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Subject: Assessment of Language Needs and Language Assistance Resources
in the 2006 – 2008 Computer Assisted Telephone Interviewing
Operation

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Attached are the final results of an assessment of the language needs and the language assistance resources in the 2006 – 2008 Computer Assisted Telephone Interviewing (CATI) operation. This is the first assessment of its kind to document ACS CATI language needs over a three-year span of full sample size, and is meant to provide the telephone center staff with information that will be valuable in making recruitment and hiring decisions.

For each year, two sets of monthly CATI-eligible language workloads were estimated. The first set estimates the monthly number of households eligible for CATI that may have a general language need or preference for a given language (language workloads), while the second set estimates the monthly number of households eligible for CATI that are likely to have a critical language need (linguistically isolated language workloads). These estimated workloads by language are compared with the number of call center interviewers that are available to conduct interviews in a particular language.

Although the linguistically isolated language workload is roughly less than ten percent of the household language workload, analyzing the needs of linguistically isolated households to make language assistance services available to them is critical for obtaining quality data in the ACS.

Major findings:

- We estimate that approximately 4,000 CATI cases each month require language support. In 2008, there were 18 languages that made up 95.4 percent of the total linguistically isolated workload. Another 21 languages made up the remaining 4.6 percent.
- Changes in monthly linguistically isolated language workloads were moderate over 2006 to 2008, except for the increase in the Spanish linguistically isolated workload.
- The Census Telephone Center interviewers support at least ten of the top fourteen linguistically isolated languages of 2008. Overall, the telephone center is satisfactorily equipped with the necessary language skills to accommodate a wide range of linguistically isolated languages.

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Assessment of Language Needs and Language Assistance Resources in the 2006 – 2008 Computer Assisted Telephone Interviewing Operation

FINAL REPORT

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EXECUTIVE SUMMARY

Objective

After the ACS moved to full sample size, the language needs of the cases assigned to the Computer Assisted Telephone Interviewing (CATI) operation and the language resources of the Census Telephone Centers were to be assessed for future hiring and recruitment decisions.

Methodology

This evaluation estimates the specific language needs of households interviewed in CATI and households that were eligible to be interviewed in CATI but were not interviewed due to a refusal, a language barrier, or for some other reasons. Data from January 2006 to December 2008 are analyzed in two ways: by household language (a need or preference) and by linguistic isolation (a critical need). Edited data from ACS completed CATI and CAPI interviews are used to estimate these language needs. Language resources are measured by assessing the language-speaking abilities of ACS telephone interviewers.

Research Questions and Results

1. What are the estimated CATI-eligible language workloads?

Each month about 13,000 of the 58,000 CATI-eligible cases involve a language other than English. The Spanish workload made up 15.4 percent of the total CATI-eligible language workload in 2008. Other languages' workloads contributed 0.6 percentage points or less each.

2. How have these workloads changed over time?

The total non-English language workload increased by about 1,000 cases each month from 2006 to 2008, a majority of which were Spanish. Other non-English workloads averaged a similar percent increase.

3. What are the estimated CATI-eligible linguistically isolated language workloads?

Approximately 4,000 of the CATI-eligible cases each month are considered linguistically isolated. About 73 percent of the total CATI-eligible linguistically isolated language workload was linguistically isolated in Spanish in 2008. Twelve languages other than Spanish had monthly linguistically isolated language workloads of 30 or more.

4. How have these workloads changed over time?

The linguistically isolated Spanish workload increased by about 7 percent between 2006 and 2008. The rate of change varied across language groups with some groups showing workload decreases and others showing rates of increase of over 10 percent.

5. How do the estimated CATI-eligible language workloads and estimated CATI-eligible linguistically isolated language workloads compare with CATI language assistance resources?

The top language needs are being addressed by staff in the Census Telephone Centers. In striving to expand ACS language assistance services in CATI for those who need it, gaps in resource coverage of the top linguistically isolated languages are noted.

1. BACKGROUND

1.1. What is the American Community Survey?

The American Community Survey (ACS) is a relatively new, national survey conducted by the U.S. Census Bureau that produces detailed demographic, socioeconomic, and housing characteristics. ACS data have been continuously collected since 2000, but in January 2005, the survey reached full-sample size. In this study, we will concentrate on data obtained from the housing unit population, of which the ACS samples roughly 3 million addresses from annually.

The annual ACS sample is partitioned into 12 monthly sample panels with each panel having a three-month interview period. One sample panel consists of three sequential data collection modes; mail, telephone, and personal visit; each taking a month for completion.¹ Each calendar month a new ACS sample panel is started so that in every month of the year all three data collection modes are running simultaneously (see Figure 1 below).

Figure 1. Sample Panel Structure.

