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Digital Readiness Gaps

Americans fall along a spectrum of preparedness when it comes to using tech tools to pursue learning online, and many are not eager or ready to take the plunge

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Digital Readiness Gaps

Americans fall along a spectrum of preparedness for using tech tools to pursue learning online, and many are not eager or ready to take the plunge

For many years concerns about “digital divides” centered primarily on whether people had *access* to digital technologies. Now, those worried about these issues also focus on the degree to which people succeed or struggle when they use technology to try to navigate their environments, solve problems, and make decisions. A recent Pew Research Center [report](#) showed that adoption of technology for adult learning in both personal and job-related activities varies by people’s socio-economic status, their race and ethnicity, and their level of access to home broadband and smartphones. Another report showed that some users are unable to make the internet and mobile devices function adequately for key activities such as [looking for jobs](#).

In this report, we use newly released Pew Research Center survey findings to address a related issue: digital readiness. The new analysis explores the attitudes and behaviors that underpin people’s preparedness and comfort in using digital tools for learning as we measured it in a survey about people’s activities for [personal learning](#).

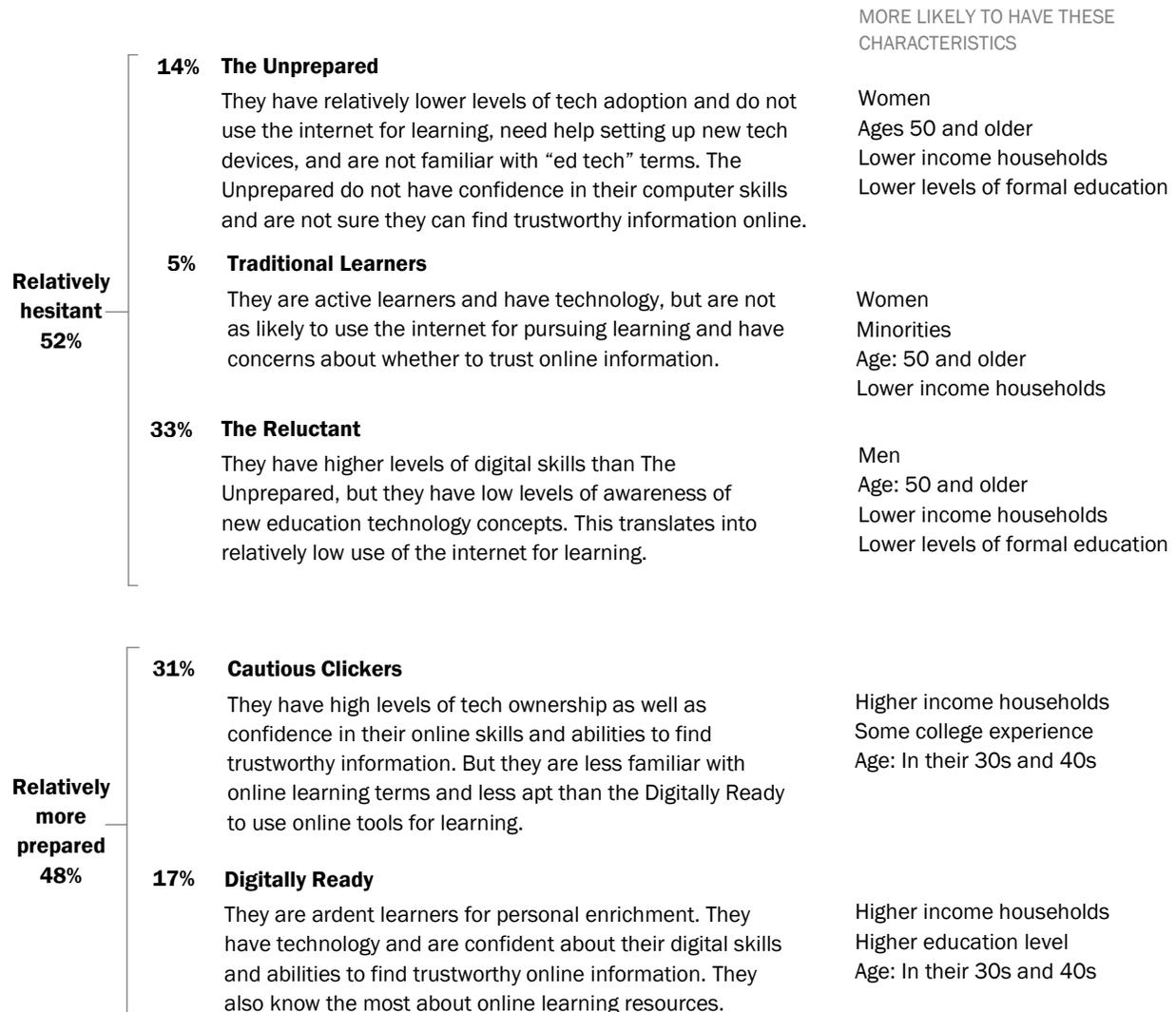
Specifically, we assess American adults according to five main factors: their confidence in using computers, their facility with getting new technology to work, their use of digital tools for learning, their ability to determine the trustworthiness of online information, and their familiarity with contemporary “education tech” terms. It is important to note that the findings here just cover people’s learning activities in digital spaces and do not address the full range of important things that people can do online or their “readiness” to perform them.

To better understand the way in which different groups of Americans line up when it comes to digital readiness, researchers used a statistical technique called [cluster analysis](#) that places people into groups based on similarities in their answers to key questions.

The analysis shows there are several distinct groups of Americans who fall along a spectrum of digital readiness from relatively more prepared to relatively hesitant. Those who tend to be hesitant about embracing technology in learning are below average on the measures of readiness, such as needing help with new electronic gadgets or having difficulty determining whether online information is trustworthy. Those whose profiles indicate a higher level of preparedness for using tech in learning are collectively above average on measures of digital readiness.

Digital readiness: The five groups along a spectrum from least ready to most ready

% of U.S. adults in each group



Source: Survey conducted Oct. 13-Nov. 15, 2015.
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Relatively Hesitant – 52% of adults in three distinct groups. This overall cohort is made up of three different clusters of people who are less likely to use digital tools in their learning. This has to do, in part, with the fact that these groups have generally lower levels of involvement with personal learning activities. It is also tied to their professed lower level of digital skills and trust in the online environment.

