Cognitive Pretesting of the
National Telecommunications and Information Administration’s
2021 Internet Use Survey

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ABSTRACT

In an interagency project between the National Telecommunications and Information Administration (NTIA), under the Department of Commerce, and the U.S. Census Bureau, the bureau’s Center for Behavioral Science Methods conducted cognitive interview research on the NTIA Internet Use Survey (IUS)\(^1\). The IUS, which has been administered periodically since 1994, is a supplement of the Current Population Survey (CPS). The primary purpose of the cognitive testing research was to test new and revised questions in the IUS. The secondary purpose was to gain qualitative insight into several issues, including the underreporting of cyberbullying and cost as a reason why people do not access the internet or cable television at home. Two iterative rounds of testing were conducted, with 15 participants interviewed each round.

Overall, results from both rounds showed that participants were able to answer most questions with little to no difficulty. In Round 1, problematic questions included one question where participants confused one device term for another device term, and another question where several participants considered their Wi-Fi connection and router although these hardware were out of scope for the question. In Round 2, revisions of the IUS reduced confusion between device terms, however, revisions did not eliminate all instances of participants considering Wi-Fi connections and routers for the previously problematic question. Across both rounds, we found evidence that a closed-ended response format may elicit more data about why participants do not access the internet or cable television, and may increase the likelihood that participants feel comfortable reporting cost as a reason. Finally, the investigation of the underreporting of cyberbullying was inconclusive because the IUS only allows people 15 years old and older to be the respondent and give direct reports. Thus, we were not able to validate reports for children under 15 years of age. The results of these cognitive interviews helped inform development of the 2021 IUS, which was implemented in the field in late 2021.

Keywords: Questionnaire Design, Mobile Devices, Computer Technology, Internet Service, Cyberbullying


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\(^1\) The NTIA Internet Use Survey is formerly known as the CPS Computer and Internet Use Supplement
1. INTRODUCTION

The Current Population Survey (CPS) is sponsored by the Bureau of Labor Statistics (BLS) and the U.S. Census Bureau and is conducted every month with a sample of approximately 60,000 US households (U.S. Census Bureau, 2019). Although the main purpose of the CPS is to acquire labor force data, supplemental studies on different topics are included during different rounds of the CPS. These supplemental studies allow other agencies to obtain additional information about the U.S. population while taking advantage of the large sample size, broad coverage, and skilled field staff of CPS (U.S. Census Bureau, 2019). One of the supplemental studies included in the CPS is the NTIA Internet Use Survey (IUS), which is sponsored by the National Telecommunications and Information Administration (NTIA) and was last conducted during the November 2019 fielding of the CPS (NTIA, 2019).

In 2020, the NTIA released a request for comments and revisions to the IUS and invited the general public to provide suggestions for what new questions should be included (NTIA, 2020). After implementing changes based on received comments and agency priorities, the NTIA contacted the Center for Behavioral Science Methods (CBSM) at the U.S. Census Bureau to request an evaluation of the entire IUS, including the new and revised items. The goal of this evaluation was to provide recommendations that will minimize response error and participant burden. To achieve these goals, the CBSM conducted an expert review and two rounds of cognitive testing. The purpose of the first round of cognitive testing was to test new or revised questions in the IUS that reflect new trends in technology use, evaluate participants' understanding of current and new internet-connected devices, and assess the extent to which participants could answer these questions for other people in the household. After the first round of cognitive interviews, the CBSM provided the NTIA with suggestions for modifications to reduce potential response error and participant burden. The modifications approved by the NTIA underwent cognitive testing in a second round. After the second round of cognitive testing, the CBSM provided additional recommendations for modification where necessary.

1.2 Literature Review

Two previous collaborations between the CBSM and the NTIA included the cognitive test evaluation of the IUS for the years 2015 and 2017 (Terry & Fobia, 2015; Henderson, Luck, Katz, & Fulton, 2020). Each of these evaluations had the purpose of testing new and revised items of the IUS to minimize the likelihood of response error and participant burden. The 2015 evaluation had the additional purpose of exploring reasons for a previously reported decrease in computer use among the Hispanic population (Terry & Fobia, 2015).

Both the 2015 and the 2017 evaluations included two rounds of cognitive interviews, with the second interview serving to help validate the modifications implemented after their respective first rounds (Henderson et al., 2020; Terry & Fobia, 2015). The results from both evaluations converged in their findings that most participants had minimal to no issues understanding and answering most of the items in the IUS (Henderson et al., 2020; Terry & Fobia, 2015). Where issues were identified, these issues were related to items with unclear wording or technical
jargon that is not used in everyday conversations (Henderson et al., 2020; Terry & Fobia, 2015). Terry and Fobia (2015) also found that, for items that required participants to think about a particular timeframe, participants showed a tendency to consider a timeframe wider than the one specified by the item (i.e., considering as far in the past as “last month” or “last year” when asked to consider “current use”), and that highly technical terms might be difficult to translate for participants who speak little or no English (e.g., “data caps” and “DSL”).

The current 2021 IUS evaluation, in addition to aiming for the general goal of reducing participant burden and error, also had the goal of exploring participants’ understanding of some of the technical terms used in the survey. For example, the NTIA requested that the CBSM investigate the dial-up internet option, in terms of participant’s use and familiarity with dial-up internet. Further, the NTIA also requested that the CBSM to explore why estimates of (a) cyberbullying and (b) not being able to afford the Internet at home are lower for the IUS than such estimates in other studies and surveys, respectively.

To test these for these above issues and ensure that the supplement remains stable enough for time-series comparisons, staff from the Center for Behavioral Science Methods (CBSM) conducted cognitive pretesting of the IUS. This report presents findings and recommendations from two iterative rounds of cognitive testing.

2. METHODOLOGY

2.1 Expert Review

In October 2020, the NTIA requested that the CBSM conduct an expert review of the IUS prior to cognitive testing. The expert review team consisted of six CBSM staff with expertise in questionnaire design, survey methodology, usability testing, and psychology. Further, two team members also had experience conducting cognitive testing of previous versions of the IUS. First, each expert review team member individually reviewed the questionnaire to identify areas of revision. The team then had a consensus meeting to share individual findings and develop team recommendations for revision to the IUS questionnaire and cognitive interview protocol.

Many of the changes suggested by the CBSM were incorporated into the questionnaire used during the first round of cognitive testing. The expert review team recommended probing participants on the meaning of several terms, including “notebook computer” and “laptop computer,” to investigate whether participants’ definitions match the optional definitions provided in the survey. The team also recommended probing the term “home internet connection” to make sure that mobile phone-only households are thinking of their phone bills as being in scope for this question about difficulty paying for internet, we well as probing on the meaning of the term “difficulty paying.” The expert review team also recommended the use of plain language by changing the term “Internet-connected devices” to “devices that connect to the internet” to make it easier for participants to understand. Other recommendations included
checking the IUS for consistency in how terms are described throughout the survey by adding definitions for “tablet,” “e-book reader,” and other terms throughout the survey.

2.2 Data Collection

Two rounds of cognitive testing were conducted between February 2021 and April 2021. Recruitment began in February 2021. To maintain social distancing, all interviews were conducted remotely via phone call or Microsoft Teams audio call. After the interview, participants were paid $40.00 in cash via mail to compensate for participants’ time taken away from other duties such as work. Interview times ranged from 18 minutes to 105 minutes, and the average time was 61 minutes. Cognitive testing and recruitment screening were conducted in English.

2.2.1 Recruitment Criteria and Strategy

Our recruiting efforts aimed to achieve diversity in the types of respondents who typically participate in the IUS, as well as aimed to cover various levels of computer and internet use. In addition, the IUS includes questions for the respondent about the internet use of another person living in the household. Thus, recruitment targeted participants for diversity by age, whether the participant was related to members of their household, whether the participant owned a computer, tablet, and/or smartphone; and whether someone on the household accessed the internet at home. Participants were recruited using several methods, including the CBSM’s database pool of participants, word-of-mouth, fliers posted (both physically and electronically) at local community organizations that serve low-income populations such as churches and recreation centers, advertisements on social media (e.g., Craigslist.com, NextDoor), and broadcast messages distributed through the Census Bureau’s daily online newsletter. The social media and broadcast messages had a national outreach, and as a result, we recruited participants from the entire United States. Participants were screened by telephone and received a reminder about the interview appointment after they agreed to participate. The screening questionnaire took approximately six minutes per person.

2.2.1.1 Related and Unrelated Households

As previously mentioned, the IUS includes questions for the respondent about the internet use of another person living in the household. We recruited participants living in both related and unrelated households under the hypothesis that participants’ knowledge about others in the household may vary by whether the participant is related to them. For this study, the CBSM considered a “related household” to be one in which the members of the pair described their relationship as spouses, unmarried partners, or boyfriend or girlfriend; or if a participant lived with their parent, sibling, or child; grandparent or grandchild; or aunt, uncle, or cousin. The CBSM considered an “unrelated household” to be one in which the members of the pair do not describe their relationship as ‘related,’ as defined above. Examples would be friends, roommates, or godparents. Out of the eight pairs of related households who participated in the
study, we had seven pairs of spouses, and one pair consisting of a mother and a daughter. One pair reported they were roommates during screening interview and during the actual interview reported they were engaged.

2.3 Participant Characteristics

The group of participants in this study represents a wide range of ages, sex, and education levels. Across both rounds, about half of the participants were male and most of the participants were White. In terms of education, most participants had some college education or a bachelor’s degree. Further, three participants did not have access to the Internet at home. See Table 1 for the remaining participant characteristics.

Table 1: Overall Sample Participant Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Round 1</th>
<th>Round 2</th>
<th>Total (n = 30)</th>
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<td>5</td>
<td>14</td>
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<tr>
<td>Female</td>
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<td>10</td>
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<td>1</td>
<td>1</td>
</tr>
<tr>
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<td>2</td>
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<tr>
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<td>1</td>
<td>1</td>
</tr>
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<td><strong>Ethnicity</strong></td>
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<tr>
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<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>Age</strong></td>
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<td>4</td>
<td>7</td>
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<tr>
<td>31-40</td>
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<td>2</td>
<td>7</td>
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<tr>
<td>41-50</td>
<td>3</td>
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<td>5</td>
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<td>51-60</td>
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<tr>
<td>61 and over</td>
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<td>9</td>
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<tr>
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<td>2</td>
<td>3</td>
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<td><strong>Education</strong></td>
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<td>5</td>
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<tr>
<td>Some College/Bachelor’s</td>
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<td>8</td>
<td>19</td>
</tr>
<tr>
<td>Post-Grad</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

2.4 Interviewer Staffing and Training

Cognitive interviews were conducted by CBSM interviewers who were trained and experienced in cognitive interviewing. Before the first round of testing, all interviewers were given additional training on how to administer the roster questions, IUS questionnaire, and cognitive

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2 Because of recruitment challenges we experienced as a result the COVID-19 pandemic, we only recruited three of the targeted six households where someone in the household did not access the internet at home.
interview protocol. Before both rounds of cognitive testing, all interviewers completed mock sessions with co-workers as mock participants. Interviewers were also trained on revisions to the questionnaire prior to Round 2. Interviewers were also trained on procedures for how to summarize interview data.

2.5 The Cognitive Interview Protocol

The cognitive interview protocol focused on new and revised questions to the IUS questionnaire (See Appendix B for Round 1 and Appendix D for Round 2, respectively). Before beginning the interview, interviewers informed participants that the purpose of the interview was to evaluate how well the questions worked. Interviewers also informed participants of their rights, explaining that participation is voluntary, and that their responses were confidential.

At the beginning of the interview, participants were administered an abbreviated version of the full CPS roster. Participants were first asked to list all household members and then report the demographic characteristics of each person. The demographic information requested included sex, age, relationship to the participant, education, race, and ethnicity. Interviewers also asked participants about the employment status of each person.

Following the roster, the interviewer proceeded to the IUS questionnaire. There were six sections to the questionnaire. The first section included questions about the household’s use of various internet-connected devices, such as laptops, tablets, and smart watches. The second section included questions about where participants use the internet, such as at school, work, or public places. Questions from this section were asked about everyone in the household.

The third section asked about internet service plans—either home-installed or mobile—that the household may have subscribed to. The fourth section asked about participant engagement with various online activities such as email, social media, gaming, and accessing medical records. These questions were asked about the participant and either the participant’s proxy pair (if applicable) or one other person in the home aged 15 years old or older.

The fifth section included questions about various concerns the participant may have using the internet, such as privacy concerns, cyberbullying, and fraud. The sixth section asked participants to provide a reason, if any, for the following behaviors as applicable: (1) why no one in the household uses the Internet, (2) why members of the household use Internet but not at home, and (3) why no one in the household has a cable or satellite TV subscription. These questions were only asked of the household in general and not of each individual.

After completing the questionnaire, interviewers asked the participant a series of retrospective probes to assess their comprehension of the survey questions. In retrospective probing, interviewers ask follow-up questions about a series of survey questions after the participant has answered them. Although retrospective probing allows participants to complete the survey without interruption, participants may have some difficulty retrieving their thoughts about an
answer because some time will have elapsed since they gave their initial response (Willis, 2005). Retrospective probing was chosen over concurrent probing (i.e., follow-up questions that are asked directly after a IUS question) to avoid influencing participants’ answers later in the survey and their answers for other household members.

Participants were mostly probed on questions they answered about themselves. These probes asked participants to define various terms using their own words, such as “laptop” and “tablet.” Probes often included questions about how a participant formulated various responses or about what participants were thinking of when answering the question. For example, participants were probed about a question regarding cyberbullying, and the probes were about how participants answered the question and their justification for how they knew the answer for others in the household. Questions that the CBSM expected to be universally understood or were not a target of the cognitive test had no probes.

Finally, interviewers asked participants a set of debriefing questions about how easy or difficult it was for the participant to respond to the survey and if participants thought other people might consider any of the questions sensitive. Participants were then asked to share anything else they had not yet had a chance to mention.

