Pew Internet
Pew Internet & American Life Project

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Reading Habits in Different Communities

Residents of urban, suburban, and rural areas vary in their purposes for reading, their use of digital content, their engagement with public libraries, and where they turn for book recommendations

Carolyn Miller
Research Consultant

Kristen Purcell
Associate Director for Research, Pew Internet Project

Lee Rainie
Director, Pew Internet Project

Pew Research Center's Internet & American Life Project
1615 L St., NW – Suite 700
Washington, D.C. 20036
Phone: 202-419-4500

http://libraries.pewinternet.org/2012/12/20/reading-habits-in-different-communities

Summary of Findings

Reading is foundational to learning and the information acquisition upon which people make decisions. For centuries, the capacity to read has been a benchmark of literacy and involvement in community life. In the 21st Century, across all types of U.S. communities, reading is a common activity that is pursued in myriad ways.

As technology and the digital world expand and offer new types of reading opportunities, residents of urban, suburban, and rural communities at times experience reading and e-reading differently. In the most meaningful ways, these differences are associated with the demographic composition of different kinds of communities — the age of the population, their overall level of educational attainment, and the general level of household income.[1]

Several surveys by the Pew Research Center's Internet & American Life Project reveal interesting variations among communities in the way their residents read and use reading-related technology and institutions:

Book readers: Some 78% of Americans ages 16 and older say they read a book in the past 12 months. Urban (80%) and suburban (80%) residents are especially likely to have read at least one book in the past year. While rural residents are somewhat less likely to have read a book in the past year (71%), the book readers in rural areas read as many books as their counterparts in cities and suburbs.

Purposes for reading: Most of those ages 16 and older read books for pleasure, and that is especially true of suburban readers: 82% of suburbanites read for pleasure, compared with 79% of urban residents and 76% of rural residents. Urban residents (80%) and suburban dwellers (79%) are also especially likely to read to keep up with current events. Some 73% of rural residents do that. More than three-quarters of suburban residents (77%) read to research topics that interest them, compared with 74% of urban residents and 70% of rural residents. Finally, 57% of suburbanites and 58% of city dwellers read for school or work, compared with 47% of rural residents who do that.

Americans and libraries: The majority of Americans ages 16 and older (58%) have a library card and even more (69%) say the library is important to them and their families. Some 71% of city dwellers say the library is important to them and 59% have library cards — and 69% of suburban residents say the library is important and 61% have library cards. At the same time, 62% of rural residents say the library is important and 48% have library cards.

Book recommendations: Family and friends are the primary source of book discovery for Americans 16 and older, especially so for suburban (66%) and urban residents (66%). Some 60% of rural residents say they get book recommendations from family and friends. Similarly, city dwellers (25%) and suburbanites (24%) are more likely than rural residents (18%) to have gotten recommendations from book stores they

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[1] The area where each respondent lives is defined by U.S. government classifications according to the respondent's home ZIP Code.

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visit. Residents of all three kinds of communities are equally likely to say librarians and library websites are sources of book recommendations.

Newspaper and journal readers: Some 58% of those ages 16 and older say they regularly read newspapers. There are not noteworthy differences across communities in the numbers of people who regularly read newspapers. But suburban residents (57%) and urban dwellers (56%) are more likely to say they at times read their newspapers on handheld devices than rural residents (45%). When it comes to magazines and journals, 52% of the suburbanites ages 16 and older say they read them regularly, compared with 47% of urban dwellers and 44% of rural residents. Among those who read magazines and journals, 36% of urban readers and 33% of suburban readers read their magazines and journals at times on handheld devices. That compares with 24% of rural readers who read magazines and journals that way.

Preferences for e-books vs. print books: Some 14% of readers read an e-book and a printed book in the past year. Those book readers in dual platforms were asked which type of book is better for different reading activities such as sharing books with others, reading in bed, reading with a child, or reading while traveling. Generally, urban readers in both formats are more likely to prefer e-books for many reading activities, while rural readers who have read in both formats tend to prefer print.

Urban Special demographic traits: younger, more minorities

BOOK READERS

80	% who read at least one book in last 12 months
17	Among book readers, in last 12 months, mean # of books read
8	Among book readers, in last 12 months, median # of books read
93	Among book readers, in last 12 months,% who read print books
22	Among book readers, in last 12 months,% who read e-books
13	Among book readers, in last 12 months,% who listened to audiobooks

DEVICE OWNERS

19	% who own an e-reader (e.g., Kindle)
21	% who own tablet computer

AMONG E-BOOK READERS

93	% of e-reader owners who read on their e-reader
83	% of tablet owners who read e-books on their tablet
46	% of computer owners who read e-books on computer
30	% of cell owners who read e-books on their phone

PURPOSES FOR READING

79	% who read for pleasure
80	% who read to keep up with current events
74	% who read to research topics in which they are interested
58	% who read for work or school

LIBRARY ACTIVITIES

59	% who have a library card
71	% who say library is important to them and their family
45	Among print readers, % who borrowed print book from library in last 12 months
13	Among e-book readers, % who borrowed e-book from library in last 12 months
28	Among audio listeners, % who borrowed audiobook from library in last 12 months
21	% who got research help from a librarian in the past year in last 12 months

WHERE PEOPLE GET BOOK RECOMMENDATIONS

66	% who get book recommendations from family/friends
37	% who get recommendations from online bookstores/sites (among internet users)
25	% who get recommendations from staff of bookstores
19	% who get recommendations from staff of bookstores/librarians/library websites

Suburban

Special demographic traits: higher household income, middle aged

BOOK READERS

80	% who read at least one book in last 12 months
17	Among book readers, in last 12 months, mean # of books read
8	Among book readers, in last 12 months, median # of books read
93	Among book readers, in last 12 months,% who read print books
22	Among book readers, in last 12 months,% who read e-books
14	Among book readers, in last 12 months,% who listened to audiobooks

DEVICE OWNERS

19	% who own an e-reader (e.g., Kindle)
20	% who own tablet computer

AMONG E-BOOK READERS

93	% of e-reader owners who read on their e-reader
79	% of tablet owners who read e-books on their tablet
45	% of computer owners who read e-books on computer
29	% of cell owners who read e-books on their phone

PURPOSES FOR READING

82	% who read for pleasure
79	% who read to keep up with current events
77	% who read to research topics in which they are interested
57	% who read for work or school

LIBRARY ACTIVITIES

61	% who have a library card
69	% who say library is important to them and their family
51	Among print readers, % who borrowed print book from library in last 12 months
13	Among e-book readers, % who borrowed e-book from library in last 12 months
43	Among audio listeners, % who borrowed audiobook from library in last 12 months
21	% who got research help from a librarian in last 12 months

WHERE PEOPLE GET BOOK RECOMMENDATIONS

66	% who get book recommendations from family/friends
34	% who get recommendations from online bookstores/sites (among internet users)
24	% who get recommendations from staff of bookstores
21	% who get recommendations from staff of bookstores/librarians/library websites

BOOK READERS

71	% who read at least one book in last 12 months
19	Among book readers, in last 12 months, mean # of books read
7	Among book readers, in last 12 months, median # of books read
90	Among book readers, in last 12 months,% who read print books
17	Among book readers, in last 12 months,% who read e-books
16	Among book readers, in last 12 months,% who listened to audiobooks

DEVICE OWNERS

15	% who own an e-reader (e.g., Kindle)
14	% who own tablet computer

AMONG E-BOOK READERS

92	% of e-reader owners who read on their e-reader
89	% of tablet owners who read e-books on their tablet
49	% of computer owners who read e-books on computer
26	% of cell owners who read e-books on their phone

PURPOSES FOR READING

76	% who read for pleasure
73	% who read to keep up with current events
70	% who read to research topics in which they are interested
47	% who read for work or school

LIBRARY ACTIVITIES

48	% who have a library card
62	% who say library is important to them and their family
45	Among print readers, % who borrowed print book from library in last 12 months
8	Among e-book readers, % who borrowed e-book from library in last 12 months
45	Among audio listeners, % who borrowed audiobook from library in last 12 months
18	% who got research help from a librarian in last 12 months

WHERE PEOPLE GET BOOK RECOMMENDATIONS

60	% who get book recommendations from family/friends
33	% who get recommendations from online bookstores/sites (among internet users)
18	% who get recommendations from staff of bookstores
18	% who get recommendations from staff of bookstores/librarians/library websites

Some other factors stand out: <u>Urban residents</u> are more likely than suburban readers to say they are reading more because of availability of digital format and they are the most likely to prefer e-books over print for many reading activities. Among non e-readers, urban residents are the most likely to express interest in classes to learn about e-book related features of the public library. <u>Suburban</u> residents are more likely than rural residents to read magazines or journals regularly. Residents of the suburbs are more likely than urban residents to have used their library to borrow print or audiobooks in the past 12 months and they are more likely then rural residents to express interest in using e-book readers that are already loaded with books from the library. <u>Rural residents</u> are in most ways similar to readers and library users in other kinds of communities, though they are a bit less likely to have read a book in the past 12 months or be as avidly engaged with their local library.

The Pew Internet surveys also show that book readers in all kinds of communities are similar in how much they read, the format they use for getting content (print, audio, electronic books, newspapers) and whether they read "yesterday" or on a "typical day." They also express similar preferences for borrowing or buying print, audio, or electronic books. They also show no notable variation in the format of their most recently read book. And there are few differences in the e-reading behaviors among those in different communities who own those devices.

Statistical modeling shows that the biggest factors at play when it comes to different reading habits are people's ages, their level of education, and their household income. The type of community in which people live is not an independent predictor of their reading behavior or their activities at libraries. In other words, no matter where they live, people of similar ages and similar socio-economic profiles read and engage their libraries at roughly the same level. To the degree that there is variance among the reading styles in communities, those differences are associated with the demographic makeup of these communities, not because there is something unique about rural residence, or urban residence, or being a suburbanite.

Thus, the factors that characterize reading in urban communities emerge from the fact that residents of these communities are relatively young and more likely to be African-American and Latino, compared with suburban or rural residents. Urban dwellers are also most likely to be unemployed or students and to report lower household income.

In contrast, suburban residents tend to be middle-aged, have higher income than residents of other types of communities, and are more likely to be employed full time.

Rural residents are older than those living in other types of communities (rural residents are particularly likely to be ages 50 to 64). They are also the most likely to report being retired or disabled, and to have overall educational attainment of a high school diploma or less. Rural communities are also disproportionately white compared with other community types.

Still, some of the realities of rural life beyond demographics might be a factor in the issues we are exploring here. For instance, rural areas have less access to broadband connectivity and probably have fewer book stores proportionally than urban and suburban areas. Those factors could affect the way rural residents think about reading and books and where to acquire them.

We present these results because reading differences in different communities are important for libraries to understand because they function in geographic spaces. We focus on community types in the

hope that the findings will be useful to communities as they ponder the role of their libraries and contemplate the future of reading, access to knowledge, the process of learning, and where technology fits into all that.

About the research

These are just some of the findings from a series of nationally representative telephone surveys of Americans. They were conducted in English and Spanish, and included both landline and cell phone samples. The main survey of 2,986 Americans ages 16 and older was conducted November 16 - December 21, 2011, and focused on the new e-reading environment and people's habits and preferences where digital and print content are concerned. This work was underwritten by a grant from the Bill & Melinda Gates Foundation.

