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MEMORANDUM FOR   The Distribution List

From: Burton Reist *[signed]*
                                       Acting Chief, Decennial Management Division

Subject: 2010 Census Language Program Assessment Report

Attached is the 2010 Census Language Program Assessment Report. The Quality Process for the 2010 Census Test Evaluations, Experiments, and Assessments was applied to the methodology development and review process. The report is sound and appropriate for completeness and accuracy.

If you have any questions about this document, please contact Jennifer Kim at (301) 763-1311.

Attachment

2010 Census Language Program Assessment Report

U.S. Census Bureau standards and quality process procedures were applied throughout the creation of this report.
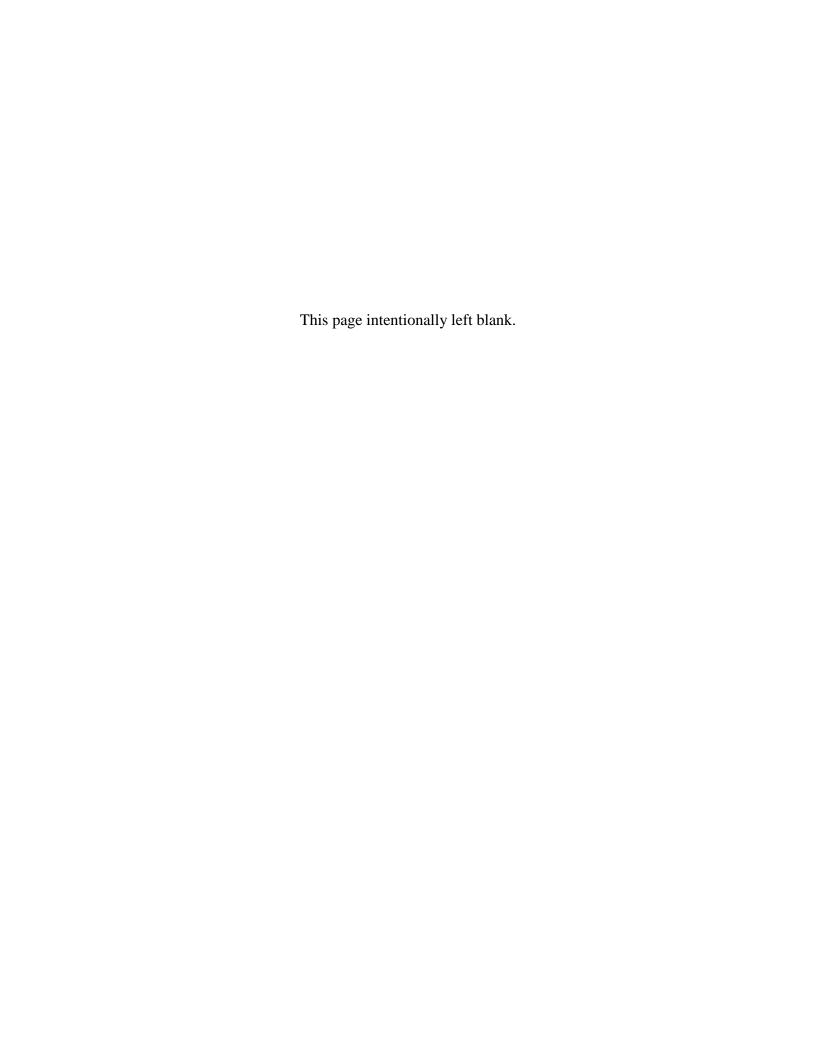
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United States Census 2010

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EXECUTIVE SUMMARY

The 2010 Census Language Program Assessment documents the results and major findings from the operations of the 2010 Census Language Program. This assessment informs the Language Integrated Product Team, stakeholders, and decision-makers on the successes, impacts, and recommended changes and improvements for future censuses. The research questions were answered by utilizing lessons learned documents, census reports and documents, and other tracking sources.

The main research questions and results related to the Language Program are stated below:

1. How were the criteria for language selection established and what were the outcomes?

The major factors taken into account when determining the languages were the 2005 American Community Survey and Census 2000 results. The five primary non-English languages – Spanish, Chinese, Korean, Vietnamese, and Russian – were selected based on the threshold of 100,000 or more occupied housing units with no persons aged 15 or older who spoke English "very well." The method for selecting the remaining languages was based on the threshold of 2,000 occupied housing units, supplemented by recommendations from stakeholders and language ability of the translation contractor.

2. What was the process for translating and reviewing in-language materials and what were the outcomes?

The Census Bureau used an existing contract with Diplomatic Language Services and extended it to include the overall translation services for the 2010 Census, in which the vendor was responsible for translations, editing, and review of the text. Once the contractor completed the translation work and sent the translated text back to the Census Bureau, available in-house reviewers assessed the quality of the work.

There was not sufficient oversight of the translation process, however, and heavy reliance on the contractor without strong in-house language teams/experts proved to be a major challenge to the translation and review process. The Census Bureau did not have a process by which it could adjudicate discrepancies in many of the materials translated into languages other than Spanish. Census Advisory Committee members and Census Bureau staff were asked to review the translations, but their review was voluntary and based on their availability.

3. What happened during the cognitive testing phase of the translated questionnaires and what were the outcomes?

In 2008, the Census Bureau cognitively tested the 2010 Mailout/Mailback self-administered census questionnaires in English and its translations into Chinese, Korean, Vietnamese, and Russian. Spanish was not included since the Spanish content was pretested in the context of the English/Spanish bilingual questionnaire. Since the English content was required to be finalized before starting the translations and/or testing, it was difficult to implement changes when

problems identified in translated languages could have been potentially changed in the English content. Additionally, delays in assembling groups together and finalizing feedback from the Census Bureau (in order to give contractors new question wording) caused tighter schedules for subsequent testing rounds.

4. Were Be Counted/Questionnaire Assistance Center materials provided sufficiently to assist in-language respondents?

Be Counted questionnaires in the five primary non-English languages for stateside as well as English and Spanish for Puerto Rico were distributed to the Be Counted sites and Questionnaire Assistance Centers. Other in-language materials were also made available to assist the Questionnaire Assistance Center representatives and non-English speaking respondents at the sites. They included Language Identification Flashcards, Language Assistance Guides, and Telephone Questionnaire Assistance cards with phone numbers for the Telephone Questionnaire Assistance lines available in English and the five primary non-English languages. Findings show that additional types of materials could have been produced, such as Language Assistance Guides specific to the Be Counted questionnaires and other materials customized for these operations.

5. What was the process for producing and distributing Telephone Questionnaire Assistance materials and what were the outcomes?

The Telephone Questionnaire Assistance materials were produced by factoring in the following: (1) in-language needs estimates from the 2005 American Community Survey data; (2) data on Census 2000 Telephone Questionnaire Assistance Fulfillment requests; and (3) the assumption that the introduction of the English/Spanish bilingual questionnaire would decrease the demand for Spanish questionnaires. The quantities of the 2010 Census Fulfillment questionnaires and Language Assistance Guides were based on this estimate and distributed to the Telephone Questionnaire Assistance sites. Findings show that overall, there was an overestimation of Fulfillment questionnaires and mixed results for the estimation of Language Assistance Guides. The availability of other non-print materials, such as those obtained from the 2010 Census Web site or through partnerships, may have decreased the demand for print materials through Telephone Questionnaire Assistance.

6. Were sufficient materials produced to support the program?

The Language Program produced in-language census questionnaires, Language Assistance Guides, and other materials that included Language Identification Flashcards, Enumerator Job Aids, fact sheets, instructional manuals, reference materials, and articles for organizational newsletters, newspapers, and Internet publications. Feedback garnered from the lessons learned sessions identified the availability and content of the in-language materials as successes. There were, however, concerns with limited space for text on the in-language questionnaires and with literal translations of the English content resulting in culturally offensive terms. Additional in-language materials created outside of Census Bureau Headquarters also increased possibilities of translation inconsistencies and/or negative feedback on materials that the Census Bureau did not officially produce. In regards to the quantity of materials produced, findings show that there was

more than sufficient amount of in-language materials with the exception of Language Assistance Guides and Enumerator Job Aids.

7. *What happened during data capture and processing of in-language questionnaires?*

The estimated data capture workload was overestimated for in-language questionnaires. Challenges pertaining to the processing of in-language questionnaires included the following: (1) differences between the software used by the contractor and the Census Bureau that caused layout issues; (2) limited space on the in-language questionnaires for different language font sizes and translated texts that were often lengthier than the English text; and (3) contractor limitations on meeting Census Bureau requirements for automated data capture. Approximately 10 percent of the in-language questionnaires returned required translation, and information provided on unacceptable forms (such as Language Assistance Guides and photocopies of questionnaires) were not captured.

8. *What were the criteria for determining quantities of printed materials and what were the outcomes?*

The Census Bureau had a systematic method that estimated and/or determined print quantities across operations. The print estimates were first based on (1) the Census 2000 print quantities; (2) the number of questionnaires returned by respondents; and (3) adding a 25 percent contingency to each estimate. Then, based on additional program requests and/or consultations made between staff members from divisions involved in the operations, the final print quantity was determined. Some languages were shown to possibly require a larger quantity and were increased accordingly. While the print/distribution operation was sufficiently coordinated between project/program areas, findings show that print quantities were overestimated.

9. *How did the planned start and finish dates for each of the operations compare to the actual dates?*

Based on the Master Activity Schedule critical path for the Language Program, all major activities were completed on time. Although not documented in the official Master Activity Schedule, there were internal delays in the review process of translated materials. The reviews were conducted on a voluntary basis, and it was difficult to enforce deadlines. While cognitive testing was completed on time, the Census Bureau was not able to allow additional rounds of testing in order to meet deadlines for forms development and printing.

Recommendations for the 2020 Census

Recommendations for the 2020 Census are outlined below by category:

Language Selection
- Consider additional selection criteria, such as hard-to-count scores and the return rate of in-language questionnaires from the past census.
- Develop a process where requests for additional languages are officially evaluated.
- Recognize emerging technologies and mixed-mode data collection when selecting languages.
- Begin production earlier in order to sufficiently incorporate requests for changes.

Translation
- Create a comprehensive translation area to coordinate translation work across all operations.
- Establish an internal project management process for central oversight of the translation work that includes translations, contracting, review, and adjudication.
- Hire in-house translators/language experts, minimally for primary non-English languages.
- Require contractors and in-house staff to utilize the Census Bureau Translation Guidelines and the Language Reference Dictionary.
- Utilize multiple translation vendors in place of relying on one contractor to ensure that translations are reviewed by a different vendor rather than the original translator.
- Expand the content of the Language Reference Dictionary.
- Better integrate translation work with field and communications staff.
- Begin cognitive testing of translated materials as soon as possible after final English content is determined to provide sufficient lead-time to conduct adequate translation of questionnaires and other key materials.
- Conduct further cognitive testing, including navigational testing, in a time frame where it would still be possible to implement changes to any questionnaires or materials.
- Test all public use materials, such as advance letters and Be Counted questionnaires, not just the Fulfillment questionnaires.
- Provide in-language staff with desktop language capabilities and software programs.

Be Counted/Questionnaire Assistance Centers
- Create reference materials specific to the Be Counted operation.
- Provide computer terminals/kiosks on site for staff to disseminate information in lieu of printed copies and to potentially collect data directly.
- Give staff the ability to print Language Assistance Guides or have access to copies if needed for distribution.
- Provide more support materials to staff assisting in-language populations.
- Produce Questionnaire Reference Books and answers to Frequently Asked Questions in non-English languages.

- Further advertise language assistance that is available at different Be Counted/Questionnaire Assistance Center sites.

Telephone Questionnaire Assistance
- Make print-on-demand capabilities available for staff in lieu of pre-established quantities of materials.
- Research how emerging technologies and multi-mode data collection would diminish the need for printed materials.
- Provide guidance to staff on promoting Telephone Questionnaire Assistance to different in-language groups.
- Research the need for supporting less frequently requested languages through Telephone Questionnaire Assistance.

Materials
- Research how emerging technologies and multi-mode data collection could affect types of in-language materials that are needed.
- Customize materials, such as Language Assistance Guides and Language Identification Flashcards, for different operations.
- Produce materials, such as Enumerator Job Aids and Notice of Visits, in additional languages.
- Research if additional materials, such as outreach materials or *It's Easy* videos, should have been included in the planning stage and how these materials can be expanded.
- Fully exploit the capability of the 2020 Census Web site for in-language materials.
- Conduct research on Language Assistance Guides for additional ways to emphasize that they are not to be filled out, and conduct more testing to find ways to help respondents realize the guides are for assistance only and not to be filled out.

Data Capture/Processing
- Research mixed-mode data collection and how in-language responses can be captured through different modes.
- Research how automated data collection could minimize many of the issues encountered with capturing paper responses of in-language questionnaires.
- Research best practices on handling special characters and accents on census responses.
- Allow flexibility for translated questionnaires and materials to have their own design, as the translated content is often lengthier than the English text.
- Provide additional lead-time for tuning optical recognition software for the questionnaires that are being scanned/recognized.
- Track returns of in-language materials not meant to be processed.
- Research ways in which information provided on unacceptable forms, such as Language Assistance Guides with information written and mailed back by respondents, could be data captured.

Print Quantities
- Research how emerging technologies and multi-mode data collection would diminish the need for printed materials.
- Make print-on-demand capabilities available for staff in lieu of pre-established quantities.
- Develop a process where program requests for additional quantities beyond the established estimates are officially evaluated.
- Utilize planning databases and American Community Survey data to determine quantities of in-language print materials to create and distribute across the regions.

Schedule
- Build additional time into the schedule for translation review.

1 Introduction

1.1 Scope

The purpose of the 2010 Census Language Program Assessment is to document the results and major findings from the operations of the 2010 Census Language Program. This assessment informs the Language Integrated Product Team, stakeholders, and decision-makers on the successes, impacts, and recommended changes and improvements for future censuses. The intent of this assessment is to touch upon portions of the overall process that are critical for the Language Program, as the segments are heavily integrated with one another.

1.2 Intended Audience

This report assumes that the reader has at least a basic understanding of the 2010 Census Language Program (U.S. Census Bureau, 2009m). The goal is to use this document to help research, planning, and development teams preparing the 2020 Census operations.

2 Background

2.1 Census 2000

The Census 2000 Language Program was significantly larger and more complex than the Language Program in the 1990 Census. The program moved from language assistance in 32 languages in the 1990 Census to 49 languages in Census 2000.