2.6 Interview Consent

After the initial screening but before the test interview, participants completed an online consent form. The form explained how the participant’s answers and feedback would be used and highlighted the participant’s confidentiality and rights as a participant. These rights include the freedom to decline answering any question or to stop the interview at any point. At the beginning of each interview, interviewers reviewed the participant’s rights and asked the participant to give oral consent to participate with video and audio recording. All participants consented to participate and be audio recorded. For various technical difficulties, one session was not audio recorded.

3. RESULTS

We present findings and recommendations by each question section on computer and Internet use. As previously mentioned, the IUS tested in this study had question sections about the following computer and Internet use topics:

1. Types of computing devices used
2. Location of Internet use
3. Type of Internet service used
4. Computing applications and services used
5. Challenges and concerns with Internet use
6. Internet and cable TV non-use

Respondents who did not access the internet at home did not receive an online consent form. Instead, they were asked to give oral consent at the start of the interview.
Within each question section, all questions with scripted probes will be discussed, as well as questions that were problematic, regardless of whether they had scripted probes. Finally, issues that span multiple questions are discussed. For each problematic question or issue, Round 1 findings and recommendations are discussed, followed by Round 2 findings and recommendations.

In sum, for Round 1, participants generally understood most of the questions and were able to give a response without difficulty. However, several participants appeared to not understand the meaning of the term “notebook” for the question about notebook computer use. For the question about rating how well internet-connected devices worked, one participant considered their Wi-Fi connection, which was out of scope for the question. Finally, for Round 1, when naming online privacy and security concerns, one participant named “unwanted solicitation” as a concern, which was not a pre-existing response option.

In Round 2, like in Round 1, most participants understood most questions and were able to give a response without difficulty. In addition, revisions made to the IUS, based on findings from Round 1, appeared to avoid possible confusion regarding the term “notebook.” Explicit instructions to avoid considering Wi-Fi when rating devices still resulted in some participants considering Wi-Fi, and no participants reported “unwanted solicitation” as an online privacy and security concern. Further detail on these findings and other findings, as well as the CBSM’s recommendations and the NTIA’s responses to those recommendations, are presented in the following sections.

3.1 Types of Computing Devices Used

After a series of demographic questions, the next question series asked about the types of computer devices that participants and the people in their households used (See Item 2 – Item 9 in Appendix A). During testing, issues were found for Item 3 and Item 8 in this section. Otherwise, participants were familiar with the computer devices discussed in this section most of the time, and none of the questions resulted in false positives.

Overall, participants had little to no difficulty answering most of the questions in this section. Most probes in this section were designed to address terms that were anticipated as potentially unfamiliar to participants. The NTIA also requested more information about the use of some devices. For Item 3 and Item 4, a comprehension probe about tablets and e-book readers revealed that most participants knew the differences between a laptop, tablet, and e-book reader. In response to another comprehension probe for Item 6 about using wearable, Internet-connected devices, participants reported using them for fitness or computing, and understood them to connect to the internet via Wi-Fi or Bluetooth connections. Finally, a probe for Item 9 about the frequency that devices are unavailable in the household was asked to learn more about participants’ experiences with device availability and the importance of devices being
available. Most participants reported that devices were always available and that the availability of devices was very important to them. Thus, the response options covered the participants’ range of responses for this question during testing.

3.1.1 Laptop Usage

One problematic item in this series asked about whether anyone in the household uses a laptop or notebook computer. The item we tested in Round 1 is below:

3. What about a laptop or notebook? [Do you/Does anyone in this household] use a laptop or notebook computer?

(If needed) A laptop, sometimes known as a notebook, is a personal computer that is portable and includes a built-in keyboard and screen.

(If yes & is multi-person household) Who is that?

In Round 1, all 15 participants reported use of a laptop in response to this question. When probed about the meaning of laptop and of notebook, none of the participants had trouble defining a laptop. However, eight participants did not understand the meaning of “notebook.” They described the characteristics of a tablet, or just said it was a tablet. For example, participants defined a notebook computer as “a computer with lower functionality [than a laptop and] used for writing or research. It does not have disk drive,” “like a Chromebook. Very small thin and light. Not a tablet, but not a laptop either,” and “like a tablet.” The CBSM recommended removing the term “notebook” and continue probing on the term “laptop” in Round 2. The NTIA accepted these recommendations. See below for the wording used in Round 2 that now has the term “notebook” deleted:

3. What about a laptop? [Do you/Does anyone in this household] use a laptop or notebook computer?

(If needed) A laptop is a personal computer that is portable and includes a built-in keyboard and screen.

(If yes & is multi-person household) Who is that?

For Round 2, 13 of 15 participants reported having a laptop. When probed, all participants understood the meaning of “laptop.” They gave such definitions as “A laptop has a built-in keyboard,” “to me means notebook. Computer means desktop,” and “portable, compact, and small enough to carry. Open and closes it like a little book.” The CBSM recommended that the wording used in Round 2 be the final wording because participants did not show issues or difficulty during this round. The NTIA accepted this recommendation.
3.1.2 Computer Device Quality

Another problematic item in this series asked participants to rate the device quality of devices used by people in the household. To preface, this question also had an experimental version of the response options that consisted of asking the participant to rate the quality of household devices on a scale from “one” (i.e., they do not work at all) to “five” (i.e., they work perfectly). This experimental condition was tested to investigate whether participants would have less difficulty using a subjective numbering system to rate device quality compared to the item’s original wording, which asks about device quality and has the participant select from pre-determined response options read aloud by the interviewer. The versions of the item we tested in Round 1 are below:

8. Control Condition Wording (Descriptive Choices)

Thinking about all the different devices we just discussed, how well do the computers and other Internet-connected devices [you use/used by this household] work overall?

[Read and select the best match. If R is unsure, ask for an average]

(1) They do not work at all
(2) They rarely work well
(3) They somewhat work
(4) They work well
(5) They work perfectly

Experimental Condition Wording (1-5 Scale)

Thinking about all the different devices we just discussed, how well do the computers and other Internet-connected devices [you use/used by this household] work overall? Please use a scale of 1 to 5, with one meaning they do not work at all, and 5 meaning they work perfectly.

[If R is unsure, ask for an average]

(Open-ended)

In Round 1, 15 participants answered this question. Most participants answered with a rating of “4 – They work well,” but there was one rating of “3 – They somewhat work” and a few ratings of “5 – They work perfectly.” The issue for this question was that when probed, one participant considered the quality of the Wi-Fi connection in the response, which is not within the NTIA’s intended scope for this question. The participant said their Wi-Fi “was not the best,” and that it was due to the area they live in. In response to this finding, the CBSM confirmed with the NTIA that participants should not consider Wi-Fi or their Wi-Fi router when answering this question. Thus, the CBSM added an instruction for this item stating that Wi-Fi was not in scope for this
question. See below for the wording used in Round 2 with the new instruction underlined for illustration:

8. Current Wording (Descriptive Choices)

Thinking about all the different devices we just discussed, how well do the computers and other Internet-connected devices [you use/used by this household] work overall? Please do not include home Wi-Fi routers or similar equipment.

[Read and select the best match. If R is unsure, ask for an average]

(1) They do not work at all
(2) They rarely work well
(3) They somewhat work
(4) They work well
(5) They work perfectly

Experimental Wording (1-5 Scale)

Thinking about all the different devices we just discussed, how well do the computers and other Internet-connected devices [you use/used by this household] work overall? Please use a scale of 1 to 5, with one meaning they do not work at all, and 5 meaning they work perfectly. Please do not include home Wi-Fi routers or similar equipment.

[If R is unsure, ask for an average]

(Open-ended)

In Round 2, 15 participants answered this question. Most participants gave either a “4 – They work well” or a “5 – They work perfectly” rating. Further, most participants understood the meaning of the term “Wi-Fi,” but two participants still considered the quality of the Wi-Fi in their responses. These participants, when probed about how they came to their answer about the devices working, said “Because sometimes they get fast [Wi-Fi] service, and sometimes they don’t,” “They never have connection issues. Wi-Fi is fast, devices are up to date, they run smoothly,” and “Sometimes the server is slow, blinking blue on and blue off and in certain places like my room if I’m using Wi-Fi on my phone I have low bars.” This last participant was speaking about the use of a laptop, and after probing about the laptop, the participant said they did not consider a laptop in their response. This participant described thinking in the sense of whether the internet worked well via the Wi-Fi connection. While these participants still reported thinking about the Wi-Fi connection despite the instruction not to do so, the CBSM recommended that the Round 2 wording to be the final wording because the new instruction attempts to discourage participants from including Wi-Fi connections and Wi-Fi routers when giving a response.
When comparing results between the experimental and control versions of this item, respondents in both rounds had little to no difficulty with either condition. In response to these findings, the CBSM suggested that the NTIA keep the original wording with the pre-determined response options, because this version was more objective than the experimental condition that asked participants to give their own subjective rating between "1" and "5." The NTIA accepted this recommendation.

3.2 Location of Internet Use

This section of the IUS had questions about locations where household members use the internet. (See Item 10 – Item 19 in Appendix A). In Round 1 and Round 2, participants were able to answer these questions with little to no difficulty. One concern with this set of questions was whether participants would include using their own data plan as well as Wi-fi that might be available at a particular location when answering this question. The first probe was designed to assess this concern and asked participants whether they considered both types of internet connections when answering this series of questions. Across both rounds, almost all participants said they considered their answer to the question regardless of whether they used their data plan or the location’s Wi-Fi. Another concern was for Item 13, regarding whether participants would include taking online classes at home as in scope for the item about the use of the internet at school. See below for the wording of Item 13:

13. What about at school? [Do you/Does anyone in this household] use the Internet at school? Please [only include use at school as a student/count students only], and do not include taking online classes from a location other than a school campus. (If yes & is multi-person household) Who is that?

For Item 13, a probe asked about the purpose of accessing the internet at school, to see if participants were counting online classes taken at home, which would be out of the intended scope of the question. For both rounds, participants reported their children accessing the internet to gather information online and complete classwork at the school’s campus.

3.3 Type of Internet Service Used

This section of the IUS had questions about the types of internet services used by the participant and his or her household (See Item 20 – Item 27 in Appendix A). In Round 1 and Round 2, participants were able to answer these questions with little to no difficulty. One concern in this series of questions was about participants knowledge of “dial-up internet service” in Item 24. In both rounds, most participants did not know the definition of the term “dial-up,” but they did not confuse dial-up internet with their type of internet access.

Another concern was comprehension of Item 26 that asks about the extent to which participants’ internet connection meets the needs of the household. For this item, we probed on potentially unfamiliar terms such as “data caps” and “reliability.” Participants understood
the meaning of the term “data caps” and “reliability” in the question, and named speed and reliability as the most important aspects of their internet connection. The last set of probes was designed to assess the comprehension of Item 27, which addresses situations when the participant temporarily lost their home internet connection due to difficulty paying. Only one participant reported experiencing this situation, but all participants understood the meaning of terms “temporarily,” “home internet connection,” and “difficulty paying.”

3.4 Computing Applications and Services Used

This section of the IUS included questions about the computing applications and computing services that participants and their households use (see Item 28 – Item 52 in Appendix A). In Round 1 and Round 2, participants were able to answer these questions with little to no difficulty. The first probe was for Item 30 and asked about how people instant message to make sure they are not confusing instant messaging with texting. Participants who used instant messaging demonstrated they were not confused by naming the instant messaging apps they used, such as WhatsApp, Facebook Messenger, and Twitter. The second probe was for Item 41 about online services used, to make sure that participants recognized the examples. Across both rounds, five participants mentioned not recognizing Angie’s List, and one participant mentioned not recognizing Instacart. Lastly, participants were probed about Item 45, which asked about how participants use financial services to better understand the diversity of financial services that participants use. The most-often mentioned financial services were online banking, investing, paying bills, and sending money.

3.4.1 Using the Internet for Healthcare-related Purposes

One problematic part of this series was two items about using the internet for healthcare purposes. One item was about communicating with health professionals online, and the other item was about accessing health records or health insurance online. The items we tested in Round 1 are below:

49. [Do you/Does anyone in this household, including you,] communicate with a doctor or other health professional using the Internet?

50. What about accessing health records or health insurance records online? (If needed) [Do you/Does anyone in this household] access health records or health insurance records online?

In Round 1, 15\(^4\) participants answered Item 49 and Item 50 without notable issues. However, in Round 2, 13 participants answered this question, and one participant reported “yes, only to check lab results” in response to Item 49, and then “yes” to Item 50. Most participants just

\(^4\) One participant did not personally use the Internet at home, but reported that others in their household use the Internet at home. Thus, this participant was asked the questions in this section for the other persons in their household.
answered “yes” or “no,” or didn’t otherwise indicate accessing lab results. However, this finding raised the question of whether checking lab results may be more in scope with Item 50 than Item 49. The NTIA confirmed that checking lab results is more in scope with Item 50 than with Item 40. Thus, the CBSM recommended reversing the order of these questions so that the possibility of checking medical records without interacting with a professional is covered first. The NTIA accepted this recommendation. See the reversed question order recommended by the CBSM below:

49. What about accessing health records or health insurance records online? (If needed)  
[Do you/Does anyone in this household] access health records or health insurance records online?

50. [Do you/Does anyone in this household, including you,] communicate with a doctor or other health professional using the Internet?

3.5 Challenges and Concerns with Internet Use

This section of the IUS included questions about the concerns that participants and their households had regarding privacy and security risks (see Item 53 – Item 57 in Appendix A). The first probe was about Item 55 regarding when concerns stop the participant from doing activities online, and whether that meant stopping the activity completely or stopping on a particular occasion or switching to another means of the activity. This probe was included to increase understanding of how participants interpreted the question and whether the interpretations across participants were consistent. Most participants said they thought about stopping the activity altogether.