		Calendar Month				
		Jan-06	Feb-06	Mar-06	Apr-06	May-06
Sample Panel	Nov-05	Personal Visit				
	Dec-05	Telephone	Personal Visit			
	Jan-05	Mail	Telephone	Personal Visit		
	Feb-05		Mail	Telephone	Personal Visit	
	Mar-05			Mail	Telephone	Personal Visit

Every data collection mode includes some level of language assistance primarily to help householders with limited English skills complete the ACS. This paper focuses on the workloads and language assistance resources associated with the intermediate mode of data collection, which uses Computer Assisted Telephone Interviewing (CATI) methods and is coordinated out of three Census Telephone Centers. For more information on the data collection operations, consult the ACS Design and Methodology Report.²

1.2. Computer Assisted Telephone Interviewing

Sample cases that have a mailable address but did not respond by mail and have a landline telephone number are eligible for CATI. A mailable address is adequate for delivery by the United States Postal Service. Following the mail mode, telephone center staff complete as many phone interviews as possible before passing the remaining workload on for consideration in the Computer Assisted Personal Interviewing (CAPI) operation. It is ideal to obtain as many interviews by mail and by telephone not only because it is more economical, but also because many cases are subsampled out prior to beginning the CAPI mode.

¹ Mail returns are accepted during all three data collection modes.

² U.S. Census Bureau. *Design and Methodology*. Washington, D.C.: U.S. Government Printing Office, 2009.

The total CATI workload is shared among the three call centers in Jeffersonville, IN; Hagerstown, MD; and Tucson, AZ. Sample cases are pooled into the WebCATI system, which is a computerized phone system that dispenses these cases to CATI interviewers as they become available. CATI interviewers call phone numbers distributed by the system and ask the respondent to complete an ACS interview. If the interviewer encounters a language barrier, the interviewer tries to determine the language spoken by the person, hangs up, and records that case as having a particular language need. The system then dispatches these cases to a CATI interviewer who speaks the required language.

1.3. Computer Assisted Personal Interviewing

At the end of one month of telephone interviewing, all CATI noninterviews are eligible for CAPI, but only a subsample of these noninterviews become part of the CAPI workload. Noninterviews after CATI are sample cases that were eligible for the mail and CATI modes, but from which no survey data was obtained. This includes refusals, language barriers, and cases with bad telephone numbers. Approximately 1 in 3 of these CATI noninterviews are sampled for personal interviewing.

In the CAPI mode, field representatives travel to sample addresses to conduct the ACS interviews in person. Other resources including community groups and additional field representatives that are skilled in multiple languages are available to the field representatives.

2. INTRODUCTION

Early in the decade the Census Bureau completed assessments of the staffing of the regional offices relative to their projected language workloads. The Race and Ethnic Advisory Committee and the 2010 Census Advisory Committee found these comparisons to be very useful and requested that the Census Bureau repeat these analyses once the ACS moved to full sample. They also requested that similar comparisons be conducted based on the telephone center staffing. Updated information on language workloads and staffing resources can provide the telephone centers with important information for recruitment and hiring.

This report is intended to document CATI language needs and resources and to provide an overview of how specific language needs are changing in the CATI operation. This information will be useful for the call centers as they make recruitment decisions and contribute to the discussion of how to improve the quality of ACS data from households that require language assistance.

3. RESEARCH QUESTIONS

This study focuses on the following questions regarding language needs and language resources in the CATI data collection mode:

- What are the estimated, CATI-eligible language workloads?
- How have these workloads changed over time?
- What are the estimated, CATI-eligible, linguistically isolated language workloads?
- How have these workloads changed over time?
- How do the estimated, CATI-eligible language workloads and the estimated, CATI-eligible, linguistically isolated CAPI language workloads compare with CATI language assistance resources?

4. METHODOLOGY

4.1. Defining the 2006 – 2008 CATI-Eligible Universe

Analysis for this study is based on data collected from the housing unit population in the United States from January 2006 through December 2008 in the CATI and CAPI operations. We aimed to estimate the number of sample cases, by their language need, that were eligible to be interviewed in CATI. The universe is the sum of all sample cases that were interviewed in CATI and the weighted sum of cases that traveled through the CATI mode but were interviewed in CAPI. Cases that passed through CATI but were later interviewed in CAPI were weighted to account for the cases not selected for personal interviewing after the telephone phase finished. The weighted number of CATI-eligible cases that were interviewed in CAPI excludes vacant and temporarily occupied housing units because population data, which are used to determine language need, are not collected from them.³

4.2. Defining Household Language

Survey data collected from the language spoken at home survey question were used to identify a “household language” for each interviewed household. The question regarding language spoken asks, “Does this person speak a language other than English at home?” If the respondent answers “yes”, then one of the follow-up questions asked is, “What is this language?” This is not to be confused with the CATI/CAPI instrument’s prompt at the end of a survey that asks the interviewer to indicate the language that the interview was conducted in. The language spoken at home question that was used to calculate household language is within the survey itself.

Since the language-spoken question is open ended, many different responses are given. Instead of using all 400 identified language responses, we recoded language spoken so that all responses fall into a 40-category grouping. Using the recoded language spoken categories, a household language category was assigned to each CATI-eligible interview. For our analysis,

³ Temporarily occupied housing units are units that, when they are interviewed in CAPI, have no people living there who qualify, per ACS residence rules, to be included at that unit. Unlike a vacant unit, someone is there, but does not live there for more than 2 months out of the year.

household language was defined as the first non-English language spoken by either the reference person, husband/wife, father/mother, brother/sister, son/daughter, grandchild, in-law, other relative, unmarried partner, housemate/roommate, roomer/boarder, foster child, other nonrelative in that order (only considering household members age 5 and older). If no household members report speaking a language other than English at home, then that housing unit is labeled as having a household language of English. Note that this is a generous definition of household language and would identify a household as having a household language if only one of the members (even a roomer/boarder) reported speaking a language other than English at home.

