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What Internet Users Know about Technology and the Web

*The Pew Research Center's "Web IQ"
Quiz*

**FOR FURTHER INFORMATION
ON THIS REPORT:**

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What internet users know about technology and the web

Results of the Pew Research Center's "Web IQ" Quiz

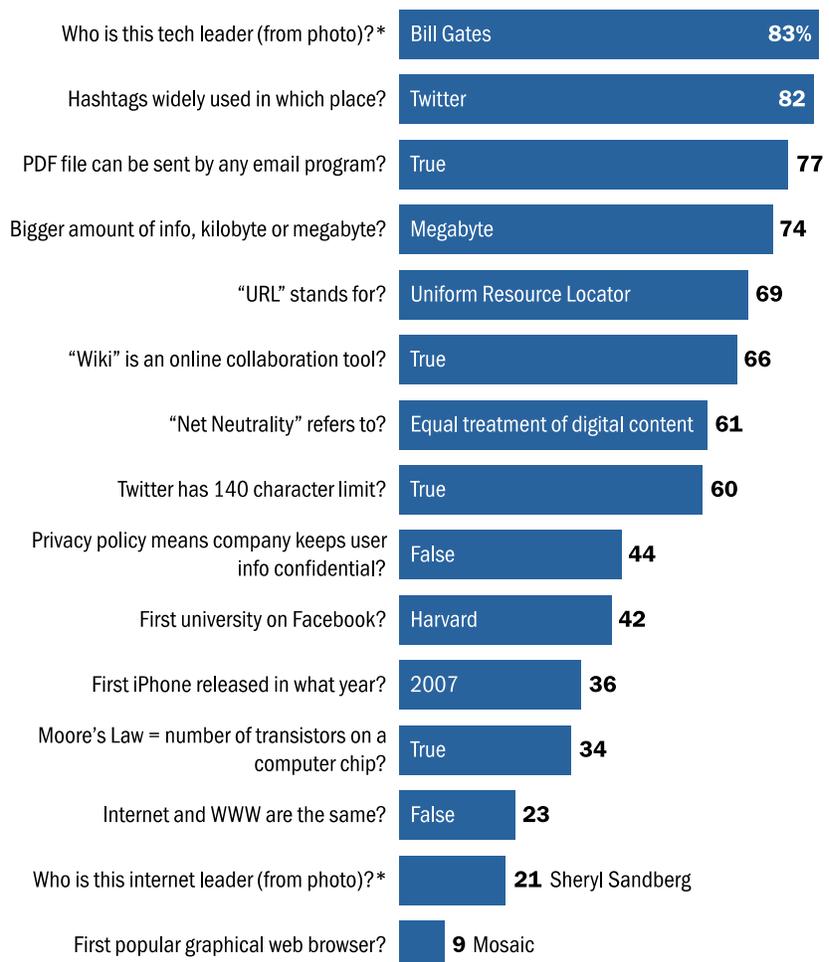
American internet users' knowledge of the modern technology landscape varies widely across a range of topics, according to a new knowledge quiz conducted by the Pew Research Center as part of its [ongoing series](#) commemorating the 25th anniversary of the World Wide Web. To take the quiz for yourself before reading the full report, [click here](#).

The survey—which was conducted among a nationally representative sample of 1,066 internet users—includes 17 questions on a range of issues related to technology, including: the meaning and usage of common online terms; recognition of famous tech figures; the history of some major technological advances; and the underlying structure of the internet and other technologies.

Substantial majorities of internet users are able to correctly answer questions about some common technology platforms and everyday internet usage terms. Around three-quarters know that a megabyte is bigger than a kilobyte, roughly seven in ten are able to identify pictures corresponding to

The "Web IQ" of American Internet Users

% of internet users answering each question correctly



Survey conducted September 12-18, 2014 among adult internet users

*Indicates a visual question for which respondents were shown images

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terms like “captcha” and “advanced search,” and 66% know that a “wiki” is a tool that allows people to modify online content in collaboration with others. A substantial majority of online adults [do not use Twitter](#), but knowledge of Twitter conventions is fairly widespread nonetheless: 82% of online Americans are aware that hashtags are most commonly used on the social networking platform, and 60% correctly answer that the service limits tweets to 140 characters.