- A group of 14% of adults make up The Unprepared. This group has *both* low levels of digital skills and limited trust in online information. The Unprepared rank at the bottom of those who use the internet to pursue learning, and they are the least digitally ready of all the groups.
- We call one small group Traditional Learners, and they make up of 5% of Americans. They are active learners, but use traditional means to pursue their interests. They are less likely to fully engage with digital tools, because they have concerns about the trustworthiness of online information.
- A larger group, The Reluctant, make up 33% of all adults. They have higher levels of digital skills than The Unprepared, but very low levels of awareness of new “education tech” concepts and relatively lower levels of performing personal learning activities of any kind. This is correlated with their general lack of use of the internet in learning.

Relatively more prepared – 48% of adults in two distinct groups. This cohort is made up of two groups who are above average in their likeliness to use online tools for learning.

- A group we call Cautious Clickers comprises 31% of adults. They have tech resources at their disposal, trust and confidence in using the internet, and the educational underpinnings to put digital resources to use for their learning pursuits. But they have not waded into e-learning to the extent the Digitally Ready have and are not as likely to have used the internet for some or all of their learning.
- Finally, there are the Digitally Ready. They make up 17% of adults, and they are active learners and confident in their ability to use digital tools to pursue learning. They are aware of the latest “ed tech” tools and are, relative to others, more likely to use them in the course of their personal learning. The Digitally Ready, in other words, have high demand for learning and use a range of tools to pursue it – including, to an extent significantly greater than the rest of the population, digital outlets such as online courses or extensive online research.

There are several important qualifying notes to sound about this analysis. First, the research focuses on a particular activity – online learning. The findings are not necessarily projectable to people’s capacity (or lack of capacity) to perform health-related web searches, use mobile apps for civic activities, or use smartphones to apply for a job.

Second, while there are numerical descriptions of the groups, there is some fluidity in the boundaries of the groups. Unlike many other statistical techniques, cluster analysis does not require a single “correct” result. Instead, researchers run numerous versions of it (e.g., asking it to produce different numbers of clusters) and judge each result by how analytically practical and substantively meaningful it is. Fortunately, nearly every version produced had a great deal in common with the others, giving us confidence that the pattern of divisions were genuine and that the comparative shares of those who were relatively ready and not ready each constituted about half of Americans.

Third, it is important to note that the findings represent a snapshot of where adults are today in a fairly nascent stage of e-learning in society. The groupings reported here may well change in the coming years as people’s understanding of e-tools grows and as the creators of technology related to e-learning evolve it and attempt to make it more user friendly.

Even allowing for those caveats, the findings add additional context to insights about those who pursue personal learning activities. Although factors such as educational attainment or age might influence whether people use digital tools in learning, other things such as people’s digital skills and their trust in online information may also loom large. These “readiness” factors, separate and apart from demographic ones, are the focus in this report.

The results are also significant in light of Americans’ expressed interest in learning and personal growth. Most Americans said in the Center survey that they like to look for opportunities to grow as people: 58% said this applies to them “very well” and another 31% said it applies to them “somewhat well.” Additionally, as they age, many Americans say they [hope to stay active and engaged with the world.](#)

1. The meaning of digital readiness

Technological innovation often unfolds at a pace faster than some people are able to embrace. When household electric service started to be widely available in the 1930s, many Americans, particularly in rural areas, were unsure whether they needed it. This led some providers to embark on extensive home-to-home marketing to urge people to wire their homes.¹

More recently, as the [internet](#) and [smartphones](#) have spread through the population, adoption across population segments has been [uneven](#). Pew Research Center recently reported that some users are unable to make the internet and mobile devices function adequately for key activities like [looking for jobs](#). Communities face similar issues. Though the use of technology in schools has unfolded [well in some places](#), problems have arisen where [insufficient planning](#) failed to take into account whether there was acceptance of new technology by all parts of the educational ecosystem.

These examples underscore two points about how new technology works its way through society: First, different people and institutions have varying levels of preparedness for using next-generation technologies. Second, this reality can result in varying levels of usage of new technologies as they diffuse in society. These differences can, in turn, ultimately raise the possibility that uneven adoption and use of technology could have negative consequences for those whose are not facile and comfortable technology users.

Since the late 1990s, inequalities in tech adoption have been characterized as the “digital divide,” and the focus has been mainly on the binary “haves versus have nots.”² However, there has recently been a pivot in the technology adoption discussion that looks at people’s preparedness, such as their digital skills and their trust in technology, which may influence their use of digital tools, separate and apart from their access to them. The term often used to capture these factors is “digital readiness.”³ When organizations, such as libraries, think about digital readiness, it is usually about whether people have the skills to use information technology, as well as the digital literacy tools to help people determine whether the online information they access is trustworthy.⁴

This means that an operational definition of [digital readiness](#) includes several things:

¹ David E. Nye, *Electrifying America: Social Meanings of a New Technology*. Cambridge, MA: MIT Press, 1990.

² Organization for Economic Cooperation and Development (OECD), “Understanding the Digital Divide,” 2001. Available online at: <https://www.oecd.org/sti/1888451.pdf>

³ D. Frank Smith, “Digital Readiness: The Next Wave of the Digital Divide,” *State Tech Magazine*, May 7, 2014. Available online at: <http://www.statetechmagazine.com/article/2014/05/digital-readiness-next-wave-digital-divide>.

⁴ Rachel Yoemans, “Are Chicagoans Digitally Ready? With Funding Support from Donors to Library Foundation, CPL Is Making Sure They Are.” *Chicago Public Library Foundation*, May 26, 2016. Available online at: <http://www.cplfoundation.org/site/News2?page=NewsArticle&id=7222>

- Digital skills, that is, the skills necessary to initiate an online session, surf the internet and share content online.
- Trust, that is, people's beliefs about their capacity to determine the trustworthiness of information online and safeguard personal information.
- These two factors express themselves in the third dimension of digital readiness, namely use – the degree to which people use digital tools in the course of carrying out online tasks.

