Children, Teens, and Reading

A Common Sense Media Research Brief

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Key Findings

1.

Reading for fun drops off dramatically as children get older, and rates among all children - especially teens - have fallen precipitously in recent years.

The proportion of children who are daily readers drops markedly from childhood to the tween and teenage years. One study (Scholastic, 2013) documents a drop from 48% of 6- to 8-year-olds down to 24% of 15- to 17-year-olds who are daily readers, and another (NCES, 2013) shows a drop from 53% of 9-year-olds to 19% of 17-year-olds.

According to government studies (NCES, 2013), since 1984 the proportion of tweens and teens who read for pleasure once a week or more has dropped from 81% to 76% among 9-year-olds, from 70% to 53% among 13-year-olds, and from 64% to 40% among 17-year-olds. The proportion who say they "never" or "hardly ever" read has gone from 8% of 13-year-olds and 9% of 17-year-olds in 1984 to 22% and 27% respectively today.

2.

Reading scores among young children have improved steadily, but achievement among older teens has stagnated.

Reading scores among 9-year-olds increased from 208 to 221 (out of 500) between 1971 and 2012; among 13-year-olds they've gone from 255 to 263 (National Center for Education Statistics, 2013). But among 17-year-olds scores have remained roughly the same: 285 in 1971 and 287 in 2012.

3.

A significant reading-achievement gap continues to persist between white, black, and Hispanic/Latino children.

Government test scores indicate that white students continue to score 21 or more points higher on average than black or Hispanic students (National Center for Education Statistics, 2011). Only 18% of black and 20% of Hispanic fourth graders are rated as "proficient" in reading, compared with 46% of whites. The size of this "proficiency gap" has been largely unchanged over the past two decades (for example, a 27 percentage-point difference between whites and blacks in 1992, and a 28 percentage-point difference in 2012) (NCES, 2012). The degree to which this gap is attributable to race, income, parental education, household reading environment, or other factors is not definitively known.

4.

There is also a gender gap in reading time and achievement.

Girls read for pleasure for an average of 10 minutes more per day than boys, a gap that has been found among both younger and older children (Rideout, 2010; Rideout, 2014). Among teenagers, 18% of boys are daily readers, compared with 30% of girls (Scholastic, 2013). The achievement gap between boys and girls has persisted during the past 20 years, with a gap of 12 percentage points in the proportion scoring "proficient" in reading in the eighth grade in 1992 and 11 points in 2012 (NCES, 2014).

5.

Reading is still a big part of many children's lives.

According to survey research from a variety of sources, young children read or are read to for an average of somewhere between a half-hour to an hour a day (Common Sense Media, 2011, 2013; Wartella, Rideout, Lauricella, & Connell, 2013; Rideout, 2014), and older children (tweens and teens) read for pleasure for a similar amount of time (an average of 38 minutes a day among 8- to 18-year-olds) (Rideout, 2010). Half of parents with children under 12 read with their children every day (Zickuhr, 2013); 60% of children 8 and under read every day (Common Sense Media, 2013); and, among 6- to 17-year-olds, the proportion of daily readers is estimated at 34% (Scholastic, 2013).

6.

But many children do not read well or often.

A third (33%) of 13-year-olds and 45% of 17-year-olds say they read for pleasure no more than one to two times a year, if that often (National Center for Education Statistics [NCES], 2013). Only a third of fourth graders are at least proficient (35%), and another third (32%) score "below basic" in national reading tests (NCES, 2014).

7.

Parents' and children's attitudes about electronic reading are still in flux.

Survey research among parents has shown mixed results (Zickuhr, 2013; Scholastic, 2013; Rideout, 2014) about whether — and the degree to which — parents prefer print to electronic reading for their children. Although many children express a desire to continue to read print books, the proportion who feel that way may be dropping (Scholastic, 2013). About a third of parents have an ereading device that their children don't use (Rideout, 2014), primarily because they are concerned about screen media use or think print is better for children.

8.

Ereading has the potential to significantly change the nature of reading for children and families, but its impact is still unknown.

Twenty to twenty-nine percent of young children (age 8 or under) live in a home with an ereader (Common Sense Media, 2013; Wartella, Rideout, Lauricella, & Connell, 2013; Rideout, 2014), and forty to fifty-five percent have a tablet device at home (Wartella, Rideout, Lauricella, & Connell, 2013; Rideout, 2014). Many young children have read books electronically (Common Sense Media, 2013; Wartella, Rideout, Lauricella, & Connell, 2013). Among older children, nearly half (46%) have read an ebook (Scholastic, 2013). But children still spend much more time with print than ebooks (:29 vs. :05, according to the Cooney Center's 2014 study). There are so many different types of ebooks and variations in how they may be used that it's not yet possible to know how this trend ultimately will affect children's reading.

9.

Parents can encourage reading by keeping print books in the home, reading themselves, and setting aside time daily for their children to read.

Strong correlations exist between these parental actions and the frequency with which children read (Scholastic, 2013). For example, among children who are frequent readers, 57% of parents set aside time each day for their child to read, compared to 16% of parents of children who are infrequent readers.

Introduction

The technology revolution of the past decade has led our society to a major transition point in the history of reading.

First we saw the migration of many traditional print sources such as newspapers and magazines online. Then, with the rapid proliferation of websites came the delivery of an abundance of informational and entertainment text online. Several years later there was the development of small mobile devices such as smartphones and iPod Touches, on which one could read websites, magazines, newspapers, and even books. Next came the birth of dedicated ereaders such as Kindles and Nooks and finally (for now) the development of multipurpose tablets such as the iPad, Nexus, and other devices, which can be used for reading as well as other activities. At the same time, much of the daily communication that used to take place in person or on a phone is now handled in short bursts of written text, such as text messages, emails, Facebook posts, or Tweets. All of this has led to a major disruption in how, what, when, and where we read.

The reading environments of children in the United States have changed dramatically since years past, but are simply the norm for young children born in the first couple of decades of the 21st century. From children's earliest ages, "reading" used to mean sitting down with a book and turning pages as a story unfolded. Today it may mean sitting down with a screen and touching words to have them read aloud. The world of children's books now includes even more specialized options, including "learning" tools such as LeapPads or other electronic books that offer multimedia experiences and blur the line between books and toys.

The electronic platforms on which children read also hold a host of diversions that are only a click away, competing for children's time and attention. In addition to ebooks, these platforms may include games, apps, websites, YouTube, Instagram, Snapchat, and a multitude of innovative ways of watching TV and movies.

In this wildly changing technological environment, what has happened to children's reading? This research brief will review the latest research about children, teens and reading in the U.S., examining what we do and don't know about the following questions:

- How much time do children and teens spend reading? How has that changed in recent years, if at all?
- How well do young people in the U.S. read, and have achievement levels changed in recent years?
- What are the main demographic differences in how much and how well children read?
- Which new media platforms do children and teens use for reading?
- What are the major unanswered questions about whether and how "electronic" book reading differs from print reading for children and adolescents?

Over the years there have been numerous studies that include data on children and reading: large government data sets on frequency of reading and reading achievement; national surveys about reading attitudes and behaviors from non-profit organizations; and several national media-use studies that have included less-scrutinized findings about children and reading. This research brief pulls together the major data points about children and reading from these large data sets. It compares findings among them, noting different methodologies and highlighting trends over time. The paper summarizes key findings across studies; highlights where research is scarce, incomplete, or outdated; and offers some thoughts on important new areas of study. By bringing these disparate studies together in one place, it is hoped that this paper can offer a unique, big-picture perspective on children's reading habits in the U.S., and how they may have changed during the technological revolution we have all experienced in recent years.

Methodology

The research literature on reading is vast.

In this brief, we focus primarily on large national studies or databases for data on specific variables:

- Time spent — and frequency of — reading or being read to
- Reading proficiency/achievement
- Prevalence of electronic reading (hence: ereading)
- Attitudes toward ereading

The paper summarizes the correlations found in these studies between the amount and proficiency of reading and key demographic variables (gender, family income, race/ethnicity). We do not examine research on the predictors of reading in any great detail. We include information on statistically significant differences as provided in the original source (we have not conducted our own independent secondary statistical analyses). Each study defines reading differently, and those varied definitions are described below. The studies cited here do not include "short form" reading of text on digital media such as tweets, SMS texts or social media posts, although some would argue that those types of reading should be measured. The main studies cited include the following:

The National Assessment of Educational Progress (NAEP) Long-Term Trend Assessment: The NAEP long-term trend assessment is a Congressionally-authorized tracking study conducted by the National Center for Education Statistics, a branch of the U.S. Department of Education. The results are part of what is broadly known as "The Nation's Report Card." The long-term trend assessment measures reading achievement by age, at ages 9, 13, and 17. The long-term reading assessment has been conducted since 1971, and is administered every four years. The most recent assessment took place in 2012 and included the participation of more than 26,000 public and private school students. The long-term trend program uses substantially the same measures over time, in order to chart educational progress. Performance levels are reported using scores on a 500-point scale.