The NTIA also wanted the CBSM to investigate possible reasons why estimates of cyberbullying were lower in the IUS than estimates found by other cyberbullying studies and surveys, including potential underreporting. Across both rounds, results were inconclusive. No participants reported cyberbullying towards themselves or others, and all participants were confident in their knowledge of the experiences of people in their household regarding potential cyberbullying. One limitation of the IUS is that because no persons under 15 years old are directly interviewed, there is no way to validate reports for people under 15 years old in the household. Underreporting in IUS may be because children under 15 years old are not asked directly about their cyberbullying experiences. In response to this finding and the limitations of the IUS, the NTIA decided to remove this item from the IUS.

3.5.1 Most Important Concern Regarding Privacy and Security Risk

5 For examples of surveys that interviews participants under 15 years of age, see the School Crime Supplement of the National Crime Victimization Survey (NCVS; U.S. Bureau of Justice Statistics, 2021) and the Adolescent Behaviors and Experiences Survey (ABES; U.S. Centers for Disease Control and Prevention, 2021).
An item in this section that raised an issue was Item 55 about concerns the participant may have regarding online privacy and security risks. The item we tested in Round 1 is below:

55. Overall, what concerns [you/members of this household] the most when it comes to online privacy and security risks?

*Do not read; select all that apply and/or enter verbatim response if other*

1. Identity theft
2. Credit card or banking fraud
3. Data collection or tracking by online services
4. Data collection or tracking by government
5. Loss of control over personal data such as email or social network profiles
6. Threats to personal safety, such as online harassment, stalking, or cyber-bullying
7. No concerns
8. Other: ___________________________

In Round 1, 15 participants answered this question, and most participants were able to provide an answer, with six participants providing answers that were coded as “other.” One participant named “unwanted solicitation” as a reason, and another participant was concerned about not being to control the computer’s camera. These responses raised the question of whether the unwanted solicitation response occurred enough in the IUS data to add it as a response option. The CBSM inquired to the NTIA about how often this response is reported and whether it should be included as a response option. The NTIA decided that unwanted solicitation should not be included as a separate response option because the response does not occur enough in the IUS data. Thus, the CBSM proposed to keep the question wording the same and monitor if participants report this response in Round 2. The NTIA accepted this recommendation.

In Round 2, 13 participants answered the question, and most participants listed reasons that were coded as “other,” followed by “no concerns.” In Round 2, no participants reported “unwanted solicitation” as a reason. The CBSM recommended that the Round 2 wording to be the final wording because no other participants had issues. The NTIA accepted this recommendation.

### 3.6 Internet and Cable TV Non-use

This section of the IUS had questions about not using the Internet at home and not subscribing to cable television, including questions about why these services are not used (see Item 58 – Item 67 in Appendix A).

Of particular focus during testing were Item 61, Item 62, and Item 67. These items asked participants about reasons why internet and cable television, respectively, are not accessed in the home. The NTIA requested that the CBSM investigate why estimates of cost (as a reason why the participant does not use the internet at home) were lower in the IUS than in other
surveys. NTIA expressed concern that this discrepancy could be the result of the design of the question or its response options. Currently, Item 61, Item 62, and Item 67 have an open-ended response option, and the interviewer then field codes the response to a list of pre-determined response options. However, as these items are posed by the interviewer as opened-ended items, participants may be reluctant to admit they cannot afford the internet or cable TV at home.

To address this issue, CBSM tested two types of response options: (a) the current open-ended version where participants are instructed to give an answer without the response options read to them, and (b) an experimental, closed-ended set of response options where the interviewer reads all of the response options out loud, and the participant responds with “yes” or “no” to each reason. To note, the closed-ended response options used in the experimental condition are the same response options used in the current format of these items. Probes were designed to inquire about the extent to which the inability to afford the service was true for the participant (in cases where the participant does not initially report this reason), as well as whether the participant knew they could give multiple response when giving an answer.

Across both rounds, three participants were filtered into Item 61 and Item 62 about not using the internet at home, and 13 participants were filtered into Item 67 about not accessing cable television at home. The wording for these items are below:

61. **Control Condition Wording (Closed-ended Response Option)**

What are the reasons why [you/members of your household] do not use the Internet at home?

*Read and select all that apply and/or enter verbatim response if other*

(1) Don’t need it or not interested
(2) Can’t afford it
(3) Not worth the cost
(4) Can use it elsewhere
(5) Not available in area
(6) No computing device, or device inadequate or broken
(7) Online privacy or cybersecurity concerns
(8) Personal safety concerns
(9) Household moved or is in the process of moving
(10) Other: ____________________________

**Experimental Condition Wording (Open-ended Response Option)**
What are the reasons why [you/members of your household] do not use the Internet at home?

Open-ended

62. Control Condition Wording (Closed-ended Response Options)

Of the reasons you just listed for not going online at home, which [do you/does your household] consider to be the most important?

Read previous responses if needed; Read and select best match and/or enter verbatim response if other

(1) Don’t need it or not interested
(2) Can’t afford it
(3) Not worth the cost
(4) Can use it elsewhere
(5) Not available in area
(6) No computing device, or device inadequate or broken
(7) Online privacy or cybersecurity concerns
(8) Personal safety concerns
(9) Household moved or is in the process of moving
(10) Other: ______________________________

Experimental Condition Wording (Open-ended Response Option)

Of the reasons you just listed for not going online at home, which [do you/does your household] consider to be the most important?

Open-ended

67. Control Condition Wording (Closed-ended Response Options)

What are the reasons why [you/members of your household] do not subscribe to a service providing access to TV channels?

Read and select all that apply and/or enter verbatim response if other

(1) Using Internet-based video services instead
(2) Don’t need it or not interested
(3) Can’t afford it
(4) Not worth the cost
(5) Can watch at another location
(6) Can watch using an antenna
(7) Not available in area
(8) No television, or television inadequate or broken
(9) Household moved or is in the process of moving
(10) Previously experienced poor customer service
(11) Previously experienced poor quality
(12) Other: _____________________________

Experimental Condition Wording (Open-ended Response Option)

What are the reasons why [you/members of your household] do not subscribe to a service providing access to TV channels?

Open-ended

Combining results from the 16 participants who answered questions about not using the internet at home or not subscribing to cable television (i.e., for item 61 and item 67, respectively), results showed that the closed-ended format produced more data. The format with response options produced multiple responses seven of eight times, and the open-ended response format produced multiple responses three of eight times. In addition, the “can’t afford it” response was reported slightly more often in the closed-ended format than the open-ended format (four of eight times vs. three of eight times, respectively). In light of these findings, CBSM recommended that the NTIA use the closed-ended option because it tended to elicit multiple responses, which may increase the chance that a “can’t afford it” response is given. The NTIA accepted this recommendation.

3.7 Conclusion

Most of the original questionnaire items in the CIU Supplement performed well throughout cognitive testing and did not require any revisions. For the few items that were tested in Round 1 and revised for Round 2, only small modifications were made to clarify the scope of the question or to remove confusing wording. In Round 1, we found that some participants factored in their Wi-fi equipment when estimating how well household internet-connected devices work. We added wording in Round 2 that instructed participants to not include Wi-fi routers or similar devices in their responses. In Round 1, several participants did not understand the use of the word “notebook,” and tended to describe it as a synonym for “laptop” during retrospective probing. We removed the term “notebook” in Round 2 for clarification and recommend using this revised wording in the final version.

In both rounds, we tested open-ended and closed-ended response formats for an item designed to measure reasons for not accessing the Internet or cable TV at home. In this study, participants who were given the closed-ended format reported “cost” slightly more often than participants given the open-ended response format. In addition, participants gave multiple reasons more often during the closed-ended format than in the open-ended format. Based on these results, CBSM recommended the closed-ended format. In addition, when investigating
the usefulness of “dial-up internet” as a response option for the types of internet service used, we found that many participants did not know the definition of “dial-up,” but also did not confuse it with their type of internet access.

Finally, we tested a question about participants’ experiences with cyberbullying, as well as their knowledge of the cyberbullying experiences of other people in the household. We attempted to qualitatively identify sources of underreporting for this question in the IUS relative to other data collection organizations. In both rounds, we found no instances of reported cyberbullying towards the participant or others in their household. Although participants were confident in their knowledge of others’ experiences, there was no way to validate reports of people under 15 years of age, as respondents in the IUS must be 15 years of age or older. It is possible that underreporting in the IUS results from this limitation. In this study, we were unable to definitively uncover any reasons for underreporting. Because of this limitation of the IUS, the NTIA decided to eliminate the cyberbullying question from the IUS.

4. REFERENCES


5. APPENDICES

5.1 APPENDIX A – Round 1 Internet Use Survey Instrument

1. CMPINT
   All households
   This month we are asking some additional questions about the Internet, as well as computers, mobile phones, tablets, and other devices that connect to the Internet. First, we will ask what types of computers and other devices [you/members of your household] currently use. Please focus on devices [you/members of your household] currently have access to, and have used at least occasionally during the past six months. We are interested in devices used at any location, whether at home, work, school, a library, or anywhere else.

2. DESKTP
   All households
   [Do you/Does anyone in this household, including you.] use a desktop computer at least occasionally? Include any desktop computers [you/members of your household] currently have access to and have used during the past six months. (If needed) A desktop is a personal computer that is too large or heavy to be frequently moved from place to place. (If yes & is multi-person household) Who is that?
   Enter persons by line number (1-16)

3. LAPTOP
   All households
   What about a laptop or notebook? [Do you/Does anyone in this household] use a laptop or notebook computer? (If needed) A laptop, sometimes known as a notebook, is a personal computer that is portable and includes a built-in keyboard and screen. (If yes & is multi-person household) Who is that?
   Enter persons by line number (1-16)

4. TABLET
   All households
   What about a tablet or e-book reader, such as an iPad or Kindle? (If needed) A tablet or e-book reader is a personal computer that is portable and has a built-in screen, but does not have a built-in physical keyboard. (If yes & is multi-person household) Who is that?
   Enter persons by line number (1-16)

5. MPHONE
   All households
   What about a smartphone, or a cell phone that connects to the Internet? (If needed) [Do you/Does anyone in this household] use a smartphone? (If yes & is multi-person household) Who is that?
   Enter persons by line number (1-16)

6. WEARAB
   All households
   [Do you/Does anyone in this household] use a wearable device that is connected to the Internet, such as a smart watch or fitness band? Examples include an Apple Watch or Fitbit. (If yes & is multi-person household) Who is that?
   Enter persons by line number (1-16)
7. TVBOX
All households [Do you/Does anyone in this household] use a smart TV, a game or video system, or another device that connects to the Internet and plays through a TV? Examples include an Xbox, Apple TV, PlayStation, Roku, or a Blu-Ray player that can access the Internet. *(If yes & is multi-person household) Who is that? Enter persons by line number (1-16)*

If any (2. DESKTOP, 3. LAPTOP, 4. TABLET, 5. MPHONE, 6. WEARAB, or 7. TVBOX) [1-16] = 1 (i.e., anyone in the household uses any device), go to 8. DEVQUA
Else go to 10. INTINT

8. DEVQUA
Households w/ any device use *(Version 1)* Thinking about all the different devices we just discussed, how well do the computers and other Internet-connected devices [you use/used by this household] work overall? [If R is unsure, ask for an average]

*Read and select best match*

(1) They do not work at all
(2) They rarely work well
(3) They somewhat work
(4) They work well
(5) They work perfectly

*(Version 2)* Thinking about all the different devices we just discussed, how well do the computers and other Internet-connected devices [you use/used by this household] work overall? Please use a scale of 1 to 5, with one meaning they do not work at all, and 5 meaning they work perfectly. [If R is unsure, ask for an average]

*(Open-ended)*

9. DEVSTA
Households w/ any device use During the last six months, how often were [you/members of your household] unable to use a computer or other Internet-connected device because it was in use by someone else, located elsewhere, or otherwise inaccessible?

*Read and select best match*

(1) Never
(2) During one or two days
(3) During three or four days
(4) During five or six days
(5) During seven or more days
10. INTINT
All households

Next, we will ask where [you/members of your household] currently use the Internet. Please focus on places where [you/members of your household] have used the Internet at least occasionally during the past six months. People can use the Internet in many places, such as at work, school, or a library. Internet use includes a wide variety of activities, from checking email or browsing the Web to watching videos or using mobile apps. We are interested in all forms of Internet use on all devices, including the ones we just discussed.

11. INHOME
All households

[Do you/Does anyone in this household, including you,] use the Internet at home? This includes accessing the Internet with a cell phone, computer, tablet, or other device. (If yes & is multi-person household) Who is that?
Enter persons by line number (1-16)

If any anyone in the household is employed (based on household roster questionnaire), go to 12. INWORK

Else go to 13. INSCHL

12. INWORK
HHs w/ at least 1 employed person

What about at work? [Do you/Does anyone in this household] use the Internet at work? Do not include work from home. (If yes & is multi-person household) Who is that?
Enter persons by line number (1-16)

13. INSCHL
All households

What about at school? [Do you/Does anyone in this household] use the Internet at school? Please [only include use at school as a student/count students only], and do not include taking online classes from a location other than a school campus. (If yes & is multi-person household) Who is that?
Enter persons by line number (1-16)

14. INCAFE
All households

What about at a coffee shop or other business that offers Internet access? (If needed) [Do you/Does anyone in this household] use the Internet while at a coffee shop or other business that offers Internet access? (If yes & is multi-person household) Who is that?
Enter persons by line number (1-16)

15. INTRAV
All households

What about while going from one place to another? Examples include using the Internet while riding public transit, or using the GPS on your cell phone while driving. (If needed) [Do you/Does anyone in this household] use the Internet while going from one place to another? (If yes & is multi-person household) Who is that?
Enter persons by line number (1-16)
16. INLICO
All households
What about at a library, community center, park, or other public place? (If needed) [Do you/Does anyone in this household] use the Internet at a library, community center, park, or other public place? (If yes & is multi-person household) Who is that?
Enter persons by line number (1-16)

17. INELHO
All households
What about at someone else’s home? (If needed) [Do you/Does anyone in this household] use the Internet at someone else’s home? (If yes & is multi-person household) Who is that?
Enter persons by line number (1-16)

18. INOTHR
All households
[Do you/Does anyone in this household] use the Internet at some other location we haven’t covered? (If yes & is multi-person household) Who is that?
Enter persons by line number (1-16)

If this is a multi-person household and not everyone was reported as using the Internet, go to 19. NETCHK

Else if anyone goes online anywhere, go to 20. TCHINT

Else go to 59. NONINT

19. NETCHK
Multi-person HHs reporting any non-Internet users
Based on your responses, it sounds like (NAME)[does/do] not use the Internet. [Does/Do] [he/she/these people in your household] use the Internet from any location, and for any purpose? (If additional users) Who uses the Internet from any location, and for any purpose?
Fill appropriate lines if necessary; locations of use will be allocated

If any anyone goes online anywhere, go to 20. TCHINT

Else go to 59. NONINT

20. TCHINT
HHs w/ any Internet users, any location
Next, we are interested in learning about the specific technologies households use to go online. Please focus on how your household as a whole connects to the Internet.