Two additional nationally representative telephone surveys were conducted between January 5 - 8 and January 12 - 15, 2012 to see the extent to which adoption of e-book reading devices (both tablets and e-readers) might have grown during the 2011 holiday gift-giving season, and some of those figures are reported here.[2] Also, Pew Internet's Winter Tracking Survey (fielded January 20 - February 19, 2012) repeated questions from the first survey about the incidence of book reading in the previous 12 months to determine if there were any changes resulting from the sharp increase in device owners over the holiday season.[3]

Throughout the report, all data cited are from the initial November 16 - December 21, 2011 survey unless otherwise specified.

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Amy Eshelman, Program Leader for Education, Urban Libraries Council
Sarah Houghton, Director, San Rafael Public Library, California

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[2] Results from these surveys will be referred to as "January omnibus data" where they are cited.
[3] Results from this survey will be referred to as "Winter Tracking data" where they are cited.

Mimi Ito, Research Director of Digital Media and Learning Hub, University of California Humanities Research Institute
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Jo McGill, Director, Northern Territory Library, Australia
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Part 1: Introduction

This report is part of a series exploring the rising e-book environment and its impact on the general reading habits of Americans, as well as its impact on public libraries. To understand the place e-reading, e-books, and libraries have in Americans' evolving reading habits, the Bill & Melinda Gates Foundation awarded the Pew Internet Project a three-year grant. Libraries have traditionally played a key role in the civic and social life of their communities, and this work is aimed at exploring the ways that changes in consumer behavior and library offerings might affect that unique relationship between libraries and communities.

This report is the fourth in a series of Gates Foundation-funded releases. The first report,[4] issued in April 2012, detailed the general reading habits of the U.S. adult population and how it has shifted since the advent of e-book technology. The second report,[5] issued in June 2012, focused on the intersection of e-books and libraries, where libraries fit into the new book-consumption patterns of Americans, when people choose to borrow or buy books, and when they prefer digital content over print content and vice versa. The third report, issued in October of 2012 examined the reading habits and library use of younger adults ages 16 to 29.[6]

The current report builds on the first two, in that it explores the general reading habits and e-reading habits of Americans, yet it does so through the lens of different community types. Its focus is how people living in urban, suburban, and rural communities compare with one another in their reading patterns, interest in e-reading, and library use habits. Specifically, this report takes a closer look across communities at similarities and differences in how much people read, what they read, how they read and how they use and value their local public library.

An examination of differences in the demographic makeup and electronic ownership profile of these different communities provides an important framework and context for the reading and e-reading differences reported here.

Community descriptions — demographic profile

Overall, in the main survey analyzed here, about a third (31%) of the respondents live in an urban setting, nearly half (48%) reside in the suburbs of a large city, and 16% live in rural areas.[7] Significant demographic differences across the populations of these different community types, as well as attitudinal and behavioral differences, impact residents' reading habits and attitudes. Statistical modeling shows that in most cases, the key demographics of age, income, and educational attainment are most strongly related to reading habits and behaviors, and these are precisely the variables by which urban, suburban, and rural communities generally differ. Thus, the demographic makeup of different community types is noted below and should provide a context for interpreting the results. The Pew

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[4] The Rise of E-reading, available at http://libraries.pewinternet.org/2012/04/04/the-rise-of-e-reading.
[5] Libraries, Patrons and E-books, available at http://libraries.pewinternet.org/2012/06/22/libraries-patrons-and-e-books.
[6] Younger Americans' Reading and Library Habits, available at http://libraries.pewinternet.org/2012/10/23/younger-americans-reading-and-library-habits.
[7] 5% of the sample was undesignated with respect to community size. These respondents were excluded from the analysis for this report.

Internet findings are consistent with community demographic attributes that are issued by the U.S. Census Bureau.

The community designations that form the basis of this report are based on the location of the telephone number in a community of a specific size. For landline numbers in the sample, urban/suburban/rural designations based on Office of Management and Budget (OMB) definitions are appended to each number in the sample by the survey sample vendor. For cell phone numbers, respondents are asked the zip code in which they live and then those cell phone respondents are matched to known community type designations based on landlines in the same zip code. For about 5% of the sample, almost exclusively cell phone respondents, community type cannot be determined because the zip code provided cannot be matched to existing community type designations.

Differentiation of the sample into community type
% of respondents who live in each community type
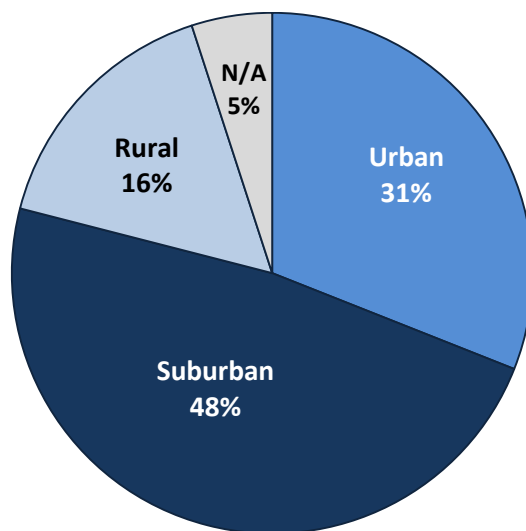
Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16 - December 21, 2011. Total sample n=2,986 adults, ages 16 and older. Interviews were conducted in English and Spanish and on landline and cell phones. The margin of error for the total sample is +/- 2 percentage points.

Demographically, these community types differ in terms of the age, educational attainment, household income, and the race/ethnic status of their residents. Specifically, compared to suburban and rural residents, those living in **urban areas** tend to be younger and minority — they are the group most likely to be under age 30 and the most likely to be black or Hispanic. They are also most likely to be unemployed or a student and to report lower household income. Urban residents are the least likely of the three community types to be married.

In contrast, **suburban residents** tend to be middle-aged, have higher income than residents of other types of communities, and employed full time.

Rural residents are older than those living in other types of communities (rural residents are particularly likely to be ages 50 to 64). They are also the most likely to report being retired or disabled, and to have

an overall educational attainment of a high school diploma or less. Rural communities are also disproportionately white compared with other community types.

The demographic makeup of urban, suburban, and rural populations

The % of residents ages 16 and older who fall into each demographic category

	Urban	Suburban	Rural
Age			
16-29	26%*	19%	16%
30-49	32	35*	28
50-64	26	28	35*
65+	14	17	20*
Race and ethnicity			
White, non-Hispanic	54	71*	81*
Black, non-Hispanic	17*	10	7
Hispanic	21*	12*	7
Educational attainment			
High school grad or less	42	42	58*
Some college	26	27	26
College graduate	32*	30*	14
Household income			
Less than $30,000	33*	24	35*
$30,000-$49,999	17	17	17
$50,000-$74,999	11	13	13
$75,000+	22*	26*	14

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. Sample sizes for community groups are: Urban=880; Suburban=1468; Rural=504. Interviews conducted in English and Spanish and on landline and cell phones. Margin of error for the total sample is +/- 2 percentage points. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

Internet use and gadget ownership profile

In addition to demographic variation, rural, suburban, and urban residents differ in terms of their ownership of electronic gadgets, which may be partly a reflection of the demographic profiles noted above.

Rural residents (who tend to be older and somewhat less educated than residents of other types of communities) are least likely to use the internet or email or to have a cell phone, and they are most likely to take most of their calls on a landline phone. This might partly stem from the fact that some remote rural areas have not had access to wired broadband, so it is not available to residents even if

they want it. The most recent Federal Communications report on this found that 14.5 million rural Americans live in areas where they do not have access to wired broadband.[8]

Suburban residents, on the other hand, are the most likely to have a laptop or desktop computer.

Digital connectivity in different communities
% of residents age 16+ in each community who use…
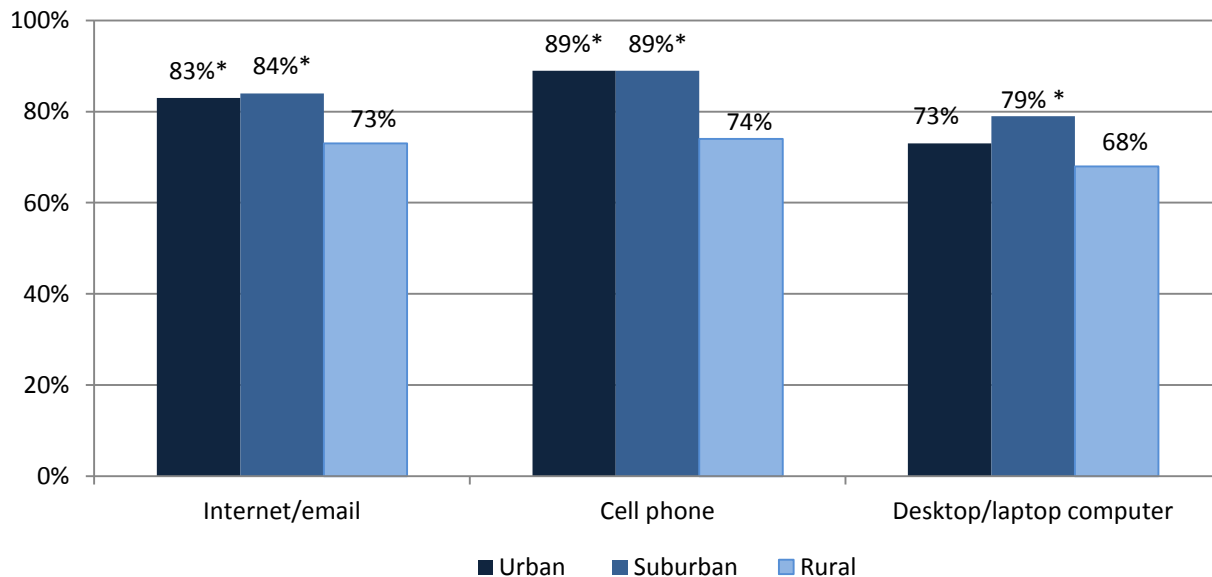
Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. Sample sizes for community groups are: Urban=880; Suburban=1468; Rural=504. Interviews conducted in English and Spanish and on landline and cell phones. Margin of error for the total sample is +/- 2 percentage points. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

Ownership of e-reading devices across community types also differs: rural residents are less likely than their urban or suburban counterparts to have a tablet computer, but there is no difference across community types in ownership of a handheld e-reading device such as a Kindle or Nook. Rural residents are most likely to indicate they own neither type of device — more than three-quarters say they do not have an e-reader or tablet computer compared with slightly more than two-thirds of suburban and urban residents.[9]

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[8] Federal Communications Commission. "Eighth Broadband Progress Report." August 21, 2012. Available at http://www.scribd.com/doc/103512404/FCC-2012-Broadband.
[9] Data from January omnibus surveys