Language Selection
For Census 2000 operations, the Census Bureau printed questionnaires in English, Spanish, Chinese, Korean, Vietnamese, and Tagalog for the Mailout/Mailback and Be Counted (BC) operations. Spanish, Chinese, Korean, Vietnamese, and Tagalog were selected after reviewing the ten languages spoken by the largest in-language populations in the U.S. and comparing with Census Bureau's hard-to-count scores[1] for these areas.

Questionnaires
In 2000, the only way to obtain an official Census 2000 questionnaire in a language other than English was for the respondent to return an advance letter request. All stateside housing units receiving an addressed advance letter had the opportunity to request a questionnaire in Spanish, Chinese, Korean, Vietnamese, or Tagalog. They could also request Language Assistance Guides (LAG) in 49 different languages.

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[1] Hard-to-count scores, ranging from 0 to 132, are an indicator of the likely degree of difficulty in enumeration. Areas with the highest scores (e.g., over 70) are likely to have higher mail non-return rates and higher undercount rates (Bruce and Robinson, 2009).

Language Assistance Guides
There were two separate layouts for Census 2000: (1) a short-form two page/two color guide corresponding to the official Census 2000 short-form questionnaire and (2) a long-form twelve page/two color guide corresponding to the official Census 2000 long-form questionnaire. Both short-form and long-form LAGs were printed in 49 different languages. The Census Bureau printed both guides in an English Large Print version (19-point font) to assist the visually impaired. LAGs were printed in Haitian/Creole for Puerto Rico (Briggs, 2001).

A Census 2000 Language Identification Flashcard with the same sentence in 37 different languages (to help respondents identify the language spoken in a household) was included in all Census Bureau enumerator kits. The Census Bureau printed a combined total of over 18 million Census 2000 LAGs and nearly 2 million Language Identification Flashcards. LAGs were also available on the Census Bureau Web site. Both short- and long-forms in all 49 languages were accessible for any Web user for print.

LAGs in all 49 languages were available at Regional Census Centers, Local Census Offices (LCO), or directly from Census Bureau headquarters upon request. The Census Bureau provided an English version of the Census 2000 LAG for translation and printing to partners, community groups, religious organizations, and others interested in localized or targeted distribution in other languages (Briggs, 2001).

Be Counted/Questionnaire Assistance Centers
For Census 2000, a total of 28,983 BC sites were available for people to obtain BC questionnaire packages. These packages were printed in English, Spanish, Chinese, Korean, Vietnamese, and Tagalog. Each package comprised an exterior envelope in English or translated in one of the five primary non-English languages, a BC questionnaire in the corresponding language, and a postage-paid return envelope. Stickers with specific language assistance telephone numbers were translated and printed for the BC display box.

There were 23,556 Questionnaire Assistance Centers (QAC) established through the Census 2000 Partnership Program. The following were available at QACs:
- BC questionnaires in the five primary non-English languages at designated QACs
- LAGs in 49 languages to help people complete their official questionnaires
- Language Identification Flashcards

Telephone Questionnaire Assistance
For Census 2000, the Census Bureau identified constraints on the number of languages it could support through Telephone Questionnaire Assistance (TQA) and finalized its language selection to offer support in the same languages as the BC and Mailout/Mailback questionnaires. When respondents requested in-language questionnaires through TQA, the TQA staff members were only able to provide LAGs (Briggs, 2001).

2.2 2010 Census

The goal of the 2010 Census Language Program was to provide information, assistance, and materials in languages other than English. The program intended to help improve coverage and achieve efficiencies by developing effective methods to meet the diverse language needs of the nation. As the inability to communicate well in English could be a barrier to enumeration, the Language Program attempted to lower this barrier by providing information, assistance, and materials in languages other than English.

The Language Program was integrated into almost every major operation and system of the 2010 Census. The program was responsible for providing input for the selection of languages to be used for the census questionnaires, LAGs, and related materials provided to non-English speaking populations. The operation also selected the areas where English/Spanish bilingual questionnaires were delivered.

Key elements of the program included the following:
- Language selection
- Introduction of an English/Spanish bilingual questionnaire for targeted areas
- In-language questionnaires and materials including:
  - In-Language Questionnaires (Fulfillment[2])
  - LAGs
  - Language Reference Dictionary
  - Language Identification Flashcard
- Five-prong expansion effort to increase language assistance for Chinese, Korean, Vietnamese, and Russian speakers

The Language Program, with input from internal and external stakeholders, selected a list of non-English languages required for questionnaires and LAGs. The program determined the final list of content that needed to be translated into each of the selected languages for materials such as questionnaires, letters, reminder cards, Language Identification Flashcards, and Enumerator Job Aids. Respondents were able to request questionnaires or LAGs in several different languages.

The sections below describe the different components of the Language Program. The background information provided for each section may overlap as segments of the Language Program were highly integrated with one another.

Bilingual Mailing
As part of the 2010 Census operations, English/Spanish bilingual questionnaires were delivered to all housing units in "Spanish Assistance" tracts. The English/Spanish bilingual questionnaire had a swim-lane design that had side-by-side response columns (English and Spanish) with the same questions and response categories. Prior to receiving the English/Spanish bilingual questionnaires, housing units in the selected areas were sent an English/Spanish bilingual

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[2] Respondents were able to request that in-language questionnaires be sent to them in one of the five primary non-English languages through Fulfillment operations.

advance letter with the same swim-lane design as the bilingual questionnaire and an English/Spanish bilingual reminder letter thereafter.

The "Spanish Assistance" tracts that were to receive English/Spanish bilingual questionnaires were identified using the 2005 American Community Survey (ACS) data, in conjunction with Census 2000 sample data. These were tracts in which at least 20 percent of the housing units had at least one resident age 15 years or older that spoke Spanish and did not speak English "very well." Housing units that initially received the bilingual questionnaire but did not mail it back before the cut-off for identifying the replacement questionnaire universe received an English replacement questionnaire, rather than a replacement bilingual questionnaire. Housing units in identified Update/Leave operation areas were also given bilingual questionnaires, with an English replacement questionnaire mailed to the housing unit, if necessary.

Language Selection
Languages for the 2010 Census were selected based on pre-determined, data-driven criteria. After consulting with stakeholders within and outside of the agency, the Census Bureau decided to use need-based, housing unit-level criteria to select the primary non-English languages. Using 2005 ACS data and growth factors from the counts in Census 2000, the Census Bureau extrapolated the number of occupied housing units with no person age 15 or older that spoke a language other than English (Language Spoken at Home response) and did not speak English "very well" to identify the languages spoken in 100,000 or more occupied housing units in the U.S. The five language groups that met this threshold were Spanish, Chinese, Korean, Vietnamese, and Russian (Angueira, 2007).

The Census Bureau used a threshold of 2,000 housing units estimated to need language assistance for a given language when preparing the final list of languages for consideration in creating LAGs. A few languages were removed from the list when the translation contractor indicated inability to translate into that language. As a result, 50 languages were initially selected (Bentley, 2008). Based on the recommendations of the 2010 Census Advisory Committee and from the Race and Ethnicity Advisory Committees, nine languages were added. The languages for the 59 LAGs were the following:

Table 1. List of Languages for Language Assistance Guides[3]

Albanian	Dinka	Khmer (Cambodian)	Somali
Amharic	Dutch	Korean	Spanish
Arabic	Farsi	Laotian	Swahili
Armenian	French	Lithuanian	Tagalog
Bengali	German	Malayalam	Tamil*
Bulgarian	Greek	Marshallese**	Telugu*
Burmese	Gujarati*	Navajo	Thai
Cebuano*	Haitian Creole	Nepali	Tigrinya
Chamorro**	Hebrew	Polish	Tongan**
Chinese, Simplified	Hindi	Portuguese	Turkish
Chinese, Traditional	Hmong	Punjabi	Ukrainian
Chuukese**	Hungarian	Romanian	Urdu
Croatian	Ilocano	Russian	Vietnamese
Czech	Italian	Samoan**	Yiddish
Dari	Japanese	Serbian	

Source: **2010 Language Program DOSP**
* Selection was based on a request from the Census Advisory Committee on the Asian Population.
** Selection was based on input from the Census Advisory Committee on the Native Hawaiian and Other Pacific Islanders Population.

The Census Bureau utilized a three-tier approach in making in-language materials available. The first tier represented the languages spoken by housing units that had the greatest estimated need for in-language assistance (more than 141,000 housing units per language). The second tier represented the languages spoken by housing units needing in-language assistance estimated at 20,000 to approximately 141,000 housing units per language. The third tier represented the languages spoken by housing units needing in-language assistance estimated at 2,000 to 19,999 housing units per language. The 2010 Census language assistance approach can be summarized as follows:

- <u>First Tier</u> – Included the five primary non-English languages for questionnaires (Fulfillment and BC) and printed LAGs available through TQA, QACs, and the Partnership Program

- <u>Second Tier</u> – Included printed LAGs available through TQA, QACs, and the Partnership Program

- <u>Third Tier</u> –Included printed LAGs available in QACs and the Partnership Program

For each tier, all LAGs were available on the Internet, where respondents were able to view and download/print materials (Boyer, 2007; Vitrano, 2008).

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[3] The Language Program was also responsible for producing guides in Braille and Large Print, but Braille and Large Print were not part of the selection criteria.

Translations
The Language Program oversaw the translation and printing of LAGs into 59 different languages[4] that were used to support the 2010 Census partnership and outreach effort. LAGs for the first and second tier languages were furnished to telephone centers, LCOs, Regional Census Centers, community groups, and partnership specialists and were posted on the Web in advance of Census Day. Sets of the third tier language LAGs were provided for QAC and partnership staff to be utilized as resources when assisting respondents.

Staff in the Decennial Management Division (DMD) translated some of the Spanish materials in-house, as permitted by time and staff resources. Translations for all other languages as well as Spanish materials not handled by the Census Bureau staff were conducted through a contract awarded to Diplomatic Language Services (DLS). Census Bureau Headquarters staff, regional staff, and Census Advisory Committee members participated in reviewing some of the translated materials.

In 2004, the Census Bureau issued the Census Bureau Translation Guidelines that outlined best practices for conducting translations and recommended that translations be reliable, complete, accurate, and culturally appropriate. The guideline recommended that the translated instruments and supporting documents be pretested with speakers of target languages in order to ensure the quality of translations (Pan and de la Puente, 2005). The Census Bureau thus increased the amount of translation pretesting this decade. The Census Bureau pretested the 2010 Census English/Spanish bilingual questionnaire (Goerman et al., 2007a, 2007b) and the 2010 Census Mailout/Mailback self-administered census questionnaires that had been translated into Chinese, Korean, Vietnamese, and Russian (Pan et al., 2009).

Be Counted/Questionnaire Assistance Centers
The BC operations were designed to provide assistance to individuals who did not receive or believed they did not receive a census questionnaire during the Mailout/Mailback operation or were not included on the census questionnaire returned for their address. BC questionnaires were available in English and the five primary non-English languages on the stateside. Puerto Rico had BC questionnaires available in Spanish and English. The questionnaires were available at joint BC/QAC sites as well as independent BC sites.

The BC/QAC sites were determined by the LCOs based on the number of sites allocated to them. The sites were predominantly in hard-to-count areas, identified based on Census 2000 results, partnership, and LCO staff local knowledge. All QACs had copies of LAGs in 59 languages to help individuals within the QAC neighborhoods who needed additional assistance in other languages that were not available at each site. The Integrated Partnership Contact Database was utilized by partnership specialists in the regions to record information on the proposed, selected, and confirmed BC/QAC sites.

Additionally, QACs provided a venue in which individuals could receive assistance to fill out their questionnaires. QAC representatives had resources such as the Enumerator Job Aid that explained their main duties and included answers to frequently asked questions (FAQs), a

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[4] The Census Bureau additionally worked with the Macedonian community that produced its own LAG, which was made available on the 2010 Census Web site.

Questionnaire Reference Book to answer specific questions, Language Identification Flashcards to identify the language of the respondent, and LAGs in 59 languages.

Telephone Questionnaire Assistance
The Census Bureau designed the TQA operation to provide three primary services to the general public: (1) provide general information and answers to questions about the 2010 Census and how to fill out the census questionnaires; (2) take requests for Fulfillment questionnaires and LAGs; and (3) conduct telephone interviews to collect census questionnaire information as appropriate.

TQA was supported by an Interactive Voice Response (IVR) system to assist the public in completing their census questionnaires, which was available 24 hours a day, 7 days a week. The IVR system gave assistance and Fulfillment support for the TQA operation on the English and Spanish lines[5] while calls to other language lines were directed to agents with language abilities.[6] TQA operations note that late in the 2010 Census production, a change was made to place a message at the front of the IVR providing callers with directions on speaking to an agent in order to provide their census information (Zajac, 2011).

All stateside and Puerto Rico English and Spanish self-administered questionnaires displayed both English and Spanish TQA telephone numbers as well as a Telecommunications Device for the Deaf number. All in-language questionnaires displayed an English and in-language TQA telephone number for assistance. The partnership and outreach programs disseminated TQA telephone numbers for the five primary non-English languages throughout the period when the TQA system was available from late February through July, 2010.

Materials
For the first time during a decennial census, the Census Bureau implemented targeted mailing of English/Spanish bilingual questionnaires to pre-selected housing units. English/Spanish bilingual 2010 Census questionnaires were sent to "Spanish Assistance" tracts as identified, using ACS and other census data. Targeted areas also received English/Spanish bilingual questionnaires during Update/Leave operations.

Additionally, printed questionnaires were available in other primary non-English languages: Chinese (Simplified), Korean, Vietnamese, Russian, as well as Spanish (non-bilingual version). The LAGs were available for all 59 non-English languages and in large-print and Braille. These materials were available to the public through the 2010 Census Web site, QACs, and as requested, by calling the TQA numbers.

The Language Program also provided translated outreach materials such as fact sheets, manuals, reference materials, and articles made available for organizational newsletters, newspapers, and Internet publications. The program helped develop advertising campaign materials, videos, and posters in a variety of languages. Also available was a Language Identification Flashcard that

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[5] English- and Spanish-speaking callers in the IVR system also had the opportunity speak to an agent if necessary.
[6] Initially, the Chinese lines were for Mandarin only, but a request was made from Cantonese-speaking interest groups to include the Cantonese dialect. In response, the Census Bureau hired Cantonese-speaking agents and certified existing agents who were also able to speak Cantonese.

consisted of translated statements in 50 languages[7] that asked if there was someone in the housing unit that spoke English who could help the enumerator. This allowed the respondent to point to the language he/she spoke so that enumerators could locate language assistance in the chosen language to help the respondent complete the 2010 Census questionnaire. A single-sheet privacy notice was created that combined the confidentiality notice (in both English and Spanish) and flashcard, which were separate items in previous years.