21. MOBDAT
HHs w/ any Internet users, any location
[Do you/Does anyone in this household] access the Internet using a data plan for a cell phone, smartphone, tablet, mobile hotspot, or other device? This type of Internet service is provided by a wireless carrier, and may be part of a package that also includes voice calls from a cell phone or smartphone.
(1) Yes
(2) No
If any 11. INHOME[1-16] == 1 & 21. MOBDAT == 1 (i.e., anyone goes online at home and household has a mobile data plan), go to 22. HMINT1

Else if 11. INHOME[1-16] == 1 & 21. MOBDAT == 2 (i.e., anyone goes online at home but household does not have a mobile data plan), go to 23. HMINT2
Else go to 28. USEINT

22. HMINT1
HHs w/ any home Internet users & MOBDAT == 1

In addition to [your/your household’s] mobile Internet service or data plan, we are interested in whether [you/your household] also use[s] any other type of Internet service when at home.

Go to 24. HOMTE

23. HMINT2
HHs w/ any home Internet users & MOBDAT == 2

You mentioned that [you/someone in this household/members of this household] use[s] the Internet at home.

24. HOMTE
HHs w/ any home Internet users

I am going to read a list of ways that people access the Internet from their homes, other than a mobile data plan. At home, [do you/does anyone in this household] access the Internet using:

*Read and select all that apply*

(1) High-speed Internet service installed at home, such as cable, DSL, or fiber-optic service? *(If needed)* This type of Internet service is often provided by a cable company or phone company. *(Go to 26. HNETCA)*

(2) Satellite Internet service? *(If needed)* This type of Internet service is received through a satellite dish installed at home. *(Go to 26. HNETCA)*

(3) Dial-up service? *(Go to 26. HNETCA)*

(4) Some other service? *(Go to 25. TEOTHR)*

(5) *(Do not read)* None *(Go to 26. HNETCA)*

25. TEOTHR
HHs w/ any home Internet users

What other service?

*Enter verbatim response*
26. HNETCA
HHs w/ any home Internet users
In [your/your household’s] experience over the past six months, does your [household’s] Internet connection at home fill [your/the household’s] needs, including for speed, reliability, and, if applicable, data caps?
(1) Yes
(2) No

27. HNETST
HHs w/ any home Internet users
At any point during the past six months, did [you/this household] temporarily lose a home Internet connection due to difficulty paying?
(1) Yes
(2) No

Select a random age 15+ Internet user in household for questions 29. EMAIL – 47. HOMIOT.
IF THE RESPONDENT IS HALF OF A PROXY PAIR, PLEASE SELECT THE RESPONDENT’S PAIR.

If all Internet users are under 15 years old, skip to 48. MEDINT.

28. USEINT
Random respondents
We are interested in learning about the applications and services people commonly use with the Internet. [(If is multi-person household) We have randomly selected one member of your household for this section.] Consider how [you personally/NAME] currently use[s] the technologies we’ve been discussing, whether at home or any other location. Please focus on activities [you have/NAME has] done online at least occasionally during the past six months, using an Internet-connected device such as a computer, tablet, or cell phone.

29. EMAIL
Random respondents
[Do you/Does NAME] use email?
(1) Yes
(2) No

30. TEXTIM
Random respondents
What about texting or instant messaging? [Do you/Does NAME] text or use instant messaging?
(1) Yes
(2) No

31. SOCIAL
Random respondents
What about using social networks, such as Facebook, Twitter, or Instagram? (If needed) [Do you/Does NAME] use social networks?
(1) Yes
(2) No

32. GAMING
Random respondents
What about playing video games online, whether on a smartphone, console, PC, or any other computing device? (If needed) [Do you/Does NAME] use the Internet to play video games?
(1) Yes
(2) No
33. CONFER
Random respondents
In the past six months, [have you/has NAME] participated in video or voice calls or conferencing over the Internet, such as with Skype, FaceTime, or Zoom? (If needed) [Do you/Does NAME] participate in video or voice calls or conferencing?
(1) Yes
(2) No

34. VIDEO
Random respondents
What about streaming or downloading videos? [Do you/Does NAME] watch videos over the Internet? Examples include YouTube and Netflix.
(1) Yes
(2) No

35. AUDIO
Random respondents
What about streaming or downloading music, radio programs, or podcasts? (If needed) [Do you/Does NAME] listen to music, radio programs, or podcasts using the Internet?
(1) Yes
(2) No

36. PUBLISh
Random respondents
What about posting or uploading blog posts, original videos, or other content that [you/NAME] created? Do not include photos or videos taken for personal use and shared to social media. (If needed) [Do you/Does NAME] publish or upload original content that [you/NAME] created to the Internet?
(1) Yes
(2) No

If Respondent/selected person is employed, go to 37. TELEWK
Else go to 38. JOBSCH

37. TELEWK
Employed random respondents
[Do you/Does NAME] use the Internet to telecommute or work while away from [your/his/her] usual workplace, such as working from home?
(1) Yes
(2) No

38. JOBSCH
Random respondents
In the past six months, [have you/has NAME] used the Internet to search or apply for a job? (If needed) [Do you/Does NAME] use the Internet to search or apply for a job?
(1) Yes
(2) No

39. EDTRAI
Random respondents
What about online classes or job training? (If needed) [Do you/Does NAME] use the Internet for educational classes or job training?
(1) Yes
(2) No
<table>
<thead>
<tr>
<th>Question</th>
<th>Description</th>
<th>Options</th>
</tr>
</thead>
</table>
| **40. EGOVTS** | What about accessing government services, such as registering to vote or renewing your driver’s license? *(If needed)* [Do you/Does NAME] use the Internet to access government services? | (1) Yes  
(2) No |
| **41. USESVC** | What about requesting services provided by other people, for example hailing a ride using Uber, ordering food using DoorDash or Instacart, reserving a room through Airbnb, or requesting a home repair through Angie’s List? *(If needed)* [Do you/Does NAME] use the Internet to request services provided by other people? | (1) Yes  
(2) No |
| **42. ESRVCS** | What about offering [your/his/her] own services for sale via the Internet? Examples include offering rentals on Airbnb and driving for Uber or Lyft. Do not include any goods or possessions sold online, such as clothing, shoes, or crafts. *(If needed)* [Do you/Does NAME] offer [your/his/her] own services for sale via the Internet? | (1) Yes  
(2) No |
| **43. ECOMME** | In the past six months, [have you/has NAME] used the Internet for online shopping, travel reservations, or other consumer services on the Internet? *(If needed)* [Do you/Does NAME] use the Internet for online shopping, travel reservations, or other consumer services? | (1) Yes  
(2) No |
| **44. EGOODS** | [Do you/Does NAME] use the Internet to sell goods? Examples include selling items on Etsy or eBay. | (1) Yes  
(2) No |
| **45. FINANC** | [Do you/Does NAME] use the Internet for financial services such as banking, investing, paying bills online, or sending money to other people? Examples include using your bank’s website or app, paying a credit card or utility bill online, or sending money using Venmo or PayPal. | (1) Yes  
(2) No |
| **46. VOICEA** | What about communicating with a digital assistant, such as Alexa, Siri, or Google Assistant? | (1) Yes  
(2) No |
47. **HOMIOT**
Random respondents

What about interacting with household equipment or appliances that are connected to the Internet, such as a connected thermostat, light bulb, or security system? *(If needed)* *(Do you/Does NAME)* use the Internet to interact with household equipment or appliances?

(1) Yes
(2) No

48. **MEDINT**
HHs w/ any Internet users, any location

*(If multi-person household)* Our remaining questions are about your household as a whole. *(All)* I’m going to ask a couple of questions about how *(you have/your household has)* used the Internet for health-related activities during the past six months.

49. **MEDDOC**
HHs w/ any Internet users, any location

*[Do you/Does NAME]* communicate with a doctor or other health professional using the Internet?

(1) Yes
(2) No

50. **MEDREC**
HHs w/ any Internet users, any location

What about accessing health records or health insurance records online? *(If needed)* *(Do you/Does anyone in this household)* access health records or health insurance records online?

(1) Yes
(2) No

51. **MEDINF**
HHs w/ any Internet users, any location

*[Do you/Does anyone in this household]* research health information online, such as with WebMD or similar services?

(1) Yes
(2) No

52. **MEDMON**
HHs w/ any Internet users, any location

*[Do you/Does anyone in this household]* use an electronic health monitoring service that collects and sends data to your doctor or health care provider through the Internet? Examples include connected devices that monitor vital statistics, blood glucose levels, or blood pressure.

(1) Yes
(2) No

53. **UHHINT**
HHs w/ any Internet users, any location

*(If multi-person household)* We are interested in learning generally, without identifying specific people, what challenges your household has had while using the Internet.

*(If single-person household)* We are interested in learning what challenges you have had while using the Internet.
54. PSPRE
HHs w/ any Internet users, any location

During the past year, have concerns about privacy or security stopped [you/anyone in this household] from doing any of these activities online:

Read and select all that apply

1. Conducting financial transactions such as banking, investing, or paying bills online?
2. Buying goods or services online?
3. Posting photos, status updates, or other information on social networks?
4. Expressing an opinion on a controversial or political issue on a blog or social network, or in a forum, email or any other venue?
5. Searching for information using a platform such as Google Search, Yahoo Search, Microsoft Bing, or another web search engine?
6. (Do not read) None of the above

55. PSCON
HHs w/ any Internet users, any location

Overall, what concerns [you/members of this household] the most when it comes to online privacy and security risks?

Do not read; select all that apply and/or enter verbatim response if other

1. Identity theft
2. Credit card or banking fraud
3. Data collection or tracking by online services
4. Data collection or tracking by government
5. Loss of control over personal data such as email or social network profiles
6. Threats to personal safety, such as online harassment, stalking, or cyber-bullying
7. No concerns
8. Other: ___________________________

56. PSCYBA
HHs w/ any Internet users, any location

During the past year, [have you/has any member of your household] experienced an online security breach, identity theft, or a similar crime?

1. Yes
2. No

57. CBULLY
HHs w/ any Internet users, any location

During the past year, has someone ever repeatedly used technologies, such as a smartphone, the Internet, or social media to hurt, harass, intimidate, or embarrass [you/any member of your household, including you]? Some examples of these actions include: Making fun of [you/their], calling [you/their] names, spreading rumors about [you/their] or trying to make others dislike [you/their], or purposefully sharing [your/their] private information, photos, or videos in a hurtful way.

1. Yes
2. No

If anyone goes online at home, go to 64. TVINT
Else go to 58. NHMINT
58. NHMINT  You previously mentioned that [you/members of your household] use the Internet in some places, but not at home.

Go to 60. EVRHOM

59. NONINT  (If multi-person household) Our remaining questions are about your household as a whole. We are interested in learning why households such as yours do not use the Internet.
(If single-person household) For our remaining questions, we are interested in learning why you do not use the Internet.

60. EVRHOM  [Have you/Has anyone in this household] ever used the Internet from home?
(1) Yes
(2) No

61. NOHM  (Version 1) What are the reasons why [you/members of your household] do not use the Internet at home?
Read and select all that apply and/or enter verbatim response if other

(1) Don’t need it or not interested
(2) Can’t afford it
(3) Not worth the cost
(4) Can use it elsewhere
(5) Not available in area
(6) No computing device, or device inadequate or broken
(7) Online privacy or cybersecurity concerns
(8) Personal safety concerns
(9) Household moved or is in the process of moving
(10) Other: ____________________________

(Version 2) What are the reasons why [you/members of your household] do not use the Internet at home?
Open-ended

If more than one 61. NOHM response is given, go to 62. PRINOH
Else go to 63. LOPRCE
62. PRINOH
HHs w/o any home Internet users & more than one NOHM response
(Version 1) Of the reasons you just listed for not going online at home, which [do you/does your household] consider to be the most important?
Read previous responses if needed; Read and select best match and/or enter verbatim response if other

(1) Don’t need it or not interested
(2) Can’t afford it
(3) Not worth the cost
(4) Can use it elsewhere
(5) Not available in area
(6) No computing device, or device inadequate or broken
(7) Online privacy or cybersecurity concerns
(8) Personal safety concerns
(9) Household moved or is in the process of moving
(10) Other: _____________________________

(Version 2) Of the reasons you just listed for not going online at home, which [do you/does your household] consider to be the most important?

Open-ended

63. LOPRCE
HHs w/o any home Internet users
At what monthly price, if any, would [you/your household] buy home Internet service?
Enter number in dollars or zero if ‘none’

64. TVINT
All households
Our last few questions are about the use of cable TV and satellite TV services not accessed through the Internet.