Gadget ownership in different communities

% of residents ages 18+ in each community who own each device
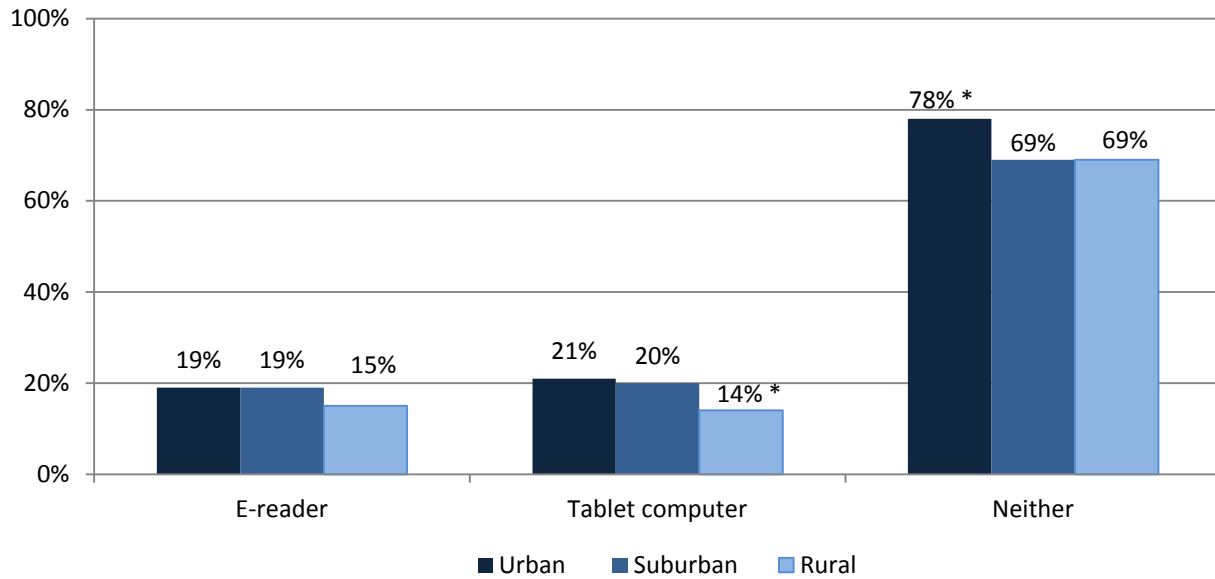
Source: The Pew Research Center's Internet Project January Omnibus Surveys conducted January 5-8, 2012 of 1,000 adults age 18 and older and the other conducted January 12-15, 2012 among a sample of 1,008 adults. The overall margin of error in the combined Jan. 2012 dataset is +/- 2.4 percentage points. The January surveys were conducted on landline and cell phones. They were conducted only in English. Sample size for Urban=540, Suburban=977, Rural=381. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

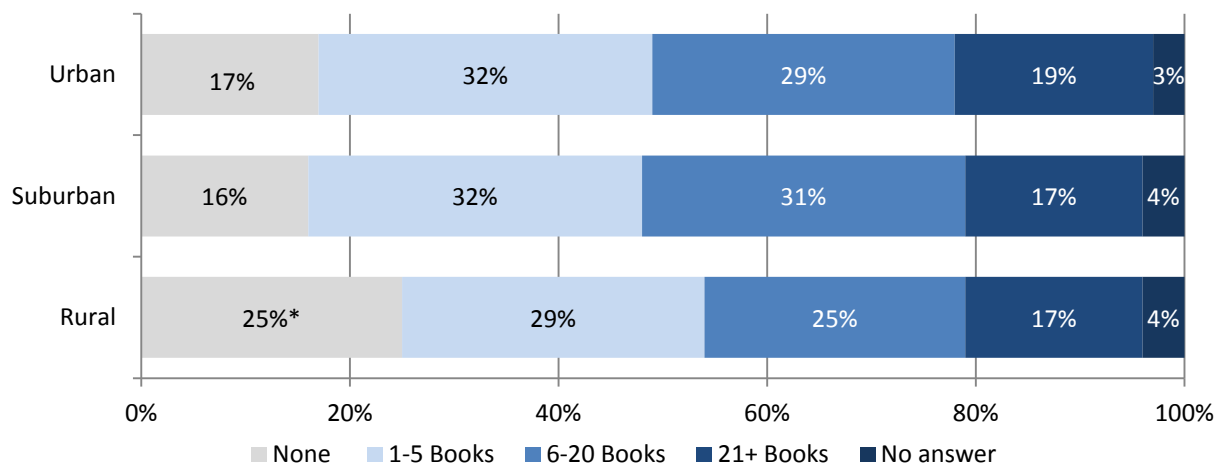# Part 2: The General Reading Habits of Americans

General reading

In our December 2011 survey, we found that 78% of Americans ages 16 and older read a book in the previous year. There are differences among the communities in the overall portion of those who have read at least one book in the previous year: 80% of urban residents ages 16 and older have read a book in the past year; 80% of suburban residents have done so; and 71% of rural residents have done so.

Once our examination turns to the book readers in the population, there are not notable differences among urban, suburban, and rural residents when it comes to the volume of the reading they do. Among those who do read books, on average, urban and suburban residents report they have read 17 books over the past 12 months and rural residents, on average, have read 19.

When grouped into categories of reading frequency, residents of urban, suburban, and rural communities are very similar. Roughly three in 10 are light readers (one to five books in the past 12 months); another 25% to 31% are moderate readers (six to 20) and just about two in 10 are heavy readers (21 or more books) in the past 12 months.

Book readers by community type

% of residents ages 16+ in each community who read indicated number of books in whole or in part in the past 12 months

	None	1-5 Books	6-20 Books	21+ Books	No answer
Urban	17%	32%	29%	19%	3%
Suburban	16%	32%	31%	17%	4%
Rural	25%*	29%	25%	17%	4%

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. Sample sizes for community groups are: Urban=880; Suburban=1468; Rural=504. Interviews conducted in English and Spanish and on landline and cell phones. Margin of error for the total sample is +/- 2 percentage points. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

Readers across communities show similar patterns in the types of books they have consumed in the past 12 months (print, e-book, audiobook) and their recent reading habits (whether they read yesterday and

if so, what type of book they read). Nine in 10 have read printed books over the past 12 months, two in 10 have read an e-book, and slightly more than one in 10 have listened to an audiobook.

Types of books people read are similar across community types

	Urban	Suburban	Rural
Among readers, type of books read in past 12 months			
Print	92%	89%	89%
Audio	14	15	17
E-book	29	29	27
	(n=416)	(n=665)	(n=245)

Source: The Pew Research Center's Internet & American Life Winter Tracking Survey, January 20 - February 19, 2012. Total sample for book readers n=1,850 respondents age 16 and older. Total sample sizes for community groups are: Urban=551; Suburban=878; Rural=336. Interviews conducted in English and Spanish and on landline and cell phones. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

In the December 2011 Reading Habits Survey, respondents were also asked if they had read a book the day prior to the interview, and if so, what format they had read. Across communities, just under half report doing some kind of reading on the day before they were interviewed. Of those who read "yesterday," the vast majority (more than 80%) read a print book, 14%-17% listened to an audiobook and 5% or fewer read an e-book. There are no significant differences across community type.

Daily reading and types of books read on a typical day are similar across community types

	Urban	Suburban	Rural
% of residents ages 16+ who…			
Read yesterday	48%	44%	45%
Among readers, type of book read yesterday…			
Print	87%	84%	83%
Audio	14	14	17
E-Book	3	5	2
	(n=387)	(n=591)	(n=200)

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. Total sample sizes for community groups are: Urban=880; Suburban=1468; Rural=504. Interviews conducted in English and Spanish and on landline and cell phones.

Why people read

The reasons people give for reading vary slightly across different types of communities. Suburban residents are more likely than either urban or rural residents to read for pleasure and they are more likely than rural residents to read as part of research on specific topics. Rural residents are the *least*

likely to read in order to keep up with current events or for work or school, likely due to fewer rural residents being employed or in school than is the case in other communities.

Suburban residents are more likely than rural residents to read for pleasure or for research purposes

% of residents age 16+ in each community type who read for each reason…
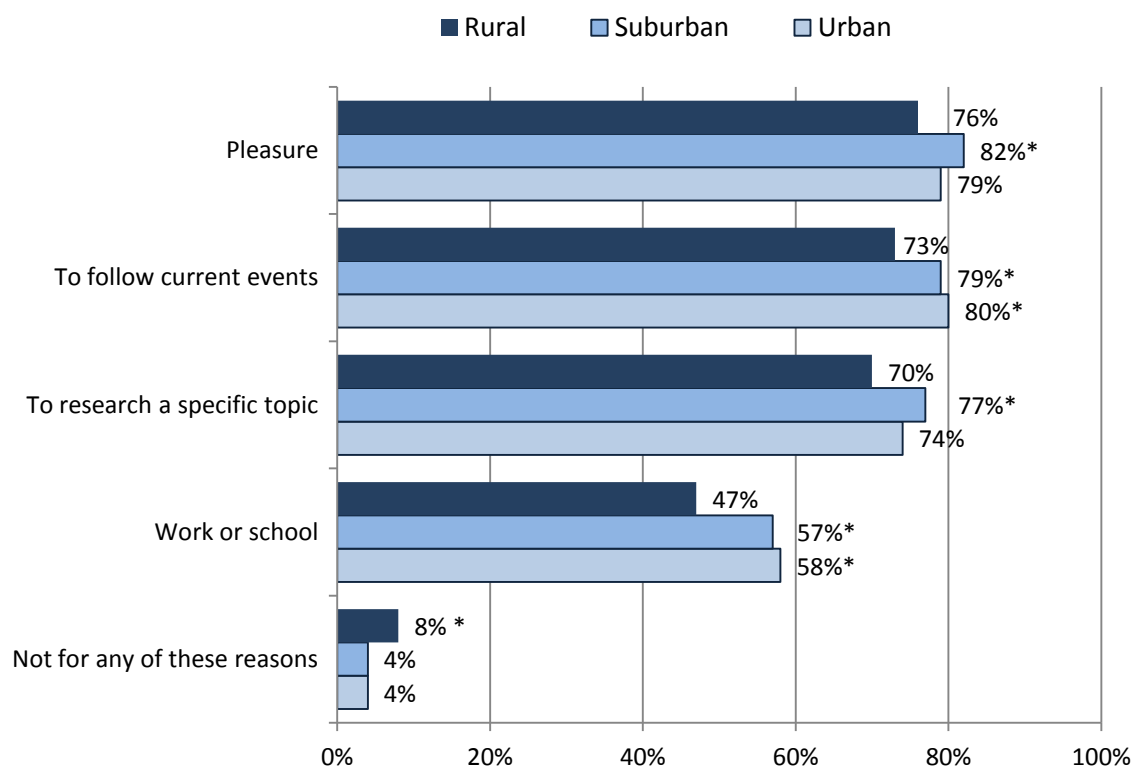
Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16 - December 21, 2011. Total sample n=2986 respondents age 16 and older. Sample sizes for community groups are: Urban=880; Suburban=1468; Rural=504. Interviews were conducted in English and Spanish and on landline and cell phones. The margin of error for the total sample is +/- 2 percentage points. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

The joy of reading

Across communities, readers are similar in what they like most about reading. Residents of all three communities most often say they like the learning, knowledge, and information they get from reading, the escape, the entertainment, and the relaxation it provides. A less commonly cited value of reading is the good mental exercise it provides. Notably, urban residents are more likely than rural residents to cite this as one of the things they like best about reading (5% vs. 2%).

Newspaper, magazine, and journal reading

While residents of urban, suburban and rural communities are similar in most of their reading habits with regard to daily newspapers, there are differences across communities in residents'

magazine/journal reading habits and in the frequency of reading either newspapers or magazines/journals on handheld devices such as a tablet computer, e-reader or cell phone.