4.3. Defining Linguistic Isolation

If a respondent answers the language spoken question by saying that they speak a language other than English at home, a follow-up question about English proficiency is asked: “How well does this person speak English?” with four response options: “very well”, “well”, “not well”, and “not at all”. A linguistically isolated household is defined as a household where no household member age 14 or over speaks only English or speaks another language and speaks English “very well”. It is a household in which all adults have some limitation in communicating in English. This definition of linguistic isolation is the same as the one used in Census 2000.

The ACS question on English-speaking ability captures the respondents’ own assessment of their English-speaking ability. The Census Bureau uses the distinction of those who report speaking English less than “very well” as having some difficulty with the English language, based on a 1982 study on the English Language Proficiency Survey (ELPS), which found that those who spoke English less than “very well” had some difficulty with the tests administered in the ELPS. However, no study has been conducted to measure the performance of the ACS question on English-speaking ability since the 1982 ELPS (Kominski, 1989).

4.4. Estimating Language Needs

Estimating language needs was a two-part process. First, edited ACS data production files were used to calculate the household language and linguistic isolation status for each sample case in the universe. Edited files contain some values that have been imputed to account for survey item nonresponse. The imputations are based on the most probable response given the housing unit’s reported demographic, socioeconomic, and geographic characteristics. In our study, the use of edited data means that imputed responses to the language spoken at home and English proficiency questions were used. Due to the low item nonresponse rates for these questions, using edited ACS production files does not impose a considerable limitation on this study.⁴

Second, the CATI-eligible CAPI interviews were weighted using only their CAPI subsampling factors to estimate the language characteristics of all the CATI nonrespondents

⁴ Item allocation rates have increased over 2006 – 2008, but they are still low. In 2008, the items “speaks another language at home”, “language spoken”, and “English ability” had respective item allocation rates of 3.1, 5.3, and 3.9 percent.

including those that were subsampled out of CAPI. Estimating the CATI nonrespondents this way allows us to infer their unknown linguistic characteristics. Adding together the actual number of CATI interviews and the weighted sum of CATI-eligible CAPI interviews, we produced an estimate of the number of sample households in the universe that were or could have been interviewed in CATI.

For example, say that in March 2006 there were 2,000 completed telephone interviews and in April 2006 there were 1,000 completed personal interviews. If we determine that 800 of the completed personal interviews were CATI-eligible, we apply the CAPI subsampling weights to estimate that about 2,400 (800×3) cases were once in CATI.⁵ The CATI-eligible language workload is defined as the sum of the cases interviewed in CATI and the weighted sum of the cases that passed through CATI but were interviewed in CAPI, so in this case the CATI-eligible language workload would be 4,400 ($2,400 + 2,000$) cases.

The sum of these cases for each year yields an annual CATI-eligible language workload. Since data collection workloads are typically reported monthly and not annually, we divided the estimated annual workloads by twelve to produce monthly CATI-eligible language workloads. These workloads are intentionally weighted using only the CAPI subsampling factors so that, given our current sample design, the number of CATI-eligible cases can be estimated. Since the data are not weighted to represent the U.S. population, our language workloads do not reflect national language characteristics and should not be used to do so.

4.5. Assessing Language Assistance Resources

Language resources refer to the number of telephone interviewers with specific language skill sets. The National Processing Center supplied data, collected by the WebCATI system, on the language skill sets of the Census Telephone Centers' interviewers in early June 2009 to serve as a snapshot of the current language resource status in CATI. Language assistance resource data should be interpreted keeping in mind that the reported numbers represent the status of interviewer language skill sets as of one point in time. The data should be used only as an indicator of the estimated language assistance resource distribution. These numbers are unofficial and do not accurately represent language resources in 2009 or even in June 2009 since staffing is in constant flux.

5. LIMITATIONS

Recall that the universe for this study is defined as the sum of all sample cases that were interviewed in CATI and the weighted sum of cases that passed through CATI but were interviewed in CAPI. One limitation comes from that fact that weighted sum of cases that passed through CATI but were interviewed in CAPI do not account for the CATI-eligible

⁵ For this example we use 3 as a subsampling weight. For the analysis we used the actual weights, which varied across geography.

cases that resulted in a noninterview in CAPI. However, since the CAPI noninterview rates for 2006 to 2008 were 5.06 percent and less, we do not consider this to be a major limitation.⁶

Second, the CATI-eligible language workloads are a high estimate of actual number of cases that could have responded in CATI because sometimes cases that are eligible for CATI will never respond or cannot respond in CATI. Such instances include cases where household members screen their calls and do not pick-up, or in cases where household members are not home when the interviewer calls. These cases could be considered unreachable and if there was a way to differentiate them from the true CATI-eligible cases, we might exclude them from the universe. Since we have no way of identifying these “unreachable” cases, they remain accounted for in the CATI-eligible language workload estimates. For our purposes, this is not a major limitation.

