Reading Data Available from the Early Childhood Longitudinal Studies (ECLS)

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The Early Childhood Longitudinal Studies

What kinds of things do kindergartners know?
The previous ECLS studies worked with kindergartners to learn about their knowledge and skills.

- 66% recognized their letters
- 29% knew the first sounds of words
- 58% understood size comparisons, such as big, bigger, and biggest
- 94% recognized numbers and shapes and were able to count to 10

Goals of the Early Childhood Longitudinal Studies

• Collect data that can be used to study:
  
  – The ways children are prepared for school – at home, and in their early care and education settings
  – Cognitive, social, emotional, and physical development
  – The association of background characteristics and early educational experiences with child outcomes over time
Early Childhood Longitudinal Study, Birth Cohort (ECLS-B)

- Nationally representative study of children born in the United States in 2001
- More than 10,000 children and their parents participated in the first data collection
- Data are available for multiple points in the child’s life:
  - Birth (information from the birth certificate)
  - At about 9 months of age
  - At about 2 years of age
  - Preschool age (about age 4)
  - Kindergarten
Early Childhood Longitudinal Study, Birth Cohort (ECLS-B)

• Data were collected from:
  – Sampled children
  – Their families (both mothers and fathers)
  – Their nonparental care providers
  – Their kindergarten teachers
Early Childhood Longitudinal Study, Birth Cohort (ECLS-B)

• Available reading-related data include:
  
  – Direct child cognitive assessments: Language and communication development (9 months and 2 years); Reading knowledge and skills (preschool and kindergarten)
  
  – Parent reports of child and family demographics, home activities (e.g., how often family read books to the child, told stories to the child, talked about books read to the child)
  
  – Care/education provider reports on characteristics of the child’s development, the learning environment, and teaching practices
  
  – Kindergarten teacher reports on the child’s development, school programs, and educational goals and objectives
Findings from the ECLS-B: Early cognitive skills

Figure 4. Percentage of children demonstrating certain mental skills at 8 to 10 months of age and at 11 to 13 months of age: 2001

• Nationally representative study of children in kindergarten in the United States in the 1998-99 school year

• More than 21,000 children attending more than 1,200 public and private schools participated in the first year

• Data were collected at multiple points in time:
  – Fall 1998 and Spring 1999: Kindergarten
  – Fall 1999 and Spring 2000: First Grade
  – Spring 2002: Third Grade
  – Spring 2004: Fifth grade
  – Spring 2007: Eighth grade

Data allow for the analysis of summer learning
Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K)

• Data were collected from:
  – Sampled children
  – Their families
  – Their teachers
  – Their school administrators
Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K)

• Available reading-related data include:
  
  – Direct child cognitive assessments in reading at all study rounds
Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K)

- Reading-related data include direct cognitive assessments in reading at all study rounds
Available reading-related data include:

- Direct child cognitive assessments in reading at all study rounds
- Parent reports of child characteristics (e.g., disabilities), home activities (e.g., how often family read books to the child, told stories to the child, talked about books read to the child) and home environment (e.g., number of books in the home)
- Teacher reports at both the child (e.g., child’s perceived interest and competence in reading, child’s approaches to learning) and classroom (e.g., reading instructional practices) levels
- Special education teacher reports were also collected when applicable
Early Childhood Longitudinal Study, Kindergarten Class of 2010-11 (ECLS-K:2011)

- Nationally representative study of children in kindergarten in the United States in the 2010-11 school year

What kinds of activities do parents do with their kindergarten children at least once a month?

Parents reported on activities family members did with their kindergartners in the last ECLS.

- **59%** visited a library
- **47%** visited a zoo, aquarium, or petting farm
- **45%** attended an athletic or sporting event
- **40%** attended a play, concert, or other live show
- **34%** visited an art gallery, museum, or historical site

Early Childhood Longitudinal Study, Kindergarten Class of 2010-11 (ECLS-K:2011)

- More than 18,000 children attending more than 900 public and private schools participated in the first year

- Data were collected at multiple points in time:
  - Fall 2010 and Spring 2011: Kindergarten
  - Fall 2011 and Spring 2012: First Grade
  - Fall 2012 and Spring 2013: Second Grade
  - Spring 2014: Third Grade
  - Spring 2015: Fourth Grade
  - Spring 2016: Fifth Grade
  
  Data allow for the analysis of summer learning
Early Childhood Longitudinal Study, Kindergarten Class of 2010-11 (ECLS-K:2011)

• Data were collected from:

  – Sampled children
  – Their families
  – Their teachers
  – Their school administrators
  – Their before- and after-school care providers (in kindergarten only)
Early Childhood Longitudinal Study, Kindergarten Class of 2010-11 (ECLS-K:2011)

• Reading-related data include direct cognitive assessments in reading at all study rounds
Available reading-related data include:

- Direct child cognitive assessments in reading at all study rounds
- Parent reports of child characteristics (e.g., disabilities), home activities (e.g., how often family read books to the child, told stories to the child, talked about books read to the child) and home environment (e.g., number of books in the home)
- Teacher reports at both the child (e.g., child’s perceived interest and competence in reading, child’s approaches to learning) and classroom (e.g., reading instructional practices) levels
- Special education teacher reports were also collected when applicable
Research Resources: Statistics in Brief

FIGURE 8.
Percentage distribution of students in the kindergarten class of 2010–11, by household poverty status, parents’ highest level of education, and frequency with which child looked at or read books on his/her own during a typical week in the summer: Summer 2011

More Information on NCES Early Childhood Data
Research Resources: NCES Publications & Products

- NCES publications and products website: nces.ed.gov/pubsearch/
Research Resources: *The Condition of Education*

### Research Resources: *Digest of Education Statistics*

#### Table 220.60. Fall 2010 kindergartners’ reading, mathematics, science, and approaches to learning scale scores and standard deviations, by kindergarten entry status and time of assessment: Fall 2010 and spring 2011 through spring 2016

<table>
<thead>
<tr>
<th>Type and time of assessment</th>
<th>Overall mean score(^1)</th>
<th>Standard deviation of the overall mean score</th>
<th>Mean score by fall 2010 kindergarten entry status(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Early kindergarten entrants</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Kindergarten</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Fall 2010</td>
<td>54.6 (0.24)</td>
<td>11.3 (0.18)</td>
<td>52.1 (1.09)</td>
</tr>
<tr>
<td>Spring 2011</td>
<td>69.3 (0.33)</td>
<td>14.4 (0.18)</td>
<td>64.5 (2.13)</td>
</tr>
<tr>
<td>First grade, spring 2012</td>
<td>94.9 (0.37)</td>
<td>17.8 (0.14)</td>
<td>87.7 (2.85)</td>
</tr>
<tr>
<td>Second grade, spring 2013</td>
<td>112.3 (0.34)</td>
<td>17.0 (0.16)</td>
<td>108.1 (2.22)</td>
</tr>
<tr>
<td>Third grade, spring 2014</td>
<td>120.9 (0.31)</td>
<td>15.3 (0.14)</td>
<td>116.4 (1.93)</td>
</tr>
<tr>
<td>Fourth grade, spring 2015</td>
<td>129.3 (0.27)</td>
<td>14.6 (0.15)</td>
<td>124.9 (2.02)</td>
</tr>
<tr>
<td>Fifth grade, spring 2016</td>
<td>136.3 (0.29)</td>
<td>15.3 (0.14)</td>
<td>132.9 (2.16)</td>
</tr>
</tbody>
</table>

Research Resources: *Digest of Education Statistics*

Table 220.40. Fall 2010 first-time kindergartners’ reading scale scores and standard deviations through spring of fifth grade, by selected child, family, and school characteristics during the kindergarten year: Fall 2010 and spring 2011 through spring 2016