Residents living in different types of communities are equally likely to report they read daily news or a newspaper regularly (57% urban, 60% suburban, 54% rural). Moreover, among regular newspaper readers, residents across communities are equally likely to report they read a newspaper yesterday (76% urban, 75% suburban, 72% rural).
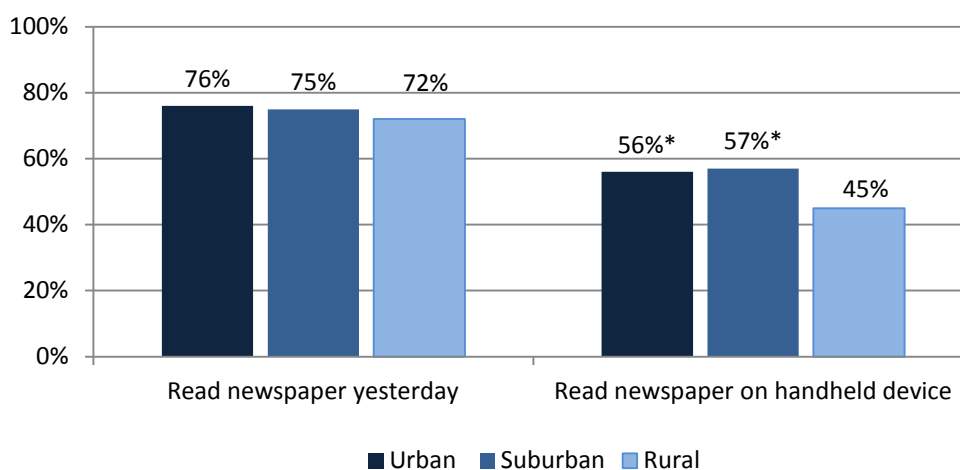
However, among regular newspaper readers, urban and suburban residents are more likely than rural residents to have read the newspaper in an electronic format (56% urban, 57% suburban vs. 45% rural). Again, this might at least partially result from the fact that rural residents — and their libraries — are somewhat less likely to have access to broadband.

Daily newspaper reading is similar across communities, but among regular readers, rural residents are least likely to read newspapers on a handheld device

% of residents ages 16+ in each community who read newspapers regularly
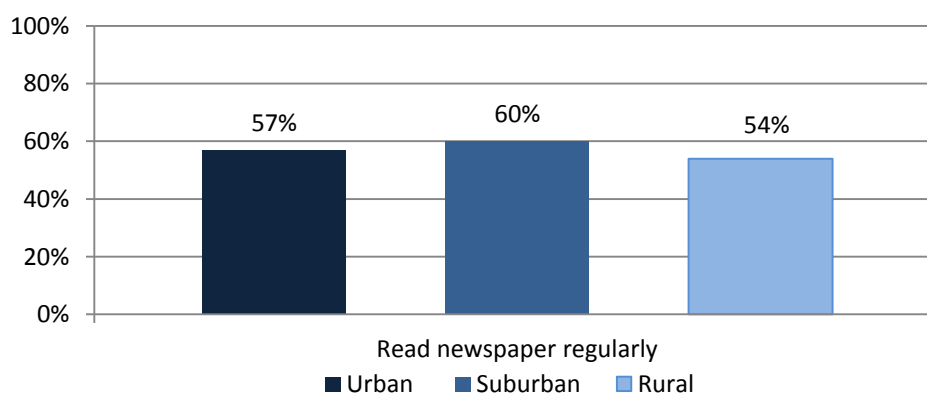
% of regular newspaper readers in each community who…

The picture is slightly different for magazines and journal readership. Suburban residents are more likely than rural residents to read these publications regularly (52% vs. 44%). Among regular readers of magazines and journals, there are no differences across community type in reading this type of publication yesterday but urban and suburban residents are more likely than rural residents to read magazines or journals in electronic format (36% urban, 33% suburban vs. 24% rural).

Rural residents are also least likely to read magazines or journals on handheld devices

% of residents ages 16+ in each community that reads magazines/journals regularly

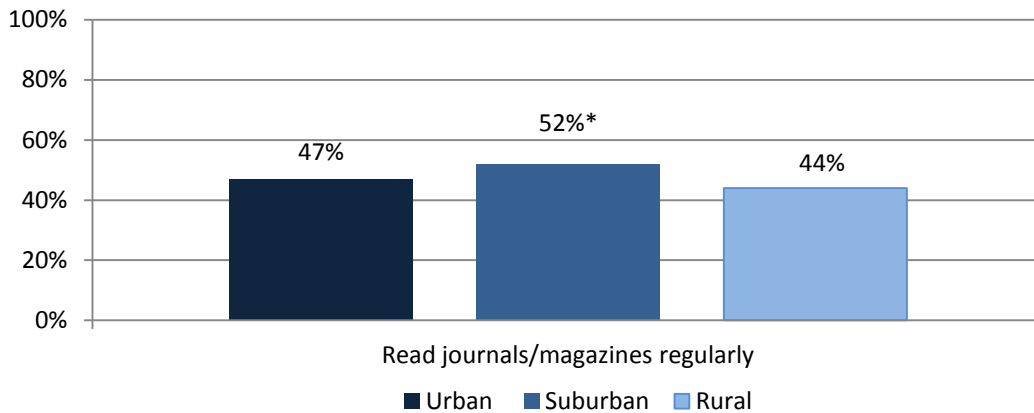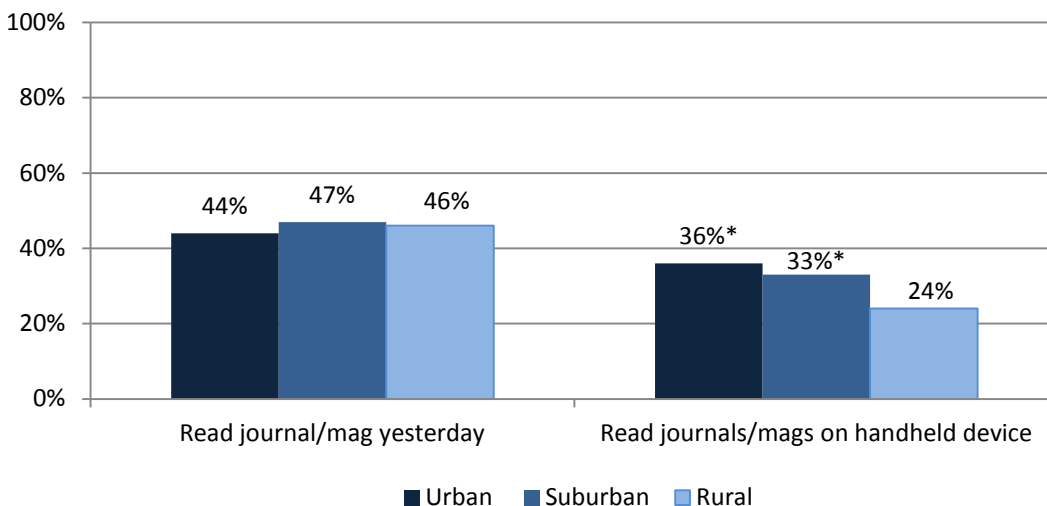*% of regular magazine/journal readers in each community who…*

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. The margin of error for the total sample is +/- 2 percentage points. Sample sizes for community groups, all adults: Urban 880; Suburban=1468; Rural=504. Regular magazine/journal readers: Urban=468; Suburban=819; Rural 244. Interviews conducted in English and Spanish and on landline and cell phones. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.
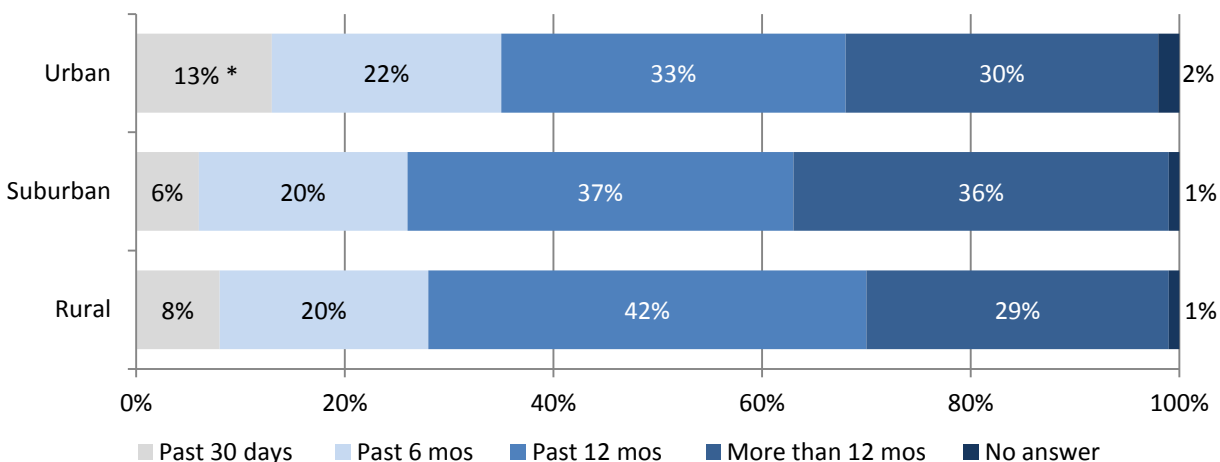
Part 3: E-reading Device Ownership

In the December 2011 survey and follow-up surveys of January 2012 there was major growth in ownership of e-reading devices like Kindles and Nooks and in tablet computer ownership. In the January survey, we found that 21% of urban residents, 20% of suburban residents, and 14% of rural residents had tablets. There was not notable variance by community type in the timing of those purchases.

On the other hand, urban, suburban, and rural e-reader owners show some variations. Some 19% of urban dwellers own such e-readers, 19% of suburban residents own such devices, and 14% of rural residents own them. Among e-reader owners, urban residents are more likely than those in the suburbs or rural areas to be recent purchasers, past 30 days (13% urban vs. 6% suburban, 8% rural). Roughly two in 10 e-reader purchasers bought within the past six months, three in 10 purchased within the past 12 months, and another three in 10 purchased more than 12 months ago.

Timing of e-reader purchases

% of e-reader owners in each community who purchased within…

	Past 30 days	Past 6 mos	Past 12 mos	More than 12 mos	No answer
Urban	13% *	22%	33%	30%	2%
Suburban	6%	20%	37%	36%	1%
Rural	8%	20%	42%	29%	1%

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. Sample sizes for e-reader owners in each community group: Urban=195; Suburban=330; Rural=93. Interviews conducted in English and Spanish and on landline and cell phones. The margin of error for the total sample is +/- 2 percentage points. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

Who intends to buy either device?

When looking at non-owners of these devices, rural residents are most likely to report no plans to purchase either an e-reader or tablet computer in the near future while urban residents are more likely than their rural counterparts to say they plan to purchase a tablet computer within the next six months.