6. RESULTS

6.1. What are the estimated CATI-eligible language workloads?

The CATI-eligible language workloads estimate the number of households that were interviewed or could have been interviewed in CATI, categorized by their potential language need. Included in this measure are households that need language assistance because no household member speaks English well or at all, households that might simply prefer to respond in a non-English language although they are capable of completing an interview in English, and households with a single household member who speaks a language other than English. For these reasons, the language workload is a generous estimate of the number of cases likely to use language assistance.

The total CATI-eligible language workload is the estimated sum of all languages’ CATI-eligible workloads, which is similar to, but not an estimate of, the operational CATI workload. The operational CATI workload is the monthly aggregate of the cases delivered to CATI after the mail mode, despite their outcome.

Table 1 displays the average monthly English only, Spanish, and other language workloads in 2008 and their proportions relative to the total language workload.

⁶ Cepietz, Erica. “American Community Survey and Puerto Rico Community Survey: 2008 Housing Unit Response Rates and Margins of Error by Mode.” Memo to Susan Schechter, Chief, American Community Survey Office, U.S. Census Bureau. 14 Sept 2009.

Table 1. CATI Average Monthly Language Workloads in 2008

Household Language	2008 Average Monthly Language Workload	Percent of 2008 Average Monthly Language Workload
English only	44,746	76.9
Spanish & Creole	8,969	15.4
All Other Languages	4,439	7.7
Total	58,154	100.0

In 2008, the English only language workload represented 76.9 percent of the total language workload. Nationally, this amounted to about 45,000 cases out of 58,000 CATI sample cases each month that require only English-speaking interviewers. The Spanish language workload was 15.4 percent of the total language workload and accounted for nearly 9,000 cases per month. The combined non-English, non-Spanish monthly language workloads totaled 4,439, with estimated language workloads ranging from 363 to 18 cases per month. For detailed language workloads information see Attachment 1.

Attachment 1 of this report displays the average monthly language workloads for 2006, 2007, and 2008 along with the proportion of each language workload relative to the total language workload. Additionally, the change in workloads over 2006 to 2008 is given in absolute terms in the last column of the table. Household languages are shaded from light to dark corresponding with whether the average monthly language workload is 100 or more cases per month, 50 to 99 cases per month, or less than 50 cases per month.

Table 2 summarizes the top non-English, non-Spanish language workloads. These languages had estimated monthly language workloads of 200 or more. Keep in mind that these language workloads generously estimate the number of cases that might need language assistance.

Table 2. Top Non-English, Non-Spanish Language Workloads in 2008

Household Language	2008 Average Monthly Language Workload
French incl. Patois & Cajun	363
Chinese	356
German	248
Tagalog	246
Vietnamese	233
Russian	222
Korean	220

The top non-English, non-Spanish language workloads are very close together, ranging from 363 cases per month for the French workload to 220 cases per month for the Korean workload. Other top non-English, non-Spanish language workloads are Chinese, German, Tagalog, Vietnamese, and Russian.

By expanding the view to all language workloads, one will get a sense of the language need distribution by looking down the percent of average monthly workload column. In 2008, each of the non-English, non-Spanish language workloads ranged from 0.6 percent to less than 0.1 percent of the total number of CATI-eligible sample cases.

6.2. How have these workloads changed over time?

Table 3 shows the change in English, Spanish, and other language workloads from 2006 to 2008 in terms of absolute change and percentage change. The 2008 estimated total CATI-eligible language workload was about 4,000 cases larger than the 2006 total CATI-eligible language workload.

Table 3. Change in Language Workloads (2006 – 2008)

Household Language	2008 Avg Monthly Language Workload - 2006 Avg Monthly Language Workload	Percentage Change in 2006 to 2008 Average Monthly Language Workload (%)
English only	2,945	7.0
Spanish & Creole	779	9.5
All Other Languages	325	7.9
Total	4,049	7.5

By looking at Table 3, one can see that the English only language workload showed the smallest percentage change in workload over 2006 to 2008. The English only language workload increased by 7.0 percent over 2006 to 2008 while the Spanish and other language workloads increased by 9.5 and 7.9 percent, respectively. The faster growth of the non-English workloads may be due to an increase in the foreign-born population over 2006 to 2008. ACS data show that the foreign-born population grew by 1.21 percent, or 451,190 people, over 2006 to 2008. During this time, an average of 84.4 percent of the foreign-born population reported that they speak a language other than English at home.⁷

Individually speaking, nearly all of the other language workloads increased from 2006 to 2008. Table 4 lists language workloads that changed by 20 cases per month or more. For a detailed list of the language workloads changes, consult Attachment 1.

⁷ Derived from data in the 2006, 2007, and 2008 ACS detailed tables ‘C16005. Nativity by Language Spoken at Home by Ability to Speak English for the Population 5 Years and over’.