How we measure digital readiness

Each of the three elements of digital readiness – skills, trust, and use – is measurable. Pew Research Center's November 2015 survey captured the elements of digital readiness in the specific context of lifelong learning and the extent to which people use digital tools to pursue it. The questions described in this section served as the inputs to the typology that generated the five groups of those more or less “digitally ready” to use technology in personal learning.

For measuring skills, the survey asked:

How confident people are in using computers, smartphones or other electronic devices to do the things they need to do online:

- 54% of internet and smartphone users said they are “very confident.”
- 32% said they are “somewhat confident.”
- 10% said they are “only a little confident.”
- 4% said they are “not at all confident.”

How well this statement describes them: “When I get a new electronic device, I usually need someone else to set it up or show me how to use it.”

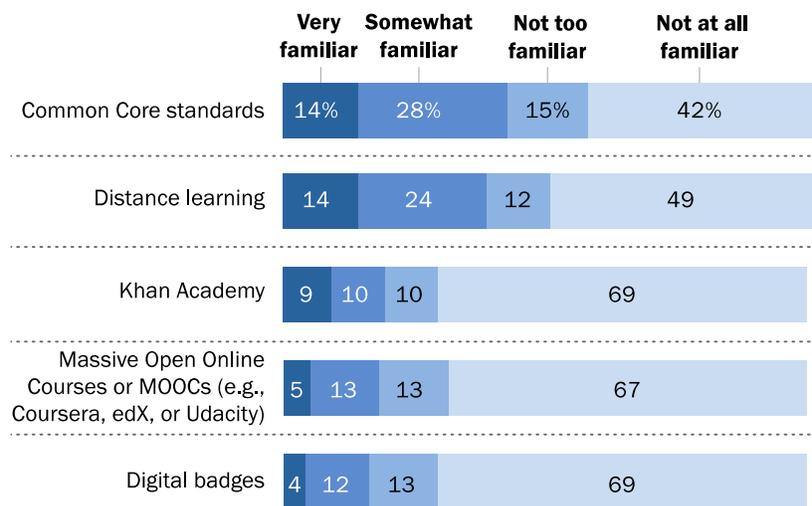
- 26% said this describes them “very well.”
- 20% said it describes them “somewhat well.”
- 11% said the statement describes them “not too well.”
- 42% said this describes them “not at all well.”

How familiar adults are with specific educational resources or concepts. As it turns out, there is not widespread public awareness of some of the key resources that are becoming available thanks to innovation online. Noteworthy majorities of Americans say they are “not too” or “not at all” aware of these things:

- **Common Core standards** – 57% of adults have little or no awareness of Common Core, a set of education standards for English and math that were adopted by the federal government in 2010. States create the curricula for the standards, which establish benchmarks that make it easier to compare how students are doing across state lines. The standards are an effort to try to make sure students across the country are learning the same essentials.
- **Distance learning** – 61% of adults have little or no awareness of the concept of learning activities that take place remotely rather than in physical classrooms.
- **The Khan Academy** – an online archive of video lessons for students on key concepts in math, science, the humanities and languages. Fully 79% of adults do not have much awareness of it.
- **Massive Open Online Courses (MOOCs)** that are now being offered by universities and companies – 80% of adults do not have much awareness of these.
- **Digital badges** that can certify if someone has mastered an idea or a skill – 83% of adults do not have much awareness of these.

Few people are very familiar with some popular “education tech” terms and programs

% of U.S. adults who are ... with these terms



Source: Survey conducted Oct. 13-Nov. 15, 2015.
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Overall, 28% of adults say they are very familiar with at least one of the five “ed tech” terms listed. This turns out to be an important indicator of whether a person has used the internet for personal learning.

On its face, asking people about their familiarity with educational technology terms may not seem to have much to do with digital skills. Yet asking people about their familiarity with tech terms has been shown to be a good proxy for their overall level of digital skills in a specific domain. In addition to seeking people’s perceptions of their skills, some surveys also ask about people’s

degree of awareness of fairly challenging tech terms. If respondents are highly aware of these terms, experimental research shows that they are also very likely to be able to use the resources associated with them.⁵ This line of questioning, then, serves as an indicator of whether someone is inclined to pursue learning in an educational ecosystem that regularly requires the use of digital technology.

Additionally, our inclusion of “Common Core standards” as an “ed tech” term warrants explanation because the term itself is not explicitly tied to technology. However, technology is seen as embedded in the Common Core curriculum as a tool that is important for students to be able to use to master the skills and concepts that the Common Core aims to cultivate.⁶

For measuring trust, the survey asked people:

How well the following statement describes them: “I find it difficult to know whether the information I find online is trustworthy.”

- 22% said this describes them “very well.”
- 38% said the statement describes them “somewhat well.”
- 16% said it describes them “not too well.”
- 23% said this describes them “not at all well.”

Finally, in measuring use, the analysis measured the extent to which a person used technology in the course of pursuing a number of personal enrichment activities in the past year. (A [previous Pew Research report](#) covered in detail how we defined and measured personal learning.) Overall, some 74% of adults – the “personal learners” – said they had participated in activities we classified as personal learning endeavors in the last year. For the use of technology in personal learning, the survey asked about:

- Using the internet in personal learning in the past 12 months: 52% of personal learners (or 38% of all adults) had done this.
- Taking an online course in the past 12 months: 16% of all adults had done this.

Each of these two measures were inputs to the typology.

⁵ Eszter Hargittai, “An Update on Survey Measures of Web-Oriented Digital Literacy.” *Social Science Computer Review*, Volume 27, no. 1, February 2009, pp. 130–137.

⁶ See for instance, “[Technology and the Common Core](#)” at the Staff Development for Educators.

In addition, the analysis of digital readiness in the context of personal learning also involves questions about people's general attitudes toward learning. These included asking how well people thought these sentences described them:

- “I often find myself looking for new opportunities to grow as a person.” Some 58% say this describes them “very well” and 31% say “somewhat well.”
- “I am really glad I am no longer in school and don't have to go to classes anymore.” About a third (31%) say this describes them “very well” and 20% say “somewhat well.”
- “I think of myself as a lifelong learner.” Fully 73% say this describes them “very well” and 20% say “somewhat well.”

Each of these questions were part of the typology's input.