On the other hand, relatively few internet users are familiar with certain concepts that underpin the internet and other modern technological advances. Only one third (34%) know that Moore’s Law relates to how many transistors can be put on a microchip, and just 23% are aware that “the Internet” and “the World Wide Web” do not, in fact, refer to the same thing.

Many online Americans also struggle with key facts relating to early—and in some cases, more recent—technological history. Despite an Oscar-winning movie (*The Social Network*) about the story of Facebook’s founding, fewer than half of internet users (42%) are able to identify Harvard as the first university to be on the site; and only 36% correctly selected 2007 as the year the first iPhone was released. The Mosaic web browser is an especially poorly-remembered pioneer of the early Web, as just 9% of online Americans are able to correctly identify Mosaic as the first widely popular graphical web browser.

When tested on their recognition of some individual technology leaders, a substantial 83% of online Americans are able to identify a picture of Bill Gates (although 10% incorrectly identified him as his long-time rival, former Apple CEO Steve Jobs). But just 21% are able to identify a picture of Sheryl Sandberg, a Facebook executive and author of the recent best-selling book *Lean In*.

Americans also have challenges accurately describing certain concepts relating to internet policy. Six in ten internet users (61%) are able to correctly identify the phrase “Net Neutrality” as referring to equal treatment of digital content by internet service providers. On the other hand, fewer than half (44%) are aware that when a company posts a privacy statement, it *does not* necessarily mean that they are actually keeping the information they collect on users confidential.

Age differences in web knowledge

Younger internet users are more knowledgeable than their elders on some—but by no means all—of the questions on the survey. These differences are most pronounced on the questions dealing with social media, as well as common internet usage conventions. Compared with older Americans, younger internet users are especially likely to know that Facebook originated at Harvard University and that hashtags are commonly used on Twitter, to correctly identify pictures representing phrases like “captcha” and “advanced search,” and to understand the definition of a “wiki.”

At the same time, internet users of all ages are equally likely to believe—incorrectly—that the internet and the World Wide Web are the same thing. There are also no major age differences when it comes to the meaning of phrases like “Net Neutrality” or “privacy policy,” and older and younger internet users correctly identify pictures of Bill Gates and Sheryl Sandberg at comparable rates.

Younger internet users are more knowledgeable about common usage terms, social media conventions

	18-29	30-49	50-64	65+
<i>% who answered each correctly (based on internet users)</i>	%	%	%	%
Hashtags widely used where? (Twitter)	89	87	81	68
Wiki is a web app that lets users collaborative edit content (True)	84	72	61	43
Who is this tech leader? (Bill Gates)	84	80	83	88
PDF can be transferred w/ any major email program (True)	80	82	78	61
Can identify picture of “advanced search”	80	75	69	55
Can identify picture of “captcha”	80	75	64	45
Which is bigger, KB or MB? (Megabyte)	78	75	74	67
URL means what? (Uniform Resource Locator)	70	72	72	59
140-character limit on Twitter (True)	64	66	54	55
Net Neutrality refers to? (Equal treatment of digital content)	62	60	60	61
First university on Facebook? (Harvard)	55	47	39	19
Privacy policy ensures company keeps info confidential (False)	46	40	46	49
Moore’s Law relates to # of transistors that can fit on a computer chip (True)	42	34	31	29
Year of iPhone release (2007)	41	40	33	30
Internet and WWW are the same (False)	23	22	23	26
Who is this tech leader? (Sheryl Sandberg)	20	23	18	21
First popular web browser (Mosaic)	11	11	8	3
Average number correct overall	10.1	9.6	8.9	7.8

Survey conducted September 12-18, 2014 among adult internet users

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Educational differences in web knowledge

College graduates tend to score relatively highly on most Pew Research Center knowledge quizzes, and also tend to have high rates of usage for most consumer technologies. As such, it is perhaps not surprising that this group tends to do relatively well when it comes to knowledge of the internet and technology.

Compared with internet users who have not attended college, college graduates have much greater awareness of facts such as Twitter's character limit, or the meaning of terms such as "URL" and "Net Neutrality." Still, there are some elements of the technology world on which even this highly educated group rates poorly. For instance, just one in five correctly answered that the internet and World Wide Web are not the same thing, and only 12% know that Mosaic was the first widely available graphical web browser.