Table 4. Changes in Other Language Workloads (2006 – 2008)

Household Language	2008 Avg Monthly Language Workload - 2006 Avg Monthly Language Workload
Tagalog	38
Vietnamese	31
French Creole	27
African Languages	22
Hindi	21
Other Indic	20

6.3. What are the estimated, CATI-eligible, linguistically isolated language workloads?

Linguistically isolated language workloads indicate the number of households that are probably not able to respond to, or understand, an interviewer that only speaks English. Although the linguistically isolated language workload is, nationally, less than ten percent of the total language workload, analyzing the language needs of these households and making language assistance services available according to top language priorities is critical for obtaining quality data in the ACS. It is assumed that most linguistically isolated households require language assistance in order to accurately answer ACS survey questions.

Table 5 displays the average monthly linguistically isolated language workloads in the 2008 CATI operation along with two columns of percentages. One column designates the percentage of each linguistically isolated language workload relative to the total language workload and another gives the percentage of each linguistically isolated language workload relative to the total linguistically isolate language workload.

In 2008, the CATI-eligible, linguistically isolated language workload made up 7.0 percent of the total estimated CATI-eligible language workload. Nationally, this amounted to about 4,000 linguistically isolated cases per month, which seems very small compared to the total language workload of over 58,000 cases per month (see Table 1). As one may have suspected, the Spanish linguistically isolated language workload was, by far, the largest linguistically isolated language workload; in 2008, it represented 73.5 percent of the total linguistically isolated workload and 5.1 percent of the total language workload.

The remainder of the CATI-eligible, linguistically isolated workload in 2008 consisted of many linguistically isolated language workloads each with a small number of cases per month. Of these workloads, those with more than 40 cases per month are included in Table 5.

Table 5. CATI Average Monthly, Linguistically Isolated Language Workloads in 2008

Household Language	2008 Average Monthly Linguistically Isolated Language Workload	Percent of 2008 Average Monthly Language Workload	Percent of 2008 Average Monthly Linguistically Isolated Language Workload
Spanish & Creole	2,989	5.1	73.5
Chinese	169	0.3	4.2
Russian	103	0.2	2.5
Korean	69	0.2	2.4
Vietnamese	86	0.1	2.1
Polish	53	0.1	1.3
French Creole	52	0.1	1.3
African Languages	45	0.1	1.1
All Other Languages	502	0.8	11.6
Total	4,068	7.0	100.0

Note that in 2008 the largest CATI linguistically isolated language workloads differ from the largest language workloads. For example, the French, German, and Tagalog language workloads fell down the rankings on the linguistically isolated language workload list compared to their rankings on the language workload list (see Table 2). This observation is not unique to the year 2008, but rather it is true for 2006, 2007, and 2008. This is explained by the fact that language workloads in Table 2 include households that speak English in addition to a given language. To meet the needs of linguistically isolated households and lessen the linguistically isolated workload in CAPI, it is important that the ACS give priority to the language needs of the linguistically isolated language workloads.

For details on all CATI-eligible, linguistically isolated languages workloads see Attachment 2. The attachment displays the average monthly linguistically isolated language workloads for 2006, 2007, and 2008 along with two columns of percentages. One column designates the percentage of each linguistically isolated language workload relative to the total language workload and another gives the percentage of each linguistically isolated language workload relative to the total linguistically isolated language workload. The very last column in the table exhibits the change in the average monthly linguistically isolated language workloads over 2006 to 2008. Household languages are shaded from light to dark corresponding with whether the average monthly workloads is 30 or more cases per month, 10 to 29 cases per month, or less than 10 cases per month.

6.4. How have these workloads changed over time?

The CATI-eligible linguistically isolated language workload increased at about the same rate as the total language workload. However, in terms of actual number of cases, the increase in the total linguistically isolated language workload was much smaller than that of the total language workload due to the fact that the total linguistically isolated language workload is a small percentage of the total language workload.

Table 6 shows the linguistically isolated language workloads with changes of more than 5 cases per month from 2006 to 2008.

Table 6. Changes in Linguistically Isolated Language Workloads (2006 – 2008)

Household Language	2008 Avg Monthly LI Language Workload - 2006 Avg Monthly LI Language Workload
Spanish & Creole	191
Chinese	25
Korean	11
Other Indic	9
Armenian	8
African Languages	6
French Creole	6
Portuguese and Creole	-9
All Other Languages	28
Total	275

The total monthly CATI-eligible linguistically isolated language workload increased by 275 cases from 2006 to 2008. Of that increase, 191 cases (69.5 percent) are attributable to the linguistically isolated Spanish language workload increase. All other linguistically isolated language workloads increased by 25 or fewer cases, some of which are listed in Table 6. Changes for all language workloads can be found in Attachment 2.

As was the case with the CATI-eligible language workloads, the CATI-eligible linguistically isolated language workloads did not necessarily increase each year. In 2008, the CATI-eligible linguistically isolated language workload decreased from an unusually high total in 2007. This might be due to the fluctuation in the linguistically isolated foreign-born population over 2006 to 2008. ACS detailed tables show that from 2006 to 2007 the linguistically isolated foreign-born population increased by 1.44 percent or 281,761 people, and then from 2007 to 2008 it decreased by 0.74 percent or 146,253 people.⁸

6.5. How do the estimated CATI-eligible language workloads and linguistically isolated language workloads compare with CATI language assistance resources?