The Main National Assessment of Educational Progress: The main NAEP is another Congressionally-authorized tracking study conducted by the National Center for Educational Statistics, and is also part of "The Nation's Report Card." The main NAEP is conducted by grade level rather than by age, and includes a much larger sample than the long-term trend assessment. Unlike the long-term assessment, measures on the main NAEP change as educational priorities and curricula evolve. The main NAEP reading assessment has been administered every two years since 1992 to a large, nationally-representative sample of 4th- and 8th-grade students. The most recent main NAEP reading assessment was conducted in 2013 and included more than 190,000 4th-graders and more than 170,000 8th-graders. Student performance is reported as an average score on a 500-point scale, and by percentage of students scoring at basic, proficient, or advanced achievement levels. The scales are not comparable to those used in the NAEP long-term trend assessment.

The Kaiser Family Foundation's *Generation M²: Media in the Lives of 8- to 18-Year-Olds:* This study included a nationally representative, probability-based sample of just over 2,000 3rd-12th-grade public, private, and parochial school students, and was conducted in 2008-9. The report includes tracking data from prior studies conducted every five years from 1999 through 2009. The survey used written questionnaires completed anonymously by students in the classroom. The study asked students to report the amount of time they had spent reading the previous day. Sampling was spread out over the seven days of the week (some of those who took the survey on Monday were asked about their media use the previous Friday or Saturday). Students were asked to report the time they had spent reading books for their own enjoyment, excluding any that were part of a school assignment; reading or looking at magazines; and reading or looking at newspapers. Response options were 5 minutes, 15 minutes, 30 minutes, 45 minutes, 1 hour, and then in half-hour increments (the final category was seven hours or more). Each type of reading was asked about separately, and responses were summed for total time spent reading. The only non-print reading that was measured was time spent reading newspapers and magazines online.

Scholastic's *Kids & Family Reading Report, 4th Edition*: Scholastic has conducted a biennial study of reading among 6- to 17-year-olds since 2006. However, the methodology has changed substantially during this period, making comparisons with prior findings unreliable. The most recent survey was conducted in 2012, using a probability-based online panel with 1,074 pairs of children and their parents completing the survey. The survey focuses on how frequently children read print and electronic books for fun, and parent and child attitudes about reading, including electronic vs. print books.

Northwestern University's *Parenting in the Age of Digital Technology*: Northwestern's Center on Media and Human Development surveyed more than 2,300 parents of children ages eight or under in 2012. The survey was conducted with an online probability panel. Parents were asked how much time a focal child spends reading in a typical weekday and a typical weekend day. Parents offered specific responses rather than choosing categorical options. The survey measured time spent reading at home, and did not specify anything about reading for pleasure and/or for schoolwork. The questionnaire did not distinguish reading on different platforms, such as books vs. magazines, print vs. online, or long-form vs. short-form reading.

Common Sense Media's *Zero to Eight: Children's Media Use in America 2013*: The Common Sense survey included more than 1,400 parents of 0- to 8-year-olds. It was conducted in 2013 and includes trend data from 2011. The survey was conducted online, using a probability-based panel. Survey questions include how often a focal child reads/is read to, and how much time the child spent reading on various platforms the previous day. The questions about reading did not specify anything concerning print vs. electronic reading, or reading books vs. any other types of content. Parents entered a specific amount of time their child had spent reading the previous day. Responses were collected across the seven days of the week. The survey did not specify whether the reading was for fun or for school.

The Joan Ganz Cooney Center's *Learning at Home: Families' Educational Media Use in America*: This survey was conducted in 2013, and included more than 1,500 parents of 2- to 10-year-old children. The survey was administered online to a probability-based panel. Parents were asked how much time a focal child had spent reading or being read to at home the previous day, with surveying spread out across the seven days of the week. Parents entered a specific amount of time their child had spent reading, rather than selecting categorical response options. Separate items asked about time spent reading print books, reading on tablets or ereaders, and reading on a computer (this item did not specify types of computer reading). Items were summed for a total reading time.

Amount and Frequency of Reading

In this section we review the latest data on how frequently and for how long children read.

The first challenge in documenting time spent reading is that there is no consistent definition of what constitutes "reading" across studies. Some researchers ask only about books; others include magazines and ereaders; and some include online reading (such as when children encounter text on websites). Different studies also focus on different age groups, have very different samples sizes (from a few hundred to tens of thousands), or use different methodologies (such as a telephone survey, a written survey of students in the classroom, an online survey of parents, or a diary study). The question format also varies, with some studies asking about time spent reading in a "typical" day and others asking about reading that occurred on a specific day ("yesterday"). For these reasons, it is often difficult to make direct comparisons between studies. The main government data sets measure how often children read, but not the amount of time they spend doing so.

Time spent reading among younger children

Several studies have measured the amount of time children spend reading per day or per week, using various methodologies. Because of the differences in age groups studied and in methods used for measuring time spent reading, it is difficult track changes over time. However, in the section below we summarize the findings from these studies.

Using a diary methodology, Hofferth and Sandberg (2001) estimated that in 1997 children age 12 and under spent an average of 1:16 a week reading for pleasure, or about 10 to 11 minutes a day. Their data did not show much variation in time spent reading for pleasure per week among different age groups.

The diary methodology used to collect the data in this study asked parents to record children's activities on one specific weekday and one weekend day. The time children spent doing activities on those days was then multiplied by five for weekdays and by two for weekend days and added together for a weekly total. This assumed that the time children spent doing activities on those particular days was the same that they spent doing those activities every day; for example, if the child practiced piano for a half-hour on Wednesday, the diary methodology assumed she practiced piano every weekday for a half-hour; and, if she took Sunday off, it assumed she took Saturday off as well. Thus, activities that occur on a less-than-daily basis may be either over- or under-counted in this type of a study. In addition, diary data often don't count activities that occur simultaneously with other activities, such as watching TV while getting dressed, or reading while eating a meal. Only the primary activity counts. Whether or how this would have affected estimates of the time children spent reading is hard to know.

The Kaiser Family Foundation's study *Kids & Media @ the New Millennium* (Roberts, Foehr, Rideout, & Brodie, 1999) used a face-to-face in-home survey to ask parents how much time their young children had spent reading the previous day, with fielding of the survey spread out across the seven days of the week. This method yielded much higher counts of reading time than previous diary studies had: Parents estimated that their 2- to 7-year-olds spent an average of about 45 minutes a day reading or being read to, excluding any reading that was

Average weekly time spent reading for pleasure among 0-12 year-olds, by age, 1997

Source: Hofferth & Sandberg, 2001.

done for school. This included a half-hour (:29) reading books, 16 minutes reading magazines, and two minutes reading newspapers.

The Kaiser Family Foundation's *Zero to Six* studies, conducted in 2003 and 2005 (Rideout & Hamel, 2006), also asked parents about the amount of time their child spent reading the previous day, with the survey spread out over the seven days of the week. These studies were conducted by phone, using random-digit dialing. The results were similar to the earlier in-home survey from 1999 and remained relatively consistent over the two-year period between surveys, at around 40 minutes per day on average of reading or being read to.

Common Sense Media expanded the Kaiser Foundation's study to include children at both the younger (0- to 6-month-old) and older (7- to 8-year-old) ends of the spectrum (Common Sense Media, 2011, 2013). As with the Kaiser studies, this survey asked parents about the amount of time a focal child spent reading the previous day, with surveying spread out across the seven days of the week. Time spent reading for school or schoolwork was not included. Unlike the Kaiser surveys, however, these studies were conducted online (using a probability sample). The Common Sense studies found an average of about a half-hour of reading for pleasure per day among 0- to 8-year-olds in 2011 (:29) and again in 2013 (:28).

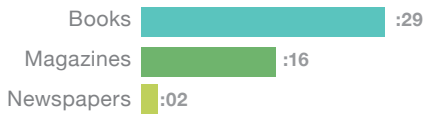
An online survey of more than 2,300 parents, conducted by Northwestern University in late 2012 (Wartella, Rideout, Lauricella, & Connell, 2013), asked parents how much time their 0- to 8-year-old children spent reading or being read to in a typical weekend and on a typical weekday. This study found higher levels of reading than previous studies had found: an average of :56 a day on a typical weekday and :58 on a typical weekend day.