65. TRADTV
All households
[Do you/Does anyone in this household] subscribe to cable TV or satellite TV? This often requires a cable box or satellite dish. Do not include TV streaming subscriptions, such as Netflix, Sling TV, or Hulu.
(1) Yes (End Interview)
(2) No (Go to 66. PREVTV)

66. PREVTV
HHs w/o any cable TV subscribers
[Have you/Has anyone in this household] ever subscribed to cable TV or satellite TV? Do not include TV streaming subscriptions, such as Netflix, Sling TV, or Hulu.
(1) Yes
(2) No
(Version 1) What are the reasons why [you/members of your household] do not subscribe to a service providing access to TV channels?

Read and select all that apply

and/or enter verbatim response if other

(1) Using Internet-based video services instead
(2) Don’t need it or not interested
(3) Can’t afford it
(4) Not worth the cost
(5) Can watch at another location
(6) Can watch using an antenna
(7) Not available in area
(8) No television, or television inadequate or broken
(9) Household moved or is in the process of moving
(10) Previously experienced poor customer service
(11) Previously experienced poor quality
(12) Other: _____________________________

(Version 1) What are the reasons why [you/members of your household] do not subscribe to a service providing access to TV channels?

Open-ended
5.2 APPENDIX B – Round 1 Cognitive Interview Protocol

Computer and Internet Use Cognitive Interview Protocol

Participant ID #: __________________________

Interview Date: [__|__|__ / __|__|__ / __|__|__|__] (mm/dd/yyyy)

Interviewer initials: _____

Start Time: ____________ AM / PM  End Time: ____________ AM / PM

Internet Group ________  No Internet Group ______

Split panel DEVQUA:
1-5 scale________  Descriptive choices with text ______

Split panel NOHM/PRINHOH/NOTV
Open-ended________  Close ended ________

CBULLY:
Paired proxy participant number__________

Double-check that you have the following documents ready prior to the start of the interview:

- Correct IUS version (1-4) depending on counterbalance.
- Household Roster
- Link to QR study:

https://research.rm.census.gov/ife/form/SV_0IHk7mG932IGEXb

All documents can be found in:

L:\Inter-group Projects\CPS Projects & Info\Supplements\Computer & Internet Use Supplements\Computer & Internet Use 2022\Data Collection Documents
SECTION I: INTRODUCTION

Hello, my name is ________________, and I work for the Census Bureau. Thank you for agreeing to help us today. The Census Bureau counts the population in the U.S and also conducts different kinds of surveys.

Today, we are working on improving questions for a part of the Current Population Survey. You will help us test questions that ask about how members of your household use technology. It is important that these questions make sense, are easy to answer, and that everyone understands the questions the same way. Remember, there are no wrong answers, because only you know what you are thinking. Please answer these questions as you would if an interviewer had come to your home to complete the survey. Do you have any questions before we begin?

SECTION II: CONSENT FORM

VERBAL CONSENT

Before we start, I would like to inform you about your rights as a participant and also need to record whether or not you agree to participate. Please know that this interview will be recorded. Your identity will be kept confidential and will not be shared with anyone outside of this project. Your participation today is completely voluntary. You may decline to answer any particular question or stop the interview at any time.

Do you give oral consent to participate and for the interview to be recorded?

[AFTER PARTICIPANT SAYS YES]

Okay thank you. I’ll turn on the recorder now and ask again so that your consent is recorded.

[START RECORDING] Do you give oral consent to participate and for the interview to be recorded? [IF YES, CONTINUE TO SECTION III, IF NO, POLITELY END THE INTERVIEW AND CONTINUE TO SECTION VIII]
SECTION III: HOUSEHOLD ROSTER

Okay, let’s get started. Please answer the questions as you would if an interviewer had come to your home.

Ask R1 – R11 for 1st HH member.  **Record information on Household Roster.** Then ask for next HH member. Repeat for every member of HH.

R1. NAME  
*First I will ask you some questions about the people who live here. What are the names of all persons living or staying here? Let’s start with you.*

R2. SEX  
What is [your/[NAME]’s] sex?

1. Male
2. Female

R3. REL  
*IF NOT PARTICIPANT: How is [NAME] related to you?*

1. Opposite sex spouse (husband/wife)
2. Opposite sex unmarried partner
3. Same sex spouse (husband/wife)
4. Same sex unmarried partner
5. Child
6. Grandchild
7. Parent
8. Brother/ sister
9. Other relative (aunt, uncle, cousin, in law)
10. Foster child
11. Housemate/roommate
12. Roomer/boarder
13. Other nonrelative
14. DK
15. REF
99. self
R4. AGE  What is [your/NAME’s] date of birth?

R5. EDUCATION  What is the highest level of school [you have /[NAME has]] completed or the highest degree [you have/[NAME has]] received?
1. 1st, 2nd, 3rd, or 4th grade
2. 5th or 6th grade
3. 7th or 8th grade
4. 9th grade
5. 10th grade, 11th grade
6. 12th grade, no diploma
7. High school graduate-high school diploma or equivalent
8. Some college – no diploma
9. Associates degree – occupational / vocational program
10. Associates degree – academic program
11. Bachelors degree (BA, BS, AB)
12. Master’s degree (MS, MA, MBA, MEd, MEng, MSW)
13. Professional degree (MD, DDS, DMV, LLB, JD)
14. Doctorate degree (PhD, EdD)

R6. HISPA  (Are/Is)(Name/You) Spanish, Hispanic or Latino?
1. Yes
2. No
3. Don’t Know  Go to R9. RACE
4. Refuse

R7. HISPB  (Are/Is)(Name/you) Mexican, Mexican American, Chicano, Puerto Rican, Cuban American, or some other Spanish, Hispanic, or Latino Group?
1. Mexican
2. Mexican American
3. Chicano  Go to R9. Race
4. Puerto Rican
5. Cuban American
6. Some Other  > Go to R8. O-HISP
R8. O_HISP  What is the name of (your/his/her) other Spanish, Hispanic, or Latino group?

R9. RACEA  I am going to read you a list of five race categories. Please choose one or more races that (NAME/you) (considers yourself/consider NAME/considers himself/considers herself) to be: White; Black or African American; American Indian or Alaska Native; Asian; OR Native Hawaiian or Other Pacific Islander.

1. White
2. Black or African American
3. American Indian or Alaska Native
4. Asian
5. Native Hawaiian or Other Pacific Islander
6. Other – DO NOT READ

Go to R11. Work

R10. RACEB  What is your race?

R11. WORK  LAST WEEK, did (name/you) do ANY work for (pay/either pay or profit)?

1. Yes
2. No
3. Retired
4. Disabled
5. Unable to work

SECTION IV: CPS Computer and Internet Use Survey

We will now start the Computer and Internet Use Survey.

[SWITCH TO CPS IUS DOCUMENT AND ADMINISTER THE QUESTIONNAIRE]
SECTION V: COGNITIVE INTERVIEW

Now I’d like to ask you some questions about the answers you just provided.

First, I asked about the computers and other internet-connected devices that members of your household have used at least occasionally during the past 6 months. As a reminder, we were interested in devices used at any location, whether at home, work, school, a library, or anywhere else.

3. LAPTOP and 4. TABLET

Earlier I asked “does anyone in this household use a laptop or notebook computer.”

A. What does “laptop computer” mean to you in this question?

B. What does “notebook computer” mean to you in this question?

C. I also asked about whether anyone in this household uses a tablet or e-book reader. What does “tablet” mean to you in this question?

D. What does “e-book reader” mean to you in this question?

6. WEARABLE

[IF YES] Earlier I asked [Do you/Does anyone in this household] use a wearable device that is connected to the Internet, such as a smart watch or fitness band?

A. Tell me more about your answer. How does your device connect to the internet? What does it use the internet for?

8. DEVQUAL

Earlier I asked “Thinking about all the different devices we just discussed, how well do the computers and other Internet-connected devices [you use/used by this household] work overall?”

A. Tell me more about your answer. How confident would you say you are about your answer?

B. [IF NOT EXPLICITLY STATED] Is your answer an average? [IF YES] How did you come up with your average? How difficult was it to come up with an average?

C. What does the phrase “work overall” mean to you in this question?
9. DEVSTA

Earlier I asked “During the last six months, how often were [you/members of your household] unable to use a computer or other Internet-connected device because it was in use by someone else, located elsewhere, or otherwise inaccessible.

A. [FOR single-person HHs] Tell me more about your answer.

[FOR MULTIPERSON HHs: FOR EACH PARTICIPANT’S OTHER HOUSEHOLD MEMBER] (the randomly selected person)

- How did you come up with your answer(s) for other members of the household?
  - [IF NEEDED] Please say more about how you know whether [NAME] was unable to use a computer or other Internet-connected device.
  - [IF NEEDED] How did you come up with the number of times it happened?
  - [PROBE AS NEEDED UNTIL PARTICIPANT PROVIDES COMPLETE AND CODEABLE RESPONSES. DOCUMENT CODE(S) AND QUALITATIVE DESCRIPTIONS TO SUPPORT THE CODE]:
    - Direct knowledge/direct experience – witnessed [NAME] being unable to use a computer or other Internet-connected device
    - Indirect knowledge – Was told about it by [NAME] of being unable to use a computer or other Internet-connected device these experiences, etc.
    - Inference – Neither witnessed or was told by [NAME], but saw evidence of [NAME] being unable to use a computer or other Internet-connected device

B. Thinking about this question I just asked about devices being available to use, how important is this to you personally?

- On a scale of 1 to 5, where 1 is not at all important and 5 is very important, how important is it to you to have devices be available for you to use? Please tell me more about that.

10. INTINT
One of the questions in the survey asked you about the places where you used the Internet at least occasionally during the past six months. I asked you whether you accessed the internet at home, at work, at school, at a coffee shop, etc.

A. When answering these questions, did you consider whether you used your own data, or whether you used the location’s Wi-Fi? Or did you answer these questions regardless of how you accessed the Internet?

13. INSCHL

[IF PARTICIPANT REPORTS ACCESSING THE INTERNET AT SCHOOL]

A. During the survey, you said that you access the Internet at school. Can you please tell me a little more about the purpose of accessing the Internet at school?

[IF R REPORTED USING DIAL-UP]:

24. HOMTE

Earlier I asked you about the ways people access the internet from their homes. “Dial up” is one of the different ways that people may use to access the Internet at home.

A. In your own words, can you please tell me what ‘dial up” means to you when talking about ways to access the internet from home?

B. Can you please tell me about your experience using dial-up to access the internet at home?

C. Which company do you use for dial-up service?

26. HNETCA

One of the questions in the survey asked about whether your Internet connection at home fills your needs for speed, reliability, and data caps.

A. How difficult was it to come up with your answer?

B. Can you please tell me what “reliability” means to you in this question?

C. What about data caps? What does “data caps” mean to you in this question.
D. In your own words, please describe the things about your Internet connection that are important to you to when using it to go online.

27. HNETST

One of the questions in the survey asked whether at any point during the past six months you lost your home Internet connection temporarily due to difficulty paying.

A. [IF R REPORTS “YES”] Tell me more about your answer.

B. In this question, what does the word “temporarily” mean to you?

C. In this question, what does the phrase “home internet connection” mean to you?

D. [IF HH ONLY USES MOBILE DATA PLANS (HOMETE = NONE)]: Did you consider your mobile data plan(s) when answering this question?

E. For this question, what does “difficulty paying” mean to you?

30. TEXTIM

[IF YES] Earlier I asked [Do you/Does NAME] text or use instant messaging. Are you/Is NAME doing text messaging, instant messaging, or both?

A. [IF EITHER INSTANT MESSAGING OR BOTH] Tell me more about your answer. What are you/is NAME using to do instant messaging?

41. USESVC

Earlier I asked a question about whether you/your household uses services like Uber, DoorDash, Instacart, Airbnb, or Angie’s List.

A. Have heard of all of them or are there some that you have not heard of before? [IF SOME NOT HEARD OF BEFORE] Which ones?
Earlier I asked a question about whether you/someone else use the internet for financial services such as banking, investing, paying bills online, or sending money to other people.

A. [IF PARTICIPANT REPORTS “YES”] Tell me more about your answer.

One of the questions asked whether during the past year, you or anyone in your household stopped doing different activities online due to concerns about privacy or security.

A. In this question, what does “stopped doing the activities” mean to you? [We want to know whether participants understand that we mean stopped on a particular occasion or switched to another means of the activity, rather than not doing the activity at all.]

[Some examples of the activities in this question included]:

(7) Conducting financial transactions such as banking, investing, or paying bills online?
(8) Buying goods or services online?
(9) Posting photos, status updates, or other information on social networks?
(10) Expressing an opinion on a controversial or political issue on a blog or social network, or in a forum, email or any other venue?
(11) Searching for information using a platform such as Google Search, Yahoo Search, Microsoft Bing, or another web search engine?

One of the questions asked whether someone ever repeatedly used technologies, such as a smartphone, the Internet, or social media to hurt, harass, intimidate, or embarrass [you/any member of your household, including you].

A. [IF A SINGLE PERSON HH] Tell me more about your answer.

B. [IF PROXY PAIR] One of the questions asked whether someone ever repeatedly used technologies, such as a smartphone, the Internet, or social media to hurt, harass, intimidate, or embarrass [you/any member of your household, including you].

- How did you come up with your answer(s)?
  - [IF NEEDED] Please say more about how you know whether someone ever repeatedly used technologies, such as a smartphone, the Internet, or social media to hurt, harass, intimidate, or embarrass [you/any member of your household, including you].
  - [IF NEEDED] How did you come up with the number of times it happened for [NAME]?
  - [IF NEEDED] Have you discussed these topics with [NAME] before?
  - [PROBE AS NEEDED UNTIL PARTICIPANT PROVIDES COMPLETE AND CODEABLE RESPONSES. DOCUMENT CODE(S) AND QUALITATIVE DESCRIPTIONS TO SUPPORT THE CODE]:
Direct knowledge/direct experience – witnessed [NAME] being hurt, harassed, intimidated, or embarrassed online, etc.