Plans to purchase an e-reader
% of non-owners in each community

Community	Within 6 mos	Considering but not in 6 mos	Not considering	No answer
Urban	9%	7%	82%	3%
Suburban	7%	5%	85%	2%
Rural	6%	4%	89%*	1%

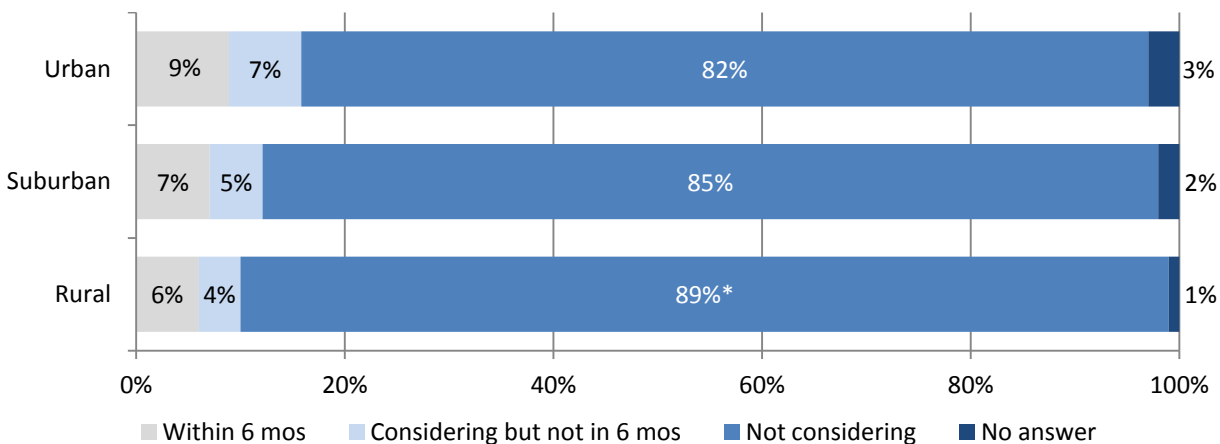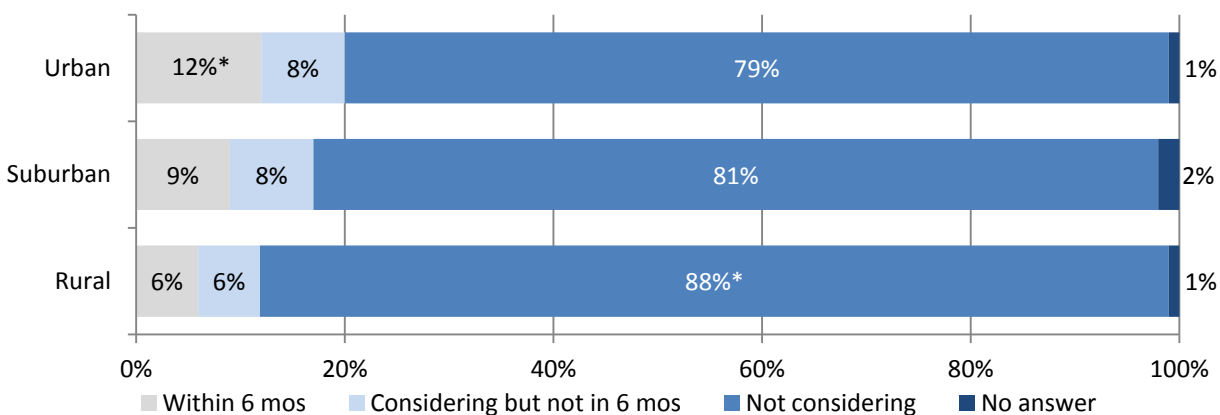■ Within 6 mos   ■ Considering but not in 6 mos   ■ Not considering   ■ No answer

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. Sample sizes for non-owners of e-reader: Urban=670, Suburban=1110, Rural=401. Interviews conducted in English and Spanish and on landline and cell phones. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

Plans to purchase a tablet computer
% of non-owners in each community

Community	Within 6 mos	Considering but not in 6 mos	Not considering	No answer
Urban	12%*	8%	79%	1%
Suburban	9%	8%	81%	2%
Rural	6%	6%	88%*	1%

■ Within 6 mos   ■ Considering but not in 6 mos   ■ Not considering   ■ No answer

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. Sample sizes for non-owners of tablet computer: Urban=674, Suburban=1126, Rural=414. Interviews conducted in English and Spanish and on landline and cell phones. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

Why people don't own these devices

There are very few substantive differences in the reasons respondents give for why they don't own e-readers or tablet computers, and where there are differences, they are related to demographic variation across community types. Those in rural areas are more likely than others to say they are "too old" (5% vs. 1% urban, 2% suburban) or that they "don't want to learn a new device" (6% vs. 4% urban, 3% suburban), or simply indicate they "don't know" why they don't want an e-reader (8% vs. 3% urban, 4% suburban). Suburban residents are more likely than rural residents to say they already have too many devices (21% vs. 15%), while urban residents are more likely than those in the suburbs to cite cost-related reasons (28% vs. 23%) for why they don't own a tablet computer.

Reasons for Non-Ownership Vary by Community Type

% of non-owners in each community type that give each reason for not owning e-readers or tablet computers[10]
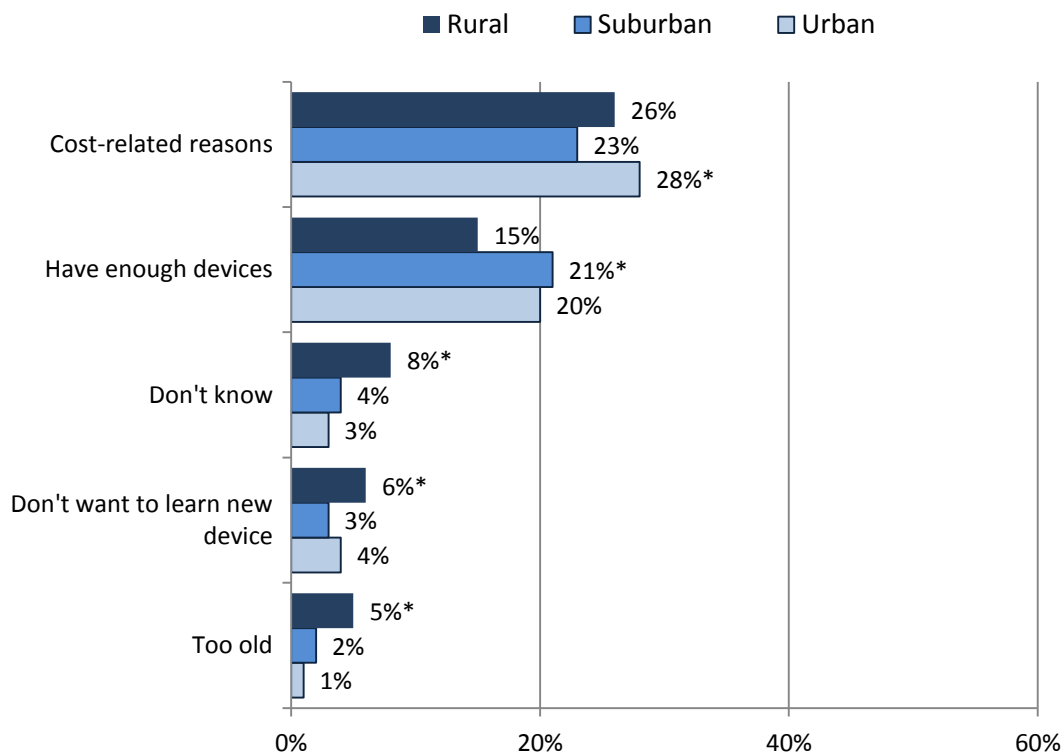

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16 - December 21, 2011. Total sample n=2,986 respondents age 16 and older. Sample sizes for non-owners in each community groups: E-readers non-owners - Urban=670; Suburban=1110; Rural=401. Tablet computer non-owners: Urban=674; Suburban=1126; Rural=414. Interviews were conducted in English and Spanish and on landline and cell phones. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

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[10] The data for the first two reasons "Cost-related" and "Have enough devices" are based on those who do not own an E-reader. The data for the last three reasons "Don't know", "Don't want to learn a new device" and "Too old" are based on those who do not own a tablet computer.

Part 4: The State of E-Book Reading

When asked about the impact electronic and digital material availability has on reading habits, urban residents are more likely than suburban residents to say they are spending more time reading now that content is available digitally. Suburban residents say they are spending about the same amount of time reading as they have in the past.

Availability of e-content promotes more reading for some

% of those who read e-content in each community who say they read more or less or the same amount with availability of digital content

	More	Less	Same	No answer
Urban	36%*	6%	57%	1%
Suburban	28%	7%	64%*	1%
Rural	29%	7%	64%	

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. Sample sizes for e-readers in each community: Urban=478, Suburban=813, Rural=225. Interviews conducted in English and Spanish and on landline and cell phones. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.
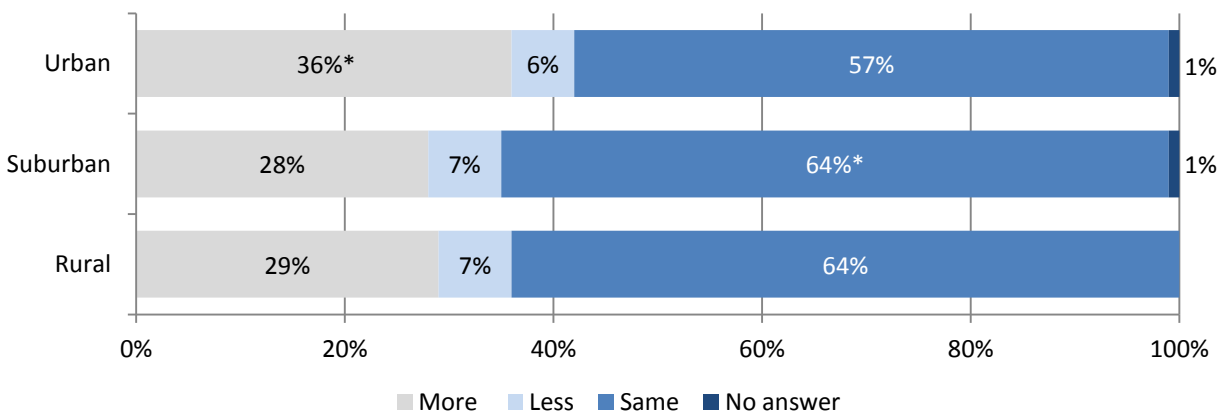
Overall, device owners across communities read e-content on e-readers, tablet computers, and cell phones about equally. One finding of note: Rural residents are more likely than either urban or suburban residents to read e-content on a computer at least a few times a week (31% rural vs. 18% urban, 14% suburban).
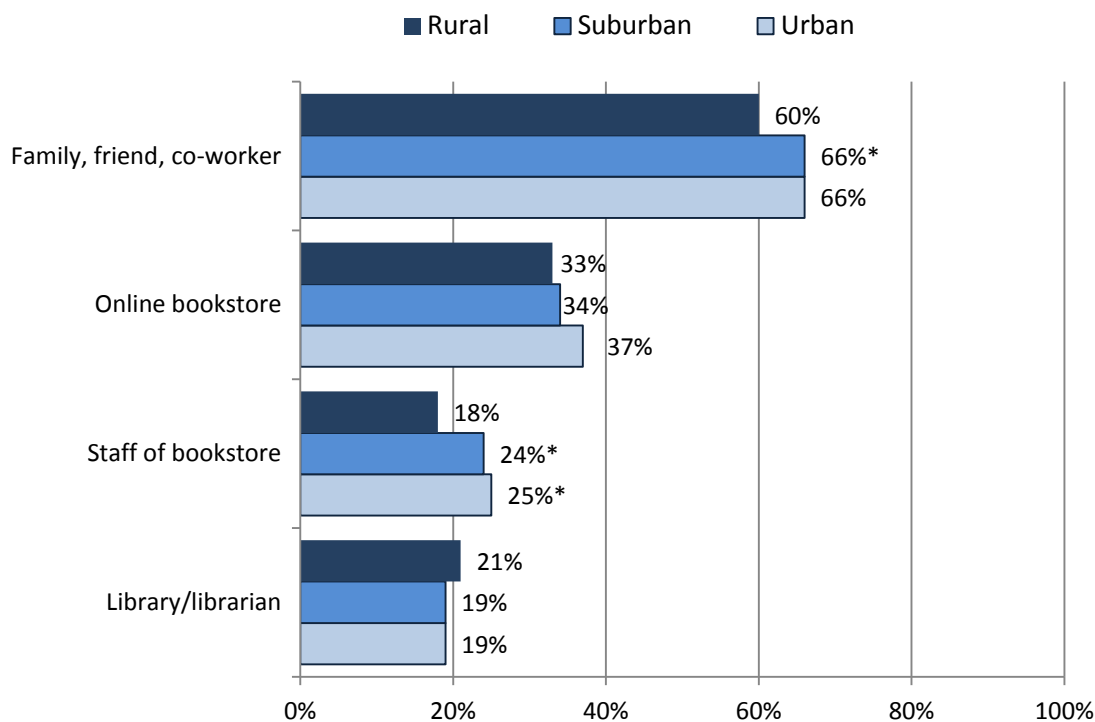
Part 5: Where and How Readers Get Their Books

Reader preferences for where and how they get their books are surprisingly similar across community types, yet the source of recommendations for new books to read and the way in which readers begin their search for e-books do show some interesting differences across communities.