In 2013, the Joan Ganz Cooney Center conducted an online survey that asked parents about the time their 2- to 10-year-old children had spent reading the previous day (Rideout, 2014). The survey asked separately about time spent reading print books, ebooks, or reading on a computer. Parents reported that their children spent an average of :29 a day reading print books, :05 a day reading ebooks, and :08 a day reading on a computer.

The most recent studies indicate that the time spent reading or being read to increases with age among young children, then decreases sharply among tweens and teens. According to Common Sense Media's national parent survey (2013), time spent reading or being read to among 0- to 8-year-olds averages 19 minutes a day among children under age 2, 29 minutes a day among 2- to 4-year-olds, and 32 minutes a day among 5- to 8-year-olds. Data from Northwestern's study of the same age group (Wartella, Rideout, Lauricella, & Connell, 2013) indicate a range of :39 a day among children under 2 to about an hour among 2- to 8-year-olds. And the Cooney Center's study (Rideout, 2014) finds an average of 37 minutes a day among 2- to 4-year-olds and 49 minutes a day among 8- to 10-year-olds, although that difference was not statistically significant.

Average time spent reading or being read to per day, among 2- to 7-year-olds, by age, 1999:

Average time spent reading or being read to per day, among 2- to 7-year-olds, by platform, 1999:

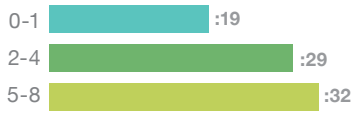


Source: Roberts, Foehr, Rideout, & Brodie, 1999.

Average time spent reading or being read to per day, by age, 2006:

Source: Rideout & Hamel, 2006.

Average time spent reading or being read to per day, by age, 2013:



Source: Common Sense Media, 2013.

Time spent reading among older children

In 2003, Juster et al. (2004) went back to families that had participated in the 1997 time-use study cited above (Hofferth & Sandberg, 2001). Nearly 3,000 6- to 17-year-olds completed 24-hour time-use diaries (6- to 9-year-olds got help from a parent). Researchers found a nearly identical amount of weekly reading for pleasure as had been found using the diary method six years earlier: one hour and 17 minutes a week of reading on average.

The Kaiser Foundation's studies *Kids & Media @ the New Millennium* (Roberts, Foehr, Rideout, & Brodie, 1999) and *Generation M* (Rideout, Foehr, & Roberts, 2010) used written questionnaires completed by students in the classroom and asked how much time they had spent reading for pleasure the previous day. Again, this method yielded much higher estimates of reading than diary studies had found: an average of 38 minutes a day in 2009, including 25 minutes with books, 9 minutes with magazines, and 3 minutes with newspapers. Across the 10 years of the Kaiser research, the estimates of time spent reading books remained remarkably steady, while decreases in estimates of time spent reading newspapers and magazines seemed to reflect national trends in those industries. Kaiser's most recent data among 8-18 year-olds (Kaiser, 2010) indicate that the amount of time children spend reading each day for pleasure drops off significantly as they get older. The time spent with magazines and newspapers is stable, but time spent with books goes down from 33 minutes a day among 8- to 10-year-olds to 21 minutes a day among 15- to 18-year-olds. Similarly, Scholastic's survey of youth (2013) found that the percent of children who report reading for fun five to seven times a week drops from 48% among 6- to 8-year-olds to 39% among 9- to 11-year-olds, 28% among 12- to 14-year-olds, and 24% among 15- to 17-year-olds.

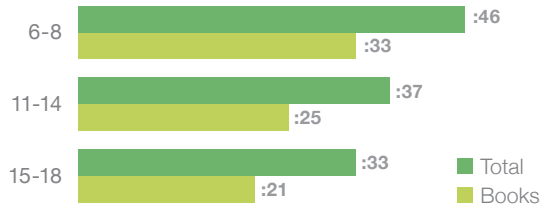
Frequency of reading

Many studies also look at how often children read: daily, weekly, or less often than that. This section summarizes those findings.

The Kaiser Foundation (Rideout & Hamel, 2006) found that, as of 2006, nearly seven in 10 (69%) children age six or under were daily readers, 24% were weekly, and 6% read less than weekly or not at all.

A survey conducted by the Pew Research Center (Zickuhr, 2013) in the fall of 2012 found that half (50%) of all parents with children under 12 read to them every day, and a quarter (26%) do so a few times a week. The remaining quarter do so less often than that. This survey was conducted by phone, using a

Average time spent reading for pleasure per day, by age, 2009:



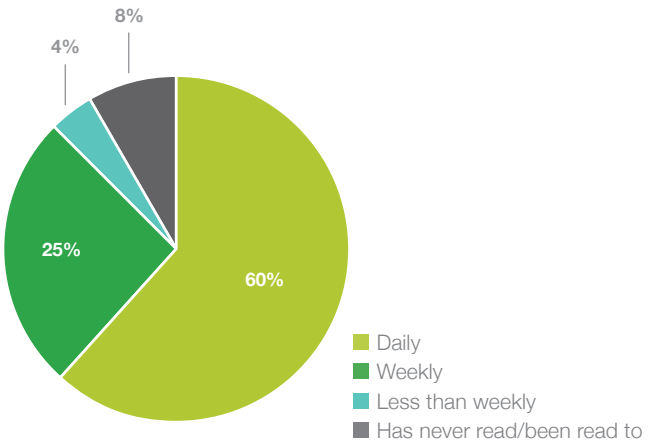
Source: Rideout, Foehr, & Roberts, 2010.

Average daily time spent reading for pleasure, 8- to 18-year-olds, 1999-2009:

	1999	2004	2009
Total	:43[a]	:43[ab]	:38[b]
Books	:21[a]	:23[ab]	:25[b]
Magazines	:15[a]	:14[a]	:09[b]
News papers	:07[a]	:06[a]	:03[b]

Source: Rideout, Foehr, & Roberts, 2010.

Frequency of reading among 0- to 8-year-olds, 2013:



Source: Common Sense Media, 2013.

nationally representative random-dial sample, among a little more than 400 parents.

Common Sense Media's studies (2011, 2013) find that six in 10 (60%) children age 8 or under read or are read to every day. Another quarter of all children (25%) read or are read to at least once a week. These numbers held steady between 2011 and 2013.

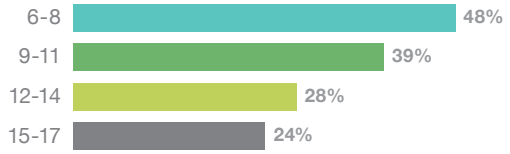
The National Center for Education Statistics conducts regular surveys of 9-, 13-, and 17-year-olds as part of the National Assessment of Educational Progress (NAEP) long-term trend assessment (2013). In addition to measuring children's reading achievement, this long-term assessment survey (with a sample of more than 26,000 students in 2012) also includes questions about how often young people read for fun.

The data indicate a sharp drop in how often children read for fun once they hit middle- and high-school age. According to this study, in 2012 approximately half (53%) of all 9-year-olds, a quarter (27%) of all 13-year-olds, and one in five (19%) 17-year-olds read for fun almost every day.

Scholastic has conducted a biennial study of reading among 6- to 17-year-olds since 2006, using a probability-based online survey. In 2012 (Scholastic, 2013), the survey found that 34% of respondents read for fun five to seven days a week. One in four (26%) read for fun less than once a week, including 9% who say they never do.

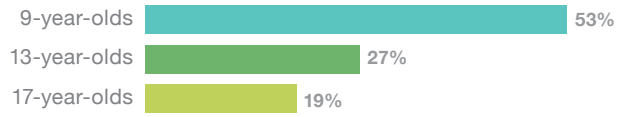
As with the findings from NCES, Scholastic's survery also indicates that the percent of children who report reading for fun five to seven times a week drops substantially as they get older: from 48% among 6- to 8-year-olds to 39% among 9- to 11-year-olds, 28% among 12- to 14-year-olds, and 24% among 15- to 17-year-olds.

Percent of 6- to 17-year-olds who read for fun five to seven days a week, by age, 2012:



Source: Scholastic, 2013.