Indirect knowledge – Was told about it by [NAME] of these experiences, etc.

Inference – Neither witnessed or was told by [NAME], but saw evidence of one or more of these events.

C. Thinking about this question I just asked about experiences of online harassment, intimidation, or embarrassment, how important are these topics to you personally?

- On a scale of 1 to 5, where 1 is not at all important and 5 is very important, how important are these topics to you?

61. NOHM, and 62. PRINHOH:

[IF RESPONSE TO NOHM AND PRINOH DO NOT INCLUDE “INABILITY TO AFFORD”]:

One of the questions asked reasons why [you/members of your household] do not use the Internet at home.

A. Is being unable to afford the internet at home a reason at all?

[IF YES] Is this reason a bigger reason than the other reason(s) you mentioned before?

B. Were there any other reasons why [you/members of your household] do not use the Internet at home, but haven’t mentioned yet?

C. [IF PARTICIPANT ONLY GAVE ONE ANSWER]. When answering this question, did you know that you could have said multiple reasons? Or did you think you should only select one reason?

63. LOPRCE:

Earlier I asked you about what monthly price, if any, would [you/your household] buy home Internet service.

A. Tell me more about your answer. [IF NEEDED] How did you come up with the price? What did you think about when coming up with the price?
SECTION VI: Debriefing Questions

How easy or difficult was it to answer questions for [YOU/NAME].

Do you think other people might find any of these questions to be sensitive?
- [IF YES] Which ones?
- [IF NEEDED] What about the question do you think people would find sensitive?

Is there anything else you would like to tell us that you haven’t had a chance to mention yet?

SECTION VII: QR CODE STUDY

Now I’d like shift gears a bit. I have a couple of questions for you, and like other questions we asked you today, there is not a right or wrong answer. I just want to know what you think.

I am going to send you a link through the Teams chat and then I will ask you to share your screen with me. Please make sure that you have closed anything in your computer that you would not like me to see.

[Copy and paste Qualtrics link into Teams chat: https://research.rm.census.gov/jfe/form/SV_0IHk7mG932IGEXb]

Qualtrics will contain all the images in order. Ask participant to share their screen (click the square with arrow pointing up)]

1. [For Figure 1]
   A. Are you familiar with what this is?
   B. [IF NEEDED] Could you tell me about what you know about it?
   C. Have you ever used one of these?
   D. [IF YES] How often?

2. [For Figure 2]
Please advance to the next page.

A. If you received this in the mail and decided to respond to the survey, what would you do?

B. IF NEEDED: How would you access the survey using the QR code?

Next, I’m going to show you a few different versions of this mailer. The only thing that will change are QR code instructions. Please advance to the next page.

3. [For Figure 3]

A. In your own words, what do these instructions tell you to do? What would you expect to happen if you followed these instructions?

B. IF NEEDED: How would you access the survey using the QR code?

4. [For Figure 4]

Please advance to the next page.

A. In your own words, what do these instructions tell you to do?

B. IF NEEDED: How would you access the survey using the QR code?

5. [For Figure 5]

Please advance to the next page.

A. In your own words, what do these instructions tell you to do? Walk me through what you would do if you were to follow these instructions.

6. [Show screen with Figures 3, 4, 5 on it.]

Please advance to the next page.

A. Of all the instructions I showed you, which do you prefer? Why?

B. Were any more informative than others? Where any more confusing than others? Would you expect anything different to happen based on the instructions provided?

Those are all the questions I have for you. Thank you for participating in this study. Your feedback has been very helpful.

TURN OFF TAPE RECORDER
[Instructions for participants with access to Internet]

In a few minutes, you will receive an email with a link. Please follow that link so you can provide the information necessary to receive the compensation for your participation. Thank you.

[Instructions for participants without access to Internet]

We will mail you your compensation for your participation to the address you gave when you were interviewed to see if you were eligible to participate. Thank you.
5.3 APPENDIX C – Round 2 Internet Use Survey Instrument

1. CMPINT
   All households
   This month we are asking some additional questions about the Internet, as well as computers, mobile phones, tablets, and other devices that connect to the Internet. First, we will ask what types of computers and other devices [you/members of your household] currently use. Please focus on devices [you/members of your household] currently have access to, and have used at least occasionally during the past six months. We are interested in devices used at any location, whether at home, work, school, a library, or anywhere else.

2. DESKTP
   All households
   [Do you/Does anyone in this household, including you,] use a desktop computer at least occasionally? Include any desktop computers [you/members of your household] currently have access to and have used during the past six months. (If needed) A desktop is a personal computer that is too large or heavy to be frequently moved from place to place. (If yes & is multi-person household) Who is that?
   Enter persons by line number (1-16)

3. LAPTOP
   All households
   What about a laptop? [Do you/Does anyone in this household] use a laptop computer? (If needed) A laptop is a personal computer that is portable and includes a built-in keyboard and screen. (If yes & is multi-person household) Who is that?
   Enter persons by line number (1-16)

4. TABLET
   All households
   What about a tablet or e-book reader, such as an iPad or Kindle? (If needed) A tablet or e-book reader is a personal computer that is portable and has a built-in screen, but does not have a built-in physical keyboard. (If yes & is multi-person household) Who is that?
   Enter persons by line number (1-16)

5. MPHONE
   All households
   What about a smartphone, or a cell phone that connects to the Internet? (If needed) [Do you/Does anyone in this household] use a smartphone? (If yes & is multi-person household) Who is that?
   Enter persons by line number (1-16)

6. WEARAB
   All households
   [Do you/Does anyone in this household] use a wearable device that is connected to the Internet, such as a smart watch or fitness band? Examples include an Apple Watch or Fitbit. (If yes & is multi-person household) Who is that?
   Enter persons by line number (1-16)

7. TVBOX
   All households
   [Do you/Does anyone in this household] use a smart TV, a game or video system, or another device that connects to the Internet and plays through a TV? Examples include an Xbox, Apple TV, PlayStation, Roku, or a Blu-Ray player that can access the Internet. (If yes & is multi-person household) Who is that?
   Enter persons by line number (1-16)
If any (2. DESKTP, 3. LAPTOP, 4. TABLET, 5. MPHONE, 6. WEARAB, or 7. TVBOX) [1-16] = 1 (i.e., anyone in the household uses any device), go to 8. DEVQUA
Else go to 10. INTINT

8. DEVQUA
Households w/ any device use

(Version 1) Thinking about all the different devices we just discussed, how well do the computers and other Internet-connected devices [you use/used by this household] work overall? Please do not include home Wi-Fi routers or similar equipment. [If R is unsure, ask for an average].

*Read and select best match*

1. They do not work at all
2. They rarely work well
3. They somewhat work
4. They work well
5. They work perfectly

(Version 2) Thinking about all the different devices we just discussed, how well do the computers and other Internet-connected devices [you use/used by this household] work overall? Please do not include home Wi-Fi routers or similar equipment. Please use a scale of 1 to 5, with one meaning they do not work at all, and 5 meaning they work perfectly. [If R is unsure, ask for an average].

*Open-ended*

9. DEVSTA
Households w/ any device use

During the last six months, how often were [you/members of your household] unable to use a computer or other Internet-connected device because it was in use by someone else, located elsewhere, or otherwise inaccessible?

*Read and select best match*

1. Never
2. During one or two days
3. During three or four days
4. During five or six days
5. During seven or more days

10. INTINT
All households

Next, we will ask where [you/members of your household] currently use the Internet. Please focus on places where [you/members of your household] have used the Internet at least occasionally during the past six months. People can use the Internet in many places, such as at work, school, or a library. Internet use includes a wide variety of activities, from checking email or browsing the Web to watching videos or using mobile apps. We are interested in all forms of Internet use on all devices, including the ones we just discussed.
11. INHOME
All households
[Do you/Does anyone in this household, including you,) use the Internet at home? This includes accessing the Internet with a cell phone, computer, tablet, or other device. (If yes & is multi-person household) Who is that?
Enter persons by line number (1-16)

If any anyone in the household is employed (based on household roster questionnaire), go to 12. INWORK

Else go to 13. INSCHL

12. INWORK
HHs w/ at least 1 employed person
What about at work? [Do you/Does anyone in this household] use the Internet at work? Do not include work from home. (If yes & is multi-person household) Who is that?
Enter persons by line number (1-16)

13. INSCHL
All households
What about at school? [Do you/Does anyone in this household] use the Internet at school? Please [only include use at school as a student/count students only], and do not include taking online classes from a location other than a school campus. (If yes & is multi-person household) Who is that?
Enter persons by line number (1-16)

14. INCAFE
All households
What about at a coffee shop or other business that offers Internet access? (If needed) [Do you/Does anyone in this household] use the Internet while at a coffee shop or other business that offers Internet access? (If yes & is multi-person household) Who is that?
Enter persons by line number (1-16)

15. INTRAV
All households
What about while going from one place to another? Examples include using the Internet while riding public transit, or using the GPS on your cell phone while driving. (If needed) [Do you/Does anyone in this household] use the Internet while going from one place to another? (If yes & is multi-person household) Who is that?
Enter persons by line number (1-16)

16. INLICO
All households
What about at a library, community center, park, or other public place? (If needed) [Do you/Does anyone in this household] use the Internet at a library, community center, park, or other public place? (If yes & is multi-person household) Who is that?
Enter persons by line number (1-16)

17. INELHO
All households
What about at someone else’s home? (If needed) [Do you/Does anyone in this household] use the Internet at someone else’s home? (If yes & is multi-person household) Who is that?
Enter persons by line number (1-16)
18. INOTHR
All households
[Do you/Does anyone in this household] use the Internet at some other location we haven’t covered? (If yes & is multi-person household) Who is that?
Enter persons by line number (1-16)

If this is a multi-person household and not everyone was reported as using the Internet, go to 19. NETCHK

Else if anyone goes online anywhere, go to 20. TCHINT

Else go to 59. NONINT
19. NETCHK
Multi-person HHs reporting any non-Internet users
Based on your responses, it sounds like (NAME) [does/do] not use the Internet. [Does/Do] [he/she/these people in your household] use the Internet from any location, and for any purpose? (If additional users) Who uses the Internet from any location, and for any purpose?
Fill appropriate lines if necessary; locations of use will be allocated

If any anyone goes online anywhere, go to 20. TCHINT

Else go to 59. NONINT
20. TCHINT
HHs w/ any Internet users, any location
Next, we are interested in learning about the specific technologies households use to go online. Please focus on how your household as a whole connects to the Internet.

21. MOBDAT
HHs w/ any Internet users, any location
[Do you/Does anyone in this household] access the Internet using a data plan for a cell phone, smartphone, tablet, mobile hotspot, or other device? This type of Internet service is provided by a wireless carrier, and may be part of a package that also includes voice calls from a cell phone or smartphone.
(1) Yes
(2) No

If any 11. INHOME[1-16] == 1 & 21. MOBDAT == 1 (i.e., anyone goes online at home and household has a mobile data plan), go to 22. HMINT1

Else if 11. INHOME[1-16] == 1 & 21. MOBDAT == 2 (i.e., anyone goes online at home but household does not have a mobile data plan), go to 23. HMINT2
Else go to 28. USEINT
22. HMINT1
HHs w/ any home Internet users & MOBDAT == 1
In addition to [your/your household’s] mobile Internet service or data plan, we are interested in whether [you/your household] also use[s] any other type of Internet service when at home.

Go to 24. HOMTE
23. HMINT2
HHs w/ any home Internet users & MOBDAT == 2

You mentioned that [you/someone in this household/members of this household] use[s] the Internet at home.

24. HOMTE
HHs w/ any home Internet users

I am going to read a list of ways that people access the Internet from their homes, other than a mobile data plan. At home, [do you/does anyone in this household] access the Internet using:

Read and select all that apply

(1) High-speed Internet service installed at home, such as cable, DSL, or fiber-optic service? (If needed) This type of Internet service is often provided by a cable company or phone company. (Go to 26. HNETCA)

(2) Satellite Internet service? (If needed) This type of Internet service is received through a satellite dish installed at home. (Go to 26. HNETCA)

(3) Dial-up service? (Go to 26. HNETCA)

(4) Some other service? (Go to 25. TEOTHR)

(5) (Do not read) None (Go to 26. HNETCA)

25. TEOTHR
HHs w/ any home Internet users

What other service? Enter verbatim response

26. HNETCA
HHs w/ any home Internet users

In [your/your household’s] experience over the past six months, does your [household’s] Internet connection at home fill [your/the household’s] needs, including for speed, reliability, and, if applicable, data caps?

(1) Yes
(2) No

27. HNETST
HHs w/ any home Internet users

At any point during the past six months, did [you/this household] temporarily lose a home Internet connection due to difficulty paying?

(1) Yes
(2) No

Select a random age 15+ Internet user in household for questions 29. EMAIL – 47. HOMIOT.

FOR MULTI-PERSON HOUSEHOLDS, ASK QUESTIONS 29. EMAIL – 47. HOMIOT FOR BOTH THE RESPONDENT AND THE OTHER PERSON.

IF THE RESPONDENT IS HALF OF A PROXY PAIR, PLEASE SELECT THE RESPONDENT’S PAIR.

If all Internet users are under 15 years old, skip to 48. MEDINT.
28. USEINT
Random respondents
We are interested in learning about the applications and services people commonly use with the Internet. *(If is multi-person household)* We have randomly selected one member of your household for this section. Consider how [you personally/NAME] currently use[s] the technologies we’ve been discussing, whether at home or any other location. Please focus on activities [you have/NAME has] done online at least occasionally during the past six months, using an Internet-connected device such as a computer, tablet, or cell phone.