Urban, suburban, and rural residents are similar in whether they prefer to *buy* or *borrow* print, e-books, or audiobooks and they are comparable in whether their most recent book was purchased or borrowed. However, suburban residents depend more on family members, friends, and co-workers for suggestions for new books to read, and rural residents are *least* likely to rely on the staff of a bookstore for reading recommendations, perhaps because there are fewer bookstores in their vicinity.

Suburban and urban residents rely on family, friends, and co-workers for recommendations

% of residents ages 16+ in each community who get reading recommendations from each source…

■ Rural ■ Suburban ☐ Urban

Family, friend, co-worker
- Rural: 60%
- Suburban: 66%*
- Urban: 66%

Online bookstore
- Rural: 33%
- Suburban: 34%
- Urban: 37%

Staff of bookstore
- Rural: 18%
- Suburban: 24%*
- Urban: 25%*

Library/librarian
- Rural: 21%
- Suburban: 19%
- Urban: 19%

(x-axis: 0% – 100%)

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16 - December 21, 2011. Total sample n=2986 respondents age 16 and older. Sample sizes for community groups: Urban=880; Suburban=1468; Rural=504. Interviews were conducted in English and Spanish and on landline and cell phones. The margin of error for the total sample is +/- 2 percentage points. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

Across all three communities, a large majority of e-readers begin their search for an e-book at an online bookstore, but suburban residents are slightly more likely than those living in rural areas to begin their search for an e-book this way.

Where the search begins for an e-book

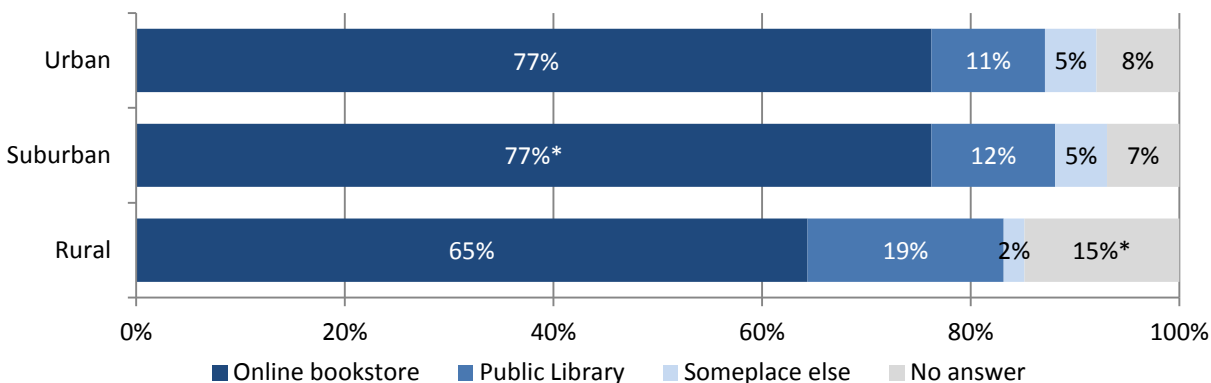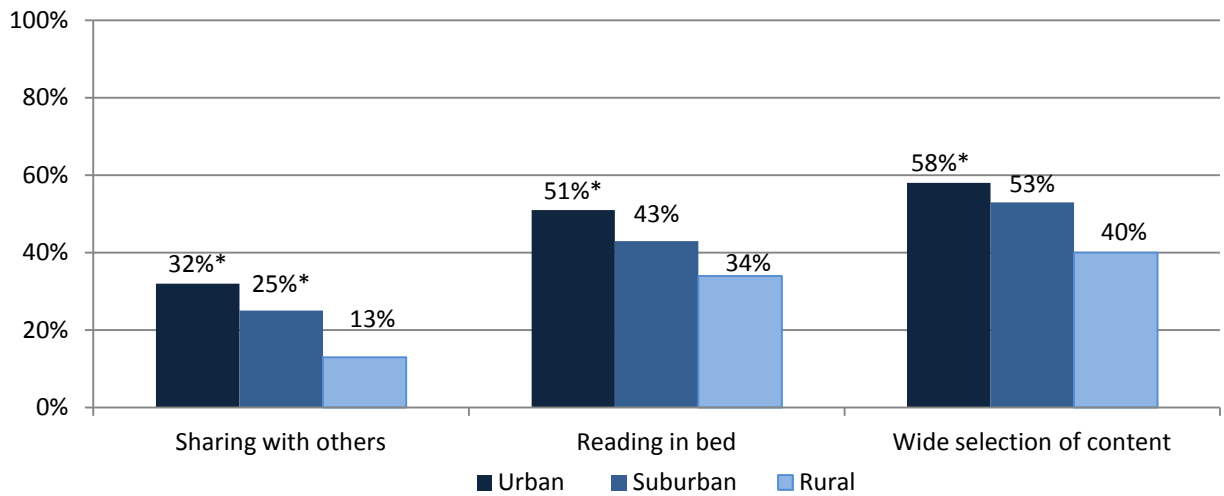*% of readers of e-content in each community who look for an e-book first at…*

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. Sample sizes for readers of e-content in each community: Urban=239; Suburban=417; Rural=108. Interviews conducted in English and Spanish and on landline and cell phones. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

Readers of both e-books and print books were asked which type of book is better for different reading activities such as sharing books with others, reading in bed, reading with a child, or reading while traveling. Generally, urban readers are more likely to prefer e-books for many reading activities while rural readers who have read in both formats tend to prefer print. For reading in bed and offering a wide selection, urban residents are more likely than those in rural communities to say e-books are better. Rural residents, on the other hand, are significantly *less* likely to say e-books are better than print for sharing books with others. Residents of these different types of communities do not differ from each other in their views of the best type of book for reading with a child, reading while traveling, or being able to get books quickly.

Prefer e-book over print for...

% of readers of both print and e-content in each community who prefer e-book for each purpose…

	Sharing with others	Reading in bed	Wide selection of content
Urban	32%*	51%*	58%*
Suburban	25%*	43%	53%
Rural	13%	34%	40%

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. Sample sizes for readers of both print and e-content in each community: Urban=212; Suburban=372; Rural=94. Interviews conducted in English and Spanish and on landline and cell phones. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

Part 6: Library Use Across Communities

People in different communities sometimes have different connections to their local library. Suburban and urban residents are especially likely to have library cards and place value on the local library. Suburban residents are the most likely to have borrowed print or audiobooks from the library in the past 12 months. On other aspects of library use, including using the library to access special databases, historical documents or archives, newspaper articles, or magazines/journals, or to get research help, or to borrow e-books, the residents of different communities do not differ.

Among those who have borrowed an e-book from the library in the past 12 months, views about the quality of the selection of e-books at the local library and problems encountered when trying to borrow e-books also does not differ across community type. Across all community types, there is a pervasive lack of awareness that libraries loan e-books. Roughly two thirds (63%) of residents in each type of community say they do not know if their public library loans e-books; two in 10 say their library does.

The charts below sketch out some of the differences among communities about their local libraries:

Public library use and attitudes toward public libraries across communities
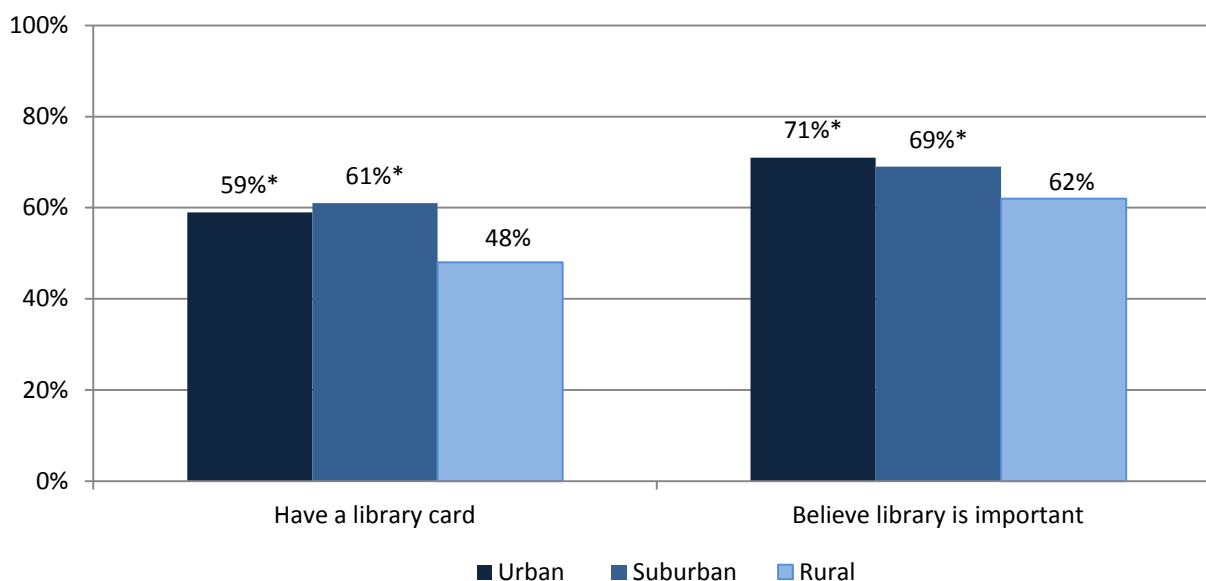
% of residents ages 16+ in each community who…

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. Sample sizes for community groups: Urban=880; Suburban=1468; Rural=504. Interviews conducted in English and Spanish and on landline and cell phones. Margin of error for the total sample is +/- 2 percentage points. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