Percent of 9-, 13-, and 17-year-olds who read for fun almost every day, 2012:



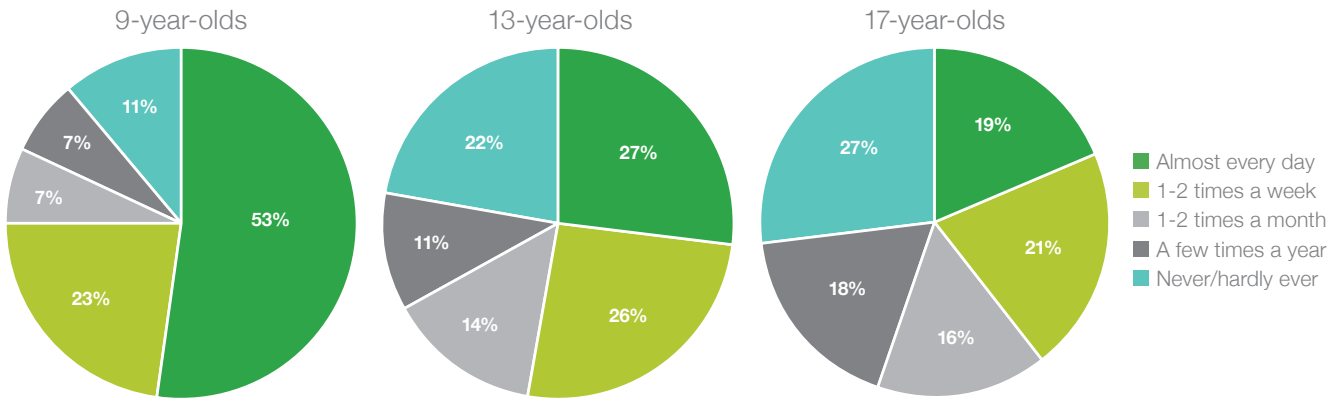
Source: National Center for Education Statistics, 2013.

Percent of 6- to 17-year-olds who read frequently, moderately, and infrequently:

Frequently		Moderately		Infrequently	
Daily	16%	3-4 times per week	21%	2-3 times per month	3%
5-6 times per week	19%	1-2 times times per week	19%	1 time per month or less	23%
All	**35%**	All	**40%**	All	**26%**

Source: Scholastic, 2013.

Frequency of reading for fun, by age, 2012



Source: National Center for Education Statistics, 2013.

Multitasking and reading

Not all time spent reading is fully focused. Even before electronic books, some children "media multitasked" while reading — in other words, used some other medium at the same time they were reading, such as having music or television on in the background.

The Kaiser Foundation's study of media multitasking (Foehr, 2006), using data from 2003–2004, found that 28% of seventh through twelfth graders used another medium "most of the time" when they were reading, and another 30% said they did so "some" of the time they read.

Diary data collected in the Kaiser study (Foehr, 2006) indicated that 35% of the time that students were reading as their primary activity, they also were using another medium — for example, watching TV (11% of the time), listening to music (10% of the time), or instant messaging (2% of the time).

Predictors of reading

Studies have found a variety of factors that may influence how often chilren read. Some of the variables that have been correlated to children's reading are mutable, and others are not. For example, various studies have found that the child's gender, race, family income, and parents' level of education all are related to how much a child reads. But aspects of the home environment that are changeable also have been strongly related to children's reading. These include how many print books are in the home, how often the child's parents read, and whether parents make time in the child's daily schedule for reading. In fact, Scholastic's (2013) survey of 6- to 17-year-olds found a stronger correlation between some of these factors and children's reading than between family income and reading.

Relation between household variables and reading frequency among 6- to 17-year-olds, 2013:

	Frequent readers (5+ days a week)	Infrequent readers (<1 day a week)
Percent whose parents read books 5-7 days a week	44%	22%
Average number of print books in the home	259	160
Mean household income	$71,000	$70,000
Average number of print or electronic books acquired for child in the past 6 months	22	4
Percent whose parents build time for reading into the child's daily schedule	57%	16%

Source: Scholastic, 2013.

Changes in Reading Rates Over Time

Several studies show a substantial drop in how often children and youth read for fun.

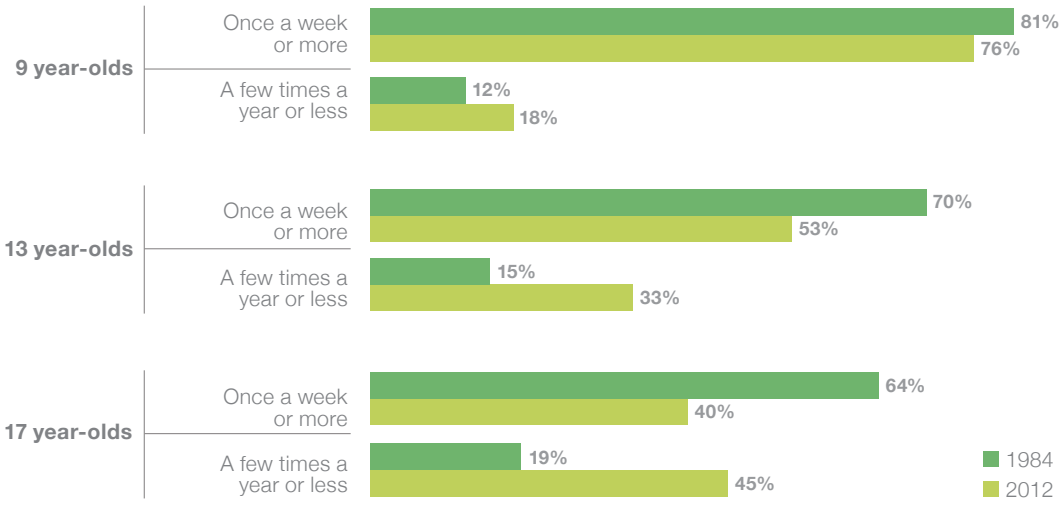
The National Center for Education Statistics' (2013) long-term trend assessment has asked a large national sample of students how often they read for fun, using the same question format to measure changes over time. There has been a drop in how often children read for fun among all three age groups included in the study, but the drop has been especially sharp among middle- and high-school students. In particular, the percent of 13- and 17-year-olds who report "never" or "only occasionally" reading for fun has increased substantially during the past 30 years. In 1984, 8% of 13-year-olds and 9% of 17-year-olds said they never or hardly ever read for fun; today those rates have roughly tripled, to 22% and 27% respectively. At the same time, the percent who report reading almost every day has dropped, from 35% to 27% among 13-year-olds and from 31% to 19% among 17-year-olds.

Frequency of reading for fun, by age, over time:

Percent who read for fun:	9-year-olds			13-year-olds			17-year-olds		
	1984	2004	2012	1984	2004	2012	1984	2004	2012
Almost every day	53%	54%	53%	35%	30%	27%	31%	22%	19%
1-2 times a week	28%	26%	23%	35%	34%	26%	33%	30%	21%
1-2 times a month	7%	7%	7%	14%	15%	14%	17%	15%	16%
A few times a year	3%	5%	7%	7%	9%	11%	10%	14%	18%
Never/hardly ever	9%	8%	11%	8%	13%	22%	9%	19%	27%

Sources: National Center for Education Statistics, 2005 & 2013.

Change in frequency of reading, 1984-2012:



Source: National Center for Education Statistics, 2013.

Scholastic (2013) has been surveying 6- to 17-year-old children and parents about reading since 2006. In that time, the percent who report reading for fun every day has dropped substantially, from 31% in 2006 to 24% in 2008, 17% in 2010, and 16% in 2012. However, the methodology of the Scholastic study changed significantly during this time, including sample size (going from 500 to 1,000 young people), representativeness (going from mall intercepts to a probability-based online panel), and response options (for example, going from four to six days a week as a response option to three to four and five to six days a week as separate options). These changes make it impossible to know whether the frequency of reading for fun has really declined or not. However, the methodology currently in place is more reliable than that used previously, meaning that the current, lower estimates of daily reading are more likely to be accurate.

The data about possible changes in reading rates among younger children are harder to assess. Common Sense Media's estimates of time spent reading by young children in 2011 and 2013 are substantially lower than those found in the Kaiser Foundation's studies in 2003 and 2005. In Kaiser's 2005 data, 6-month- to 6-year-olds read or were read to for an average of 40 minutes a day. In Common Sense's 2011 study, the same age group was found to read for an average of 29 minutes a day. The question wording in the two studies was identical ("Thinking just about yesterday, how much time did your child spend reading or being read to?"). But the methodology was different: the Kaiser study used a random-digit-dial telephone survey, while Common Sense used a probability-based online sample. It is not possible to know for sure whether the difference between the findings is an artifact of the change in methodology, or reflects a real drop in reading. The time period between the two studies included the introduction of the Amazon Kindle and the Apple iPad.

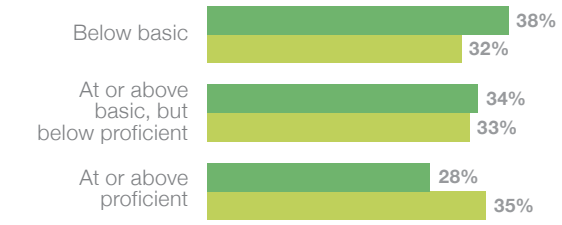
Common Sense Media's studies found no change in the proportion of children age 0 to 8 who read on a daily basis between 2011 (59%) and 2013 (60%). The Kaiser Foundation's study of 6-month- to 6-year-olds found that 69% were daily readers in 2005 (Rideout & Hamel, 2006). Looking only at the 0- to 6-year-olds in the 2011 Common Sense study, 56% were daily readers. Again, it's not possible to know whether this reflects a drop in daily reading or is due to a change in study methodology.