It is important to note that people's technology access assets (e.g., home broadband subscriptions or smartphones) are *not* included as inputs to the typology. Although they are related to personal learning and tech use, the choice to have these tech gadgets is generally not the principle reason people decide to purchase them.

2. The spectrum of digital readiness for e-learning

Because digital readiness encompasses a range of characteristics – people’s digital skills, trust in information, and use of tech in learning – it is impossible to develop five groups of the “digitally ready” from a single question. Instead, cluster analysis of the answers from the group of questions on skills, trust and use allows us to place respondents in groups according to the similarity of their answers.

On the subject of digital readiness for learning, one can imagine that one end of the spectrum contains people with low levels of knowledge of tech terms, little confidence with computers, and quite low levels of tech use in personal learning. At the other end are people who are very sophisticated when it comes to technology – they know what they are doing and they know the terminology. In between, some people may have a decent level of confidence with computers, but not much awareness of “ed tech” terms, and perhaps moderate levels of using the internet for learning.

For this study, the inputs were people’s answers to the questions listed in [Chapter 1](#). The cluster analysis yielded five distinct groups, covered here in the descending order of digital readiness:

Digitally Ready: One-in-six adults (17%) make up the Digitally Ready who are confident in their online skills, display little hesitation about finding information online that they trust, are familiar with the emerging “ed tech” world, and have the technology assets to take advantage of it. They are well-off economically, highly educated and likely to be in their 30s or 40s. (See the [Appendix](#) for detailed breakdown of the demographic and tech usage traits of all the clusters.)

Two-thirds of the Digitally Ready have done some personal learning on the internet in the past 12 months, and four-in-ten (40%) say most or all of their learning takes place online. This notably exceeds the norm for a typical adult (31%). Further, the Digitally Ready are twice as likely as the average to have taken a course online: 33% have.

Cautious Clickers: This is the large middle grouping among the five clusters. They are the one-third of adults (31%) who are confident in their digital skills and are relatively aware of new “ed tech” concepts. They are distinct from the Digitally Ready because they are less likely to engage in personal learning either offline or online. For instance, Cautious Clickers are about 10-percentage points less likely than the Digitally Ready to attend meetings such as a book club or take courses pertaining to a hobby.

At the same time, Cautious Clickers turn to the internet for at least some level of personal learning at rates somewhat above average: 60% have. They are also more likely than average to have taken an online course (23% have). But their concern about trusting online information is real: 59% express concerns, which is right at the average and significantly less trusting than the Digitally Ready. This may be the source of their caution. At the same time, Cautious Clickers do use the internet for personal learning; some 37% use the internet for most or all of their learning vs. 31% for all personal learners. With respect to socio-economic status, the Cautious Clickers have above average educational and income levels. They are highly wired, with nearly 90% having home broadband or a smartphone.

After the Cautious Clickers come three groups that can broadly be categorized as relatively hesitant when it comes to using digital tools for learning. Some of them are not online at all. Others use digital tools, but are significantly less confident of their skills and are less sure of their capacity to find trustworthy information online. The groups are:

The Reluctant: This group makes up 33% of adults, and they have learning and tech asset profiles that are very similar to The Unprepared. What distinguishes this group from The Unprepared (see below) is the nature of their digital preparedness. They do not express much worry about being able to trust online information, but their confidence with computers and other electronic devices is a bit below average. Some 43% say they are very confident with computers, compared with 54% for all adults. Very few – just 1% – are very aware of any of the new “ed tech” concepts on our list.

Even though they have some degree of comfort with their digital skills, their reluctance manifests itself in relatively low levels of internet use for learning purposes. For instance, just 6% have taken an online course, and their use of the internet for all or most of their personal learning, at 23%, trails the figure for all adults who have done this (31%). Demographically, they are middle-aged and have relatively lower levels of income and education.

Traditional Learners: This is a small set of adults (5%) who are active learners, but not very keen on using technology to pursue their learning. Some 84% of Traditional Learners have done at least one personal learning activity in the past year, but they are fairly traditional in the way they pursue it. Part of this has to do with digital skills and trust. They generally need help with getting new devices to work (74% vs. 45% for all adults). And fully 90% say they have worries about whether they can trust information online, compared with the 60% of all adults.

Traditional Learners are generally familiar with new “ed tech” terms, but are less likely than the Digitally Ready and Cautious Clickers to use the internet for personal learning or to take an online

course. To take one clear contrast, 40% of the Digitally Ready do some or all of their personal learning online, while this is true for just 23% of Traditional Learners. Demographically, Traditional Learners are more likely female, ethnically diverse, and lower- to lower-middle income.

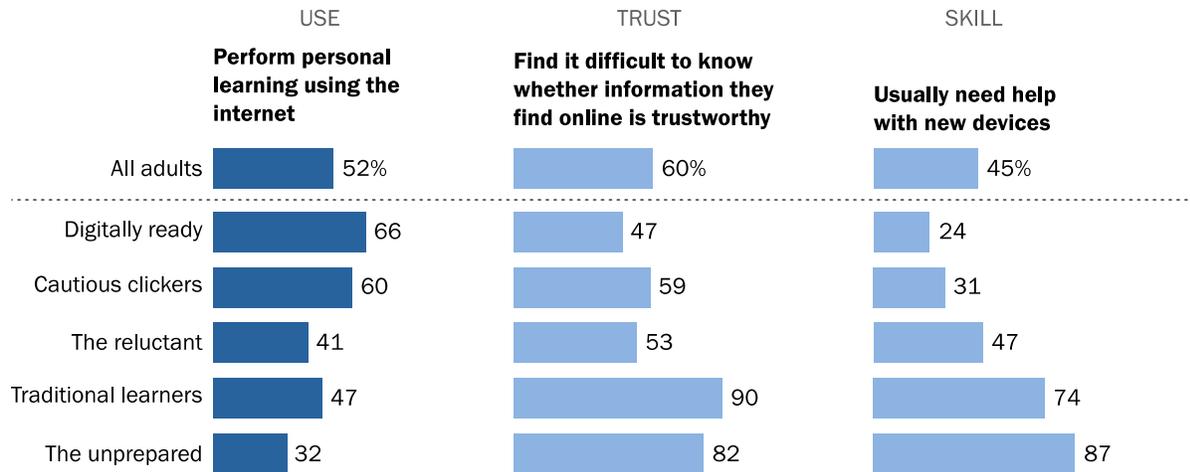
The Unprepared: This group comprises one-in-seven adults (14%). Though half engage in basic lifelong learning activities such as reading “how to” magazines or other publications of interest, they do not venture too far beyond that. Some 63% have done at least one personal learning activity in the past year. Few (8%) are very familiar with new “ed tech” terms, and this group captures the two elements of low levels of digital readiness. The Unprepared are not confident in their digital skills: Only 17% are very confident with computers, less than a third of the 54% for all adults who say they are. Additionally, 87% of The Unprepared say they have difficulty determining what online information is trustworthy. They do not often turn to the internet for most or all of their learning (just 6% have taken an online course and 18% use the internet in their personal learning) and they have low levels of tech assets. They are an older group, with relatively lower levels of household income and educational attainment.