The Field Division (FLD) hired enumerators with language abilities relevant to their enumeration areas as well as partnership specialists with language capabilities to do outreach at the grassroots level. An Enumerator Job Aid and an Enumerator Questionnaire translated into Spanish were made available to enumerators during operations. The Spanish Enumerator Job Aid was revised to include more comprehensive content and clearer instructions than the Census 2000 Enumerator Job Aid.

For the first time in a decennial census, the Census Bureau produced a Language Reference Dictionary (LRD) to provide definitions and translations in the five primary non-English languages for selected English terms and phrases commonly used in the 2010 Census. The intent of the LRD was to maintain consistency in translated materials across all operational areas. The LRD was posted on the 2010 Census Web site and was also available for use by translators (in-house and contractor) as well as the Partnership Program, the Integrated Communications Program, Regional Offices, and many other operations and programs.

Data Capture/Processing
Non-English language questionnaires (Fulfillment and BC) were processed through the Decennial Response Integration System (DRIS) data capture system. For Chinese, Korean, Vietnamese, and Russian questionnaires, every write-in field was presented to a keyer who was certified as bilingual in the language of that questionnaire and English. For write-in responses written in non-English characters on these questionnaires, the English equivalent was keyed.

Chinese, Korean, Vietnamese, and Russian questionnaires were intended for processing at the Phoenix Paper Data Capture Center, due to better labor market availability of bilingual keyers certified in these languages. In some instances, either the U.S. Postal Service or respondents sent the in-language questionnaires to the other paper data capture centers in Baltimore, MD or Jeffersonville, IN. Questionnaires in these languages received in Baltimore and Jeffersonville were packaged and shipped to Phoenix for processing.

In keeping with past practice, Spanish special characters (accent and diacritical marks) were converted to the English language equivalent. The bilingual English/Spanish questionnaires were data captured at all three paper data capture centers (Phoenix, Baltimore, and Jeffersonville). Responses written in non-Roman characters on English, Spanish, or English/Spanish bilingual questionnaires were not captured, and the output was blank. The Census Bureau determined that given the low number of English, Spanish, or English/Spanish bilingual questionnaires that contained responses in non-Roman characters, it would be difficult to train staff to identify and decipher the languages in which the responses were written.

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[7] These were designed, translated, and printed before the additional nine languages were determined for LAGs.

If sufficient items were completed on those questionnaires containing non-Roman characters, the questionnaires were determined to contain sufficient data. If the questionnaire was flagged as blank due to existence of non-Roman characters and was identified as such before the Nonresponse Followup (NRFU) universe was determined, the housing unit became part of the NRFU universe.[8] If the illegibility of the non-Roman characters created a count discrepancy, the questionnaire went to the Coverage Followup operation. The keyers were instructed to key what the respondent intended, following a set of business rules defined by the Census Bureau, resulting in keying a modified response for some responses (U.S. Census Bureau, 2010e).

Certain phrases such as months, days, and weeks for age of infants were converted to the appropriate age in years (0, 1, etc.). For these cases, keyers were also instructed for the Spanish equivalent of days, weeks, and months (días, semanas, meses) to key the appropriate age in years. For example, questionnaires that had "5 días" (5 days) for age were keyed as 0 years.

Partnership and Outreach
The Integrated Communications Program (ICP) was a multimedia, multilingual outreach effort designed to reach the nation. Utilizing a language contract outside of the contract utilized by the Language Program, the ICP created in-language materials that covered basic information and key messages about the 2010 Census in 28 languages. It also deployed information about the Language Program to help reach populations who did not speak English "very well."

Information about language assistance was made available on the 2010 Census Web site and through promotional materials that included fact sheets, brochures, and posters. TQA toll-free numbers in Spanish, Chinese, Korean, Vietnamese, and Russian were included in in-language advertising that reached these communities. In addition, 59 language guides were disseminated by local ethnic media outlets. Images of 59 single sheet language guides were made available on the 2010 Census Web site. Also, the 2010 Census Web site was fully translated into Spanish.

The goal of the Partnership Program was to motivate non-English speaking housing units to visit QACs in their local communities where they could receive in-language assistance from a Census Bureau employee hired from the community. Partnership specialists in the regions spoke 146 languages assisting in outreach to in-language communities. Furthermore, the Language Program worked with the Partnership Program in creating an *It's Easy* video series to promote the three core messages of the 2010 Census: It's Easy, It's Important, and It's Safe. The videos were created in English and 59 non-English languages, giving a step-by-step guide to filling out the census questionnaires. The videos were uploaded and made available on the 2010 Census Web site and on YouTube.

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[8] Determination of blank questionnaires was based on the 2010 Census Blank Forms Specification for Reverse Check-In (Lamas, 2010).

Language Program Expansion (Summer 2009)
In the summer of 2009, the Language Program expanded its efforts to reach in-language housing units. During this expansion, The Census Bureau took a five-pronged approach, which included the following:

- Revisions to the advance letter[9] to include in-language messages (in English, Spanish, Chinese, Korean, Vietnamese, and Russian) directing respondents to the 2010 Census Web site. The advance letter advertised the 2010 Census Web site and made the in-language assistance products available to in-language populations. A total of 9,503,023 advance letters were delivered from February 17 through February 19, 2010 for Update/Leave areas, and 107,819,955 advance letters were delivered from March 8 through March 10, 2010 for Mailout/Mailback areas.

- The Census Bureau created an additional postcard providing the TQA numbers in English, Spanish, Chinese, Korean, Vietnamese, and Russian.[10] This direct mail postcard was mailed between the period of the initial mailing of the 2010 Census questionnaires and the reminder postcard to all addresses within a Zone Improvement Plan (ZIP) code area determined to be in need of assistance in Chinese, Korean, Vietnamese, or Russian. Using the 2006-2008 ACS data, the universe included housing units where the language spoken by the householder was Chinese, Korean, Vietnamese, or Russian. The tracts were selected if 10 percent or more of the housing units identified a householder that spoke the aforementioned languages. The final selected tracts were then linked to their corresponding ZIP codes. Approximately 10.8 million housing units received the direct mail postcard between March 18 and March 20, 2010.

- The Census Bureau launched a public relations campaign from March through April, 2010 to get language assistance information to Spanish, Chinese, Korean, Vietnamese, and Russian speaking populations through the use of news releases, electronic press kits, media specialist toolkits, video podcasts, public service announcements, radio scripts, regional testimonies, and through work with media outlets. This strategy was a mechanism to provide information to targeted hard-to-count populations through the media, targeting specific language audiences.

- The Regional Partnership Program staff increased local level distribution of the LAGs and distributed a flyer with all six TQA numbers through QACs and partner organizations during the March and April, 2010 timeframe. This phase was implemented through current partnership and QAC delivery strategies. At the grassroots level, partnership staff members were hired from the community and provided materials to local areas needing specific language assistance. The materials assisted partner organizations and Complete Count Committees with the ability to "blitz" their respective communities with appropriate LAGs and the flyers.

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[9] Based on results from Census 2000, the Census Bureau made the decision that the advance letter for 2010 would not include an in-language message. However, due to recommendations from the 2010 Census Advisory Committee and the Race and Ethnic Advisory Committees, the decision was reversed.
[10] The goal of the direct mail postcard was to provide information to Asian and Russian-speaking populations on obtaining assistance with completing the 2010 Census questionnaire.

- Through the paid media campaign, LAGs were inserted into in-language newspapers and magazines during the March through April, 2010 timeframe. This tactic was possible as DraftFCB, the primary contractor for the 2010 Census Integrated Communications Program, and partner agencies negotiated added value as part of media buys. There were several additional implementation alternatives, such as inserting a LAG into a publication or directly printing an image of a LAG into the publications with articles covering the 2010 Census Language Program.

Costs
The total cost of the 2010 Census Language Program cannot be documented in detail since language components permeated across many program areas. Additional costs incurred by program areas where language components were embedded into their operations cannot be easily documented. Examples include TQA and FLD bilingual staff, communications and publicity, printing and shipping of in-language materials, and data capture/processing contracts.

The aspects of the Language Program that can be identified and associated with specific costs are the major contract costs for translation and research. During the period between 2007 and 2011, the Census Bureau costs for contracted language services amounted to $337,514 for projects related to the decennial census. During the period between 2002 and 2008, the costs for contracted services for the English/Spanish bilingual questionnaire research and pretesting of the 2010 Census questionnaire in five languages amounted to $715,027.

3 Methodology

3.1 Methodology

There were eight research topics identified for this assessment. The study first examines the language selection process and the means in which in-language materials were translated into the selected languages. It then discusses the operations which the Language Program supported through its in-language materials. This is followed by looking at the sufficiency of these materials by type and quantity. This study then discusses how in-language questionnaires were captured and processed as well as the overall schedule for Language Program operations.

The topics selected for the study are below:
- Language Selection
- Translations
- BC/QACs
- TQA
- Materials
- Data Capture/Processing
- Print Quantities
- Schedule

Research questions were developed for each topic along with sub-questions that provide further details on the main research questions posed. The questions were answered by utilizing data sources such as lessons learned documents, census reports and documents, and other tracking reports. Research questions and descriptions of the data sources are provided in Sections 3.2 and 3.3 below, respectively. The findings were reviewed by subject matter experts who were either knowledgeable or involved in the operations pertaining to the topic.

3.2 Research Questions

Below are the main research questions and sub-questions as they pertain to the topics examined in this study.

Language Selection
1. How were the criteria for language selection established and what were the outcomes?
   a. Were the five primary non-English languages sufficient in meeting the needs of in-language respondents and stakeholders?
   b. Were the criteria for selecting the languages for the primary non-English languages and the Language Assistance Guides sufficient?
   c. Was the three-tier system effective and sufficiently communicated to stakeholders?
   d. Were there languages that should or should not have been selected based on internal/external perception of need?

Translations
2. What was the process for translating and reviewing in-language materials (by product type) and what were the outcomes?
    a. Was there sufficient oversight of the translation process to ensure quality of the translated materials?
    b. How did the translation process work? Were quality assurance steps taken to ensure the translations were complete, consistent, and correct? Was there a system in place that addressed differing views of translations?
    c. Should we have had translations reviewed by an independent contractor?
    d. How did the process for finding reviewers (internal and external) work?
    e. How much time was allotted to review the translations?
    f. Was this process significantly delayed or hampered by external dependencies?
    g. How did the translation contractor handle the forms layout and design tasks?
    h. How well did the process support translation of late content changes?

3. What happened during the cognitive testing phase of the translated questionnaires and what were the outcomes?
    a. Was there adequate time to complete all the testing?
    b. Were feedback and recommendations provided in a timely manner?
    c. Were there other materials that should have been tested? If yes, explain.
    d. Was the approach to testing in-language questionnaires (Fulfillment) through one vendor with a minimal number of respondents sufficient to ensure quality of the questionnaire translations?

Be Counted/Questionnaire Assistance Centers
4. Were BC/QAC materials provided sufficient to assist in-language respondents?
    a. Was there a sufficient amount of in-language materials at the sites?
    b. Was there adequate distribution of the Be Counted forms?
    c. How many times was language assistance a reason for visiting the BC/QAC site?

Telephone Questionnaire Assistance
5. What was the process for producing and distributing TQA materials and what were the outcomes?
    a. How effective was the methodology for producing estimates of the amount of materials to be produced?
    b. How many interviews were conducted in each language through TQA?
    c. How many hits did the 2010 Census Web site receive for the following?
        i. English questionnaires
        ii. In-language questionnaires (by language and in total)
        iii. Language Assistance Guides (by language and in total)
        iv. Large Print and Braille guides

Materials
6. Were sufficient materials produced to support the program?
    a. Were there sufficient in-language materials (by type and quantity)?
    b. Were all in-language materials pre-tested? If no, explain.

c. What distribution of language needs was indicated on the Enumerator forms?
d. What types of feedback were received for in-language materials from internal and external stakeholders?
e. What other in-language materials were used to support the Language Program?

Data Capture/Processing
7. What happened during data capture and processing of in-language questionnaires?
    a. How did initial workload estimates for the volume of in-language questionnaires compare to the actual amount received?
    b. Were there issues with spacing, font size, etc. specifically related to in-language questionnaires?
    c. Were the in-language questionnaires designed for efficient data capture?
    d. What number of in-language forms had responses requiring translation?
    e. How many non-standard forms (e.g., Language Assistance Guides) were returned by respondents with data written on them?

Print Quantities
8. What were the criteria for determining quantities of printed materials and what were the outcomes?
    a. What methods were used in estimating print quantities for in-language materials?
    b. How effective was the methodology for producing estimates of print quantities?
    c. Was the print/distribution operation sufficiently coordinated with the Language Program operational area?
    d. What communication channels were placed between the print/distribution operation and the language program for developing requirements and developing quantity estimates of in-language materials?
    e. Were appropriate numbers of materials produced and distributed for the following?
        i. Be Counted
        ii. Enumerator Forms
        iii. Field Materials
        iv. Language Assistance Guides
        v. Be Counted Boxes
        vi. Information Sheets
        vii. Braille Guides
        viii. Large Print Guides
        ix. Envelopes

Schedule
9. How did the planned start and finish dates for each of the operations compare to the actual dates?

3.3 Data Sources

Below are descriptions of the major data sources utilized in this assessment.

3.3.1 Lessons Learned Document

This document compiles all the findings from the lessons learned sessions conducted with the Census Bureau Headquarters staff involved in the design and development of the Language Program and its products. These individuals include subject matter experts, research methodologists, and linguists that helped develop, design, and implement the Language Program. This document identifies the successes, problems, and recommendations for the Language Program and was compiled from May to August, 2010.

3.3.2 Decennial Management Division Cost and Progress Reports

The DMD Cost and Progress System reports consist of tallied data and information that managers and team members utilized to monitor check-in data and TQA services during the operations. These data originate from areas such as the Decennial Applicant, Personnel and Payroll System; Paper-Based Operations Control System; DMD Budget Formulation Branch; Census Matching, Review, and Coding System; and Universe Control and Management. The data received from Cost and Progress do not reflect any post processing information.

3.3.3 Field Quality Assurance Branch Reports

These reports record the number of BC questionnaires picked up (by language) at each BC site during the 2010 Census. These data were compiled by FLD and reported weekly during the BC/QAC operation.

3.3.4 Master Activity Schedule

The Master Activity Schedule (MAS) documented the baseline start/finish and actual start/finish dates for all scheduled activities. Following the completion of the 2010 Census, the DMD Management Information Systems staff provided a spreadsheet of baseline and actual dates, related operations, and other information for each activity line.