Reading Achievement

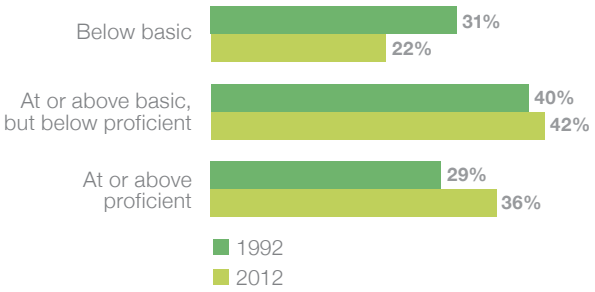
National tests in the U.S. indicate that reading comprehension among younger children has been on the rise during the past few decades, while achievement levels among teens have stagnated.

According to Department of Education data, as of 2012 only 35% of fourth graders were proficient in reading; 32% scored below basic levels; and the remainder fell in-between those two levels (NCES, 2014). This represents a modest improvement from a decade earlier, with a drop of six percentage points in those scoring below basic levels and an increase of seven points in those scoring at or above proficient. By the time they reach the eighth grade, fewer students are below basic (22%), a rate that also has declined during the past 10 years (from 31% in 1992). But only about a third (36%) are proficient (although this is up from 29% 20 years ago). The NAEP's long-term assessment tests indicate gains in reading scores among 9- and 13-year-olds since the early '70s but show stagnating scores among 17-year-olds (NCES, 2014).

Reading proficiency levels among 4th graders, 1992–2012

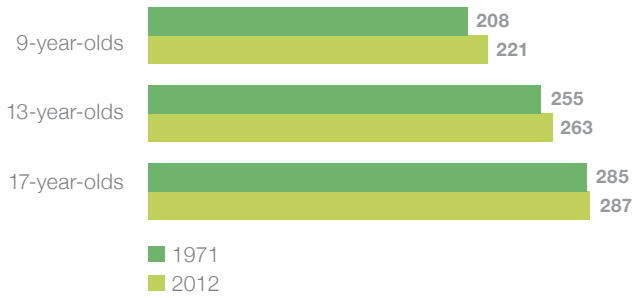


Reading proficiency levels among 8th graders, 1992–2012



Source: National Center for Education Statistics, 2014.

NAEP long-term assessment scores, 1971–2012



Source: National Center for Education Statistics, 2014.

Demographic Variations in Reading

Several studies have explored differences in reading patterns and achievement among children from different demographic groups. In this section we summarize research on reading trends by race, socioeconomic status, and gender.

Differences in amount and frequency of reading by race/ethnicity and socioeconomic status

Studies among younger children have mixed results regarding differences in average daily time spent reading or being read to based on race, income, or parent education: Kaiser's 2005 data on 6-month- to 6-year-olds show differences for all three variables, whereas studies from Common Sense and the Joan Ganz Cooney Center in 2013 find none (Rideout & Hamel, 2006; Common Sense Media, 2013; Rideout, 2014). It is possible that differences in reading have diminished over time, from the 2006 Kaiser Study to the more recent data from Common Sense and the Cooney Center. But both the earlier Kaiser study and the Common Sense studies found significant differences across all three variables (race, income, and parent education) when it comes to the proportion of children who are daily readers (as opposed to the length of time spent reading; the Cooney Center study did not include this question).

In the Kaiser study (Rideout & Hamel, 2006), Hispanic children were found to spend an average of 15 minutes less per day reading than black children and 20 minutes less than non-Hispanic white children. The difference in time spent reading between children of college-educated parents and those whose parents had only a high school degree was similar. The difference between income groups was smaller, with an average of 6 minutes a day between the lowest and the highest income groups (Rideout & Hamel, 2006). Northwestern's study of 0- to 8-year-olds found a similar rate of reading among Hispanic and non-Hispanic white children, at :52 and :55 a day, respectively, while parents of black children reported 1:08 a day in reading.

With regard to the likelihood of a child being a daily reader, both the Kaiser (Rideout & Hamel, 2006) and Common Sense (2013) studies found substantial differences across all three variables. For example, the Common Sense study of 0- to 8-year-olds in 2013 found a 22 percentage-point difference in the proportion of white vs. Hispanic children who read or are read to on a daily basis and a 19 percentage-point difference between white and black children. The difference between the high- and low-income groups was 15 percentage points, with a 16-point difference based on parents' level of education.

Data from the NCES's School Readiness Survey also offer evidence of a gap among younger children (Nord, Lennon, & Liu, 1999). This survey documented the proportion of 3- to 5-year-olds who had read or been read to three or more times during the past week. It found differences based on race, income, and the mother's education. Among all children this age, the proportion who had read or been read to at least three times the previous week went up slightly between 1993 and 2005 (Rooney, Hussar, Planty, Choy, Hampden-Thompson, Provasnik, & Fox, 2006). Differences by race were the largest, although the gap narrowed somewhat from a 27 percentage-point difference in 1993 and 1999 to a 20-point difference in 2005.

The Kaiser studies among older children (8- to 18-year-olds) did not collect family income data (Rideout, 2010). However, in both 2004 and 2009 those studies found a difference in time spent reading based on parent education. Based on the child's race or ethnicity, there was no difference in total recreational reading (including magazines and newspapers), but there was a difference in time spent reading books specifically.

Percent of 3- to 5-year-olds who read or were read to three or more times in the past week, by race/ethnicity, over time:

	1993	1999	2005
White	85%	89%	92%
Black	66%	72%	79%
Hispanic	58%	62%	72%

Sources: Nord, Lennon, & Liu, 1999, and Rooney et al, 2006.
Note: Only includes children not yet in kindergarten.

Average time spent reading per day, by race/ethnicity

	By Race/Ethnicity			By Income				By Parent Education		
	White	Black	Hispanic	<$20K	$20-50K	$50-75K	>$75K	High School	Some College	College Degree
Among 6-month- to 6-year olds, 2006	44[a]	39[a]	24[b]	:40[a]	:38[ab]	:42[ab]	:46[b]	:31[a]	:46[b]	:45[b]
Among 0- to 8-year olds, 2013	29	25	29	<$30K	$30-75K		>$75K	:27	:24	:32
				:31	:25		:29			

Percent who read or are read to every day, by race/ethnicity

	By Race/Ethnicity			By Income				By Parent Education		
	White	Black	Hispanic	<$20K	$20-50K	$50-75K	>$75K	High School	Some College	College Degree
Among 6-month- to 6-year olds, 2006	75%[a]	66%[b]	50%[c]	60%[a]	69%[a]	78%[b]	76%[b]	59%[a]	71%[b]	78%[b]
Among 0- to 8-year olds, 2013	68%[a]	49%[b]	46%[b]	<$30K	$30-75K		>$75K	52%[a]	54%[a]	68%[b]
				53%[a]	58%[a]		68%[b]			

Sources: Rideout & Hamel, 2006, and Common Sense Media, 2013.
Note: Only items with different superscripts differ at the level of p<.05. Items that share a common superscript do not differ significantly.

Average time spent reading per day among 8- to 18-year-olds, by parent education, 2009

High School	Some College	College Degree
:35[a]	:30[ab]	:44[b]

Average time spent reading books for pleasure per day among 8- to 18-year-olds, by race/ethnicity, 2009

White	Black	Hispanic
:28[a]	:18[b]	:20[b]

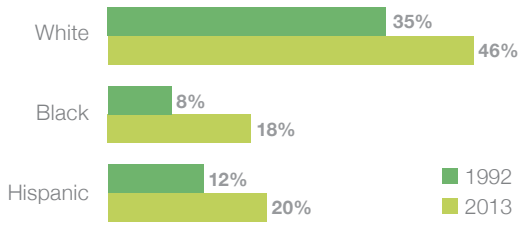
Source: Rideout, Foehr, & Roberts, 2010.
Note: Only items with different superscripts differ at the level of p<.05. Items that share a common superscript do not differ significantly.

Achievement gap

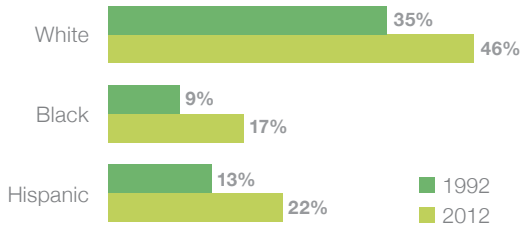
In the U.S., white students score substantially higher on reading literacy tests than black or Hispanic students (NCES, 2011, 2013). According to NCES data, "White students continued to score 21 or more points higher on average than black and Hispanic students in 2012." The Joan Ganz Cooney Center's Michael Levine (2012) notes that this is a difference of about two grade levels. The degree to which these differences may be a result of economic or other issues cannot be known from the available data.