Table 7 (on the next page) shows for each household language, the 2008 average monthly language workload range compared with the number of CATI interviewers with that language skill. The language workload range serves as a fair estimate for the number of households that could respond to CATI in a given language where the lower bound indicates the number

⁸ The 2008, 2007, and 2006 ACS detailed tables ‘C16005. Nativity by Language Spoken at Home by Ability to Speak English for the Population 5 Years and over’ show there were 19,644,730; 19,790,973; and 19,509,212 linguistically isolated foreign born in 2008, 2007, and 2006, respectively.

of cases that are likely to need language assistance and the upper bound indicates the number of cases that either need or may prefer language assistance. Therefore, the range given in the table has its lower bound equal to the 2008 linguistically isolated CATI language workload and its upper bound equal to 2008 CATI language workload. Household languages are sorted in descending order by the CATI-eligible linguistically isolated language workload and are shaded from light to dark corresponding with whether their average monthly workload is 20 or more cases per month, 10 to 29 cases per month, or less than 10 cases per month.

By looking at the last column in the table, one can see that the interviewers' language skill sets span many languages. The top five linguistically isolated languages and 14 other household languages are supported in CATI by 184 interviewers who speak languages other than English. In striving to expand language assistance services to meet the needs of the public, gaps in resource coverage of the top linguistically isolated languages are, however, noted. Table 7 shows that Polish, French Creole, Other Indic languages, Armenian, Other Asian languages, and Other Slavic languages are top linguistically isolated languages that were unsupported. These are some of the same languages that showed substantial increases in their linguistically isolated workloads from 2006 to 2008.

It has been brought to attention, however, that since the assessment of language speaking abilities of the interviewers in mid-June 2009, the Census Telephone Center has since hired some interviewers that speak a few of the languages mentioned above. If resources were updated to reflect this, there would not be gaps near the top of the language resource column in Table 7.

7. CONCLUSIONS

The CATI operation is doing many things well with respect to supporting non-English speaking households in the ACS. Additional efforts are required to improve the number of interviews obtained from linguistically isolated households in all languages. This suggests the need to continue recruitment for bilingual staff. Also, keep in mind that although the number of linguistically isolated language cases is small compared to the total language workload, collecting data from these households is critical to provide high quality data.

ACSO should assist the telephone centers by supplying these data on a regular basis to help managers identify emerging needs. As the language assistance service in the CATI operation expands, a future report like this one might mention how these factors affect non-English language workloads and linguistically isolated language workloads.

Table 7. CATI Language Workload Range and Interviewer Skill Sets

Household Language	2008 Average Monthly CATI Language Workload Range	Number of Interviewers with Language Skill ¹
Spanish & Creole	2989 - 8,969	104
Chinese	169 - 356	18
Russian	103 - 222	6
Korean	96 - 220	8
Vietnamese	86 - 233	9
Polish	53 - 151	
French Creole	52 - 186	
African languages	45 - 196	4
Arabic	37 - 170	4
Portuguese and Creole	37 - 146	3
Other Indic	33 - 135	
French incl. Patois, Cajun	32 - 363	5
Italian	31 - 184	2
Armenian	27 - 60	
Other Asian	23 - 112	
Japanese	22 - 85	2
Tagalog	22 - 246	6
Other Slavic	20 - 68	
Persian	19 - 81	1
Other IndoEuropean	18 - 93	1
Serbo-Croatian	17 - 63	
Hindi	16 - 118	1
German	14 - 248	6
Other Pacific Islands	11 - 72	
Greek	10 - 79	
Laotian	10 - 38	1
Mon-Khmer, Cambodian	10 - 39	
Urdu	10 - 62	
Yiddish	10 - 44	
Miao, Hmong	9 - 32	
Gujarathi	8 - 47	
Hebrew	7 - 51	
Thai	7 - 29	1
Other languages & not reported	5 - 28	
Other West Germanic	3 - 44	
Hungarian	2 - 18	
Navajo	2 - 19	
Other Native North American langs	2 - 69	2
Scandinavian	1 - 32	
TOTAL	4,068 - 13,408	184

¹ Interviewer data were collected on and representative of one moment in time in June 2009. Blank entries represent zeros to enhance readability.

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Attachment 1. CATI-eligible Average Monthly Language Workloads