3.3.5 In-Language Briefing Reports

The in-language briefing reports provide information on Web traffic to language related pages of the 2010 Census Web site during the 2010 Census operations. Information includes the following: number of views of the 59 individual language pages; number of downloads of the informational questionnaire and LAGs; number of downloads of the *It's Easy* videos made in different languages; and the number of downloads of the different language tools and references. Any views or downloads that came from Census Bureau Internet Protocol addresses were not included in the totals of these reports.

3.3.6 Field Kit Specifications

The FLD kit specifications are memoranda written by the National Processing Center requesting the assembly of material kits for the 2010 Census operations including BC/QAC, NRFU, Enumeration at Transitory Locations, Update/Leave, and Remote Update/Enumerate. The specifications included quantities of printed materials in each kit to be delivered to the LCOs.

3.3.7 2010 Census Print Contracts

The 2010 Census print contracts were multiple contracts that documented the specifications, print quantities, and delivery information for different forms and printed materials used in decennial census operations. For this assessment, focus was placed on the print contracts that included the Language Program's in-language materials.

3.3.8 Decennial Response Integration System Fulfillment Solution Plan

The DRIS Fulfillment Solution Plan documents all aspects of the Fulfillment operation. The document consists of requirements, concept of operations, operations design, implementation plan, operational processes, and deployment and close out processes. For this assessment, focus was placed on the operational processes which determined the quantity of materials used during the Fulfillment operation.

3.3.9 Universe Control and Management Reports

The Universe Control & Management reports provide counts for both Mailout and Update/Leave Bilingual questionnaires and advance letters. The reports are drawn from the Universe Control and Management system, designed to verify and classify addresses for decennial census processes. These reports were presented at the operational status meetings during the 2010 Census production period.

3.3.10 Census Document System

The Census Document System is a Web-based system for requesting form design services, publication and graphics services, and printing services. This system was utilized to search for completed form print requests.

3.3.11 Section J.27 of the Decennial Response Integration System Contract

Section J.27 of the DRIS contract provides workload estimates intended for system sizing. This method used the worst-case scenario by overestimating the final actual workloads encountered for most questionnaire types, including in-language questionnaires. In general, a ten percent design capacity contingency was initially figured into the original data capture workload estimates.

3.3.12 Non-Standard Forms Returned By Respondents

Tracking of non-standard forms returned by respondents was presented at the 2010 Census daily operations meetings. These non-standard forms included torn front pages from the census questionnaire, filled-out LAGs, and any other returned responses that were not entered on an official census questionnaire.

3.3.13 Nonresponse Followup Language Data Tables from the Nonresponse Followup Operations Assessment

The NRFU language data tables show the totals and percentage of languages in which the NRFU interviews were conducted. During the NRFU operations, enumerators were asked to record the language in which the majority of an interview was conducted. The Decennial Statistical Studies Division compiled these data from the 2010 Decennial Response Files (DRF) and Auxiliary Questionnaire Data.

3.3.14 Record of Contact Form (D-399) Questionnaire Assistance Center Results

The Record of Contact Form (D-399) was filled out by QAC representatives whenever they assisted a respondent. The entries on this form indicated the reason for the visit, type of assistance given, materials provided to the respondent or utilized while assisting the respondent, and how the respondent learned about the QAC.

4 Limitations

- Due to the high volume of activities during the peak 2010 Census period, not all details, such as all print quantities, were properly documented.
- There were limitations caused by subjective interpretation of errors compared with stylistic preferences (e.g., translation).
- This study was limited by timing for completion of other assessments that addressed similar issues and provided data for this study.
- Some key players involved in development and printing of in-language materials were not available (e.g., due to retirement) for needed information at the time of this study.

5 Results

5.1 How were the criteria for language selection established and what were the outcomes?

5.1.1 Were the five primary non-English languages sufficient in meeting the needs of in-language respondents and stakeholders?

The five primary non-English languages for the 2010 Census were Spanish, Chinese, Korean, Vietnamese, and Russian. This was determined by first extrapolating the number of occupied housing units with no person age 15 or older who speaks English "very well" from the 2005 ACS data. Using this criterion and extrapolation from estimates from Census 2000 results, Spanish, Chinese, Korean, Vietnamese and Russian were identified as languages spoken by residents of at least 100,000 occupied housing units who might need language assistance.

Respondents were able to request questionnaires in the five primary non-English languages through TQA. BC questionnaires in those five languages were also available for respondents to pick up at BC sites and QACs. The tables below show the number of Fulfillment requests through TQA, the number of checked-in Fulfillment questionnaires based on those requests, and the number of BC questionnaires distributed and returned. The intent of displaying these numbers was to show the utilization of various types of in-language assistance made available to respondents.

As shown below in Table 2, the total number of in-language Fulfillment questionnaires requested was 88,794. Of this total, respondents returned 60,625 (68.28 percent) of the requested questionnaires. The data show that the majority of the requests were for Spanish questionnaires.

Table 2. Telephone Questionnaire Assistance Fulfillment Requests and Responses

Questionnaire	Total Fulfillment Requests Received	Total Questionnaires Checked In (9/30/10 cut off)	Percentage Returned by a Respondent	Total Number of Undeliverable-As-Addressed Checked In (Cumulative)	Percentage Undeliverable-As-Addressed
D-1(Spanish)	82,280	55,935	67.98	5,450	6.62
D-1(Chinese)	2,149	1,535	71.43	75	3.49
D-1(Korean)	1,844	1,417	76.84	50	2.71
D-1(Vietnamese)	1,756	1,180	67.20	37	2.11
D-1(Russian)	765	558	72.94	37	4.84
Total	**88,794**	**60,625**	**68.28**	**5,649**	**6.36**

Source(s): Cost and Progress Report 2010 Cumulative Data Capture Progress (based on 09/30/10 cutoff date), Cost and Progress Report 2010 UAA Check-In Status by DRIS Data Capture Center, Cost and Progress Report 2010 Call Resolution Cumulative Fulfillment Requests by IVR/TQA

Table 3 below indicates that respondents utilized TQA and BC services offering assistance in the five primary non-English languages. It is, however, difficult to determine whether or not the five primary non-English languages were sufficient in serving the needs of respondents and stakeholders based on these numbers alone, as there were other methods in which respondents could receive in-language assistance (e.g., 2010 Census Web site).

Table 3. Distribution and Return of Be Counted Questionnaires

Questionnaire	Total Be Counted Questionnaires Distributed	Total Be Counted Questionnaires Picked Up	Percentage of Be Counted Questionnaires Picked Up	Total Be Counted Questionnaires Checked In (09/30/10 cut off)	Percentage of Questionnaires Picked up that were Checked In
D-10(Spanish)	1,487,233	689,607	46.37	71,252	10.33
D-10(Chinese)	434,992	158,672	36.48	10,871	6.85
D-10(Korean)	384,589	138,635	36.05	4,680	3.38
D-10 (Vietnamese)	371,314	131,230	35.34	3,337	2.54
D-10(Russian)	365,686	115,520	31.59	2,072	1.79
Total	**3,043,814**	**1,233,664**	**40.53**	**92,212**	**7.47**

Source(s): Total Cumulative Questionnaire Report 04/29/10, Quality Assurance Branch BC/QAC: Questionnaire Distribution Summary, Cost and Progress 2010 Cumulative Data Capture Progress (based on 09/30/10 cutoff date)

Tables 4 and 5 below show the number of times the informational in-language questionnaires were downloaded through the 2010 Census Web site and the number of times the *It's Easy* videos were downloaded. These numbers reflect the number of questionnaires downloaded but may not be indicative of actual use.

Table 4. 2010 Census Informational Questionnaire Downloads[11]

Type of Informational Questionnaire	Number of Downloads
2010 English/Spanish Bilingual Informational Questionnaire	11,741
2010 Spanish Informational Questionnaire	8,031
2010 Chinese Informational Questionnaire	3,607
2010 Korean Informational Questionnaire	2,660
2010 Vietnamese Informational Questionnaire	2,693
2010 Russian Informational Questionnaire	1,800
Total	**30,532**

Source(s): In-Language Briefing Report (09/7/10)

The data indicate over 30,000 downloads of the informational in-language questionnaires. Over half of the downloads were for the English/Spanish bilingual and the Spanish informational questionnaires.

As the table below indicates, *It's Easy* videos in the primary non-English languages reached nearly 52,000 downloads. The number of downloads for all languages is in Appendix A.

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[11] Downloads occurred between the period of 01/01/10 and 08/31/10.

Table 5. *It's Easy* **Video Downloads in Primary Non-English Languages**

Language	Number of Downloads
Spanish	25,910
Mandarin	11,611
Cantonese	8,976
Korean	2,503
Vietnamese	1,858
Russian	1,122
Total	**51,980**

Source(s): In-Language Briefing Report (09/7/10)

5.1.2   Were the criteria for selecting languages for the in-language questionnaires and the Language Assistance Guides sufficient?

In addition to the aforementioned threshold of 100,000 housing units to determine the five primary non-English languages, the Census Bureau used a threshold of 2,000 housing units (estimated to need language assistance for a given language) when preparing the final list of languages for consideration in creating the LAGs. A few languages were removed from the list when the translation contractor indicated inability to translate into that language (Bentley, 2008). Fifty languages were selected through this process, supplemented by nine additional languages recommended by the 2010 Census Advisory Committee and the Race and Ethnicity Advisory Committees.

A request was made by the Macedonian community to create a Macedonian LAG after the 59 languages had been finalized. The Census Bureau worked with the Macedonian community by providing guidelines on how the LAG should be created.   The Macedonian LAGs were not distributed at QACs, but the electronic version of the Macedonian LAG was made available on the 2010 Census Web site.

5.1.3   Was the three-tier system effective and sufficiently communicated to stakeholders?

The Census Bureau utilized a three-tier approach in making the in-language materials available. The table below summarizes the estimated number of housing units for each language to qualify to be included in its respective tier and the types of language assistance materials available for each tier. It should be noted that while the Census Bureau communicated the mechanism in which certain materials were made available, it did not advertise the existence of a tier-system.

Table 6. Three-Tier System for In-Language Materials

Tier	Estimated Number of Housing Units Needing Language Assistance Per Language	Available Materials
1	Greater than 141,000	Fulfillment and BC questionnaires for the five primary non-English languages Printed LAGs available through TQA, QACs, TQA interviews, 2010 Census Web site, and the Partnership Program
2	20,000 – 141,000	Printed LAGs available through TQA, QACs, 2010 Census Web site, and the Partnership Program
3	2,000 – 19,999	Printed sets of LAGs available in QACs, 2010 Census Web site, and the Partnership Program

Source: Memorandum for Suggestions for Language Assistance Guides (Vitrano, 2008)

5.1.4 Were there languages that should or should not have been selected based on internal/external perception of need?

The Census Bureau consulted with the Census Bureau Advisory Committees and Census Bureau Regional Directors for additional input once the initial list of languages was compiled. Two Alaska Native languages – Inupit and Yupit – were requested, but translation was not available for either of the languages.   Additional requests were made to produce LAGs in an additional five Native Hawaiian and Other Pacific Islander languages: Chamorro, Chuukese, Marshallese, Samoan, and Tongan. The Census Bureau utilized translation assistance through the Asian and Pacific Islander American Health Forum, in collaboration with the Census Advisory Committee on the Native Hawaiian and Other Pacific Islanders Population, to produce these materials. The Census Bureau's translation contractor for the 2010 Census was unable to provide translations for these five languages.

The Macedonian community also requested that a Macedonian LAG be created. However, due to the request coming in after the languages had been finalized, the Census Bureau funded the Macedonian community to create its own LAG and made it available online. There were requests from various communities to incorporate additional in-language materials to which the Census Bureau was not able to respond. For example, there were suggestions from the field offices that Arabic be added as a sixth primary non-English language. No languages were requested to be eliminated other than those for which the contractor could not provide translations.

5.2 What was the process for translating and reviewing in-language materials (by product type) and what were the outcomes?

5.2.1 Was there sufficient oversight of the translation process to ensure quality of the translated materials?

There was not sufficient oversight of the translation work or a standardized quality assurance plan for the translations. The language contract utilized for the 2010 Census was an extension of an already existing contract with DLS. The intent of the original contract was to provide Spanish translation for DMD and ACS projects that could not be handled in-house due to limited resources and time. The original contract did not provide any requirements for desktop publishing work or any translation into other languages than those that initially formed the contract.

The Census Bureau amended the contract with additional languages and foreign language desktop publishing without properly setting up the infrastructure and logistics to handle all of the incoming work. This contributed to insufficient oversight of the translation process. A separate project manager was not set in place for each individual project (at both the Census Bureau and contractor levels) for the translation projects to be managed concurrently and in a collective way. The translation review process also differed across projects.

Since the contracted translators were often unfamiliar with census concepts, a Census Bureau technical point of contact was needed to discuss definitions, terminology, and other content issues. The Census Bureau developed the LRD with the intent of providing a comprehensive census dictionary of terms, concepts, and phrases found on the text of the questionnaires and forms, but there was not sufficient time to finalize, review, and distribute it. During instances when it was utilized, translators found it limiting in terms of concepts and terminology. Overall, the process was not streamlined to provide proper oversight of the process.

5.2.2 How did the translation process work? Were quality assurance steps taken to ensure the translations were complete, consistent, and correct? Was there a system in place that addressed differing views of translations?

The Census Bureau used the existing contract with DLS and extended it to include the overall translation services for the 2010 Census. DLS in turn provided the subcontracting of translations as necessary. Quality assurance measures used by the contractor and agreed to by the Census Bureau included ensuring uniformity and consistency throughout in the use of terminology, layout, etc. The intent was to achieve the same look and feel of the English version of the original documents.

During the translation phase, DLS oversaw its translation and review and had its own quality control process that included assigning the appropriate qualified translators for translating the materials, reviewing the translations, and editing the translations. Linguists were screened for appropriate educational background, professional experience, and technical fields of expertise. Many of the translators had professional training in translation as well as certification and/or

accreditation from recognized organizations. These individuals translated from the source language into their native language to ensure linguistic accuracy and cultural appropriateness.

Once the text was translated, the document was sent to a reviewer for editing. Reviewers were subject to the same screening criteria as the translators, and they compared the translation to the original document to ensure that the document was the best possible reflection of the original. Only one reviewer was assigned per project (per language).

During the quality control process performed by DLS, there was not a mechanism in place for the Census Bureau to be consulted in the event of a discrepancy. It was the responsibility of DLS to ensure completeness and appearance of the final product of the translations into the target language. The final process included comparing the translation against the original for completeness, accuracy of numbers, and formatting consistency and consulting with the reviewer if something had been omitted or did not meet requirements. This was problematic, as the quality control was conducted by the same vendor that conducted the translations.