Library borrowing across communities

% of residents age 16+ in each community (among those who have read print, read e-book or listened to audiobook in past 12 months) who have borrowed each format from a public library
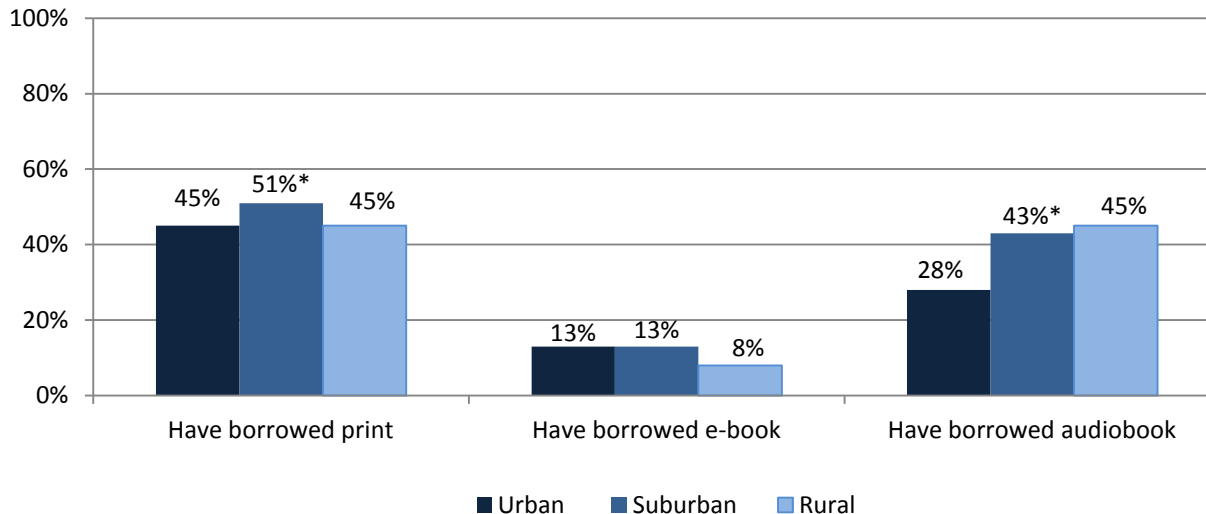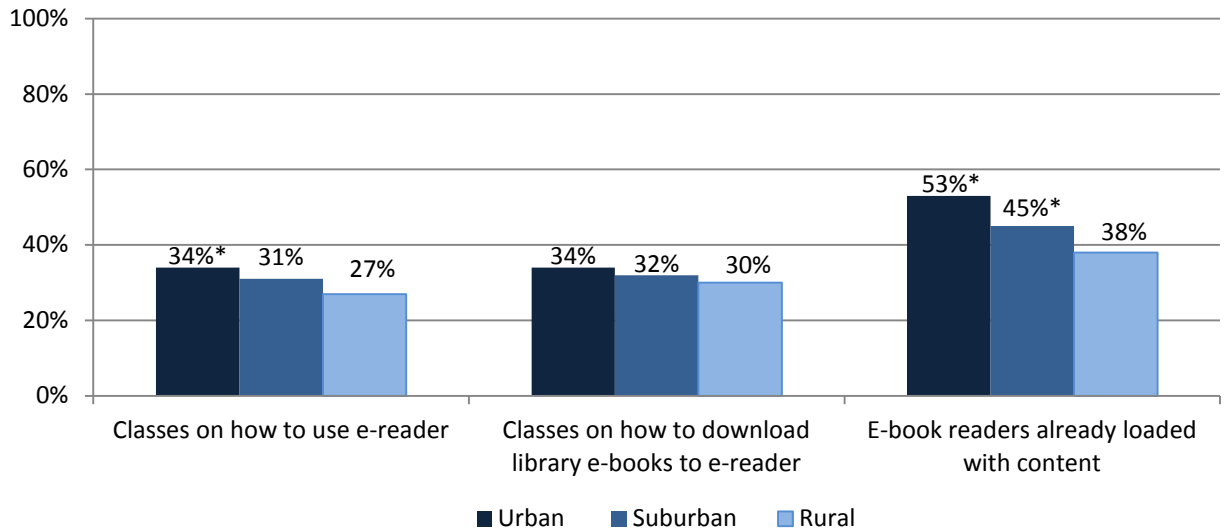

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. Sample sizes for print; Urban=682; Suburban=1159; Rural=364. Sample size for e-book; Urban=239; Suburban=417; Rural=108. Sample size for audio book; Urban=120, Suburban=203, Rural=71.Interviews conducted in English and Spanish and on landline and cell phones. Sample size print: Urban=682, Suburban=1159, Rural=364. Sample size e-book: Urban=239, Suburban=417, Rural=108. Sample size audio-book: Urban=120, Suburban=203, Rural=71. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

Respondents with more limited experience and knowledge of e-reading (those who are not e-readers and have not borrowed e-books from the public library) were asked how likely they would be to use different types of classes to learn about e-book related features of the public library experience. Urban residents appear to be the most interested in such activities. Urban residents are more likely than those in rural communities to say they would be likely to take advantage of classes on how to use handheld reading devices (34% vs. 27%), while rural residents are most likely to say they would *not* be likely to use such classes (71% vs. 64%).

Urban and suburban residents are also more likely than rural residents to say they would be likely to use e-book readers already loaded with books if they were made available at the public library (53% urban vs. 45% suburban, 38% rural).

Likelihood of using different library services

% of non e-readers and those who don't borrow e-books from library in each community who would be likely to use...

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. Non e-readers or e-readers who don't borrow from library; Urban=845; Suburban=1405; Rural=494. Interviews conducted in English and Spanish and on landline and cell phones. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

Part 7: Differences Between Heavy, Light, and Non-book readers Across Community Type

In The Rise of E-Reading report we noted that the distribution between heavy and light readers is relatively even. Among those ages 16 and older who had read a book in the past 12 months:

- 8% read 1 book
- 17% 2-3 books
- 16% 4-5 books
- 19% 6-10 books
- 18% 11-20 books
- 22% more than 20 books

As part of the analysis of overall reading habits for that report, readers were divided into three categories of reading frequency: light readers (1-5 books in the past 12 months) comprised 31% of the *total population 16 and older*; moderate readers (6-20 books) comprised 29% of that population; heavy readers (21 or more books) comprised 17%. The analysis found that heavy readers were more likely to be women, white, and have higher education levels. Medium and heavy readers were also more likely to own e-book readers and were more likely to read for pleasure.

Frequent vs. less frequent readers: Looking across community types

For this analysis, we look at how these different types of readers differ across community types; specifically, whether heavy readers in one size community (urban, suburban, rural) differ in their reading attitudes or behaviors from heavy readers in the other community types.

Among readers, the amount of book reading that people do does not differ by community type — about three in 10 residents living in each type of community are light readers, another three in 10 are moderate readers, and about two in 10 are heavy readers.

Reading frequency by community size

	Urban	Suburban	Rural
	(n=847)	(n=1417)	(n=484)
% of residents age 16+ who read this number of books in past 12 months…			
None	18%	17%	26%*
Light (1-5 books)	33	33	30
Moderate (6-20 books)	30	32	26
Heavy (21 or more books)	19	18	18

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. Total sample sizes for community groups are: Urban=880; Suburban=1468; Rural=504. Interviews conducted in English and Spanish and on landline and cell phones. The margin of error for the total sample is +/- 2 percentage points. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

The analysis of different level readers across community type reveals some differences in overall reading habits and in attitudes and behaviors related to the local public library, but few differences in e-reading related behaviors or attitudes.

In overall reading habits, heavy readers in urban and suburban communities are involved in reading for the acquisition of information and knowledge more so than heavy readers in rural areas. For instance, heavy readers in urban and suburban areas are more likely than those in rural areas to read for work or school (62% urban, 63% suburban vs. 48% rural) and those in urban areas are more likely than rural heavy readers to indicate that the learning, information, and knowledge they get from reading is what they like best about the activity (33% vs. 18%).

Moderate and light readers show some differences across community type in regard to where they get reading recommendations. Moderate readers in rural areas are more likely than other moderate readers to get reading recommendations from a librarian or library website (33% rural vs. 21% urban, 20% suburban) while moderate urban readers are more likely than moderate rural readers to get recommendations from the staff at a bookstore (34% vs. 22%). Light suburban readers are more likely than light rural readers to get recommendations from family, friends, or co-workers (68% vs. 56%).

Sources of recommendations for reading material among moderate and light readers by community type

% of moderate and light readers 16 and over in each community type who report getting recommendations from each source

	Urban	Suburban	Rural
Moderate Readers (6-20 books)	(n=278)	(n=494)	(n=145)
A library or librarian	21%	20%	33%*
Staff of a bookstore you visit in person	34*	28	22
Light Readers (1-5 books)	(n=253)	(n=436)	(n=142)
A family member, friend, or co-workers	66%	68%*	56%

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. Total sample sizes for community groups are: Urban=880; Suburban=1468; Rural=504. Interviews conducted in English and Spanish and on landline and cell phones. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

Overall results by community type reported earlier revealed that suburban residents are more likely than others to be regular magazine or journal readers, and that among regular readers of these publications, urban and suburban residents are more likely than rural residents to read them in electronic format.

Further analysis that examines different levels of intensity of reading in communities shows that even light suburban readers are more likely than light rural readers to regularly read magazines or journals (47% vs.35%) and moderate suburban readers are more likely than moderate urban readers to read magazines and journals regularly (64% vs. 50%). Among those who regularly read newspapers or

magazine/journals, heavy urban and suburban readers are more likely than heavy rural readers to have read a newspaper (61% urban, 66% suburban vs. 38% rural) or a magazine/journal (44% urban, 40% suburban vs. 21% rural) in electronic format.

Many aspects of ownership and use of e-reading devices, as well as attitudes and behaviors related to e-reading, are similar across heavy and light readers in different types of communities. However, light urban readers are more likely than light suburban readers to say that the availability of e-content has made them read more than in the past (39% vs. 23%) and heavy urban readers are more likely than heavy rural readers to be considering purchasing an e-reader (24% vs. 9%).

Those who report a similar level of reading frequency differ across community types in their stated preference for print or e-books for various reading activities. Heavy urban readers are more likely than their rural counterparts to prefer e-books most of the time (50% vs. 22%).[11] For the specific reading activity of "sharing with others," moderate and heavy urban readers are more likely than rural moderate and heavy readers to prefer e-books over printed books (31% vs. 5% moderate readers and 31% vs. 12% for heavy readers). Moderate suburban readers are more likely than moderate urban readers to prefer print over e-books when they want to obtain a book quickly (11% vs. 3%).

Attitudes toward and use of the local public library differ across heavy readers in different types of communities. Heavy suburban readers are more likely than heavy urban readers to have a library card (82% vs. 68%), as are light urban and suburban readers when compared with light rural readers (58% urban, 56% suburban vs. 41% rural). On a general measure of library use, heavy suburban readers are more likely than heavy urban readers to have used the library at all in the past 12 months (84% vs. 65%) and specifically to have borrowed books (70% vs. 58%). Heavy suburban readers are more likely than heavy rural readers to say their library loans e-books (37% vs. 18%).

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[11] 'Most of the time' is a summary measure that indicates a preference for one or the other type of book 4 or more times when asked about six different reading activities - reading with a child, reading in bed, sharing books with others, having a wide selection of books to choose from, reading while traveling or commuting, being able to get a book quickly.

Library use among heavy and light readers by community size

	Urban	Suburban	Rural
Heavy Readers (21+ books)	(n=198)	(n=315)	(n=112)
Have a library card	68%	82%*	74%
Total used library past 12 months	65	84*	77
Borrowed books	58	70*	58
Library loans e-books	31	37*	18
Light Readers (1-5 books)	(n=253)	(n=436)	(n=142)
Have a library card	58%*	56%*	41%

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. Total sample sizes for community groups are: Urban=880; Suburban=1468; Rural=504. Interviews conducted in English and Spanish and on landline and cell phones. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

Non-book readers

The Rise of E-Reading report also included a profile of non-book readers (18% of the population ages 16 or older) which showed that overall, non-book readers are more likely to be male than female (23% vs. 14%), Hispanic rather than white or black (28% vs. 17% and 16%), ages 65 or older (27%), lacking a high school diploma (34%), living in households earning less than $30,000 (26%), unemployed (22%), and residents of rural areas (25%).

While those living in rural areas are more likely than those in other communities to be non-book readers, a closer look at non-book readers *across community type* shows many similar patterns of reading-related behavior and attitudes.

There are few statistically significant differences between non-book readers from these different types of communities and the differences that do emerge generally coincide with overall patterns of community differences. For example, the overall differences between rural residents and those in suburban and urban communities regarding attitudes toward and use of the local public library do not change when looking at non-book readers across community type.

Interest in participating in library classes on e-reading related topics is stronger among urban non-book readers than suburban or rural non-book readers. Non-book readers in suburban and rural areas are more likely than urban non-book readers to say they are *not* likely to take library classes on downloading e-content (79% suburban, 81% rural, vs. 57% urban) or use e-readers already loaded with content (72% suburban, 81% rural, vs. 59% urban) and non-book readers in rural areas are more likely than non-book readers in urban or suburban areas to say they are not likely to take classes in how to use e-readers (86% rural vs. 63% urban, 74% suburban).