2006	2006 Average Monthly Language Workload	Percent of 2006 Average Monthly Language Workload ²	2007	2007 Average Monthly Language Workload	of 2007 Average Monthly Language Workload ²	2008	2008 Average Monthly Language Workload	Percent of 2008 Average Monthly Language Workload ²	2008 Avg Monthly Language Workload - 2006 Avg Monthly Language Workload
Household Language ¹			Household Language ¹			Household Language ¹			
English only	41,801	77.3	English only	48,219	77.5	English only	44,746	76.9	2,945
Spanish & Creole	8,190	15.1	Spanish & Creole	9,375	15.1	Spanish & Creole	8,969	15.4	779
French incl. Patois, Cajun	373	0.7	French incl. Patois, Cajun	405	0.7	French incl. Patois, Cajun	363	0.6	-10
Chinese	339	0.6	Chinese	389	0.6	Chinese	356	0.6	17
German	250	0.5	German	256	0.4	German	248	0.4	-2
Russian	212	0.4	Tagalog	253	0.4	Tagalog	246	0.4	38
Tagalog	208	0.4	Russian	235	0.4	Vietnamese	233	0.4	31
Korean	205	0.4	Korean	232	0.4	Russian	222	0.4	10
Vietnamese	202	0.4	Vietnamese	231	0.4	Korean	220	0.4	15
Italian	186	0.3	Italian	204	0.3	African languages	196	0.3	22
African languages	174	0.3	African languages	195	0.3	French Creole	186	0.3	27
French Creole	159	0.3	French Creole	195	0.3	Italian	184	0.3	-2
Arabic	156	0.3	Arabic	190	0.3	Arabic	170	0.3	14
Portuguese and Creole	151	0.3	Portuguese and Creole	174	0.3	Polish	151	0.3	3
Polish	148	0.3	Polish	168	0.3	Portuguese and Creole	146	0.3	-5
Other Indic	115	0.2	Other Indic	130	0.2	Other Indic	135	0.2	20
Hindi	97	0.2	Hindi	114	0.2	Hindi	118	0.2	21
Other Asian	96	0.2	Other Asian	110	0.2	Other Asian	112	0.2	16
Japanese	84	0.2	Other IndoEuropean	93	0.1	Other IndoEuropean	93	0.2	13
Other IndoEuropean	80	0.1	Japanese	91	0.1	Japanese	85	0.1	1
Other Pacific Islands	79	0.1	Other Pacific Islands	84	0.1	Persian	81	0.1	14
Other Native North American langs	75	0.1	Other Native North American langs	83	0.1	Greek	79	0.1	9
Greek	70	0.1	Persian	79	0.1	Other Pacific Islands	72	0.1	-7
Persian	67	0.1	Greek	74	0.1	Other Native North American langs	69	0.1	-6
Other Slavic	66	0.1	Other Slavic	71	0.1	Other Slavic	68	0.1	2
Serbo-Croatian	58	0.1	Serbo-Croatian	70	0.1	Serbo-Croatian	63	0.1	5
Urdu	54	0.1	Urdu	69	0.1	Urdu	62	0.1	8
Hebrew	50	0.1	Hebrew	54	0.1	Armenian	60	0.1	11
Armenian	49	0.1	Armenian	53	0.1	Hebrew	51	0.1	1
Gujarathi	38	0.1	Gujarathi	44	0.1	Gujarathi	47	0.1	9
Other West Germanic	37	0.1	Other West Germanic	40	0.1	Other West Germanic	44	0.1	7
Laotian	34	0.1	Mon-Khmer, Cambodian	39	0.1	Yiddish	44	0.1	13
Mon-Khmer, Cambodian	34	0.1	Scandinavian	38	0.1	Mon-Khmer, Cambodian	39	0.1	5
Yiddish	31	0.1	Laotian	35	0.1	Laotian	38	0.1	4
Scandinavian	28	0.1	Yiddish	35	0.1	Miao, Hmong	32	0.1	7
Other languages & not reported	26	0.0	Thai	33	0.1	Scandinavian	32	0.1	4
Miao, Hmong	25	0.0	Other languages & not reported	30	0.0	Thai	29	0.0	5
Thai	24	0.0	Miao, Hmong	27	0.0	Other languages & not reported	28	0.0	2
Hungarian	17	0.0	Navajo	21	0.0	Navajo	19	0.0	2
Navajo	17	0.0	Hungarian	16	0.0	Hungarian	18	0.0	1
TOTAL	54,105	100.0	TOTAL	62,254	100.0	TOTAL	58,154	100.0	4,049

¹ Household language is defined as a 40-category sub-grouping of all languages spoken as reported in the 2006, 2007, and 2008 ACS.

² Average monthly workloads that are less than 0.05% of the documented workload are indicated by 0.0% due to rounding.

NOTE: Workloads represent the *estimated* average monthly number of sample cases, by their language need, that were eligible to be interviewed in CATI.

Attachment 2. CATI-eligible Average Monthly Language Workloads -- Linguistically Isolated