The Reluctant, Traditional Learners and The Unprepared are classified as relatively hesitant because they generally rank below the Digitally Ready and Cautious Clickers along several measures of digital readiness. The Unprepared are the most digitally wary because they rank low in all measures of skills, trust and use. The Reluctant differ little relative to all adults with trusting online information, but are not highly aware of tech terms and rate somewhat below average on measures of their tech skills. Traditional Learners show high levels of concern about trusting information they find online and are very likely to say they need help in getting gadgets to function. Relative to other groups, they are less likely to use the internet for learning.

The nearby charts show how key measures of digital readiness – use, trust and skills – compare across the five groups.

Different groups have different levels of readiness for digital learning

% of each group who say the following about their use of technology, trust in information and skill using devices



Source: Survey conducted Oct. 13-Nov. 15, 2015.
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There is more material on the characteristics of each of the groups – in terms of how they answered the questions about digital readiness, the kinds of personal technology assets they have (which were not inputs into the statistical analysis that created the groups), and demography. The report's [Appendix](#) contains tables with this information.

3. Greater digital readiness translates to higher level of use of technology in learning

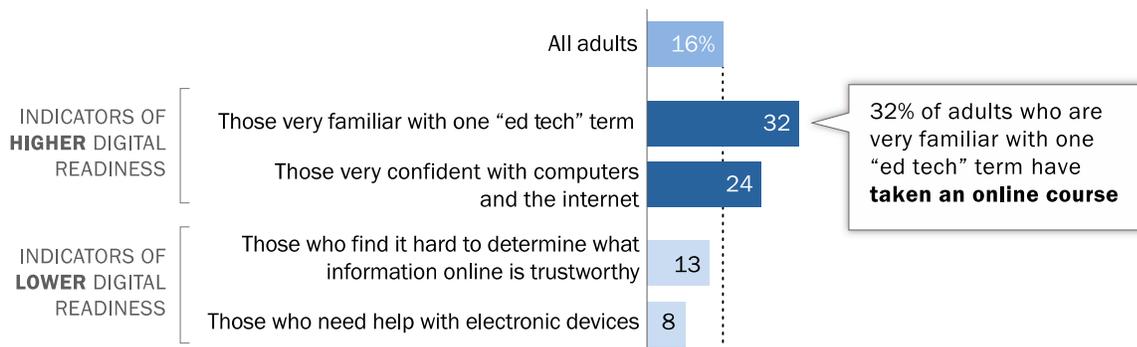
Another way to understand digital readiness and its connection to use of tech tools in learning is to simply compare measures of digital readiness to the likelihood people use digital tools to pursue personal learning. This section does that by looking at:

- 1) Whether people used the internet in the course of their personal learning in the previous 12 months. Overall, 52% of personal learners (or 38% of all adults) had used the internet as a tool in learning activities they pursued for their own interests.
- 2) Whether people had taken an online course of any sort in the past 12 months. Some 16% of all adults had done this.

The following tables show results for comparing the use of digital tools in learning to the main components of digital readiness: people's familiarity with "ed tech" terms, whether people need help in setting up new gadgets, whether they have a hard time determining what information online is trustworthy, and their confidence with computers and the internet. In each table, the differences reported are significant even when controlling for socio-economic factors such as age, income or educational attainment.

Those who are confident in their tech skills and familiar with "ed tech" terms are more likely to take an online course

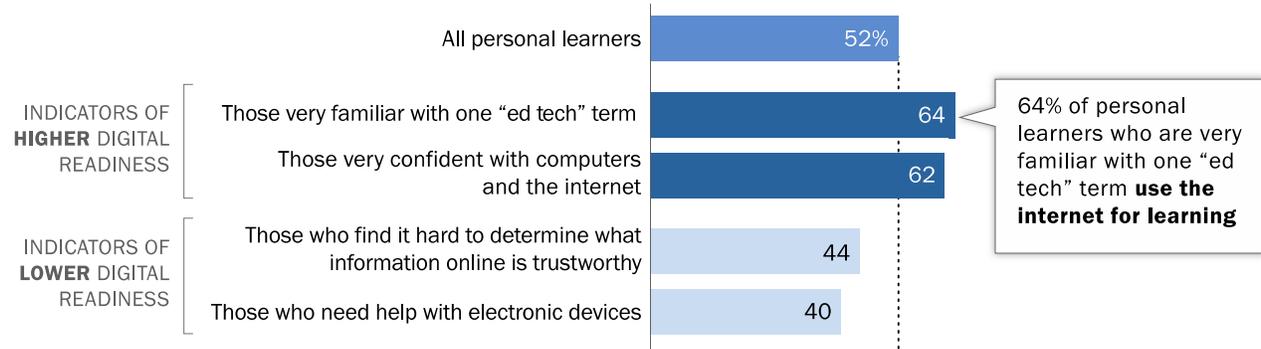
% of U.S. adults who *have taken an online class* among ...



Note: Personal learners = 74% of adults who participated in some kind of personal enrichment activity in the past 12 months.
Source: Survey conducted Oct. 13-Nov. 15, 2015.
"Digital Readiness Gaps"

Using the internet in personal learning is more prevalent among those confident in their tech skills and familiar with “ed tech” terms

% of personal learners who have used the internet for personal learning among ...



Note: Personal learners = 74% of adults who participated in some kind of personal enrichment activity in the past 12 months.

Source: Survey conducted Oct. 13-Nov. 15, 2015.