Library use and attitudes among non-book readers by community size

	Urban	Suburban	Rural
Percent of non-book readers who…			
Have a library card	35%	37%*	23%
Think library is important	57*	50*	32
Percent of non-book readers who are *NOT* likely to use each library resource			
Classes on how to use e-readers	63	74	86*
Classes on how to download library e-books to handheld device	57	79*	81*
E-readers already loaded with e-content	59	72*	81*

Source: The Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. Total sample n=2,986 respondents age 16 and older. Total sample sizes for community groups are: Urban=880; Suburban=1468; Rural=504. Interviews conducted in English and Spanish and on landline and cell phones. An asterisk (*) indicates a significant difference across community type at the 95% confidence level.

In addition, comparing non-book readers and readers across community type shows that urban and suburban non-book readers are more likely than moderate and heavy readers in those communities to have a physical or health condition that makes reading difficult. Rural non-book readers are not more likely than rural readers to cite physical reasons suggesting that the reasons for non-reading may differ across communities.

Methodology

Reading Habits Survey

Prepared by Princeton Survey Research Associates International
for the Pew Research Center's Internet & American Life Project with
support from the Bill & Melinda Gates Foundation

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Summary

The Reading Habits Survey, conducted by the Pew Research Center's Internet & American Life Project
with support from the Bill & Melinda Gates Foundation, obtained telephone interviews with a nationally
representative sample of 2,986 people ages 16 and older living in the United States. Interviews were
conducted via landline (n_{LL}=1,526) and cell phone (n_C=1,460, including 677 without a landline phone).
The survey was conducted by Princeton Survey Research Associates International. The interviews were
administered in English and Spanish by Princeton Data Source from November 16 to December 21, 2011.
Statistical results are weighted to correct known demographic discrepancies. The margin of sampling
error for results based on the complete set of weighted data is ±2.2 percentage points. Results based on
the 2,571 internet users have a margin of sampling error of ±2.3 percentage points.

Details on the design, execution and analysis of the survey are discussed below.

Design and Data Collection Procedures

Sample Design
A combination of landline and cellular random digit dial (RDD) samples was used to represent all adults
in the United States who have access to either a landline or cellular telephone. Both samples were
provided by Survey Sampling International, LLC (SSI) according to PSRAI specifications.

Numbers for the landline sample were drawn with equal probabilities from active blocks (area code +
exchange + two-digit block number) that contained three or more residential directory listings. The
cellular sample was not list-assisted, but was drawn through a systematic sampling from dedicated
wireless 100-blocks and shared service 100-blocks with no directory-listed landline numbers.

Contact Procedures
Interviews were conducted from November 16 to December 21, 2011. As many as seven attempts were
made to contact every sampled telephone number. Sample was released for interviewing in replicates,
which are representative subsamples of the larger sample. Using replicates to control the release of
sample ensures that complete call procedures are followed for the entire sample. Calls were staggered
over times of day and days of the week to maximize the chance of making contact with potential
respondents. Interviewing was spread as evenly as possible across the days in field. Each telephone
number was called at least one time during the day in an attempt to complete an interview.
For the landline sample, interviewers asked to speak with the youngest adult male or female currently at
home based on a random rotation. If no male/female was available, interviewers asked to speak with
the youngest adult of the other gender. This systematic respondent selection technique has been shown

to produce samples that closely mirror the population in terms of age and gender when combined with cell interviewing.

For the cellular sample, interviews were conducted with the person who answered the phone. Interviewers verified that the person was an adult and in a safe place before administering the survey. Cellular respondents were offered a post-paid cash reimbursement for their participation. Calls were made to the landline and cell samples until 1,125 interviews were completed in each. Once those targets were hit, screening for e-book and tablet owners was implemented. During the screening, anyone who did not respond with having an e-book or tablet device was screened-out as ineligible. All others continued the survey until approximately 700 e-Reader/tablet owners were interviewed overall.

Weighting and analysis

The first stage of weighting corrected for the oversampling of tablet and e-reader users via screening from the landline and cell sample frames. The second stage of weighting corrected for different probabilities of selection associated with the number of adults in each household and each respondent's telephone usage patterns.[12] This weighting also adjusts for the overlapping landline and cell sample frames and the relative sizes of each frame and each sample.

This first-stage weight for the ith case can be expressed as:

$$WT_i = \frac{1}{\left(\frac{S_{LL}}{S_{CP}} \times \frac{1}{AD_i}\right)} \; if \; respondent \; has \; no \; cell \; phone$$

$$WT_i = \frac{1}{\left(\frac{S_{LL}}{S_{CP}} \times \frac{1}{AD_i}\right) + R} \; if \; respondent \; has \; both \; kinds \; of \; phones$$

$$WT_i = \frac{1}{R} \; if \; respondent \; has \; no \; land \; line \; phone$$

Where S_{LL} = size of the landline sample

S_{CP} = size of the cell phone sample

AD_i = Number of adults in the household

R = Estimated ratio of the land line sample frame to the cell phone sample frame

The equations can be simplified by plugging in the values for S_{LL} = 1,526 and S_{CP} = 1,460. Additionally, we will estimate of the ratio of the size of landline sample frame to the cell phone sample frame R = 1.03. The final stage of weighting balances sample demographics to population parameters. The sample is balanced to match national population parameters for sex, age, education, race, Hispanic origin, region (U.S. Census definitions), population density, and telephone usage. The Hispanic origin was split out based on nativity; U.S born and non-U.S. born. The White, non-Hispanic subgroup is also balanced on age, education and region. The basic weighting parameters came from a special analysis of the Census Bureau's 2010 Annual Social and Economic Supplement (ASEC) that included all households in the

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[12] i.e., whether respondents have only a landline telephone, only a cell phone, or both kinds of telephone.

United States. The population density parameter was derived from Census 2000 data. The cell phone usage parameter came from an analysis of the July-December 2010 National Health Interview Survey.[13][14]

Weighting was accomplished using Sample Balancing, a special iterative sample weighting program that simultaneously balances the distributions of all variables using a statistical technique called the *Deming Algorithm*. Weights were trimmed to prevent individual interviews from having too much influence on the final results. The use of these weights in statistical analysis ensures that the demographic characteristics of the sample closely approximate the demographic characteristics of the national population. Table 1 compares weighted and unweighted sample distributions to population parameters.

Table 1: Sample Demographics

Parameter (16+)		Unweighted	Weighted
Gender			
Male	48.6	47.2	48.9
Female	51.4	52.8	51.1
Age			
16-24	16.0	15.0	14.2
25-34	17.3	14.0	15.1
35-44	17.0	14.9	17.3
45-54	18.7	17.6	18.7
55-64	14.8	17.3	18.5
65+	16.2	21.2	16.2
Education			
Less than HS Graduate	16.8	11.5	15.5
HS Graduate	33.8	26.7	33.3
Some College	23.1	23.3	23.9
College Graduate	26.3	38.5	27.3
Race/Ethnicity			
White/not Hispanic	68.0	73.1	67.7
Black/not Hispanic	11.7	10.8	11.9
Hisp - US born	6.4	6.5	6.8
Hisp - born outside	7.5	4.3	7.3
Other/not Hispanic	6.2	5.3	6.2
Region			
Northeast	18.5	15.8	18.2
Midwest	22.0	24.1	22.7
South	36.9	37.3	37.0
West	22.6	22.7	22.1

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[13] Blumberg SJ, Luke JV. Wireless substitution: Early release of estimates from the National Health Interview Survey, July-December, 2010. National Center for Health Statistics. June 2011.

[14] The phone use parameter used for this 16+ sample is the same as the parameter we use for all 18+ surveys. In other words, no adjustment was made to account for the fact that the target population for this survey is slightly different than a standard 18+ general population survey.

County Pop. Density			
1 - Lowest	20.1	23.6	20.3
2	20.0	21.2	20.1
3	20.1	22.3	20.4
4	20.2	17.6	20.2
5 - Highest	19.6	15.2	18.9
Household Phone Use			
LLO	9.3	5.0	8.3
Dual/few, some cell	41.7	51.7	42.3
Dual/most cell	18.5	20.6	19.0
CPO	30.5	22.7	30.5

Effects of Sample Design on Statistical Inference

Post-data collection statistical adjustments require analysis procedures that reflect departures from simple random sampling. PSRAI calculates the effects of these design features so that an appropriate adjustment can be incorporated into tests of statistical significance when using these data. The so-called "design effect" or *deff* represents the loss in statistical efficiency that results from systematic non-response. The total sample design effect for this survey is 1.46.

PSRAI calculates the composite design effect for a sample of size n, with each case having a weight, w_i as:

$$deff = \frac{n \sum_{i=1}^{n} w_i^{\,2}}{\left(\sum_{i=1}^{n} w_i \right)^2} \qquad \qquad \textit{formula 1}$$

In a wide range of situations, the adjusted *standard error* of a statistic should be calculated by multiplying the usual formula by the square root of the design effect ($\sqrt{deff}$). Thus, the formula for computing the 95% confidence interval around a percentage is:

$$\hat{p} \pm \left(\sqrt{deff} \times 1.96 \sqrt{\frac{\hat{p}(1-\hat{p})}{n}} \right) \qquad \qquad \textit{formula 2}$$

where $\hat{p}$ is the sample estimate and n is the unweighted number of sample cases in the group being considered.

The survey's *margin of error* is the largest 95% confidence interval for any estimated proportion based on the total sample— the one around 50%. For example, the margin of error for the entire sample is ±2.2 percentage points. This means that in 95 out every 100 samples drawn using the same methodology, estimated proportions based on the entire sample will be no more than 2.2 percentage points away from their true values in the population. It is important to remember that sampling fluctuations are only one possible source of error in a survey estimate. Other sources, such as

respondent selection bias, questionnaire wording and reporting inaccuracy, may contribute additional error of greater or lesser magnitude.

Response Rate

Table 2 reports the disposition of all sampled telephone numbers ever dialed from the original telephone number samples. The response rate estimates the fraction of all eligible respondents in the sample that were ultimately interviewed. At PSRAI it is calculated by taking the product of three component rates:[15]

Contact rate – the proportion of working numbers where a request for interview was made[16]

Cooperation rate – the proportion of contacted numbers where a consent for interview was at least initially obtained, versus those refused

Completion rate – the proportion of initially cooperating and eligible interviews that were completed

Thus the response rate for the landline sample was 14 percent. The response rate for the cellular sample was 11 percent.

Table 2: Sample Disposition

Landline	Cell	
66,518	60,997	Total Numbers Dialed
2,876	919	Non-residential
3,004	142	Computer/Fax
16	----	Cell phone
32,283	22,623	Other not working
3,844	887	Additional projected not working
24,495	36,426	Working numbers
36.8%	59.7%	Working Rate
1,281	296	No Answer / Busy
7,092	13,997	Voice Mail
118	27	Other Non-Contact
16,004	22,106	Contacted numbers
65.3%	60.7%	Contact Rate
902	3,485	Callback
11,408	14,644	Refusal
3,694	3,977	Cooperating numbers
23.1%	18.0%	Cooperation Rate
104	129	Language Barrier
1,960	2,362	Child's cell phone / Oversample Screenout
1,630	1,486	Eligible numbers

[15] PSRAI's disposition codes and reporting are consistent with the American Association for Public Opinion Research standards.

[16] PSRAI assumes that 75 percent of cases that result in a constant disposition of "No answer" or "Busy" are actually not working numbers.

44.1%	37.4%	Eligibility Rate
104	26	Break-off
1,526	1,460	Completes
93.6%	98.3%	Completion Rate
14.1%	10.7%	Response Rate