schools.

Conclusion

In 1999-2000, more than 9 in 10 first-graders received daily instruction in reading and mathematics. Perhaps not surprisingly given the research on the importance of early success in reading, helping students to a good start in reading appears to be a major focus of the first grade curriculum in most classrooms. The amount of time the typical student spent on reading lessons or projects per day was more than an hour and a half, whereas the typical student spent more than a half hour but less than an hour on mathematics per day. Although reading and language arts were taught daily to all but 2 percent of

students, the reading activities they took part in and the skills they worked on in class varied depending on teacher and school characteristics. For example, students whose teachers had taken six or more college courses in reading pedagogy were more likely to discuss new or difficult vocabulary daily than were students whose teachers had taken two or fewer college courses in reading pedagogy.

References

- Cunningham, A. and Stanovich, K. (1997). Early Reading Acquisition and Its Relation to Reading Experience and Ability 10 Years Later. *Developmental Psychology*, 33(6), 934-945.
- Denton, K., and West, J. (2002). *Children's Reading and Mathematics Achievement in Kindergarten and First Grade* (NCES 2002-125). U.S. Department of Education, Washington, DC: National Center for Education Statistics.
- Education Commission of the States. (2005). *Full Day Kindergarten: A Study of State Policies in the United States*. Denver, CO: Education Commission of the States Distribution Center.

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 as measured by two-tailed Student's *t* tests; 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. Standard errors were computed to reflect the complex sample design. In the design, conduct, and data processing of National Center for Education Statistics (NCES) surveys, efforts are made to minimize the effects of nonsampling error, such as item nonresponse, measurement error, data processing error, or other systematic error. For more information on the Early Childhood Longitudinal Study, visit <http://nces.ed.gov/ecls>.

This Issue Brief was prepared by Lawrence Lanahan, Daniel Princiotta, and Christine Enyeart, of the Education Statistics Services Institute (ESSI). This Issue Brief was formatted by Carol Rohr of Kforce Government Solutions. For further information, contact Edith McArthur, NCES, at 202-502-7393 or Edith.McArthur@ed.gov. To order additional copies of this Issue Brief or other NCES publications, call 1-877-4ED-PUBS or visit <http://www.edpubs.org/>. NCES publications are also available on the Internet at <http://nces.ed.gov/>.

The Issue Brief series presents information on education topics of current interest.

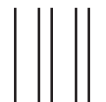
NCES 2006-056

Instructional Focus in First Grade

Issue
Brief

U.S. Department of Education
ED Pubs
8242-B Sandy Court
Jessup, MD 20794-1398

Official Business
Penalty for Private Use, \$300



Postage and Fees Paid
U.S. Department of Education
Permit No. G-17