“Digital Readiness Gaps”

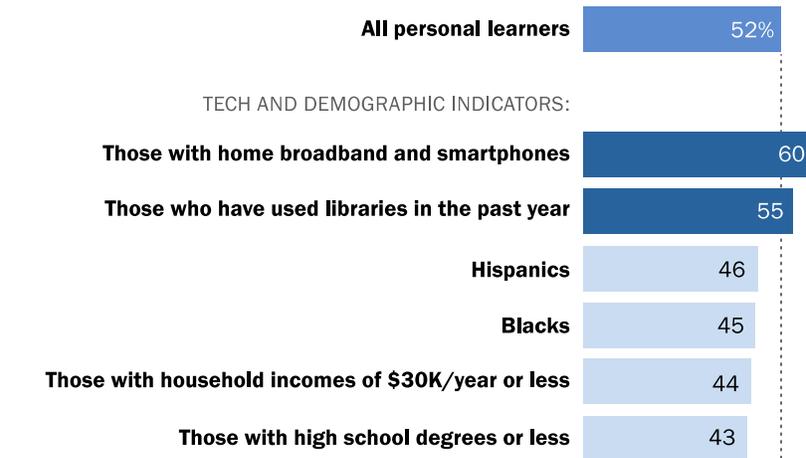
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At the same time, factors *other* than the ones used to measure digital readiness have something to do with whether people use the internet in personal learning. Demographic characteristics, as well as the amount of tech access gadgets people have, also make a difference.

As the Center’s report “[Lifelong Learning and Technology](#)” noted, demographic and socio-economic variables have a lot to do with people’s likelihood of participating in personal or professional learning. Those with higher levels of income and educational attainment are more likely to use technology in

Library users and the highly wired are more likely to use the internet in personal learning

% of personal learners who use the internet for learning among ...



Note: Personal learners = 74% of adults who participated in some kind of personal enrichment activity in the past 12 months.

Source: Survey conducted Oct. 13-Nov. 15, 2015.

“Digital Readiness Gaps”

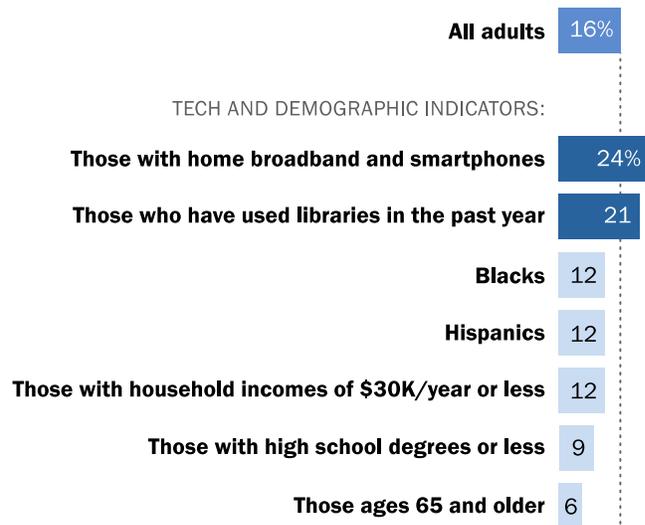
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learning, while those with fewer tech assets and minorities are less likely to. Library use is also relevant here – with those who have used libraries in the past year more likely to have used digital tools in learning.

As with measures of digital readiness, the differences reported are all significantly different from results for all personal learners (or all adults), and these differences are significant even when controlling for socio-economic factors such as age, income or educational attainment.

Library users and the highly wired are more likely to have taken an online course

% of U. S. adults who have taken an online course among ...



Source: Survey conducted Oct. 13-Nov. 15, 2015.
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Appendix: Detail on digital readiness and other metrics across groups

Personal learning patterns vary across groups of adult learners

% of U.S. adults who report doing these activities in the past 12 months*

	Digitally Ready (17% of adults)	Cautious Clickers (31% of adults)	The Reluctant (33% of adults)	Traditional Learners (5% of adults)	The Unprepared (14% of adults)	All adults
Read how-to magazines, consumer magazines or other publications related to some area of personal interest	75%	64%	47%	67%	50%	58%
Attended a meetings where you learned new information such as a book club, a sports club arts club or a health-related support group	51	38	24	49	26	35
Attended a convention or conference where you learned about something of personal interest, like a garden show, a car show, a science fiction convention, or a music conference	41	35	23	37	22	30
Taken a course related to your personal interests or hobbies	39	28	17	37	15	25
Taken an online course	33	23	6	14	6	16
Overall personal learning (did at least one personal learning activity in past year)	90	81	63	84	63	74
Mean number of personal learning activities from the five on our list	2.39	1.88	1.17	2.04	1.19	1.64

■ Percentage is **greater** than all adults
■ Percentage is **about the same** as all adults
■ Percentage is **less** than all adults

Source: Survey conducted Oct. 13-Nov. 15, 2015.
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Elements of digital readiness across groups

% of U.S. adults who state these views

	Digitally Ready (17% of adults)	Cautious Clickers (31% of adults)	The Reluctant (33% of adults)	Traditional Learners (5% of adults)	The Unprepared (14% of adults)	All adults
I am very confident about using computers, smartphones and other gadgets (% saying they are very confident)	78%	64%	43%	49%	17%	54%
I usually need help with new devices (% very or somewhat well)	24	31	47	74	87	45
I find it difficult to know whether information I find online is trustworthy (% very or somewhat well)	47	59	53	90	82	60
I am more productive because of all my electronic information devices (% very or somewhat well)	83	79	54	74	50	67
Very familiar with at least one "ed tech" term	34	38	1	39	8	28
Very or somewhat familiar with at least one "ed tech" term	100	100	17	100	33	64
Used library in the past year	68	61	36	57	37	51
Home broadband subscription	84	86	48	62	51	67
Smartphone	87	88	52	68	46	69
Have both a smartphone and a home broadband connection	76	79	35	52	29	56

Percentage is **greater** than all adults

Percentage is **about the same** as all adults

Percentage is **less** than all adults

Source: Survey conducted Oct. 13-Nov. 15, 2015.