Once the translations were completed by DLS, the translated materials were sent to the Census Bureau. Using available in-house reviewers, the following criteria were utilized to assess the quality of the translation:
- Spelling or grammatical errors
- Missing words, items or sections
- Style and readability of the target language consistent with the source language
- Layout of the translated document consistent with the layout of the original source document, including page size, formatting, graphics, headers, footers, etc.
- Related documents consistent in style and terminology
- Specific terminology translated in accordance with the glossary of terms and/or reference materials provided by the Census Bureau, where applicable
- Questions regarding terminology and/or layout discussed with the Census Bureau program manager

When in-house language experts were not available to help adjudicate discrepancies, the Census Bureau consulted with representatives from the contractor/in-house translators, members of the Language Integrated Program Team, or subject matter experts to determine the next steps in requesting revisions from DLS. Depending on the changes requested, DLS provided the Census Bureau with an updated document with justification of the changes that it accepted/rejected.

On some occasions when the contractor did not agree with the suggested change, the Census Bureau determined the next course of action based on the justification provided by the contractor and the back-translation (translation of the phrase into English) of the term/phrase in question. In the end, the Census Bureau made the final decision on which comments and translations were to be accepted, rejected, or modified[12] (Woodling and Pabon Marrero, 2010).

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[12] See Appendix B for examples of translation issues.

5.2.3 Should we have had translations reviewed by an independent contractor?

There was difficulty with solely relying on one vendor during the translation and review processes without another language company serving as an independent reviewer and/or adjudicator. The Census Bureau did not have in-house language team/experts, minimally supporting the primary non-English languages, to verify the work of the contractor. There was not a formal process to review and/or adjudicate discrepancies in many of the materials translated into languages other than Spanish, and the Census Bureau had to rely on the review and quality control processes of the contractor.

Census Advisory Committee members and Census staff were asked to review the translations, but this was voluntary and based on their availability. This posed problems, as there was not an official process to verify their comments. These comments were directly forwarded to DLS, once again relying on the original contractor to adjudicate.

Furthermore, due to Census Bureau staff members not having language fonts on their computers, many comments made on the translations were handwritten and/or faxed to the Language Program staff. As a result, many of the comments were illegible. This was further complicated in that sufficient time was not allotted for clarification from reviewers.

5.2.4 How did the process for finding reviewers (internal and external) work?

The Census Bureau had a process that comprised of internal language experts to adjudicate discrepancies as well as subject matter experts who assisted with adjudication, although not all had language capabilities. Census Advisory Committee members and Census Bureau staff were asked to review the translations, but this was voluntary and based on their availability, and the timing most often did not comply with the official schedule in the contract. The only alternative was to extend the contract if the comments were received before the closing date or to award a new contract for the review and response by the contractors.

When the Census Bureau received the translated files from the contractor, the translated documents were sent to members of the Language Team that oversaw the 2010 Language Program. They were asked to distribute the items to anyone they knew who spoke the language under review. At the same time, the documents were sent simultaneously to members of the Census Advisory Committees and to the Regional Offices and Partnership specialists in FLD. The Census Bureau asked these individuals to distribute to bilingual members within their community for review/comment (Woodling and Pabon Marrero, 2010).

If any comments were received, they were consolidated, summarized, and submitted back to the contractor for their feedback on the suggested change. However, the process did not utilize the review section of the Census Bureau Translation Guidelines. Since the process relied heavily on volunteers, it was difficult to enforce formal deadlines and guidelines. Another problem with voluntary translation/review was that the Census Bureau did not have an internal system to verify or corroborate the changes that were given.

5.2.5   How much time was allotted to review the translations?

The time allotted for review of translations was determined by using the start date and the project deadline to calculate the time for all that needed to be done between those two dates. In a majority of the cases, the project sponsor would communicate how long they needed for review. That time was added to the translation and finalization time to come up with the project end date. For a short project, the review time was three to five business days, and for a larger project, the review time was 10 business days.

The blanket purchase agreement stated that one review would be done by the Census Bureau. With many of the decennial census projects, the sponsor did not specify the amount and type of reviews needed beforehand. Therefore, when the request for other than the standard review came, they were disallowed and/or instructed by the Acquisitions Division to close and restart a new project (Woodling and Pabon Marrero, 2010).

5.2.6   Was this process significantly delayed or hampered by external dependencies?

Because there were no official reviewers for translations in various languages, external reviewers were sought throughout the Census Bureau and the 12 Regional Offices to assist with translation reviews. Since these reviews were being done on a voluntary basis, it was difficult to enforce a deadline. The vast majority of the delays in the schedule were caused by the Census Bureau's inability to adhere to the agreed upon schedule in the statement of work. During the 2008-2010 time period, 20 of the approximate 52 call orders for decennial census projects either had to have modifications to the schedule due to Census Bureau noncompliance with deadlines or needed to be closed and reopened as a new project, because multiple modifications were not possible (Woodling and Pabon Marrero, 2010).

5.2.7   How did the translation contractor handle the forms layout and design tasks?

The statement of work for the overarching blanket purchase agreement indicated what general specifications would be followed (e.g., what software would be used for the future call orders). Each call order detailed the requirements for the layout of individual documents. It was the Census Bureau's responsibility to provide the specifications for the color, fonts, margins, resolution, etc. for each document. The agency was also responsible for providing copies of the original (non-PDF) files in English, as well as any font and graphic files as necessary.

There were instances where it was impossible for the contractor to comply with the sponsor's request for the following reasons:

1.   **Changes were made to the documents after the call order was issued and were out of scope for the statement of work**. These changes had to be conducted in-house. For example, the statement of work stipulated that the contractor should only change the text of the document. Graphics and barcodes were not to be moved or changed. The Contracting Officer's Technical Representative was informed that the barcodes in the translated versions were supposed to be different from the English version only after the

translated document was returned with incorrect barcodes to the sponsor. The document could not be returned to the contractor at that time.

2. **Sponsor did not provide the original files of graphics and fonts**. The contractor tried to mimic the layout as closely as possible. If the contractor did not have the fonts, it used one that was similar. It was impossible to obtain a high resolution of the graphics from a PDF file.

3. **Sponsor requested the use of desktop publishing software that was not listed in the blanket purchase agreement**. The contractor used a different software than the one utilized by Lockheed Martin and the Administrative and Customer Services Division for creating the census questionnaires. This created additional problems, revisions, and delays; and the changes in margins and spacing had to be finalized in-house. This approach resulted in questionnaires that could not meet the guidelines for automated data capture, requiring every non-English, non-Spanish questionnaire to be viewed by a bilingual keyer with limited data capture automation for these forms.

5.2.8 How well did the process support translation of late content changes?

There was not a system in place for the translation contractor to guarantee the work and to review and respond to any negative feedback on their translations. They were not required to do any necessary fixes that came up with the translation once the call order was closed. Because the process relied solely on one contractor, there was not sufficient assessment of the workload of the contractor to determine whether they had the capacity to handle any additional translation workload. The process also lacked a concrete schedule for testing materials outside of in-language questionnaires. While portions of Fulfillment questionnaires were tested, all other in-language materials were not tested (Woodling and Pabon Marrero, 2010).

5.3 What happened during the cognitive testing phase of the translated questionnaires and what were the outcomes?

5.3.1 Was there adequate time to complete all the testing?

The Census Bureau tested the 2010 mailout/mailback self-administered census questionnaires in English and its translations into Chinese, Korean, Vietnamese, and Russian. The Spanish content was not included, as the Spanish content was tested in the context of the English/Spanish bilingual questionnaire in 2002 and 2005 (U.S. Census Bureau, 2010i). The Census Bureau conducted the first round of cognitive interviews from February to March, 2008 and the second round from April to May, 2008. Revisions and recommendations were finalized and presented in May, 2008 (Pan et al., 2009).

The cognitive tests were divided into two rounds for each language. The results of the first round helped to revise the protocol guide and materials for the second and final round of interviews. The table below shows the number of participants.

Table 7. Number of Participants during Cognitive Testing

Language	Number of Participants		
	Round 1	**Round 2**	**Total**
Chinese	12	11	23
Korean	12	11	23
Vietnamese	12	11	23
Russian	12	12	24
English	8	8	16

Source(s): 2010 Census Language Program: Pretesting of Census 2010 Questionnaire in Five Languages

Before conducting the first round of cognitive interviews, a team of language experts[13] reviewed the materials for typographical and other patent errors. Although the materials were reprinted with the changes, some issues remained in the Korean, Russian, and Vietnamese translations. Due to time constraints, the Census Bureau was unable to reprint the questionnaires for a second time. There were also instances where the Census Bureau was not able to test alternative translations that attempted to fix errors, such as missing or outdated terms after cognitive testing had taken place, due to time constraints (Pan et al., 2009).

Starting the cognitive testing phase earlier would have been beneficial. Because deadlines had to be met in order to get the final files for printing and production purposes, additional testing rounds, such as testing alternative translations, did not occur. Furthermore, since English content was often finalized before starting the translations and/or testing, this posed difficulties in implementing changes when problems were identified in translated languages that could have been remedied through changes in the English content.

5.3.2   Were feedback and recommendations provided in a timely manner?

Delays in assembling groups and finalizing feedback from the Census Bureau to give new question wording to the contractor resulted in tighter schedules for subsequent testing rounds. Further cognitive testing on the questionnaire should have been conducted, including navigational testing, in a timeframe when it would have been possible to implement changes to the questionnaire.

5.3.3   Were there other materials that should have been tested? If yes, explain.

BC questionnaires should have been tested in the five translated languages. Time and resources should also have been allocated to test all public use materials. Doing so would have allowed changes to be made on other materials based on the results from cognitive testing. Furthermore, Puerto Rico Spanish questionnaires should have been tested separately from stateside questionnaires.

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[13] Language experts comprised of individuals within and outside of the Census Bureau.

5.3.4 Was the approach to testing in-language questionnaires (Fulfillment) through one vendor with a minimal number of respondents sufficient to ensure quality of the questionnaire translations?

There were no known issues with testing in-language questionnaires through one vendor. The vendor was able to test the questionnaires and provide recommendations for improvement. The difficulties arose after the vendor communicated the results to the Census Bureau, as there were not sufficient in-house staff members to review and implement the findings made by the contractor. A mechanism was not set in place to verify that the recommendations had been incorporated.

5.4 Were Be Counted/Questionnaire Assistance Center materials provided sufficient to assist in-language respondents?

5.4.1 Was there sufficient amount of in-language materials at the sites?

The BC/QAC operation created an additional avenue for individuals with limited English proficiency to complete a questionnaire or receive questionnaire assistance in their native language. At operational peak, there were 38,827 BC/QAC sites confirmed in the Integrated Partner Contact Database with 9,670 of those being BC only sites. The BC sites made BC questionnaires available in English and the five primary non-English languages (Spanish, Chinese, Vietnamese, Korean, and Russian) for stateside as well as English and Spanish for Puerto Rico.

Additional in-language materials were available to assist the QAC representatives and non-English speaking respondents at the QACs. The materials included: Language Identification Flashcards to help QAC representatives identify the language of the respondent; a booklet of 59 LAGs; and TQA cards with phone numbers to the TQA lines available in English and the five primary non-English languages. The table below displays the amount of materials distributed to BC sites and QACs.

Table 8. Distribution of Materials to Be Counted/Questionnaire Assistance Center Sites

Form ID	Description	Amount Distributed to Field Operations
D-1(F)(S)	Information Sheet-Spanish	148,357
D-1(F)(PR)	Information Sheet-Spanish(PR)	2,844
D-10(S)	Spanish BC Questionnaire Package	1,487,233
D-10(C)	Chinese BC Questionnaire Package	434,992
D-10(K)	Korean BC Questionnaire Package	384,589
D-10(R)	Russian BC Questionnaire Package	365,686
D-10(V)	Vietnamese BC Questionnaire Package	371,314
D-1210	Questionnaire Reference Book	95,005
D-1210(PR)	Questionnaire Reference Book – PR Spanish	3,081
D-3309	Language Identification Flashcard	150,020
D-3313	Telephone Questionnaire Assistance Cards	7,495,000*
D-60(1-59) Package	Language Assistance Guide Package	84,039
D-60(Braille)	Braille Language Assistance Guide	34,588
D-60(LP)	Large Print Guide	83,188

Source(s): BC/QAC Kit Specifications, Quality Assurance Branch BC/QAC: Questionnaire Distribution Summary, TO-024 Section J Promotional Materials, TO-024 Section J Promotional Materials
*This was the total amount sent to all Regional Offices.

Additional English materials were provided to the staff, such as answers to FAQs as well as the Questionnaire Reference Book to answer specific questions about the census. Staff have expressed that in-language versions of these English materials would have been helpful. Others have suggested providing training to staff on overcoming language barriers, creating LAGs specific to the BC questionnaire, and customizing Language Identification Flashcards specific to BC operations.

5.4.2 Was there adequate distribution of the Be Counted questionnaires?

There was more than adequate distribution of the in-language BC questionnaires. Table 9 below shows the amount of in-language questionnaires distributed to BC operations, as compared to the amount reportedly picked up by respondents. Also included in the table is the number of BC questionnaires received and checked in by DRIS.

Table 9. Be Counted Questionnaires Distributed and Checked In

Be Counted Language Questionnaire	Number of BC Questionnaires Distributed to BC Operations	Total BC Questionnaires Picked up from BC Containers (as of 4/29/10)	Percentage Picked Up that were Distributed to BC Operations	Total Questionnaires Checked In (9/30/10 cut off)	Percentage of Questionnaires Checked In that were Picked up from BC Containers	Percentage of BC Questionnaires Checked In that were Distributed to BC Operations
Spanish	1,487,233	689,607	46.37	71,252	10.33	4.79
Spanish(PR)	Not Available*	Not Available*	Not Available*	9,285	Not Available*	Not Available*
Chinese, Simplified	434,992	158,672	36.48	10,871	6.85	2.50
Korean	384,589	138,635	36.05	4,680	3.38	1.22
Vietnamese	371,314	131,230	35.34	3,337	2.54	0.90
Russian	365,686	115,520	31.59	2,072	1.79	0.57
TOTAL	**3,043,814**	**1,233,664**	**40.53**	**101,497**	**8.23**	**3.33**

Sources: Be Counted Print Contract, Total Cumulative Questionnaire Report 04/29/10, Cost and Progress Report 2010 Cumulative Data Capture Progress (based on 9/30/10 cutoff date)
*Tracking data on Puerto Rico BC Questionnaire Pick-up are unavailable (Source: FLD).