College grads more familiar with common tech terms

	HS or less	Some college	College grad+	College-HS difference
<i>% who answered each correctly (based on internet users)</i>				
	%	%	%	
140-character limit on Twitter (True)	47	62	76	+29
URL means what? (Uniform Resource Locator)	54	76	83	+29
Net Neutrality refers to? (Equal treatment of digital content)	49	63	73	+24
PDF can be transferred w/ any major email program (True)	65	80	89	+24
Wiki is a web app that lets users collaborative edit content (True)	56	68	79	+23
Can identify picture of "advanced search"	62	72	81	+19
Privacy policy ensures company keeps info confidential (False)	35	46	56	+21
Hashtags widely used where? (Twitter)	72	86	92	+20
Year of iPhone release (2007)	29	36	47	+18
Who is this tech leader? (Bill Gates)	75	88	90	+15
First university on Facebook? (Harvard)	37	38	51	+14
Can identify picture of "captcha"	62	69	73	+11
Which is bigger, KB or MB? (Megabyte)	70	73	79	+9
Who is this tech leader? (Sheryl Sandberg)	19	19	25	+6
Moore's Law relates to # of transistors that can fit on a computer chip (True)	31	37	36	+5
First popular web browser (Mosaic)	7	7	12	+5
Internet and WWW are the same (False)	28	20	21	-7
Average number correct overall	8.0	9.4	10.6	+2.6

Survey conducted September 12-18, 2014 among adult internet users

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About the Survey

The analysis in this report is based on an online survey conducted September 12-18, 2014 among a sample of 1,066 adult internet users, 18 years of age or older. The survey was conducted by the GfK Group using KnowledgePanel, its nationally representative online research panel. To qualify for the main survey, a panel member must have been at least 18 years of age and meet one of the following two criteria:

- Use the internet or email at least occasionally; or
- Access the internet on a cell phone, tablet or other mobile handheld device at least occasionally

KnowledgePanel members are recruited through probability sampling methods and include both those with internet access and those without. KnowledgePanel provides internet access for those who do not have it and, if needed, a device to access the internet when they join the panel. A combination of random digit dialing (RDD) and address-based sampling (ABS) methodologies have been used to recruit panel members (in 2009 KnowledgePanel switched its sampling methodology for recruiting panel members from RDD to ABS). The panel comprises households with landlines and cellular phones, including those only with cell phones, and those without a phone. Both the RDD and ABS samples were provided by Marketing Systems Group (MSG). KnowledgePanel continually recruits new panel members throughout the year to offset panel attrition as people leave the panel. The survey was conducted in English. Respondents were selected randomly from eligible adult household members of the panel. All sampled members received an initial email September 12-13, 2014 to notify them of the survey and included a link to the survey questionnaire. One follow-up reminder was sent three days later to those who had not yet responded.

The final sample for this survey was weighted using an iterative technique that matches gender, age, education, race, Hispanic origin, household income, metropolitan area or not, and region to parameters from the July 2013 Census Bureau's Current Population Survey (CPS). In addition, the sample is weighted to match current patterns of internet access from the July 2011 CPS survey. This weight is multiplied by an initial base or sampling weight that corrects for differences in the probability of selection of various segments of the sample and by a panel weight that adjusts for any biases due to nonresponse and noncoverage at the panel recruitment stage (using all of the parameters mentioned above as well home ownership status).

Sampling errors and statistical tests of significance take into account the effect of weighting at each of these stages. Sampling error for the total sample of 1,066 respondents is plus or minus 3.2

percentage points at the 95% level of confidence. Sample sizes and sampling errors for other subgroups are available upon request.

In addition to sampling error, one should bear in mind that question wording and practical difficulties in conducting surveys can introduce error or bias into the findings of opinion polls.

About Pew Research Center

Pew Research Center is a nonpartisan fact tank that informs the public about the issues, attitudes and trends shaping America and the world. It does not take policy positions. It conducts public opinion polling, demographic research, media content analysis and other empirical social science research. The center studies U.S. politics and policy views; media and journalism; internet and technology; religion and public life; Hispanic trends; global attitudes and U.S. social and demographic trends. All of the center's reports are available at www.pewresearch.org. Pew Research Center is a subsidiary of The Pew Charitable Trusts.

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Survey Questions

Q37 The Internet and the World Wide Web are the same thing.