29. EMAIL
Random respondents
[Do you/Does NAME] use email?
(1) Yes
(2) No

30. TEXTIM
Random respondents
What about texting or instant messaging? [Do you/Does NAME] text or use instant messaging?
(1) Yes
(2) No

31. SOCIAL
Random respondents
What about using social networks, such as Facebook, Twitter, or Instagram? *(If needed)* [Do you/Does NAME] use social networks?
(1) Yes
(2) No

32. GAMING
Random respondents
What about playing video games online, whether on a smartphone, console, PC, or any other computing device? *(If needed)* [Do you/Does NAME] use the Internet to play video games?
(1) Yes
(2) No

33. CONFER
Random respondents
In the past six months, [have you/has NAME] participated in video or voice calls or conferencing over the Internet, such as with Skype, FaceTime, or Zoom? *(If needed)* [Do you/Does NAME] participate in video or voice calls or conferencing?
(1) Yes
(2) No

34. VIDEO
Random respondents
What about streaming or downloading videos? [Do you/Does NAME] watch videos over the Internet? Examples include YouTube and Netflix.
(1) Yes
(2) No

35. AUDIO
Random respondents
What about streaming or downloading music, radio programs, or podcasts? *(If needed)* [Do you/Does NAME] listen to music, radio programs, or podcasts using the Internet?
(1) Yes
(2) No
36. PUBLSH Random respondents
What about posting or uploading blog posts, original videos, or other content that [you/NAME] created? Do not include photos or videos taken for personal use and shared to social media. (If needed) [Do you/Does NAME] publish or upload original content that [you/NAME] created to the Internet?
(1) Yes
(2) No

If Respondent/selected person is employed, go to 37. TELEWK

Else go to 38. JOBSCH

37. TELEWK Employed random respondents
[Do you/Does NAME] use the Internet to telecommute or work while away from [your/his/her] usual workplace, such as working from home?
(1) Yes
(2) No

38. JOBSCH Random respondents
In the past six months, [have you/has NAME] used the Internet to search or apply for a job? (If needed) [Do you/Does NAME] use the Internet to search or apply for a job?
(1) Yes
(2) No

39. EDTRAII Random respondents
What about online classes or job training? (If needed) [Do you/Does NAME] use the Internet for educational classes or job training?
(1) Yes
(2) No

40. EGOVTS Random respondents
What about accessing government services, such as registering to vote or renewing your driver’s license? (If needed) [Do you/Does NAME] use the Internet to access government services?
(1) Yes
(2) No

41. USESVC Random respondents
What about requesting services provided by other people, for example hailing a ride using Uber, ordering food using DoorDash or Instacart, reserving a room through Airbnb, or requesting a home repair through Angie’s List? (If needed) [Do you/Does NAME] use the Internet to request services provided by other people?
(1) Yes
(2) No
<table>
<thead>
<tr>
<th>Question Number</th>
<th>Description</th>
<th>Answer Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>42. ESRVCS</strong></td>
<td>What about offering [your/his/her] own services for sale via the Internet? Examples include offering rentals on Airbnb and driving for Uber or Lyft. Do not include any goods or possessions sold online, such as clothing, shoes, or crafts. (If needed) [Do you/Does NAME] offer [your/his/her] own services for sale via the Internet?</td>
<td>Yes/No</td>
</tr>
<tr>
<td><strong>43. ECOMME</strong></td>
<td>In the past six months, [have you/has NAME] used the Internet for online shopping, travel reservations, or other consumer services on the Internet? (If needed) [Do you/Does NAME] use the Internet for online shopping, travel reservations, or other consumer services?</td>
<td>Yes/No</td>
</tr>
<tr>
<td><strong>44. EGOODS</strong></td>
<td>[Do you/Does NAME] use the Internet to sell goods? Examples include selling items on Etsy or eBay.</td>
<td>Yes/No</td>
</tr>
<tr>
<td><strong>45. FINANC</strong></td>
<td>[Do you/Does NAME] use the Internet for financial services such as banking, investing, paying bills online, or sending money to other people? Examples include using your bank’s website or app, paying a credit card or utility bill online, or sending money using Venmo or PayPal.</td>
<td>Yes/No</td>
</tr>
<tr>
<td><strong>46. VOICEA</strong></td>
<td>What about communicating with a digital assistant, such as Alexa, Siri, or Google Assistant?</td>
<td>Yes/No</td>
</tr>
<tr>
<td><strong>47. HOMIOT</strong></td>
<td>What about interacting with household equipment or appliances that are connected to the Internet, such as a connected thermostat, light bulb, or security system? (If needed) [Do you/Does NAME] use the Internet to interact with household equipment or appliances?</td>
<td>Yes/No</td>
</tr>
<tr>
<td><strong>48. MEDINT</strong></td>
<td>(If multi-person household) Our remaining questions are about your household as a whole. (All) I’m going to ask a couple of questions about how [you have/your household has] used the Internet for health-related activities during the past six months.</td>
<td></td>
</tr>
</tbody>
</table>
49. **MEDDOC**

HHs w/ any Internet users, any location

[Do you/Does anyone in this household, including you,] communicate with a doctor or other health professional using the Internet?

(1) Yes
(2) No

50. **MEDREC**

HHs w/ any Internet users, any location

What about accessing health records or health insurance records online? *(If needed)* [Do you/Does anyone in this household] access health records or health insurance records online?

(1) Yes
(2) No

51. **MEDINF**

HHs w/ any Internet users, any location

[Do you/Does anyone in this household] research health information online, such as with WebMD or similar services?

(1) Yes
(2) No

52. **MEDMON**

HHs w/ any Internet users, any location

[Do you/Does anyone in this household] use an electronic health monitoring service that collects and sends data to your doctor or health care provider through the Internet? Examples include connected devices that monitor vital statistics, blood glucose levels, or blood pressure.

(1) Yes
(2) No

53. **UHHINT**

HHs w/ any Internet users, any location

*(If multi-person household)* We are interested in learning generally, without identifying specific people, what challenges your household has had while using the Internet.

*(If single-person household)* We are interested in learning what challenges you have had while using the Internet.

54. **PSPRE**

HHs w/ any Internet users, any location

During the past year, have concerns about privacy or security stopped [you/anyone in this household] from doing any of these activities online: *Read and select all that apply*

(1) Conducting financial transactions such as banking, investing, or paying bills online?
(2) Buying goods or services online?
(3) Posting photos, status updates, or other information on social networks?
(4) Expressing an opinion on a controversial or political issue on a blog or social network, or in a forum, email or any other venue?
(5) Searching for information using a platform such as Google Search, Yahoo Search, Microsoft Bing, or another web search engine?
(6) *(Do not read)* None of the above
55. PSCON
HHs w/ any Internet users, any location
Overall, what concerns [you/members of this household] the most when it comes to online privacy and security risks?
Do not read; select all that apply and/or enter verbatim response if other
(1) Identity theft
(2) Credit card or banking fraud
(3) Data collection or tracking by online services
(4) Data collection or tracking by government
(5) Loss of control over personal data such as email or social network profiles
(6) Threats to personal safety, such as online harassment, stalking, or cyber-bullying
(7) No concerns
(8) Other: ___________________________

56. PSCYBA
HHs w/ any Internet users, any location
During the past year, [have you/has any member of your household] experienced an online security breach, identity theft, or a similar crime?
(1) Yes
(2) No

57. CBULLY
HHs w/ any Internet users, any location
During the past year, has someone ever repeatedly used technologies, such as a smartphone, the Internet, or social media to hurt, harass, intimidate, or embarrass [you/any member of your household, including you]? Some examples of these actions include: Making fun of [you/them], calling [you/them] names, spreading rumors about [you/them] or trying to make others dislike [you/them], or purposefully sharing [your/their] private information, photos, or videos in a hurtful way.
(1) Yes
(2) No

If anyone goes online at home, go to 64. TVINT
Else go to 58. NHMINT

58. NHMINT
HHs w/ any Internet users, but none from home
You previously mentioned that [you/members of your household] use the Internet in some places, but not at home.

Go to 60. EVRHOM

59. NONINT
HHs w/o any Internet users from anywhere
(If multi-person household) Our remaining questions are about your household as a whole. We are interested in learning why households such as yours do not use the Internet.
(If single-person household) For our remaining questions, we are interested in learning why you do not use the Internet.
60. EVRHOM  [Have you/Has anyone in this household] ever used the Internet from home?  
HHs w/o any home Internet users  
(1) Yes  
(2) No  

61. NOHM  
HHs w/o any home Internet users  
(Version 1) What are the reasons why [you/members of your household] do not use the Internet at home?  
Read and select all that apply  
and/or enter verbatim response if other  
(1) Don’t need it or not interested  
(2) Can’t afford it  
(3) Not worth the cost  
(4) Can use it elsewhere  
(5) Not available in area  
(6) No computing device, or device inadequate or broken  
(7) Online privacy or cybersecurity concerns  
(8) Personal safety concerns  
(9) Household moved or is in the process of moving  
(10) Other: ____________________________  

(Version 2) What are the reasons why [you/members of your household] do not use the Internet at home?  
Open-ended  

If more than one 61. NOHM response is given, go to 62. PRINOH  
Else go to 63. LOPRCE
62. PRINOH
HHs w/o any home Internet users & more than one NOHM response

(Version 1) Of the reasons you just listed for not going online at home, which [do you/does your household] consider to be the most important?

Read previous responses if needed; Read and select best match and/or enter verbatim response if other

(1) Don’t need it or not interested
(2) Can’t afford it
(3) Not worth the cost
(4) Can use it elsewhere
(5) Not available in area
(6) No computing device, or device inadequate or broken
(7) Online privacy or cybersecurity concerns
(8) Personal safety concerns
(9) Household moved or is in the process of moving
(10) Other: ____________________________

(Version 2) Of the reasons you just listed for not going online at home, which [do you/does your household] consider to be the most important?

Open-ended

63. LOPRCE
HHs w/o any home Internet users

At what monthly price, if any, would [you/your household] buy home Internet service?

Enter number in dollars or zero if ‘none’

64. TVINT
All households

Our last few questions are about the use of cable TV and satellite TV services not accessed through the Internet.

65. TRADTV
All households

[Do you/Does anyone in this household] subscribe to cable TV or satellite TV? This often requires a cable box or satellite dish. Do not include TV streaming subscriptions, such as Netflix, Sling TV, or Hulu.

(1) Yes (End Interview)
(2) No (Go to 66. PREVTV)

66. PREVTV
HHs w/o any cable TV subscribers

[Have you/Has anyone in this household] ever subscribed to cable TV or satellite TV? Do not include TV streaming subscriptions, such as Netflix, Sling TV, or Hulu.

(1) Yes
(2) No
67. NOTV HHs w/o any cable TV subscribers

(Version 1) What are the reasons why [you/members of your household] do not subscribe to a service providing access to TV channels?

Read and select all that apply

and/or enter verbatim response if other

(1) Using Internet-based video services instead
(2) Don’t need it or not interested
(3) Can’t afford it
(4) Not worth the cost
(5) Can watch at another location
(6) Can watch using an antenna
(7) Not available in area
(8) No television, or television inadequate or broken
(9) Household moved or is in the process of moving
(10) Previously experienced poor customer service
(11) Previously experienced poor quality
(12) Other: _____________________________

(Version 2) What are the reasons why [you/members of your household] do not subscribe to a service providing access to TV channels?

Open-ended
5.4 APPENDIX D – Round 2 Cognitive Interview Protocol

2021 Computer and Internet Use Cognitive Interview Protocol - Round 2

Participant ID #: __________________________
Interview Date: | | | / | | | / | | | | (mm/dd/yyyy)
Interviewer initials: _____
Start Time: ____________ AM / PM End Time: ____________ AM / PM

Internet Group ________ No Internet Group ______

Split panel DEVQUA:
1-5 scale_______ Descriptive choices with text _______

Split panel NOHM/PRINHOH/NOTV
Open-ended_______ Close ended ______

CBULLY:
Paired proxy participant number_______________

Double-check that you have the following documents ready prior to the start of the interview:

- Correct IUS version (1-4) depending on counterbalance.
- Household Roster
- Link to QR study:

https://research.rm.census.gov/jfe/form/SV_0lHk7mG932lGEXb

All documents can be found in:

L:\Inter-group Projects\CPS Projects & Info\Supplements\Computer & Internet Use Supplements\Computer & Internet Use 2022\Data Collection Documents\Round 2
SECTION I: INTRODUCTION

Hello, my name is ________________, and I work for the Census Bureau. Thank you for agreeing to help us today. The Census Bureau counts the population in the U.S and also conducts different kinds of surveys.

Today, we are working on improving questions for a part of the Current Population Survey. You will help us test questions that ask about how members of your household use technology. It is important that these questions make sense, are easy to answer, and that everyone understands the questions the same way. Remember, there are no wrong answers, because only you know what you are thinking. Please answer these questions as you would if an interviewer had come to your home to complete the survey. Do you have any questions before we begin?

SECTION II: CONSENT FORM

VERBAL CONSENT

Before we start, I would like to inform you about your rights as a participant and also need to record whether or not you agree to participate. Please know that this interview will be recorded. Your identity will be kept confidential and will not be shared with anyone outside of this project. Your participation today is completely voluntary. You may decline to answer any particular question or stop the interview at any time.

Do you give oral consent to participate and for the interview to be recorded?

[AFTER PARTICIPANT SAYS YES]

Okay thank you. I’ll turn on the recorder now and ask again so that your consent is recorded.

[START RECORDING] Do you give oral consent to participate and for the interview to be recorded? [IF YES, CONTINUE TO SECTION III, IF NO, POLITELY END THE INTERVIEW AND CONTINUE TO SECTION VIII]

62
Okay, let’s get started. Please answer the questions as you would if an interviewer had come to your home.

Ask R1 – R11 for 1st HH member. Record information on Household Roster. Then ask for next HH member. Repeat for every member of HH.

**R1. NAME**

First I will ask you some questions about the people who live here. What are the names of all persons living or staying here? Let’s start with you.

**R2. SEX**

What is your/[NAME]’s sex?