2006 Household Language ¹	2006	Percent of	Percent of	2007 Household Language ¹	2007	Percent of	Percent of	2008 Household Language ¹	2008	Percent of	Percent of	2008 Avg Monthly LI Lang Wkld - 2006 Avg Monthly LI Lang Wkld
	Average Monthly LI Language Workloads	2006 Avg Monthly Language Workload ²	2006 Average Monthly LI Language Workload ²		Average Monthly LI Language Workloads	2007 Avg Monthly Language Workload ²	2007 Average Monthly LI Language Workload ²		2008 Average Monthly LI Language Workloads	2008 Avg Monthly Language Workload ²	2008 Average Monthly LI Language Workload ²	
Spanish & Creole	2,798	5.2	73.8	Spanish & Creole	3,168	5.1	73.3	Spanish & Creole	2,989	5.1	73.5	191
Chinese	144	0.3	3.8	Chinese	181	0.3	4.2	Chinese	169	0.3	4.2	25
Russian	99	0.2	2.6	Russian	112	0.2	2.6	Russian	103	0.2	2.5	4
Korean	85	0.2	2.2	Korean	104	0.2	2.4	Korean	96	0.2	2.4	11
Vietnamese	85	0.2	2.2	Vietnamese	97	0.2	2.2	Vietnamese	86	0.1	2.1	1
Polish	52	0.1	1.4	Polish	60	0.1	1.4	Polish	53	0.1	1.3	1
French Creole	46	0.1	1.2	Portuguese and Creole	55	0.1	1.3	French Creole	52	0.1	1.3	6
Portuguese and Creole	46	0.1	1.2	French Creole	50	0.1	1.2	African languages	45	0.1	1.1	6
African languages	39	0.1	1.0	African languages	45	0.1	1.0	Arabic	37	0.1	0.9	1
Arabic	36	0.1	0.9	Arabic	41	0.1	0.9	Portuguese and Creole	37	0.1	0.9	-9
French incl. Patois, Cajun	30	0.1	0.8	French incl. Patois, Cajun	40	0.1	0.9	Other Indic	33	0.1	0.8	9
Italian	30	0.1	0.8	Italian	35	0.1	0.8	French incl. Patois, Cajun	32	0.1	0.8	2
Other Indic	24	0.0	0.6	Other Indic	31	0.0	0.7	Italian	31	0.1	0.8	1
Tagalog	23	0.0	0.6	Tagalog	28	0.0	0.6	Armenian	27	0.0	0.7	8
Japanese	22	0.0	0.6	Other Asian	23	0.0	0.5	Other Asian	23	0.0	0.6	4
Other IndoEuropean	20	0.0	0.5	Japanese	22	0.0	0.5	Japanese	22	0.0	0.5	0
Other Slavic	20	0.0	0.5	Armenian	21	0.0	0.5	Tagalog	22	0.0	0.5	-1
Armenian	19	0.0	0.5	Other Slavic	21	0.0	0.5	Other Slavic	20	0.0	0.5	0
Other Asian	19	0.0	0.5	Other IndoEuropean	20	0.0	0.5	Persian	19	0.0	0.5	0
Persian	19	0.0	0.5	Persian	19	0.0	0.4	Other IndoEuropean	18	0.0	0.4	-2
German	17	0.0	0.4	Serbo-Croatian	18	0.0	0.4	Serbo-Croatian	17	0.0	0.4	1
Serbo-Croatian	16	0.0	0.4	Hindi	15	0.0	0.3	Hindi	16	0.0	0.4	5
Hindi	11	0.0	0.3	German	14	0.0	0.3	German	14	0.0	0.3	-3
Urdu	11	0.0	0.3	Laotian	12	0.0	0.3	Other Pacific Islands	11	0.0	0.3	1
Greek	10	0.0	0.3	Greek	11	0.0	0.3	Greek	10	0.0	0.2	0
Mon-Khmer, Cambodian	10	0.0	0.3	Urdu	11	0.0	0.3	Laotian	10	0.0	0.2	2
Other Pacific Islands	10	0.0	0.3	Mon-Khmer, Cambodian	10	0.0	0.2	Mon-Khmer, Cambodian	10	0.0	0.2	0
Laotian	8	0.0	0.2	Other Pacific Islands	10	0.0	0.2	Urdu	10	0.0	0.2	-1
Thai	7	0.0	0.2	Gujarathi	8	0.0	0.2	Yiddish	10	0.0	0.2	5
Gujarathi	6	0.0	0.2	Other languages & not reported	8	0.0	0.2	Miao, Hmong	9	0.0	0.2	5
Hebrew	6	0.0	0.2	Hebrew	6	0.0	0.1	Gujarathi	8	0.0	0.2	2
Yiddish	5	0.0	0.1	Yiddish	6	0.0	0.1	Hebrew	7	0.0	0.2	1
Hungarian	4	0.0	0.1	Miao, Hmong	5	0.0	0.1	Thai	7	0.0	0.2	0
Miao, Hmong	4	0.0	0.1	Thai	4	0.0	0.1	Other languages & not reported	5	0.0	0.1	1
Other languages & not reported	4	0.0	0.1	Hungarian	3	0.0	0.1	Other West Germanic	3	0.0	0.1	1
Other Native North American lang	4	0.0	0.1	Other Native North American lang	3	0.0	0.1	Hungarian	2	0.0	0.0	-2
Other West Germanic	2	0.0	0.1	Scandinavian	3	0.0	0.1	Navajo	2	0.0	0.0	1
Navajo	1	0.0	0.0	Other West Germanic	2	0.0	0.0	Other Native North American lang	2	0.0	0.0	-2
Scandinavian	1	0.0	0.0	Navajo	1	0.0	0.0	Scandinavian	1	0.0	0.0	0
TOTAL	3,793	7.0	100.0	TOTAL	4,323	6.9	100.0	TOTAL	4,068	7.0	100.0	275

¹ Household language is defined as a 40-category sub-grouping of all languages spoken as reported in the 2006, 2007, and 2008 ACS.

² Average monthly workloads that are less than 0.05% of the documented workload are indicated by 0.0% due to rounding.

NOTE: Workloads represent the *estimated* average monthly number of sample cases, by their language need, that were eligible to be interviewed in CATI.