There is a substantial gap between white and black students and white and Hispanic students in the percent who are rated as proficient in reading at either the fourth- or eighth-grade levels (NCES, 2011, 2013). Scores are consistently improving among all three groups, but the "proficiency" gap has held steady. For example, in 1992, 35% of white fourth graders were proficient in reading, compared to only 8% of blacks. In 2012, 46% of whites and 18% of blacks scored as proficient or higher in the fourth grade, going from a 27 percentage-point difference to a 28-point difference.

Percent proficient in reading in 4th grade, by race/ethnicity, 1992-2012



Percent proficient in reading in 8th grade, by race/ethnicity, 1992-2012



Source: National Center for Education Statistics, 2014.

However, looking at the data by average numerical score on the reading achievement test (instead of by category of proficiency), NCES data indicate that the achievement gap has been narrowing steadily (albeit modestly) during the past 40 years (2011, 2013). At all three ages included in the NCES evaluations, the white/black and white/Hispanic gaps have narrowed compared to 1971. In some cases, the gap is substantially smaller: for example, the differences between white and black 9-year-olds and 17-year-olds were nearly half the size in 2012 that they were in 1971. The change is due to larger gains among black and Hispanic students than white students. Unfortunately, since 2008 only one of the six gaps (between three age groups of white and black students and three age groups of white and Hispanic students) has narrowed (the one between white and Hispanic 13-year-olds).

When looked at by parent education, the NCES data (2014) also show a substantial achievement gap. In 1992, there was a 28-point difference in eighth-grade reading scores between those whose parents did not finish high school and those whose parents had a college degree. By 2013, scores on both ends of the scale had improved, but there was still a 27-point gap between the two.

Average 8th-grade reading score, by parent education, 1992-2012

	Average 8th-grade NAEP reading score	
Parent Education	1992	2012
No high school degree	243	251
High school	251	255
Some college	265	270
College degree	271	278

Source: National Center for Education Statistics, 2014.

Reading and gender

Studies about reading have often documented a gender gap between boys and girls, with boys tending to enjoy reading less, do it less often, and score lower on achievement tests than girls.

Among younger children, there have been mixed findings. The Joan Ganz Cooney Center's 2013 study of 2- to 10-year-olds (Rideout, 2014) found a 12-minute gap per day between boys and girls (boys averaged :34 a day and girls :46). But Common Sense Media's 2013 study of 0- to 8-year-olds found no significant differences between boys and girls in the average time spent reading or the percent of children who were daily readers. The earlier Kaiser Foundation study among 6-month- to 6-year-olds (Rideout & Hamel, 2006) found no differences in the amount of time spent reading but a 9 percentage-point difference in likelihood of reading on a daily basis (74% of girls and 65% of boys were daily readers).

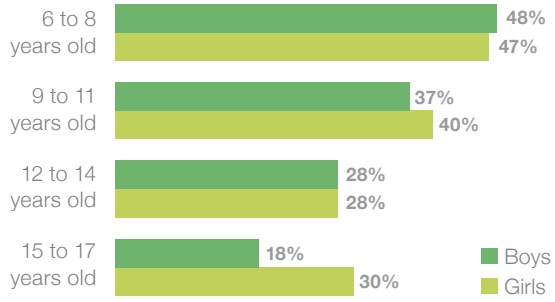
Among 8- to 18-year-olds, the Kaiser Foundation studies (Rideout, Foehr, & Roberts, 2010) found that in 2009 girls read for an average of 43 minutes a day, compared to 33 minutes a day among boys. In 2004, the difference between boys and girls for total daily time spent reading wasn't statistically significant (:40 for boys and :45 for girls), but the difference in time spent reading books in particular was (:19 for boys, compared to :28 for girls).

Scholastic's (2013) study of 6- to 17-year-olds, conducted in 2012, documented several differences between boys and girls. When asked how they felt about reading for fun, two-thirds (66%) of girls said they "love" it or "like it a lot," compared to just more than half (51%) of boys. Overall, 36% of girls reported reading five to seven times a week, compared to 32% of boys. But the Scholastic data reveal that the gender gap in daily reading becomes much more pronounced as children move into the teen years. By the time they are in the 15- to 17-year-old age range, 18% of boys report reading five to seven times a week, compared to 30% of girls.

The gender gap in reading is reflected in scholastic achievement scores (NCES, 2014). The percent of fourth- and eighth-graders who are proficient in reading is higher for girls than boys. Although scores for both boys and girls have improved, the gap has persisted. In fourth grade, the gap was seven percentage points in 1992 and six points in 2012; in eighth grade it was 12 percentage points in 1992 and 11 points in 2012.

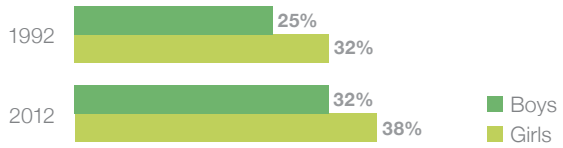
The gender gap in reading appears to be a global phenomenon. The International Association for the Evaluation of Educational Achievement (IEA) conducts the Progress in International Reading Literacy Study (PIRLS), collecting international data on fourth-grade students. The most recent PIRLS study (Thompson et al., 2013) reports that "[g]irls outperformed boys in 2011 in nearly all of the countries and benchmarking participants, and there has been little reduction in the reading achievement gender gap over the decade."

Percent of children and youth who read 5 to 7 days a week, by age and gender, 2012:

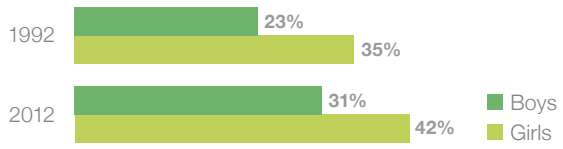


Source: Scholastic, 2013.

Percent proficient in reading in 4th grade, by gender, 1992-2012



Percent proficient in reading in 8th grade, by gender, 1992-2012



Source: National Center for Education Statistics, 2014.

Electronic Book Reading

During the past 10 to 15 years, there has been first an evolution, and then a revolution, in electronic reading.

It began with electronic books for children: storybooks that buzzed or beeped or talked back to the child when certain buttons were pressed. Then came electronic "learning" books, items such as LeapPads that were designed specifically to help with early literacy by reading words aloud to children, helping them sound out words, or defining words. Next came reading online: the migration of certain print platforms, such as magazines and newspapers, to computer screens. Then came the revolution: the development of dedicated ebooks such as the Kindle and the Nook, small multipurpose mobile devices such as smartphones and iPod Touches, and then, finally, tablets such as the iPad. Today what we think of as ebooks include texts formatted for and read on either a dedicated ereader or on a multipurpose electronic device. Within the category of ebooks, the Joan Ganz Cooney Center's Michael Levine (2012) has identified two types of ebooks: "basic" ebooks, which are essentially print books put into a digital format with minimal features such as text highlighting and audio narration, and "enhanced" ebooks, which feature more interactive multimedia options such as games, videos, and interactive animations.

Early ebook and online reading

Early Kaiser Foundation studies (Rideout & Hamel, 2006), prior to the development of ebooks such as the Kindle, measured children's use of what were then called "electronic books," namely child-specific, educationally focused devices such as LeapPads. In 2006, Kaiser found that children age 6 months to 6 years old used electronic books such as LeapPads for an average of five minutes a day. In 2009, a Kaiser survey of 8- to 18-year-olds (Rideout, 2010) documented an average of two minutes a day spent reading magazines and newspapers online.

Ebook access and use

Many children now have access to ereaders or other electronic devices on which they can read books, magazines, and newspapers. Somewhere between one in five and one in three children under age 8 live in homes with a dedicated ereader such as a Kindle or a Nook. A Northwestern University survey conducted in late 2012 (Wartella, Rideout, Lauricella, & Connell, 2013) found that 23% of families with children this age owned such a device, whereas a 2013 study by Common Sense Media found that 21% did (up from 9% in 2011) and the Cooney Center study found 29% (Rideout, 2014). In addition to ereaders, the Common Sense study also found that 75% of families owned some type of "smart" electronic device, on which reading would be possible: a smartphone (63%), tablet (40%), or iPod Touch or similar device (27%). In the Cooney Center study, 55% of respondents owned a tablet device.