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Use of internet for learning across the five groups

% of U.S. adults

	Digitally Ready (17% of adults)	Cautious Clickers (31% of adults)	The Reluctant (33% of adults)	Traditional Learners (5% of adults)	The Unprepared (14% of adults)	All adults
Professional learning using the internet	68%	59%	42%	53%	40%	55%
Took an online course	33	23	6	14	6	16
Personal learning using the internet	66	60	41	47	32	52
Did most or all of personal learning using the internet or other devices	40	37	23	23	18	31

■ Percentage is **greater** than all adults
■ Percentage is **about the same** as all adults
■ Percentage is **less** than all adults

Source: Survey conducted Oct. 13-Nov. 15, 2015.
 "Digital Readiness Gaps"

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Demographics: Five groups

% of U.S. adults

	Digitally Ready (17% of adults)	Cautious Clickers (31% of adults)	The Reluctant (33% of adults)	Traditional Learners (5% of adults)	The Unprepared (14% of adults)
Gender					
Male	49	50	53	43	42
Female	51	50	47	57	58
Parents of minor children					
Parents	37	30	26	30	25
Non-parents	63	70	74	70	75
Race/Ethnicity					
White	65	68	62	53	65
Black	12	11	12	17	10
Hispanic	13	9	20	21	18
Age					
18-29	25	28	20	14	8
30-49	48	38	28	33	24
50-64	20	22	27	36	33
65+	6	11	24	15	33
Household income					
Under \$30K	22	23	42	36	42
\$30K to \$50K	16	19	19	13	17
\$50 to \$75K	16	13	11	13	12
\$75K and over	38	37	17	27	16
Education					
High school grad or less	19	29	55	41	55
Some college	30	38	28	29	28
Bachelor's degree or more	51	33	16	30	16
Geography					
Rural	16	15	20	17	17
Urban	39	35	33	39	33
Suburban	45	50	47	44	50

Source: Survey conducted Oct. 13-Nov. 15, 2015.
"Digital Readiness Gaps"

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Methodology

The analysis in this report is based on a Pew Research Center survey conducted from Oct. 13 to Nov. 15, 2015, among a national sample of 2,752 adults, 18 years of age or older, living in all 50 U.S. states and the District of Columbia. Fully 963 respondents were interviewed on a landline telephone, and 1,789 were interviewed on a cellphone, including 1,059 who had no landline telephone. The survey was conducted by interviewers at Princeton Data Source under the direction of Princeton Survey Research Associates International. A combination of landline and cellphone random-digit-dial samples were used; both samples were provided by Survey Sampling International. Interviews were conducted in English and Spanish. Respondents in the landline sample were selected by randomly asking for the youngest adult male or female who was at home. Interviews in the cellphone sample were conducted with the person who answered the phone, if that person was 18 years of age or older. For detailed information about our survey methodology, visit: <http://www.pewresearch.org/methodology/u-s-survey-research/>

The combined landline and cellphone samples are weighted using an iterative technique that matches gender, age, education, race, Hispanic origin and nativity, and region to parameters from the 2013 Census Bureau's American Community Survey and population density to parameters from the Decennial Census. The sample also is weighted to match current patterns of telephone status (landline only, cellphone only or both landline and cellphone), based on extrapolations from the 2014 National Health Interview Survey. The weighting procedure also accounts for the fact that respondents with both landline and cellphones have a greater probability of being included in the combined sample and adjusts for household size among respondents with a landline phone. The margins of error reported and statistical tests of significance are adjusted to account for the survey's design effect, a measure of how much efficiency is lost from the weighting procedures.

The following table shows the unweighted sample sizes and the error attributable to sampling that would be expected at the 95% level of confidence for different groups in the survey:

Group	Unweighted sample size	Plus or minus ...
All adults 18+	2,752	2.1 percentage points
Men	1,445	2.9 percentage points
Women	768	3.1 percentage points
Whites	2,101	2.4 percentage points
Blacks	287	6.2 percentage points
Hispanics	364	5.6 percentage points
18-29	444	5.3 percentage points
30-49	794	4.0 percentage points
50-64	775	4.0 percentage points
65+	687	4.3 percentage points
Less than high school	230	7.4 percentage points
High school	626	4.5 percentage points
Some college	699	4.2 percentage points
Bachelor's degree or more	1,183	3.2 percentage points
<\$30K	757	4.1 percentage points
\$30K-\$49,999	455	5.2 percentage points
\$50K-\$74,999	368	5.8 percentage points
\$75K+	845	3.8 percentage points

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. Pew Research Center undertakes all polling activity, including calls to mobile telephone numbers, in compliance with the Telephone Consumer Protection Act and other applicable laws.

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Topline questionnaire

**PEW RESEARCH CENTER
2015 EDUCATIONAL ECOSYSTEM SURVEY
FINAL TOPLINE
OCT. 13 – NOV. 13, 2015
TOTAL N=2,752
CELLPHONE RESPONDENTS N=1,789**

BBHOME1 Do you subscribe to dial-up internet service at home... OR do you subscribe to a higher-speed broadband service such as DSL, cable, or fiber optic service?⁷

BBHOME2 [ASK IF BBHOME1=DIAL-UP:] Just to confirm, you use a dial-up connection to the internet at home, and not a higher-speed broadband connection?

Based on those who use the internet at home

	Dial-up	Higher speed	(VOL.) BOTH dial-up and higher speed	(vol.) Access net on cellnet or tablet	(vol.) No home access	(vol.) None of the above	(VOL.) dk	(VOL.) ref.
Current [N=2,217]	3	84	1	4	3	n/a	5	1

SUMMARY OF HOME BROADBAND

Based on those who use the internet at home

	current		July 2015
%	85	Home broadband users	92
	15	No home broadband/DK	8
	[N=2,217]		[N=1,509]
Based on Total			
	current		July 2015
%	67	Home broadband users	67
	33	No home broadband/DK	33

DEVICE1a Next, do you have a cell phone, or not?

Yes	No	(VOL.) Don't know	(VOL.) Refused
91	9	0	0

SMART1 Some cell phones are called "smartphones" because of certain features they have. Is your cell phone a smartphone such as an iPhone, Android, Blackberry or Windows phone, or are you not sure?