As the data indicate, the questionnaires were more than sufficient to meet the needs of the BC/QAC operation. Based on the table above, 50 percent of the total amount of distributed BC questionnaires would have been adequate for operations since less than 50 percent of the questionnaires distributed to operations were picked up.

5.4.3   How many times was language assistance a reason for visiting the Be Counted/Questionnaire Assistance Center site?

As part of their duties, QAC representatives were responsible for keeping track of the number of questionnaires distributed (by language) and other information on the Record of Contact Form (D-399), including reasons for the visits to the QACs. Table 10 below shows the distribution of the number of people who visited a QAC site, grouped by the reason for the visit.

Table 10. Reasons for Visiting Questionnaire Assistance Center Sites

Reason for Visit	Number of Responses (Stateside)	Number of Responses (PR)	Total Number of Responses	Percent of Responses*
Did not receive questionnaire	314,680	5,638	320,318	38.38
Lost questionnaire	90,924	1,254	92,178	11.04
Asked about jobs	69,731	461	70,192	8.41
Visit not related to questionnaire	52,928	212	53,140	6.37
Asked about a housing question	47,429	894	48,323	5.79
Could not read/or understand questionnaire	43,596	1,198	44,794	5.37
Needed assistance with a language	40,940	56	40,996	4.91
Asked about other census operations	37,761	324	38,085	4.56
Asked about a population question	34,655	692	35,347	4.24
Concern about privacy/confidentiality	31,977	304	32,281	3.87
Received two questionnaires	30,816	168	30,984	3.71
Already sent in questionnaire	19,948	13	19,961	2.39
Asked a race related question	12,635	608	13,243	1.59
Asked due date of questionnaire	11,302	9	11,311	1.36
Received questionnaire for wrong address/person	4,688	228	4,916	0.59
Asked a P.O. Box related question	3,375	1	3,376	0.40
Homeless	1,563	1	1,564	0.19
Other reason	125,550	3,378	128,928	15.45
No box checked	10,320	126	10,446	1.25
Total Visits	**820,975**	**13,740**	**834,715**	**--**

Source: QAC Record of Contact File

* This column does not sum to 100 percent since QAC representatives could select multiple answers on the D-399 form.

Based on the data, there were 834,715 individuals nationwide (both stateside and Puerto Rico) that received assistance at QAC sites during operations. Almost 41,000 respondents (approximately five percent) indicated they "needed assistance with a language" as their reason for visit.[14]

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[14] More detailed information on the D-399 data and QAC sites can be found in the Be Counted/Questionnaire Assistance Center Assessment.

5.5 What was the process for producing and distributing Telephone Questionnaire Assistance materials and what were the outcomes?

5.5.1 How effective was the methodology for producing estimates on the amount of materials to be produced?

The Census Bureau used multiple factors in determining the amount of materials needed for TQA operations. Three major factors taken into account were: (1) language needs estimates from the ACS data; (2) data on Census 2000 TQA Fulfillment requests, and (3) the assumption that the introduction of the English/Spanish bilingual questionnaire would decrease the demand for Spanish questionnaires. The estimated capture workload, as specified in the DRIS contract for the Fulfillment questionnaires, was then increased by 30 percent and rounded to the nearest 50,000 to determine the amount of pre-printed questionnaires to be made available for TQA (Lockheed Martin, 2009).

The quantities of the 2010 Census Fulfillment questionnaires and LAGs were based on this estimate and distributed to the TQA sites. Table 11 below displays the total Fulfillment requests received by TQA during its period of operations and the print amounts designated for TQA operations.

Table 11. Total Fulfillment Requests Received by Telephone Questionnaire Assistance

Form	Initial Supply of Fulfillment Questionnaires/ Language Assistance Guides	Total Fulfillment Requests Received	Percentage Distributed via Requests
Fulfillment Questionnaires			
D-1	950,000	287,916	30.31
D-1PR(Spanish)	10,000	1,609	16.09
D-1PR	10,000	435	4.35
D-1(Spanish)	900,000	82,280	9.14
D-1(Chinese)	200,000	2,149	1.07
D-1(Korean)	100,000	1,844	1.84
D-1(Vietnamese)	100,000	1,756	1.76
D-1(Russian)	100,000	765	0.77
TOTAL	**2,370,000**	**378,754**	**15.98**
Language Assistance Guides			
D-60 (Chinese, Simplified)	3,000	843	28.10
D-60 (Korean)	2,000	868	43.40
D-60 (Russian)	250	459	183.60
D-60 (Spanish)	40,000	18,681	46.70
D-60 (Vietnamese)	2,000	944	47.20
D-60 (Chinese, Traditional)	1,250	1,211	96.88
D-60 (Portuguese)	150	104	69.33
D-60 (Polish)	100	135	135.00
D-60 (Tagalog)	10,085	28	0.28
D-60 (Haitian Creole)	6,000	17	0.28
D-60 (French)	75	118	157.33
D-60 (Italian)	100	79	79.00
D-60 (German)	50	61	122.00
D-60 (Farsi)	50	117	234.00
D-60 (Dari)	125	7	5.60
D-60 (Armenian)	100	62	62.00
D-60 (Hindi)	50	60	120.00
D-60 (Tigrinya)	25	7	28.00
D-60 (Somali)	250	33	13.20
D-60 (Japanese)	100	123	123.00
D-60 (Arabic)	100	188	188.00
D-60 (Large Print)	4,000	15,287	382.18
D-60 (Braille)	100	1,911	1911.00
TOTAL	**69,960**	**41,343**	**59.10**

Source(s): DRIS Fulfillment Solution Plan, Cost and Progress Report 2010 Call Resolution Cumulative Fulfillment Requests by IVR/TQA

The table above shows the original amounts estimated by TQA. With the exception of the Large Print and Braille guides, Census Bureau staff had to ability to print any single-sheet LAGs to meet additional requests beyond the initial supply. For Large Print and Braille guides, additional

quantities were requested from FLD to compensate for the over-demand of some of the LAGs, but there was no official mechanism to track the additional quantities that were printed.

Based on the information provided in the table above, 16 percent of the total Fulfillment questionnaires for TQA were used, and 59 percent of the total LAGs printed for TQA was utilized to fulfill requests. Although the data show an overestimation for questionnaires needed to satisfy respondent requests, the availability of other non-print materials, such as instructional videos and electronic copies of LAGs, may have decreased the demand for print materials. It is, however, important to note that 10 of the 23 LAG estimates were underestimated, especially the Large Print guides.

5.5.2 How many interviews were conducted in each language through Telephone Questionnaire Assistance?

The TQA operation was divided into three phases. During the first phase,[15] callers who provided a valid Census Master Address File (MAF) ID could request a census questionnaire/LAG or request an interview to provide their data over the phone. In the second phase,[16] all callers could do so with or without a Census MAF ID. During the third phase,[17] callers could continue to request an interview over the phone; and additionally, a message was placed on the IVR informing respondents how they could connect to an agent to provide data over the phone. Questionnaires were not made available to callers during this final phase, but LAGs were still available to all callers (Zajac, 2011).

The table below lists the calls resulting in interviews taken by TQA by language. The number of interviews is inclusive of interviews that were conducted during all three operational phases of TQA.

Table 12. Non-English Interviews via Telephone Questionnaire Assistance by Language

Language	TQA Calls Resulting in a Non-English Interview	Percent of Non-English Calls Resulting in an Interview
Spanish	7,564	82.21
Spanish (PR)	347	3.77
Chinese	486	5.28
Vietnamese	448	4.87
Korean	228	2.48
Russian	128	1.39
TOTAL	**9,201**	**100.00**

Source(s): Cost and Progress Report 2010 Call Resolution Cumulative TQA Calls by Request Type

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[15] The first phase of TQA (02/25/10 – 04/11/10) started at the beginning of the operation and proceeded until the end of all forms delivery. Census Bureau business rules required that TQA not honor requests for questionnaires or phone interviews to non-MAF ID callers during this phase since the mailout operations had not been completed. Language Assistance Guides were mailed with or without a Census MAF ID, however.

[16] The second phase of TQA (04/12/10 – 04/21/10) began after delivery of all questionnaires and proceeded until the first cutoff date for NRFU selection.

[17] The third and final phase of TQA (04/22/10 – 07/30/10) started after the NRFU cutoff date and proceeded the end of TQA operations.

As the previous table shows, there were over 9,000 calls resulting in non-English interviews, of which over 80 percent of those interviews were conducted in Spanish. Overall, non-English interviews accounted for about seven percent of all interviews conducted through TQA, as 133,846 English and non-English interviews were conducted through TQA. Due to Census Bureau business rules that controlled when interviews could be offered, the majority of the interviews were captured during the third phase of operations (Lockheed Martin, 2010).

5.5.3   How many hits did the 2010 Census Web site receive for the following?

The subsections below give the number of downloads for English questionnaires, in-language questionnaires, LAGs, and Large Print and Braille guides. It should be noted that these materials were placed on the Web on a flow basis, and the number of hits may not necessarily represent the number of views. Furthermore, downloads by Census Bureau staff are not included in the counts provided below.

i.   English Questionnaires (English Informational Questionnaires)

There was a total of 113,892 downloads of the 2010 English informational questionnaire during the period of January 1 to August 31, 2010[18] (U.S. Census Bureau, In-Language Briefing Report, 2010).

ii.   In-Language Questionnaires

Table 13. Informational Questionnaire Downloads[19]

2010 Census In-Language Informational Questionnaires	Number of Downloads
English/Spanish Bilingual	11,741
Spanish	8,031
Chinese	3,607
Korean	2,660
Russian	1,800
Vietnamese	2,693
Total	**30,532**

Source(s): In-Language Briefing Report (09/07/10)
Note 1: The data use the 08/31/10 cutoff date due to unavailability of data concluding precisely on 09/05/10.
Note 2: Two versions of each informational questionnaire were posted on the Web.[20]

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[18] The data use the 08/31/10 cutoff date due to unavailability of data stopping exactly on 09/05/10.

[19] Downloads occurred during the period of 01/01/10 through 08/31/10.

[20] The original file contained an unfolded version of the questionnaire, which was sent to the contractor to print. Stakeholders were unable to properly print this version on a standard printer and requested a user-friendly version, which was later created and posted online.

iii. Language Assistance Guides

Table 14. Language Assistance Guide Downloads[21]

Language	Number of Downloads	Language	Number of Downloads	Language	Number of Downloads
Spanish	21,754	Hungarian	1,365	Armenian	853
Korean	9,084	Bengali	1,360	Croatian	848
Chinese, Traditional	8,182	Telugu	1,314	Bulgarian	835
Chinese, Simplified	7,188	Thai	1,312	Hebrew	826
Japanese	6,947	Malayalam	1,218	Greek	794
Vietnamese	6,457	Hmong	1,145	Khmer	767
Russian	3,530	Serbian	1,131	Czech	754
Polish	3,438	Urdu	1,114	Lao	697
Portuguese	2,776	Macedonian	1,104	Samoan	682
Arabic	2,661	Romanian	1,098	Lithuanian	660
Hindi	2,540	Italian	1,060	Cebuano	645
Farsi	2,402	Somali	1,038	Dari	642
French	2,191	Albanian	1,015	Ilocano	630
German	2,005	Ukrainian	994	Chamorro	617
Tamil	1,931	Haitian	982	Navajo	608
Gujarati	1,756	Punjabi	962	Marshallese	596
Nepali	1,689	Yiddish	913	Tongan	591
Tagalog	1,654	Swahili	899	Tigrinya	582
Burmese	1,606	Amharic	873	Chuukese	561
Turkish	1,497	Dutch	861	Dinka	500

Source(s): In-Language Briefing Report (09/07/10)

iv. Large Print and Braille Guides

Table 15. Large Print and Braille Guides Downloads[22]

Type	Number of Downloads
Large Print Guide	2,014
Web Braille Guide[*]	754

Source(s): In-Language Briefing Report (09/07/2010)

* The Web Braille was a census questionnaire readable in a Braille display, Braille-aware note taker, or Braille embosser.

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[21] Downloads occurred during the period of 01/01/10 through 09/07/10.
[22] Downloads occurred during the period of 01/01/10 through 09/07/10.

5.6 Were sufficient materials produced to support the program?

5.6.1 Were there sufficient in-language materials (by type and quantity)?

The Language Program provided in-language materials that included in-language questionnaires, LAGs, and other materials that included Language Identification Flashcards, Enumerator Job Aids, an LRD, instructional videos, and single sheet privacy notices that combined the English and Spanish confidentiality notices into one.

Tables 16 through 19 below display the amount of language-related materials that were printed and distributed to different operations during the 2010 Census. The print quantities include, in most cases, amounts that were used for testing DRIS data capture as well as amended/modified amounts to the print contracts.

Table 16. Distribution of English/Spanish Bilingual Questionnaires and Advance Letters

Form	Description	Print Quantity	Distributed	Percentage Distributed
D-1(E/S)	Bilingual —English/Spanish (Bilingual Initial Mailing and U/L)	15,175,200	12,089,839	79.67
D-5(L)	English Advance Letter (Initial Mailing and U/L)	120,000,500	117,322,978	97.77

Source(s): UC&M Phase 2 Implementation Report (01/12/10), Program 910 Task (PWS): OY3 v.1.81, 2010 Census Advance Letters Print Contract

As Table 16 above indicates, there were sufficient quantities of both the English/Spanish bilingual questionnaire and the English advance letter. The advance letter is considered an in-language material since it included translated text that provided the link to the 2010 Census Web site.

Table 17. Distribution of Fulfillment Questionnaires

Questionnaire	Description	Initial Supply of Fulfillment Questionnaires	Amount Requested and Distributed through TQA	Percentage Distributed
D-1(S)	Spanish	900,000	82,280	9.14
D-1(C)	Chinese, Simplified	200,000	2,149	1.07
D-1(K)	Korean	100,000	1,844	1.84
D-1(R)	Russian	100,000	765	0.77
D-1(V)	Vietnamese	100,000	1,756	1.76
Total		1,400,000	88,794	6.34

Source(s): DRIS Fulfillment Solution Plan, Cost and Progress Report 2010 Call Resolution Cumulative Fulfillment Requests by IVR/TQA

Of the total print quantities of in-language questionnaires, a designated amount were set aside for TQA operations. This amount supplied to TQA operations (when compared to the amounts

requested by respondents through TQA) shows there were more than sufficient amounts of in-language questionnaires to fulfill all respondent requests during TQA operations.