<table>
<thead>
<tr>
<th>Selected child, family, or school characteristic during the kindergarten year</th>
<th>Kindergarten</th>
<th>First grade</th>
<th>Second grade, spring 2013</th>
<th>Third grade, spring 2014</th>
<th>Fourth grade, spring 2015</th>
<th>Fifth grade, spring 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall 2010</td>
<td>Spring 2011</td>
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<td></td>
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<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mean reading score</strong>(^1)</td>
<td>54.5 (0.24)</td>
<td>69.3 (0.34)</td>
<td>95.3 (0.40)</td>
<td>121.8 (0.37)</td>
<td>129.7 (0.28)</td>
<td>136.8 (0.30)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sex of child</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Male</td>
<td>54.0 (0.20)</td>
<td>68.6 (0.41)</td>
<td>93.7 (0.45)</td>
<td>111.1 (0.44)</td>
<td>119.8 (0.40)</td>
<td>128.8 (0.34)</td>
</tr>
<tr>
<td>Female</td>
<td>55.0 (0.26)</td>
<td>70.1 (0.39)</td>
<td>97.0 (0.48)</td>
<td>114.5 (0.42)</td>
<td>123.0 (0.37)</td>
<td>130.7 (0.32)</td>
</tr>
<tr>
<td><strong>Age of child at kindergarten entry, fall 2010</strong></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Less than 5 years old</td>
<td>50.7 (0.62)</td>
<td>63.8 (0.96)</td>
<td>87.9 (1.40)</td>
<td>107.1 (1.22)</td>
<td>117.3 (1.02)</td>
<td>126.2 (0.98)</td>
</tr>
<tr>
<td>5 years old to 5 1/2 years old</td>
<td>53.0 (0.32)</td>
<td>67.7 (0.41)</td>
<td>93.5 (0.49)</td>
<td>111.3 (0.40)</td>
<td>119.8 (0.38)</td>
<td>128.7 (0.35)</td>
</tr>
<tr>
<td>More than 5 1/2 years old to 6 years old</td>
<td>55.5 (0.30)</td>
<td>76.0 (0.37)</td>
<td>96.9 (0.52)</td>
<td>114.1 (0.49)</td>
<td>122.6 (0.41)</td>
<td>130.6 (0.36)</td>
</tr>
<tr>
<td>More than 6 years old</td>
<td>57.9 (0.45)</td>
<td>73.1 (0.63)</td>
<td>96.9 (0.74)</td>
<td>115.9 (0.74)</td>
<td>124.0 (0.61)</td>
<td>131.9 (0.68)</td>
</tr>
<tr>
<td><strong>Race/ethnicity of child</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>56.1 (0.33)</td>
<td>71.4 (0.45)</td>
<td>98.6 (0.50)</td>
<td>116.1 (0.43)</td>
<td>124.8 (0.38)</td>
<td>132.8 (0.32)</td>
</tr>
<tr>
<td>Black</td>
<td>53.0 (0.32)</td>
<td>66.5 (0.38)</td>
<td>91.0 (0.90)</td>
<td>107.7 (0.80)</td>
<td>115.3 (0.62)</td>
<td>123.8 (0.68)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>50.8 (0.32)</td>
<td>65.3 (0.33)</td>
<td>89.2 (0.52)</td>
<td>107.1 (0.61)</td>
<td>116.0 (0.56)</td>
<td>125.0 (0.56)</td>
</tr>
<tr>
<td>Asian</td>
<td>59.2 (0.66)</td>
<td>74.4 (0.82)</td>
<td>104.4 (1.00)</td>
<td>117.1 (0.58)</td>
<td>125.2 (0.70)</td>
<td>134.3 (0.81)</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>52.7 (2.00)</td>
<td>69.9 (2.96)</td>
<td>97.7 (2.87)</td>
<td>115.4 (2.82)</td>
<td>123.2 (2.61)</td>
<td>131.3 (1.97)</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>50.3 (0.61)</td>
<td>64.2 (1.08)</td>
<td>91.3 (1.39)</td>
<td>107.5 (1.33)</td>
<td>117.6 (1.21)</td>
<td>125.7 (1.38)</td>
</tr>
<tr>
<td>Two or more races</td>
<td>56.2 (0.74)</td>
<td>70.8 (1.01)</td>
<td>97.0 (1.12)</td>
<td>114.6 (1.08)</td>
<td>123.6 (0.82)</td>
<td>132.0 (0.94)</td>
</tr>
</tbody>
</table>

Research Resources: ECLS Bibliography

- NCES maintains an online bibliography search tool: [https://nces.ed.gov/bibliography/](https://nces.ed.gov/bibliography/)
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Research Resources: Example Citations on ECLS Reading


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Research Resources: Example Citations on ECLS Reading


Research Resources: Example Citations on ECLS Summer Learning


Research Resources: Example Citations on ECLS Summer Learning


Research Resources: ECLS Questionnaires

• ECLS questionnaires
  – ECLS-B: https://nces.ed.gov/ecls/birthinstruments.asp
Research Resources: ECLS Datafiles

• NCES data are available in two formats

  – Restricted-use files (RUFs): Visit https://nces.ed.gov/statprog/instruct.asp for information

  – Public-use files (PUFs): Visit study websites for information
Research Resources: ECLS Datafiles Training

- Training on NCES data is available through NCES’s Distance Learning Data Training (DLDT)
  - Online, interactive tool for learning about NCES data: https://nces.ed.gov/training/datauser/
  - Modules introduce users to NCES studies and datasets, including considerations to facilitate successful analyses
  - Appropriate for use by researchers, students, policy specialists, education professionals, and others
For More Information

Contact NCES Staff

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