⁷ In July 2015, question was asked of home internet subscribers. In April 2015, question wording was: "Is your internet connection AT HOME through a slow-speed link such as dial-up... OR do you have a high-speed, broadband link" Prior to April 2015, trends asked about specific types of home broadband connections such as DSL, cable modem, wireless broadband/satellite, fiber optic, T-1 or other high-speed access.

⁸ May 2011 and earlier trend percentages for "None of the above" reflect "Other (SPECIFY)" responses.

Based on cell phone owners

Yes, 76	No, not a smartphone 17	Not sure/ don't know 7	(vol.) Refused *
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[READ TO ALL:] Now I'd like to ask you some questions about how you approach different situations when you want to learn something new.

Q3 How well do each of the following statements describe you? How about this statement: [INSERT ITEMS; RANDOMIZE]. [READ FOR FIRST ITEM, THEN AS NECESSARY: Does this describe you very well, somewhat well, not too well, or not well at all?] Next: [INSERT NEXT ITEM].

	VERY WELL	SOME-WHAT WELL	NOT TOO WELL	NOT WELL AT ALL	(VOL.) STILL IN SCHOOL	(VOL.) DK	(VOL.) REFUSED
a. I often find myself looking for new opportunities to grow as a person.	58	31	6	4	n/a	*	*
b. I am not the type of person who feels the need to probe deeply into new situations or things.	13	30	22	33	n/a	1	1
c. I like to gather as much information as I can when I come across something that I am not familiar with.	61	31	5	3	n/a	*	*
d. I am easily distracted when I try to concentrate.	16	28	23	33	n/a	*	*
e. I am really glad I am no longer in school and don't have to go to classes anymore.	31	20	16	25	7	1	1
f. I think of myself as a lifelong learner.	73	20	4	3	n/a	*	*

[READ TO ALL:] Next I have a few questions related to your PERSONAL INTERESTS, outside of a job or work. This might include interests related to a hobby, your home, health, religion, your community or other areas of personal interest to you.

Q13 [FOR FIRST TWO RANDOMIZED ITEMS: In the past 12 months, have you [INSERT ITEMS; RANDOMIZE]?]

[FOR REMAINING ITEMS: Have you [INSERT NEXT ITEM]? [IF NECESSARY: Have you done this in the past 12 months, or not?]]

YES	NO	(VOL.) DK	(VOL.) REFUSED
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a. Taken a course related to your personal interest or hobbies	25	75	*	*
b. Read how-to magazines, consumer magazines, or other publications related to some area of personal interest	58	41	*	*
c. Attended a meeting where you learned new information such as a book club, a sports club, arts club or a health-related support group	35	65	*	*

NO ITEM D

e. Attended a convention or conference where you learned about something of personal interest, like a garden show, a car show, a science fiction convention, or a music conference	30	70	0	*
f. Taken an online course	16	83	*	0

Q15 Thinking about the learning activities or the courses you have taken for a personal interest, where did these learning activities take place? Did you do this [INSERT ITEMS; RANDOMIZE; ‘SOME OTHER PLACE’ ALWAYS LAST]? How about [INSERT NEXT ITEM]? [IF NECESSARY: Did any of these learning activities or courses for a personal interest take place (ITEM)?]

Based on personal learners [N=2,121]⁹

	YES	NO	(VOL.) DK	(VOL.) REF.
a. At a library	23	76	*	0
b. At a high school, community college, or university	35	65	*	*
c. At a community center or museum	29	71	*	0
d. At a church, temple, or synagogue	26	74	*	0
e. On the internet	52	48	*	*
f. At some other place I haven't mentioned (SPECIFY)	31	67	2	*

Q16 Again, thinking about these learning activities or courses you took in the past 12 months related to a personal interest, how much of this took place online using a computer, tablet or smartphone? Please include any material you got from instructional or how-to videos. Did you do all of the learning online, most of it, only some of it, or none of it online?

Based on personal learners [N=2,121]

current

⁹ Personal learners are defined as respondents who have done any learning activities for a personal interest in the past 12 months outside of a job or work (“yes” to any Q13 item).

%	10	All of it online
	21	Most of it online
	39	Only some of it online
	30	None of it online
	*	(VOL.) Don't know
	*	(VOL.) Refused

[READ TO ALL:] Now I would like to ask you a few questions about how you deal with modern information and communications technology.

Q19 Please tell me how well each of the following statements describes you. First: [INSERT ITEMS; RANDOMIZE]. [READ FOR FIRST ITEM, THEN AS NECESSARY: Does this describe you very well, somewhat well, not too well, or not well at all?] Next: [INSERT NEXT ITEM].

	VERY WELL	SOMEWHAT WELL	NOT TOO WELL	NOT WELL AT ALL	(VOL.) DK	(VOL.) REFUSED
a. When I get a new electronic device, I usually need someone else to set it up or show me how to use it.	26	20	11	42	1	1
b. I am more productive because of all of my electronic information devices.	32	35	14	18	*	*
c. I find it difficult to know whether the information I find online is trustworthy.	22	38	16	23	1	1
d. Between phone calls, texts, emails, social media, or other messages, I deal with too much information in my daily life.	20	32	21	26	1	1

Q20 Overall, how confident do you feel using computers, smartphones, or other electronic devices to do the things you need to do online? Do you feel very confident, somewhat confident, only a little confident, or not at all confident?

Based on all internet users or smartphone owners [N=2,458]

	Current	
%	54	Very confident
	32	Somewhat confident
	10	Only a little confident
	4	Not at all confident
	*	(VOL.) Don't know
	*	(VOL.) Refused

Q21 Please tell me how familiar, if at all, you are with the following educational resources or concepts. (First, how familiar are you with / Next,) [INSERT ITEMS; RANDOMIZE]? [READ FOR FIRST ITEM, THEN AS NECESSARY: Are you very familiar, somewhat familiar, not too familiar, or not at all familiar?]

	VERY	SOME- WHAT	NOT TOO	NOT AT ALL	(VOL.) DK	(VOL.) REF.
a. Distance learning	14	24	12	49	1	*
b. Digital badges	4	12	13	69	1	*
c. Khan Academy	9	10	10	69	1	*
d. Common core standards	14	28	15	42	1	*
e. Massively open online courses, or MOOCs – such as Coursera, edX, or Udacity	5	13	13	67	1	*