Common Sense's 2013 study found that just fewer than a third (30%) of children age 8 or under had ever read a book on a smartphone (7%), iPod Touch or similar device (4%), or tablet (23%). When children used multipurpose devices such as those, reading books was the least common activity (among those activities the survey asked about, such as playing games, watching TV or movies, or using apps). This study also found that 28% of children had ever read a book on an ereading device such as a Nook or a Kindle.

Scholastic's 2012 survey (2013) of 6- to 17-year-olds found that "[t]he percent of children who have read an ebook has almost doubled since 2010 (25% v. 46%)." The Common Sense Study (2013) found that 4% of children age 8 or under use ebooks on a daily basis, either reading by themselves or being read to by their parents; this is up from 2% of children in 2011. Among older teens (16 to 17 years old), a November 2012 survey by the Pew Research Center (Zickuhr, 2013) found that among those who had read a book in the past year, 28% had done so at least once on an ereader (this compared with 13% who had done so the previous year).

Parents' attitudes toward ereading

Parents appear to have mixed feelings about having their children read on ebooks. These feelings are evolving as parents gain more experience with electronic books, and they also vary based on the child's age. With young children, reading is often a matter of parent and child snuggling together, with the child learning to turn the pages of a book as the parent reads to her, and some parents find the experience with ebooks less satisfying. For older

children, parents may be pleased to have their children carrying fewer books around but may be worried about digital distractions that can occur during reading.

A 2013 survey from the Pew Research Center (Zickuhr, 2013) found that even parents who have used ebooks have an overwhelming preference for print books when reading with a child (81% of those who had read both print and ebooks within the past year said a print book was better than an ebook for this purpose). Among all parents of minor children, 81% said it was "very" and 13% said it was "somewhat" important that their children read print books.

A Scholastic survey (2013) conducted around the same time, among parents with children age 6 to 17, found slightly more favorable attitudes toward electronic books: 68% of parents with younger children preferred print, and nearly half of all parents overall didn't express a preference one way or the other. But 54% of parents said that one benefit of print books is that they give the child a break from technology.

An informal survey from the Joan Ganz Cooney Center that recruited participants through word of mouth (Vaala & Takeuchi, 2012) explored the experiences of parents who owned iPads, some of whom did and others of whom didn't use them to read with their children. According to this survey, "iPad owners who read e-books with their children see certain features as helpful for early readers, and others as distracting. Parents reported that audio features were most helpful for their young readers, including the option to click on a word to hear it read out loud. Conversely, embedded games and videos were found to be distracting, contributing to a perception among some parents that co-reading e-books with their children was 'difficult.'"

In spring 2013, the Cooney Center conducted a national survey of parents of 2- to 10-year-olds (Rideout, 2014) and found that 38% did not own either a tablet or an ereader, 32% owned one and their child used it for reading, and 32% owned one but their child did not use it for reading. Among the latter group, some of the top reasons why the child did not use the ereading device were: because the parent prefers the print experience (45%); because the parent doesn't want the child to have more screen time (29%); and because the parent believes print is better for their child's reading skills (27%).

Children's attitudes toward ereading

As with parents, many children have a fondness for print books. In Scholastic's 2012 survey of 9- to 17-year-olds, 58% said they "will always want to read books printed on paper even though there are ebooks available." This was a decrease from 66% who had said the same thing in 2010. Scholastic's study offers a hint that ereading may contribute to more reading among young people. According to the group's report, "Of the children who have read an e-book, one in five says they are reading more books for fun—especially boys, who tend to be less frequent readers than girls."

Impact of ereading

There are many questions about ereading that are just beginning to be answered by researchers. The nature of technological development and academic research is that we often don't know the answers to our most important questions until the use of new technology is well underway. This is likely to be the case with ereading as well. Although researchers have been studying aspects of the difference between screen and print reading since the early 1990s, the technology and content continue to outpace the research.

Many of the existing studies were conducted prior to the availability of ereaders and tablets, either on a computer or on devices that were built specifically for research purposes. These studies don't reflect the technical options modern tablets and ereaders offer, nor are they focused on titles available to children commercially. Other research has begun to look at the effects of newer platforms, but with so many issues to be explored, there is much more work to be done before we can fully understand this new mode of reading.

One place to begin might be an inventory of the various ereading products being used (platforms and titles) and their available functions. Different devices and titles offer a variety of capabilities. Some have audio, such as the ability to pronounce a word aloud or even to narrate the entire text. Others have musical sound tracks or sound effects that occur if the child interacts with the images or text. Many ebooks include an electronic dictionary and allow the reader to highlight text. Some have "hot spots": interactive images and video that are activated when the reader clicks on an image, word, or phrase (for example, a child may be able to click on a picture of a bird, which may make the bird sing and flap its wings).

Beyond the inventory, a review of the literature suggests six key issues for further research:

1. How do children and families use ebooks?
   We continue to need a much better understanding of how ebooks are actually used in the real world and not only in experimental settings. Which types of platforms are families using, and which features do they engage? To what degree do children and youth use the embedded functionality of electronic books, and how does that level of use affect their understanding or enjoyment of the text?
2. How does ereading affect the amount that children and youth read?
   Will electronic books encourage more reading among young people, either because of the convenience or because of the simple fact that the reading occurs on a screen, which is a popular device among youth? Research should continue to monitor children's attitudes and behaviors regarding electronic and print reading. How much do children enjoy electronic reading? Is there a difference in frequency of reading and length of time spent reading?
3. Does ereading affect how children read?
   Do these newly minted platforms encourage children to read only in short bursts rather than with sustained focus? Do the devices distract children's attention while they're reading, given that electronic platforms offer opportunities to switch tasks quickly, from reading to playing games, texting, or checking Facebook? Does electronic reading affect how slowly or quickly children read?
4. Do electronic books improve literacy in early childhood?
   Do interactive elements such as the ability to access definitions or hear pronunciations enhance children's learning? In particular, do ebooks help develop children's vocabulary, phonemic awareness, or word recognition?
5. Does reading on a screen affect comprehension and retention, either positively or negatively?
   Does on-screen text have a different effect on children's brains than text on paper? Is there a difference in children's understanding of what they've read or in the accuracy of their story recall?
6. Does the platform affect the amount of parent-child interaction when reading together?
   Does ereading encourage or discourage parent-child reading? Does it affect the enjoyment of co-reading? And does it enhance or inhibit content-related interactions, such as labeling, pointing, or discussion of the story?

Conducting enough studies with a large enough sample to fully understand the effects of ereading will take time. The challenge is made more complex by the many variables involved, including:

- The age of the child: The impact of electronic reading devices is likely to be quite different for a 2- or 3-year-old beginning learner than for a 6-year-old or a 16-year-old.
- The type of platform being used: Different devices have different functional characteristics, and those differences could have a large influence on the nature of the experience for the child.
- The specific media titles: There are many different types of electronic books available for children and youth, and the effect on the reader may be quite different based on the type of title being read.
- Whether the child is reading alone or with a parent: Research may uncover different effects of ereading depending on whether or not a parent is co-reading with the child.

Extent and impact of "short form" online reading

While the reading of ebooks is beginning to be explored, there are very few studies documenting the extent of short form reading - tweets or other social media posts, SMS texts, emails, etc. - among children and teens compared to reading the more heavily researched traditional forms. A small body of research has also begun to explore the connections between reading this kind of short form electronic text and other factors such as phonemic awareness, long form reading comprehension, writing skills, and critical thinking skills. Much more research is needed in this arena.

Conclusion

This review of the research on children and reading is a study in contrasts.

On the one hand, there are a wealth of data about children and reading; on the other hand, we may not even have an accurate idea of how much time children spend reading or what types of materials they read. Reading scores for young children have been steadily improving, while among adolescents they've stagnated for decades. Achievement scores among minorities have improved, but the gap between whites and children of color has persisted almost unabated. There are more platforms than ever on which children can read, but the number of youth who are daily readers has fallen off dramatically. More children are proficient at reading than ever before, but one in three fourth-graders still reads at a below-basic level.

Although there are a number of large-scale, ongoing studies of children and reading, there is a surprising amount we still don't know about this important topic. This research brief highlights the need to address four critical questions going forward:

- **How much time do children spend reading?** Several important studies (e.g., NCES, Scholastic) measure the frequency of reading for fun among older children (age 6 to 17 for Scholastic, age 9 and up for NCES); another (Common Sense Media) assesses time spent reading among young children (age 8 and under). Since the Kaiser Family Foundation ended its *Generation M* studies of media use among 8- to 18-year-olds, there is no ongoing study to measure the amount of time spent reading among older children. There are significant discrepancies between the results from phone surveys, online surveys, and time-use diaries.