Table 18. Distribution of BC/QAC Materials

Form	Description	Print Quantity	Distributed to BC Operations	Questionnaires picked up from BC Containers as of 4/29/10	Percentage Utilized of the Forms Distributed
D-10(S)	Be Counted—Spanish	4,507,000	1,487,233	689,607	46.37
D-10(C)	Be Counted—Chinese	820,000	434,992	158,672	36.48
D-10(K)	Be Counted—Korean	820,000	384,589	138,635	36.05
D-10(R)	Be Counted—Russian	820,000	365,686	115,520	31.59
D-10(V)	Be Counted—Vietnamese	820,000	371,314	131,230	35.34
D-10 PR(S)	Be Counted—Puerto Rico (Spanish)	62,000	Unavailable*	Unavailable*	Unavailable*
D-60(language)	Language Assistance Guides – 59 Languages	82,050**	84,039	N/A	104.42
D-10A	Container for Be Counted Packages—with Set of 6 Inserts (English, Spanish, Chinese, Korean, Russian, and Vietnamese)	60,000	55,272	N/A	92.12
D-10A PR(S)	Container for Be Counted Packages, Puerto Rico—with Set of 2 Inserts (English and Spanish)	1,000	938	N/A	93.80

Source(s): BC/QAC Kit Specifications, Quality Assurance Branch BC/QAC: Questionnaire Distribution Summary, Total Cumulative Questionnaire Report 04/29/10
*Tracking data on Puerto Rico BC questionnaire distribution and pick-up are unavailable
** Additional 20,000 printed sets are not included in this total.

When comparing the quantity of BC questionnaires distributed to BC/QAC operations to the amount picked up by respondents, there was more than sufficient supply of BC questionnaires to accommodate the demand from respondents who picked up the questionnaires from BC locations.

As for the LAGs, the initial print quantity of 82,050 was underestimated. According to FLD, an additional 20,000 sets were printed in order to meet the need. The additional sets made it

possible to distribute a total of 84,039 sets to the BC/QAC operations. However, formal documentation on the additional printed sets is not available.

Table 19. Distribution of Other Field Materials

Form	Description	Initial Print Quantity	Distributed to Field Operations	Percentage Distributed
D-1(E)Job Aid(S)	Enumerator Job Aid - Spanish	1,083,000	1,157,328	106.86
D-1(F)(S)	Information Sheet – (Green) Spanish	144,000,000	88,358,314	61.36
D-1(F)PR(S)	Information Sheet – (Yellow) Puerto Rico (Spanish)	8,300,000	2,373,099	28.59
D-61(E/S)	Informational Copy of Bilingual Questionnaire	500,000	81,000	16.20
D-61 PR(S)	Informational Questionnaire – Puerto Rico (Spanish)	50,000	2,372	4.74
D-3309	Language ID Flashcard	1,400,000	1,380,020	98.57
D-1210	Questionnaire Reference Book	97,005	95,005	97.94
D-1210(PR)	Questionnaire Reference Book PR – Spanish	3,281	3,081	93.90

Source(s): NRFU, ETL, U/E, Remote, QAC Kit Specifications, CENDocS

Table 19 above shows that sufficient amounts of field materials were made to support the various programs that utilized the materials. The print quantities for Information Sheets were especially overestimated, where half of the printed amount would have met the demand. The Enumerator Job Aids, on the other hand, were underestimated, and additional copies were made in order to meet the demand.

5.6.2   Were all in-language materials pre-tested? If no, explain.

The Census Bureau conducted cognitive testing of the English/Spanish bilingual questionnaire and the Fulfillment questionnaires in Chinese, Korean, Vietnamese, and Russian. Other types of questionnaires (e.g., BC questionnaires) or forms were not tested due to time constraints.

5.6.3   What distribution of language needs was indicated on the Enumerator Forms?

The Enumerator Forms for the 2010 Census included an interview summary where the following question was asked of the enumerator: "What language was the majority of the interview conducted in?" Table 20 below displays the number of instances in which non-English languages were utilized during the interviews. It should be noted that the results of this question include NRFU, NRFU Reinterview, Vacant Delete Check, NRFU Residual, U/E, U/E RI, Remote Alaska, and Remote Update/Enumerate operations.

Table 20. Language in which Interviews were Conducted

Language	Number of Interviews	Language	Number of Interviews	Language	Number of Interviews
Spanish	2,572,665	Italian	1,261	Ilocano	281
Chinese	49,319	Tagalog	1,241	Romanian	265
Navajo	15,385	Hindi	1,059	Thai	231
Russian	14,441	Hmong	957	Bulgarian	184
Korean	13,709	Panjabi	917	Nepali	183
Vietnamese	9,601	Croatian	856	Turkish	164
Polish	7,881	Amharic	769	Lithuanian	125
Haitian Creole	7,707	Urdu	663	Dari	112
Portuguese	7,506	Greek	638	Czech	95
Yiddish	5,669	Ukrainian	599	Hungarian	91
Armenian	5,614	Albanian	590	Dutch	86
Arabic	5,034	Japanese	576	Tigrinya	84
Farsi	1,697	Burmese	441	Swahili	80
Somali	1,673	Laotian	338	Malayalam	38
French	1,502	German	320	Dinka	10
Cambodian	1,282	Serbian	303		
Bengali	1,264	Hebrew	296	**Total**	**2,735,802**

Source(s): NRO and UEO Language Data

The top languages indicated on the Enumerator Forms were Spanish, Chinese, Navajo, Russian, Korean, and Vietnamese. Spanish was utilized 94 percent of the time that an interview was conducted in a non-English language. The top languages, with the exception of Navajo, are the primary non-English languages selected for the 2010 Census. It should be noted that the total displayed above does not include cases that were classified as unknown (1,772,276), contradictory (83,335), or missing (69,813).[23]

5.6.4 What types of feedback were received for in-language materials from internal and external stakeholders?

One of the successes of in-language materials production was the timeliness in which the 2010 Census Mailout/Mailback and BC questionnaires were created in English and the five primary non-English languages. The availability of the LAGs in 59 languages proved to be very useful to the FLD Partnership staff in reaching out to communities. Other successes included the Language Identification Flashcards that made it easier for respondents to identify to the enumerator their spoken languages and the English/Spanish privacy and confidentiality notices.

There were several difficulties associated with in-language materials, however. First, the limited space for text on the translated in-language questionnaires was challenging due to different language font sizes and translated texts that were often lengthier than the English text. Second, not all questionnaire elements, such as the Office of Management and Budget logos, were translated consistently. Third, there were also major concerns that strict/literal translation of the English content resulted in offensive terms due to cultural differences. Lastly, regional

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[23] For more information on Nonresponse and Update/Enumerate operations, refer to their operational assessments.

partnerships created their own in-language materials including materials in languages beyond the designated 59. This increased the risk of translation inconsistencies and/or negative feedback on materials that the Census Bureau did not officially produce.

With these challenges came recommendations on how the development of in-language materials could improve for the 2020 Census. These included designing the English and all non-English questionnaires in conjunction with the data capture specifications. Other recommendations included each in-language questionnaire having its own design and/or size, more consistency across translations, and in-language versions of English-only materials, such as the Questionnaire Reference Book.

As for the LAGs, more testing should be conducted to help deter respondents from filling out and returning the LAGs (despite the efforts made in 2010), such as adding a watermark, graying out the response boxes, and placing statements on the side margins that the guide was not a questionnaire and should not be returned. The volume of the non-questionnaire returns was not large enough in Census 2000 or the 2010 Census, however, to spend significantly more effort to try to further reduce these returns to zero.

5.6.5 What other in-language materials were used to support the Language Program?

FLD coordinated regional partnership efforts in reaching out to hard-to-count and in-language populations through partnerships with local businesses, organizations, and community groups. FLD helped communities and groups develop Complete Count Committees (CCC) to help promote the 2010 Census and encourage people to fill out and return their questionnaires.

Partnership specialists and other regional staff had the capability to speak, write, and/or read in 146 different languages. They utilized their language capabilities not only to communicate and reach hard-to-count populations but to create and produce in-language materials, such as the 2010 Census fact sheets, print advertising, billboards, and CCC fact sheets. Regional partnership and media specialists also utilized materials created at the Census Bureau Headquarters by translating them into other languages.

In conjunction with FLD, *It's Easy* videos were created as additional means of guiding respondents on filling out the questionnaires. The table below displays the number of views the videos received between January, 2010 and January, 2011.

Table 21. Number of Views for *It's Easy* Videos

Language	Views	Language	Views	Language	Views
Spanish	27,443	Bengali	384	Czech	121
Mandarin	11,856	Punjabi	339	Romanian	115
Cantonese	9,241	French	298	Croatian	110
English	6,115	Thai	281	Turkish	110
American Sign Language	3,474	Armenian	258	Hungarian	109
Korean	2,583	Polish	242	Cebuano	108
Vietnamese	1,880	Amharic	227	Gujarati	108
English-LGBT	1,550	Italian	214	Dari	99
Hindi	1,252	Yiddish	212	Dutch	96
Russian	1,162	Albanian	211	Bulgarian	93
Japanese	910	Khmer	172	Haitian Creole	93
Arabic	574	Hebrew	162	Chamorro	87
Portuguese	574	Ukrainian	161	Serbian	84
Tamil	547	Swahili	159	Tongan	84
Spanish-LGBT	499	Navajo	150	Chuukese	66
Farsi	485	Lao	148	Lithuanian	66
Telugu	478	Marshallese	147	Ilocano	62
Urdu	472	Greek	141	Somali	61
German	466	Malayalam	141	Samoan	60
Burmese	458	Hmong	133	Tigrinya	53
Tagalog	453	Nepali	127	Dinka	50

Source(s): In-Language Briefing Report – December 2010

It's Easy videos received over 65,000 views through the 2010 Census Web site with the top ten viewed languages including the primary non-English languages selected for the 2010 Census. These numbers do not include the amount of views on YouTube, where the Census Bureau posted the videos. Additionally, Comcast made nine *It's Easy* videos available on its On Demand service at no cost. The languages included English, Spanish, Mandarin, Cantonese, Korean, Vietnamese, and Russian. Tracking information was not available from Comcast.

Suggestions were also made to modify the 2010 Census Web site to include more in-language materials on the actual language pages than found elsewhere on the Web site. These materials include FAQs, posters, flyers, and fact sheets. Respondents should have been given access to more of the in-language materials on a central page.

5.7 What happened during data capture and processing of in-language questionnaires?

5.7.1 How did initial workload estimates for the volume of in-language questionnaires compare to the actual amount received?

The overall estimated data capture workload for in-language questionnaires was overestimated. Table 22 displays the estimated workload for in-language questionnaires in comparison to the data capture check-in totals for both the Fulfillment and BC questionnaires. Questionnaires continued to be checked in for evaluation purposes through September 30, 2010 with a few more being received thereafter. In-language questionnaires were processed through the DRIS data capture system.

Table 22. Estimated Workload for In-Language Questionnaires

Form ID	Questionnaire	Estimated Capture Workload	Total Questionnaires Checked in through 09/30/10	Percentage Checked in Compared to Estimate
D-1	Mailback Questionnaire (Incl. Update/Leave)	92,000,000[24]	82,933,623	90.15
D-1(C)	Fulfillment- Chinese, Simplified	136,000	1,535	1.13
D-1(K)	Fulfillment - Korean	68,000	1,417	2.08
D-1(R)	Fulfillment - Russian	68,000	558	0.82
D-1(S)	Fulfillment - Spanish	646,000	55,935	8.66
D-1(V)	Fulfillment - Vietnamese	68,000	1,180	1.74
D-10	Be Counted-English	550,000	681,393	123.89
D-10(C)	Be Counted-Chinese	300,000	10,871	3.62
D-10(K)	Be Counted-Korean	300,000	4,680	1.56
D-10(R)	Be Counted-Russian	300,000	2,072	0.69
D-10(S)	Be Counted-Spanish	500,000	71,252	14.25
D-10(V)	Be Counted-Vietnamese	300,000	3,337	1.11

Source(s): Section J27 of the DRIS Contract, Cost and Progress Report 2010 Cumulative Data Capture Progress (based on 09/30/10 cutoff date)

With the exception of Fulfillment and BC questionnaires in English and Spanish, less than five percent of the expected workload was returned. Although Spanish was over five percent, utilization was still considerably low at 8.66 percent for Fulfillment and 14.25 percent for BC questionnaires. The 92,000,000 estimate for the Fulfillment questionnaires included the English/Spanish bilingual questionnaire, but the estimate was never revised downward to account for the change made in the replacement mailing strategy.

In the case of the English BC questionnaires, the expected workload exceeded the estimated capture workload by approximately 24 percent. There are a few explanations on why this occurred. For one, the original estimate utilized the wrong baseline from Census 2000 by assuming 500,000 BC questionnaires were utilized during Census 2000 instead of approximately

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[24] This estimate includes the English/Spanish bilingual questionnaire.

600,000 questionnaires. In addition, while the number of Hurricane Katrina evacuees around the country in 2005 increased the workload, the DRIS contract was never modified to account for this. Another factor was while FLD significantly increased the BC workloads, the DRIS contract was never modified to reflect the change. The assumption was made that DRIS would be able to absorb the increases in its design capacity contingency, which it did.

5.7.2 Were there issues with spacing, font size, etc. specifically related to in-language questionnaires?

There were several issues pertaining to in-language questionnaires. First, the differences between the software used by the contractor and the Census Bureau caused layout issues. Moreover, the English questionnaire used as the base template for all in-language questionnaires already had very limited free space, and it was difficult to fit the translated texts that were lengthier than the English text. Contractor limitations on meeting Census Bureau requirements for automated data capture also caused difficulty.

Furthermore, the questionnaire design process, in conjunction with data capture requirements, did not allow flexibility for each version of the translated questionnaire to have its own design. The spacing requirement per DRIS data capture guidelines was particularly difficult to follow due to varying font sizes of different languages.[25]

5.7.3 Were the in-language questionnaires designed for efficient data capture?

Questionnaires in Chinese, Korean, Vietnamese, and Russian were created differently due to the translation contractor not having forms design capabilities. The Census Bureau created a template in English and had the language contractor place the translated text onto the template. The translation contract did not include a requirement for contractors to serve as forms designers and make necessary spacing adjustments to meet all data capture requirements.

Due to time constraints, it was decided that in-language questionnaires would be processed differently from the English and Spanish questionnaires. All checkboxes were to be processed by DRIS, and the write-in responses would be captured through a key-from-image process. This added to the length of the time needed to capture these questionnaires as well as requiring certified language translators.