True	75%
False (correct)	23%
Did not answer	1%

Q38 Twitter limits the number of characters per tweet to 140.

True (correct)	60%
False	35%
Did not answer	5%

Q39 Moore's Law relates to how many transistors can be put on a computer chip.

True (correct)	34%
False	59%
Did not answer	7%

Q40 When a company posts a privacy policy, it ensures that the company keeps confidential all the information it collects on users.

True	52%
False (correct)	44%
Did not answer	3%

Q41 The first widely popular graphical Web browser, released in 1993, was:

Netscape Navigator	37%
Internet Explorer	49%
Mosaic (correct)	9%
Opera	2%
Did not answer	4%

Q43 Who is this technology leader?



Steve Jobs of Apple Computer	10%
Bill Gates of Microsoft (correct)	83%
Mark Zuckerberg of Facebook	2%
Sergei Brin of Google	3%
Did not answer	2%

Q44 Who is this internet leader?



Marissa Mayer of Yahoo!	35%
Sheryl Sandberg of Facebook (correct)	21%
Meg Whitman of Hewlett Packard	21%
Arianna Huffington of Huffington Post	16%
Did not answer	7%

Q45 The Apple iPhone was first released in what year?

2005	38%
2007 (correct)	36%
2009	16%
2011	6%
Did not answer	4%

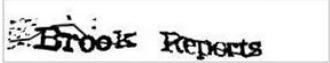
Q46 Choose the bigger amount of information:

A kilobyte	24%
A megabyte (correct)	74%
Did not answer	2%

Q47 Which one of these is a captcha?

Security Check

Security Check:
Enter both words below, separated by a space.
Can't read the words below? Try different words or an audio captcha.



Sick of these? Verify your account.

Text in the box: What's This?

68% (correct)



28%

Did not answer

4%

Q49 Hashtags are most widely used in which place?

Twitter (correct)	82%
Wikipedia	3%
Blogs	9%
YouTube	2%
Did not answer	4%

Q52 “Net Neutrality” refers to:

The postings on websites that are nonpartisan	12%
A promise by users of some websites that they will not make critical comments	13%
The way Wikipedia editors are instructed to handle new entries on their site	6%
Equal treatment of digital content by internet service companies (correct)	61%
Did not answer	9%

Q53 Which university was the first on Facebook?

Harvard (correct)	42%
Stanford	18%
MIT	26%
Univ. of Illinois	6%
Did not answer	9%

Q54 What does “URL” stand for?

Uniform Resource Locator (correct)	69%
Ultra Reliable Linkage	12%
User Responsibility Liability	12%
Unique Rate Limit	2%
Did not answer	5%

Q55 Advanced search looks like this:

The image shows the Google search interface with the following sections:

- Find pages with...**
 - all these words:
 - this exact word or phrase:
 - any of these words:
 - none of these words:
- To do this in the search box**
 - Type the important words: tricolor rat terrier
 - Put exact words in quotes: "rat terrier"
 - Type OR between all the words you want: miniature OR standard
 - Put a minus sign just before words you don't want: -rodent, -"Jack Russell"
- Then narrow your results by...**
 - language: any language (dropdown) - Find pages in the language you select.
 - region: any region (dropdown) - Find pages published in a particular region.
 - last update: anytime (dropdown) - Find pages updated within the time you specify.
 - site or domain: - Search one site (like wikipedia.org) or limit your results to a domain like .edu, .org or .gov
 - terms appearing: anywhere in the page (dropdown) - Search for terms in the whole page, page title, or web address, or links to the page you're looking for.
 - SafeSearch: Filter explicit results (dropdown) - Tell SafeSearch whether to filter sexually explicit content.
 - reading level: no reading level displayed (dropdown) - Find pages at one reading level or just view the level info.
 - file type: any format (dropdown) - Find pages in the format you prefer.
 - usage rights: not filtered by license (dropdown) - Find pages you are free to use yourself.

True (correct) 71%
 False 24%
 Did not answer 5%

Q58 A PDF file can be transferred using any of the major email programs.

True (correct) 77%
 False 19%
 Did not answer 4%

Q59 Wiki is a web application used by thousands of web sites which allows people to add, modify, or delete content in collaboration with others.

True (correct) 66%
 False 27%
 Did not answer 6%