When estimates of children's reading range from 11 minutes a day (Juster, Ono, & Stafford, 2004) to 30 to 40 minutes a day (Rideout & Hamel, 2006; Rideout, Foehr, & Roberts, 2010; Common Sense Media, 2013; Rideout, 2014) and all the way up to nearly an hour a day (Wartella, Rideout, Lauricella, & Connell, 2013), it's safe to say that we really don't have a good sense of how much time children spend reading. Researchers and literacy experts should consider the following questions:

- Is it important to know how much time children and adolescents spend reading for fun, or is frequency of reading a sufficient measure?
- If it is important to measure the amount of time spent reading, which methodology offers the most accurate results?
- What type of reading should be measured? Some studies specifically focus on books, while others include looking at text messages and social-networking posts as reading. Should "reading" include any time a young person encounters and decodes text, or is there a narrower or broader way of defining reading that is important to consider?
- Has there really been a drop in time spent reading among young children, as reflected in the difference between the Kaiser and Common Sense studies (from 40 minutes a day among 6-month- to 6-year-olds in 2005 to 29 minutes a day in 2011), or is this a result of a change in methodology from phone to online surveys?

- **How is the ereading revolution affecting boys and girls of varying ages, abilities, and socioeconomic levels?** How does ereading affect children's reading enjoyment, comprehension, retention, and frequency? What should be done to make ereading as beneficial as possible for all children?

- **What should be done about the tremendous drop in the percent of adolescents who read for fun on a regular basis?** Reading rates among 13- and 17-year-olds have declined dramatically during the past several decades. Today a third (33%) of 13-year-olds and close to half (45%) of 17-year-olds read for pleasure only a few times a year or less, more than double those rates in the mid-'80s.

    - Why are teenagers reading so much less frequently than they used to? Is it due to a lack of compelling content, an increase in time spent with screen media, changing demands from school, or some other reason?

    - If young people's reading-achievement scores have not fallen, does it matter how often they read for fun? If so, what evidence do we have that reading for fun is important?

    - What can be done to reignite young people's passion for reading?

- **How can we address the stubborn and persistent gaps in reading frequency and achievement?** Reading scores among younger children have improved, but there are still far too many children who score at or below a basic reading level, and a disproportionate number of them are boys, minorities, or low-SES youth. The racial achievement gap has narrowed when measured by raw score, but only slowly and modestly, and the "proficiency" gap remains large. Disentangling the relationships between race, income, and parent education may not be possible based on currently published reports, but the fact remains that too many students are being left behind. It is a challenge that many educators and advocates have addressed tirelessly for years, but more progress is urgently needed. Research may be able to help, by exploring possible solutions. Would readily-available, inexpensive ebooks help address the reading gap among lower-SES children? Might boys be more engaged with on-screen than print books? These are all questions that research can help address.

The technological revolution of recent years has already begun to change the nature of reading. If we are mindful about how we incorporate this new technology into children's reading lives, we may be able to use it to support ongoing efforts to reduce disparities, promote reading achievement, and fuel a passion for reading among all young people.

References

Common Sense Media. (2011). *Zero to Eight: Children's Media Use in America.* San Francisco: Common Sense Media.

Common Sense Media. (2013). *Zero to Eight: Children's Media Use in America 2013.* San Francisco: Common Sense Media.

Foehr, U.G. (2006). *Media Multitasking Among Youth: Prevalence, Predictors and Pairings.* Menlo Park, CA: The Henry J. Kaiser Family Foundation.

Hofferth, S. L. and Sandberg, J. E. (2001). How American children spend their time. *Journal of Marriage & Family, 63*(2).

Juster, F. T., Ono, H., and Stafford, F. P. (2004). *Changing Times of American Youth: 1981–2003.* University of Michigan Institute for Social Research.

Levine, M. (2012). *No More Reading Wars! Getting Ahead of the Transition from Print to Digital Books.* Retrieved from http://www.joanganzcooneycenter.org/2012/05/30/no-more-reading-wars-getting-ahead-of-the-transition-from-print-to-digital-books/.

Mangen, A., Walgermo, B.R., and Bronnick, K. (2013). Reading linear texts on paper versus computer screen: Effects on reading comprehension. *International Journal of Educational Research, volume 58*, pp. 61-68. DOI: 10.1016/j.ijer.2012.12.002.

Mullis, I.V.S., Martin, M.O., Foy, P., & Drucker, K.T. (2012). *PIRLS 2011 International Results in Reading.* Chestnut Hill, MA: TIMSS & PIRLS International Study Center, Boston College. Retrieved from http://timssandpirls.bc.edu/pirls2011/international-results-pirls.html.

National Center for Education Statistics. (2005). *NAEP 2004: Trends in Academic Progress - Three Decades of Student Performance in Reading and Mathematics.* (NCES 2005-464). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, D.C.

National Center for Education Statistics. (2011). *Achievement Gaps: How Hispanic and White Students in Public Schools Perform in Mathematics and Reading on the National Assessment of Educational Progress: HIGHLIGHTS.* (NCES 2011-485). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, D.C. Retrieved from http://nces.ed.gov/nationsreportcard/.

National Center for Education Statistics. (2012). *Reading 2011: National Assessment of Educational Progress at Grades Four and Eight.* (NCES 2012-457). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, D.C.

National Center for Education Statistics. (2013). *The Nation's Report Card: Trends in Academic Progress 2012* (NCES 2013–456). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, D.C. Retrieved from http://nces.ed.gov/nationsreportcard/.

National Center for Education Statistics. (2014). *A First Look: 2013 Mathematics and Reading. National Assessment of Educational Progress at Grades 4 and 8.* (NCES 2014–451). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, D.C. Retrieved from http://nationsreportcard.gov/reading_math_2013/#/.

Nord, C.W., Lennon, J., & Liu, B. (1999). *Home Literacy Activities and Signs of Children's Emerging Literacy, 1993 and 1999.* (NCES 2000-026rev). National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.

Rideout, V. (2014). *Learning at home: Families' educational media use in America.* New York: The Joan Ganz Cooney Center.

Rideout, V.J., Foehr, U.G., & Roberts, D.F. (2010). *Generation M²: Media in the lives of 8- to 18-year-olds.* Menlo Park, CA: Kaiser Family Foundation.

Rideout, V., & Hamel, E. (2006). *The Media Family: Electronic media in the lives of infants, toddlers, preschoolers and their parents.* Menlo Park, CA: The Kaiser Family Foundation.

Roberts, D.F., Foehr, U.G., Rideout, V.J., & Brodie, M. (1999). *Kids & Media @ the New Millennium.* Menlo Park, CA: Kaiser Family Foundation.

Rooney, P., Hussar, W., Planty, M., Choy, S., Hampden-Thompson, G., Provasnik, S., Fox, M.A. (2006). *The Condition of Education 2006.* (NCES 2006-071). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, D.C. Retrieved from https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2006071.

Scholastic. (2013). *Kids and Family Reading Report: 4th Edition.* Retrieved from http://mediaroom.scholastic.com/kfrr.

Thompson, S., Provasnik, S., Kastberg, D., Ferraro, D., Lemanski, N., Roey, S., & Jenkins, F. (2013). *Highlights from PIRLS 2011: Reading Achievement of U.S. Fourth-Grade Students in International Context.* (NCES 2013-010). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, D.C. Retrieved from http://nces.ed.gov/pubs2013/2013101.pdf.

Vaala, S. & Takeuchi, L. (2012). *Parent Co-Reading Survey: Co-reading with Children on iPads: Parents' Perceptions and Practices.* New York: Joan Ganz Cooney Center.

Wartella, E., Kirkpatrick, E., Rideout, V., Lauricella, A.R., & Connell, S. L. (2013). *Media, Technology, and Reading in Hispanic Families: A National Survey.* Evanston, IL: Northwestern University.

Wartella, E., Rideout, V., Lauricella, A.R., & Connell, S. L. (2013). *Parenting in the Age of Digital Technology: A National Survey.* Evanston, IL: Northwestern University.

Zickuhr, K. (2013). *In a digital age, parents value printed books for their kids.* Washington, D.C.: Pew Research Center. Retrieved from http://www.pewresearch.org/fact-tank/2013/05/28/in-a-digital-age-parents-value-printed-books-for-their-kids/.

Children, Teens, and Reading

A Common Sense Media Research Brief

Credits

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Common Sense Media's
Program for the Study of Children and Media

The mission of Common Sense Media's *Program for the Study of Children and Media* is to provide parents, educators, health organizations, and policymakers with reliable, independent data on children's use of media and technology and the impact it has on their physical, emotional, social, and intellectual development. For more information about the program and to read reports on these studies, visit **www.commonsense.org/research**.

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About Common Sense Media

Common Sense Media is a nonprofit, nonpartisan organization dedicated to improving the lives of kids, families, and educators by providing the trustworthy information, education, and independent voice they need to thrive in a world of media and technology.

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