1. Male
2. Female

**R3. REL**

*IF NOT PARTICIPANT:* How is [NAME] related to you?

1. Opposite sex spouse (husband/wife)
2. Opposite sex unmarried partner
3. Same sex spouse (husband/wife)
4. Same sex unmarried partner
5. Child
6. Grandchild
7. Parent
8. Brother/sister
9. Other relative (aunt, uncle, cousin, in law)
10. Foster child
11. Housemate/roommate
12. Roomer/boarder
13. Other nonrelative
14. DK
15. REF
99. self
R4. AGE
What is [your/NAME's] date of birth?

R5. EDUCATION
What is the highest level of school [you have /[NAME has]] completed or the highest degree [you have/[NAME has]] received?
1. 1st, 2nd, 3rd, or 4th grade
2. 5th or 6th grade
3. 7th or 8th grade
4. 9th grade
5. 10th grade, 11th grade
6. 12th grade, no diploma
7. High school graduate-high school diploma or equivalent
8. Some college – no diploma
9. Associates degree – occupational / vocational program
10. Associates degree – academic program
11. Bachelors degree (BA, BS, AB)
12. Master’s degree (MS, MA, MBA, MEd, MEng, MSW)
13. Professional degree (MD, DDS, DMV, LLB, JD)
14. Doctorate degree (PhD, EdD)

R6. HISPA
(Are/Is)(Name/You) Spanish, Hispanic or Latino?
1. Yes
2. No
3. Don’t Know  Go to R9. RACE
4. Refuse

R7. HISPB
(Are/Is)(Name/you) Mexican, Mexican American, Chicano, Puerto Rican, Cuban American, or some other Spanish, Hispanic, or Latino Group?
1. Mexican
2. Mexican American
3. Chicano  Go to R9. Race
4. Puerto Rican
5. Cuban American
6. Some Other  > Go to R8. O-HISP
R8. O_HISP  What is the name of (your/his/her) other Spanish, Hispanic, or Latino group?

R9. RACEA  I am going to read you a list of five race categories. Please choose one or more races that (NAME/you) (considers yourself/consider NAME/considers himself/considers herself) to be: White; Black or African American; American Indian or Alaska Native; Asian; OR Native Hawaiian or Other Pacific Islander.

1. White
2. Black or African American
3. American Indian or Alaska Native
4. Asian
5. Native Hawaiian or Other Pacific Islander
6. Other – DO NOT READ

Go to R11. Work

R10. RACEB  What is your race?

R11. WORK  LAST WEEK, did (name/you) do ANY work for (pay/either pay or profit)?

1. Yes
2. No
3. Retired
4. Disabled
5. Unable to work
SECTION IV: NTIA Computer and Internet Use Survey

We will now start the Computer and Internet Use Survey.

[SWITCH TO CPS IUS DOCUMENT AND ADMINISTER THE QUESTIONNAIRE]

SECTION V: COGNITIVE INTERVIEW

Now I’d like to ask you some questions about the answers you just provided.

First, I asked about the computers and other internet-connected devices that members of your household have used at least occasionally during the past 6 months. As a reminder, we were interested in devices used at any location, whether at home, work, school, a library, or anywhere else.

3. LAPTOP and 4. TABLET

Earlier I asked “does anyone in this household use a laptop computer.”
A. What does “laptop computer” mean to you in this question?
B. I also asked about whether anyone in this household uses a tablet or e-book reader. What does “tablet” mean to you in this question?
C. What does “e-book reader” mean to you in this question?

6. WEARABLE

[IF YES] Earlier I asked [Do you/Does anyone in this household] use a wearable device that is connected to the Internet, such as a smart watch or fitness band?
A. Tell me more about your answer. How does your device connect to the internet? What does it use the internet for?
8. DEVQUA

Earlier I asked “Thinking about all the different devices we just discussed, how well do the computers and other Internet-connected devices [you use/used by this household] work overall?”

A. Tell me more about your answer. How confident would you say you are about your answer?

B. [IF NOT EXPLICITLY STATED] Is your answer an average? [IF YES] How did you come up with your average? How difficult was it to come up with an average?

C. What does the phrase “work overall” mean to you in this question?

D. What does “Wi-fi router” mean to you in this question? [IF R KNOWS WHAT A WI-FI ROUTER IS] Were you thinking of wi-fi routers when answering this question?

9. DEVSTA

Earlier I asked “During the last six months, how often were [you/members of your household] unable to use a computer or other Internet-connected device because it was in use by someone else, located elsewhere, or otherwise inaccessible.

A. [FOR single-person HHs] Tell me more about your answer.

[FOR MULTIPERSON HHs: FOR EACH PARTICIPANT’S OTHER HOUSEHOLD MEMBER] (the randomly selected person)

- How did you come up with your answer(s) for other members of the household?
  - [IF NEEDED] Please say more about how you know whether [NAME] was unable to use a computer or other Internet-connected device.
  - [IF NEEDED] How did you come up with the number of times it happened?
  - [PROBE AS NEEDED UNTIL PARTICIPANT PROVIDES COMPLETE AND CODEABLE RESPONSES. DOCUMENT CODE(S) AND QUALITATIVE DESCRIPTIONS TO SUPPORT THE CODE]:
    - Direct knowledge/direct experience – witnessed [NAME] being unable to use a computer or other Internet-connected device
    - Indirect knowledge – Was told about it by [NAME] of being unable to use a computer or other Internet-connected device these experiences, etc.
    - Inference – Neither witnessed or was told by [NAME], but saw evidence of [NAME] being unable to use a computer or other Internet-connected device
B. Thinking about this question I just asked about devices being available to use, how important is this to you personally?

- On a scale of 1 to 5, where 1 is not at all important and 5 is very important, how important is it to you to have devices be available for you to use? Please tell me more about that.

10. INTINT

One of the questions in the survey asked you about the places where you used the Internet at least occasionally during the past six months. I asked you whether you accessed the internet at home, at work, at school, at a coffee shop, etc.

A. When answering these questions, did you consider whether you used your own data, or whether you used the location’s Wi-Fi? Or did you answer these questions regardless of how you accessed the Internet?

13. INSCHL

[IF PARTICIPANT REPORTS ACCESSING THE INTERNET AT SCHOOL]

A. During the survey, you said that you access the Internet at school. Can you please tell me a little more about the purpose of accessing the Internet at school?

[IF R REPORTED USING DIAL-UP]:

24. HOMTE

Earlier I asked you about the ways people access the internet from their homes. “Dial up” is one of the different ways that people may use to access the Internet at home.

A. In your own words, can you please tell me what ‘dial up” means to you when talking about ways to access the internet from home?

B. Can you please tell me about your experience using dial-up to access the internet at home?
C. Which company do you use for dial-up service?

26. HNETCA

One of the questions in the survey asked about whether your Internet connection at home fills your needs for speed, reliability, and data caps.

A. How difficult was it to come up with your answer?

B. Can you please tell me what “reliability” means to you in this question?

C. What about data caps? What does “data caps” mean to you in this question.

D. In your own words, please describe the things about your Internet connection that are important to you to when using it to go online.

27. HNETST

One of the questions in the survey asked whether at any point during the past six months you lost your home Internet connection temporarily due to difficulty paying.

A. [IF R REPORTS “YES”] Tell me more about your answer.

B. In this question, what does the word “temporarily” mean to you?

C. In this question, what does the phrase “home internet connection” mean to you?

D. [IF HH ONLY USES MOBILE DATA PLANS (HOMETE = NONE)]: Did you consider your mobile data plan(s) when answering this question?

E. For this question, what does “difficulty paying” mean to you?

30. TEXTIM

[IF YES] Earlier I asked [Do you/Does NAME] text or use instant messaging. Are you/Is NAME doing text messaging, instant messaging, or both?

A. [IF EITHER INSTANT MESSAGING OR BOTH] Tell me more about your answer. What are you/is NAME using to do instant messaging?

41. USESVC
Earlier I asked a question about whether you/your household uses services like Uber, DoorDash, Instacart, Airbnb, or Angie’s List.

A. Have heard of all of them or are there some that you have not heard of before? [IF SOME NOT HEARD OF BEFORE] Which ones?

45. FINANC

Earlier I asked a question about whether you/someone else use the internet for financial services such as banking, investing, paying bills online, or sending money to other people.

A. [IF PARTICIPANT REPORTS “YES”] Tell me more about your answer.

54. PSPRE

One of the questions asked whether during the past year, you or anyone in your household stopped doing different activities online due to concerns about privacy or security.

A. In this question, what does “stopped doing the activities” mean to you? [We want to know whether participants understand that we mean stopped on a particular occasion or switched to another means of the activity, rather than not doing the activity at all.]

[Some examples of the activities in this question included]:

(1) Conducting financial transactions such as banking, investing, or paying bills online?
(2) Buying goods or services online?
(3) Posting photos, status updates, or other information on social networks?
(4) Expressing an opinion on a controversial or political issue on a blog or social network, or in a forum, email or any other venue?
(5) Searching for information using a platform such as Google Search, Yahoo Search, Microsoft Bing, or another web search engine?

57. CBULLY

A. [IF A SINGLE PERSON HH] Tell me more about your answer.

B. [IF PROXY PAIR] One of the questions asked whether someone ever repeatedly used technologies, such as a smartphone, the Internet, or social media to hurt, harass, intimidate, or embarrass [you/any member of your household, including you].

• How did you come up with your answer(s)?
  o [IF NEEDED] Please say more about how you know whether someone ever repeatedly used technologies, such as a smartphone, the Internet, or social
media to hurt, harass, intimidate, or embarrass [you-any member of your household, including you].

- [IF NEEDED] How did you come up with the number of times it happened for [NAME]?
- [IF NEEDED] Have you discussed these topics with [NAME] before?
- [PROBE AS NEEDED UNTIL PARTICIPANT PROVIDES COMPLETE AND CODEABLE RESPONSES. DOCUMENT CODE(S) AND QUALITATIVE DESCRIPTIONS TO SUPPORT THE CODE]:
  - Direct knowledge/direct experience – witnessed [NAME] being hurt, harassed, intimidated, or embarrassed online, etc.
  - Indirect knowledge – Was told about it by [NAME] of these experiences, etc.
  - Inference – Neither witnessed or was told by [NAME], but saw evidence of one or more of these events.

C. Thinking about this question I just asked about experiences of online harassment, intimidation, or embarrassment, how important are these topics to you personally?

- On a scale of 1 to 5, where 1 is not at all important and 5 is very important, how important are these topics to you?

61. NOHM, and 62. PRINHOH:

[IF RESPONSE TO NOHM AND PRINHOH DO NOT INCLUDE “INABILITY TO AFFORD”]:

One of the questions asked reasons why [you/members of your household] do not use the Internet at home.

A. Is being unable to afford the internet at home a reason at all?

  [IF YES] Is this reason a bigger reason than the other reason(s) you mentioned before?

B. Were there any other reasons why [you/members of your household] do not use the Internet at home, but haven’t mentioned yet?

C. [IF PARTICIPANT ONLY GAVE ONE ANSWER]. When answering this question, did you know that you could have said multiple reasons? Or did you think you should only select one reason?

63. LOPRCE:
Earlier I asked you about what monthly price, if any, would [you/your household] buy home Internet service.

A. Tell me more about your answer. [IF NEEDED] How did you come up with the price? What did you think about when coming up with the price?

SECTION VI: Debriefing Questions

How easy or difficult was it to answer questions for [YOU/NAME].

Do you think other people might find any of these questions to be sensitive?

- [IF YES] Which ones?
- [IF NEEDED] What about the question do you think people would find sensitive?

Is there anything else you would like to tell us that you haven’t had a chance to mention yet?

SECTION VII: QR CODE STUDY

Now I’d like shift gears a bit. I have a couple of questions for you, and like other questions we asked you today, there is not a right or wrong answer. I just want to know what you think.

I am going to send you a link through the Teams chat and then I will ask you to share your screen with me. Please make sure that you have closed anything in your computer that you would not like me to see.

[Copy and paste Qualtrics link into Teams chat:]
https://research.rm.census.gov/jfe/form/SV_0IHk7mG932IGEXb

Qualtrics will contain all the images in order. Ask participant to share their screen (click the square with arrow pointing up)]

1. [For Figure 1]

A. Are you familiar with what this is?

B. IF NEEDED: Could you tell me about what you know about it?

C. Have you ever used one of these?
D. **IF YES: How often?**

2. [For Figure 2]

Please advance to the next page.

A. If you received this in the mail and decided to respond to the survey, what would you do?

B. **IF NEEDED: How would you access the survey using the QR code?**

Next, I’m going to show you a few different versions of this mailer. The only thing that will change are QR code instructions. Please advance to the next page.

3. [For Figure 3]

A. In your own words, what do these instructions tell you to do? What would you expect to happen if you followed these instructions?

B. **IF NEEDED: How would you access the survey using the QR code?**

4. [For Figure 4]

Please advance to the next page.

A. In your own words, what do these instructions tell you to do?

B. **IF NEEDED: How would you access the survey using the QR code?**

5. [For Figure 5]

Please advance to the next page.

A. In your own words, what do these instructions tell you to do? Walk me through what you would do if you were to follow these instructions.

6. [Show screen with Figures 3, 4, 5 on it.]

Please advance to the next page.

A. Of all the instructions I showed you, which do you prefer? Why?

B. Were any more informative than others? Where any more confusing than others? Would you expect anything different to happen based on the instructions provided?

Those are all the questions I have for you. Thank you for participating in this study. Your feedback has been very helpful.

**TURN OFF TAPE RECORDER**
SECTION VIII: COMPENSATION FOR PARTICIPATION

[Instructions for participants with access to Internet]

In a few minutes, you will receive an email with a link. Please follow that link so you can provide the information necessary to receive the compensation for your participation. Thank you.

[Instructions for participants without access to Internet]

We will mail you your compensation for your participation to the address you gave when you were interviewed to see if you were eligible to participate. Thank you.