5.7.4 What number of in-language forms had responses requiring translation?

Approximately 10 percent of the 25,650 returned in-language questionnaires required translation. Table 23 shows the number of in-language questionnaires and BC questionnaires that were checked in as well as the number of questionnaires that required translation by language. It should be noted that the third column (Number of Questionnaires Requiring Translation) is defined as the number of questionnaires received in a particular language with write-in responses written in that language, requiring a specialized keyer to key a translation of the write in

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[25] For example, the font on the Russian questionnaire needed to be reduced, and the phrase "mark one box" was truncated on the English/Spanish bilingual questionnaire.

response. Furthermore, only questionnaires with responses written in the language of that particular questionnaire are included in this summary.

Table 23. In-Language Questionnaires Requiring Translation

Questionnaire	Number of Questionnaires Checked in	Number of Questionnaires Requiring Translation	Percentage of Questionnaires Requiring Translation
D-1 (Chinese)	1,535	207	13.49
D-1 (Korean)	1,417	79	5.58
D-1 (Russian)	558	169	30.29
D-1 (Vietnamese)	1,180	173	14.66
D-10 (Chinese)	10,871	921	8.47
D-10 (Korean)	4,680	178	3.80
D-10 (Russian)	2,072	377	18.19
D-10 (Vietnamese)	3,337	370	11.09
TOTAL	**25,650**	**2,474**	**9.64**

Source(s): Cost & Progress 2010 Questionnaires with Response Requiring Translation Report

As the table above indicates, of the 25,650 in-language questionnaires checked in, only 9.64 percent required translation. The Russian questionnaires had the highest percentage requiring translation at 30.29 percent for Fulfillment questionnaires and 18.19 percent for BC questionnaires. It should be noted that when non-Roman alphabet letters appeared in write-in fields on English questionnaires, the field was marked as illegible and output as blank.

5.7.5   How many non-standard forms (e.g., Language Assistance Guides) were returned by respondents with data written on them?

The table below displays the number of non-standard forms returned by respondents with data written on them.

Table 24. Non-Standard Forms Returned by Respondents

Processing Location	Front Page Torn Off, Transcribed, and Processed (estimate)	Front Page Torn Off	Other Non Standard Forms	TOTAL
Baltimore	200	13,439	2,982	16,621
NPC	150	8,800	13,531	22,481
Phoenix	523	14,902	4,456	19,881
TOTAL	**873**	**37,141**	**20,969**	**58,983**

Source: Respondent Data on Nonofficial forms 04/27/10

As the table indicates, there was a total of 58,983 non-standard forms returned by respondents. This indicates there was a fair number of unacceptable forms, such as LAGs and photocopies sent to the paper data capture centers, which could not be processed.[26]

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[26] Estimates of types of in-language questionnaires with unacceptable responses are not available.

The initial procedure for data processing called for a manual check-in of these forms, where staff would generate a processing ID for any torn or partial questionnaires and transcribe to a new questionnaire for processing. However, a decision was made by the Census Integration Group to destroy the questionnaires after tracking the number of incidences this occurred.[27] Such forms were no longer considered official forms with sufficient data to be counted in the census. This new guidance was applied to all other non-standard forms received by DRIS for processing. After April 27, 2010, staff discontinued keeping track of the count, as the numbers became negligible.

5.8 What were the criteria for determining quantities of printed materials and what were the outcomes?

5.8.1 What methods were used in estimating print quantities for in-language materials?

There was a systematic method in which the Census Bureau estimated and/or determined print quantities across operations. The print estimates were first based on (1) the Census 2000 print quantities; (2) the number of materials returned; and (3) an additional 25 percent contingency to each estimate. Then, based on additional program requests and/or consultations between staff members from divisions involved in the operations, the final print quantity was determined. These final estimates were based on consultations made between staff members from divisions including DMD, FLD, and Decennial System and Contracts Management Office; and quantities were frequently revised based on conversations between key individuals for select operations.

In the case of FLD training materials, print quantities were based on the number of staff for the particular operation plus 10 percent of that total. The National Processing Center took that number and added five percent. According to the FLD logistics office, a standardized number of kits/materials were not utilized when assembling the kits, as quantities were not always dispersed equally due to varying needs of areas and operations. In order to provide some consistency and to facilitate ease of kit assembly and shipping, however, many locations were given a standard amount of forms, and additional kits were shipped as needed.

5.8.2 How effective was the methodology for producing estimates of print quantities?

The results were varied. While quantities of materials such as BC questionnaires were overestimated, the Braille guides were underestimated. In the case of LAGs, only one set of all 59 guides was available at the QACs, and staff members were not able to distribute copies to the respondents. The distribution of printed copies including BC questionnaires and boxes, Braille guides, Large Print guides, LAGs, Enumerator Forms, and field materials is discussed in Section 5.8.5.

BC quantities were increased at the suggestion of FLD to ensure wider outreach to different groups and to ensure there were sufficient materials at the LCOs. The originally proposed quantities were more in line with the final number used during the operation, however. Given

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[27] This decision was made at the daily operational status meeting held on 03/12/10.

the expense of having to do a second print run if sufficient materials were not printed the first time, the Census Bureau operated under the assumption that it would be less expensive to overprint than to go through a second print run. However, having twice the necessary number of printed materials resulted in a significant overestimation of print quantities.

5.8.3 Was the print/distribution operation sufficiently coordinated with the Language Program operational area?

The Language Program relied heavily on project/program areas to work directly with the Automated Data Collection Branch of DMD to determine the quantities. Overall, the print/distribution operation was sufficiently coordinated, even though most of the print quantities were overestimated due to last-minute decisions prior to the materials going to the print contractor.

5.8.4 What communication channels were placed between the print/distribution operation and the language program for developing requirements and developing quantity estimates of in-language materials?

As noted in Section 5.8.3 above, the Language Program relied heavily on project/program areas to work directly with the Automated Data Collection Branch to determine the quantities. Print quantities for communications materials were handled separately by the Integrated Communications Program through its own contract.

5.8.5 Were appropriate numbers of materials produced and distributed for the following?
  i.   Be Counted
  ii.   Enumerator Forms
  iii. Field Materials
  iv.   Language Assistance Guides
  v.   Be Counted Boxes
  vi.   Information Sheets
  vii. Braille Guides
  viii. Large Print Guides
  ix.   Envelopes

The tables below show the print quantity and distribution of the materials listed above. The print quantities include, in most cases, prints used for testing DRIS data capture as well as amended/modified amounts to the print contracts. The amount of envelopes is not displayed, as the number parallels the amount of questionnaires and products that were packaged for mailout during operations.

i. Be Counted

Table 25. Print and Distribution of Be Counted Questionnaires

Language	Number of Questionnaires Printed	Total Distributed to BC Operation	Respondent Check-In (09/30/10 cut off)	Percentage of Questionnaires Checked In that were Printed
Spanish	4,507,000	1,487,233	71,252	1.58
Spanish (PR)	62,000	Not Available*	9,285	14.98
Chinese, Simplified	820,000	434,992	10,871	1.33
Korean	820,000	384,589	4,680	0.57
Vietnamese	820,000	371,314	3,337	0.41
Russian	820,000	365,686	2,072	0.25
TOTAL	**7,849,000**	**3,043,814**	**101,497**	**1.29**

Sources: Be Counted Print Contract, Quality Assurance Branch BC/QAC: Questionnaire Distribution Summary, Total Cumulative Questionnaire Report 04/29/10, Cost and Progress Report 2010 Cumulative Data Capture Progress (based on 09/30/10 cutoff date)

* Specific data for Puerto Rico Be Counted questionnaires at Be Counted sites were unavailable.

Based on the data in Table 25, there was significant over-printing of the materials. Of approximately 7.8 million stateside in-language BC questionnaires, around 101,000 questionnaires were checked in. The BC print quantities were significantly increased just prior to the start of printing due to requests from program areas.

ii. Enumerator Forms

Table 26. Print and Distribution of Enumerator Forms

Form	Description	Print Quantity	Total Forms Checked In (09/30/10 cutoff)	Percentage Utilized
D-1(E)PR(S)	Enumerator Questionnaire—Puerto Rico	2,119,000	1,031,102	48.66
D-1(E)(SUPP)PR(S)	Enumerator Continuation Form—Puerto Rico	175,000	18,690	10.68
D-1(E)(RI)PR(S)	Reinterview Questionnaire—Puerto Rico	54,000	25,587	47.38

Source(s): Enumerator Print Contract, Cost and Progress Report 2010 Cumulative Data Capture Progress (based on 09/30/10 cutoff date)

Based on the data in Table 26, the print quantities of the enumerator forms were over-printed, especially the supplemental forms for large households in Puerto Rico.

iii. Field Materials

Table 27. Print and Distribution of Field Materials

Form	Description	Initial Print Quantity	Distributed to Field Operation	Percentage Distributed
D-60(language) sets	Language Assistance Guides – 59 Languages	82,050	84,039	104.42
D-3309	Language ID Flashcard	1,400,000	1,380,020	98.57
D-1210	Questionnaire Reference Book	97,005	95,005	97.94
D-1210(PR)	Questionnaire Reference Book PR-Spanish	3,281	3,081	93.90

Source(s): CENDocS, 2010 Language Guide Contract, BC/QAC Kit Specifications, FLD Kit Specifications

Based on the data in Table 27, over 90 percent of the printed field materials were distributed. As for the LAGs, the print quantity was underestimated and resulted in additional copies being printed. Further explanation has already been provided in section 5.6.

iv. Language Assistance Guides

Table 28. Print and Distribution of Language Assistance Guides

Language	Print Quantity	Distributed To QACs	Initial Pre-Printed Amount for TQA	Percentage Distributed
Chinese, Simplified	100,600	84,039	3,000	86.52
Korean	99,600	84,039	2,000	86.38
Russian	97,600	84,039	250	86.36
Spanish	138,300	84,039	40,000	89.69
Vietnamese	99,600	84,039	2,000	86.38

Source(s): QAC Kit Specifications, DRIS Fulfillment Plan, Language Assistance Guide Print Contract

Based on the data in Table 28, over 80 percent of all LAGs in the primary non-English languages were distributed to operations. This is the same for the remainder of the languages (see Appendix D).

v. Be Counted Boxes

Table 29. Print and Distribution of Be Counted Boxes

BC Boxes	Description	Quantity	Distributed to Field Operation	Percentage Distributed
D-10A	Boxes for Be Counted Packages—with Set of 6 Inserts (English, Spanish, Chinese, Korean, Russian, and Vietnamese)	60,000	55,272	92.12
D-10A PR(S)	Boxes for Be Counted Packages, Puerto Rico—with Set of 2 Inserts (English and Spanish)	1,000	938	93.80

Source(s): Be Counted Contract, Be Counted Kit Spec

Based on the data in Table 29, over 90 percent of the BC boxes produced were distributed to field operations.

vi. Information Sheets

Table 30. Print and Distribution of Information Sheets

Form	Description	Print Quantity	Distributed to Field Operation	Percentage Distributed
D-1(F)(S)	Information Sheet – (Green) Spanish	144,000,000	88,358,314	61.36
D-1(F)PR(S)	Information Sheet—(Yellow) Puerto Rico (Spanish)	8,300,000	2,373,099	28.59

Source(s): Information Sheet Print Contract, FLD Kit Specifications

Based on the data in Table 30, the print quantities of the Information Sheets surpassed the amounts that were distributed, especially for the Puerto Rico Information Sheet.

vii. Braille Guides

Table 31. Print and Distribution of Braille Guides

Form	Description	Print Quantity	Distributed To QACs	Distributed Through TQA	Percentage Distributed
D-60 (Braille)	Braille Guide	50,000	34,588	1,911	73.00

Source(s): Braille Print Contract, QAC Kit Specifications, Cost and Progress Report 2010 Call Resolution Cumulative Fulfillment Requests by IVR/TQA

Based on the data in Table 31, around 73 percent of the Braille guides were distributed.

viii. Large Print Guides

Table 32. Print and Distribution of Large Print Guides

Form	Description	Print Quantity	Distributed To QACs	Distributed Through TQA	Percentage Distributed
D-60 (LP)	Large Print Guide	183,600	83,188	15,287	53.64

Source(s): 2010 Language Guide Contract, QAC kit Specifications, Cost and Progress Report 2010 Call Resolution Cumulative Fulfillment Requests by IVR/TQA

Based on the data in Table 32, nearly 54 percent of the Large Print guides were distributed.

5.9 How did the planned start and finish dates for each of the operations compare to the actual dates?

Based on the MAS critical path for the Language Program, all major activities were completed on time, as described in the table below.

Table 33. Deliverable Timeline of Language Program

Operation	Started Early Finished Early	Started on Time Finished Early	Started on Time Finished on Time	Started Late Finished Late
Translation of Language Assistance Guides			X	
Cognitive Testing of Translated Fulfillment Questionnaires	X			
Translation of Language Reference Dictionary		X		
Translation of Public Use Forms		X		

Source(s): Master Activity Schedule

Although not documented in the official MAS, there were internal delays in the review process of translated materials. The reviews were conducted on a voluntary basis, and it was difficult to enforce deadlines. As already noted, while cognitive testing was completed on time, the Census Bureau was not able to allow additional rounds of testing in order to meet deadlines for forms development and printing.

It should be noted that seven of the 55 sub-activities under Translation of Public Use Forms showed beginning and/or finishing dates two years earlier than planned in the MAS. This was due to a business rule, enforced when using the scheduling software, where the baseline dates could not be updated or edited by a user once an activity had started. The scheduling staff had to reissue new baseline start/finish dates when modifying the schedule of an activity. Therefore, some of the baseline dates in the schedule were not true representations of what they should have been.

6   Key Lessons Learned, Conclusions, and Recommendations

6.1   Language Selection

How were the criteria for language selection established and what were the outcomes?

Conclusion
When determining the languages, the major factors taken into account were the 2005 ACS and Census 2000 results. The five primary non-English languages – Spanish, Chinese, Korean, Vietnamese, and Russian – were selected based on the threshold of 100,000 or more occupied housing units with no persons aged 15 or older who speak English "very well". The method for selecting the remaining languages was based on the threshold of 2,000 housing units estimated to need language assistance, supplemented by recommendations from stakeholders and the language ability of language contractors.

Data on the utilization of in-language materials support the selection of the five primary non-English languages. Empirical data also show that respondents used language support given in the 59 languages. It is difficult, however, to measure the degree in which the needs of the respondents were met through the 59 languages, as there were other mechanisms where respondents received language assistance outside of the Language Program materials, such as partnership materials.

Recommendations
- Consider additional selection criteria, such as hard-to-count scores and the return rate of in-language questionnaires from the past census.
- Develop a process where requests for additional languages are officially evaluated.
- Recognize emerging technologies and mixed-mode data collection when selecting languages.
- Begin production earlier in order to sufficiently incorporate requests for changes.

6.2   Translation

What was the process for translating and reviewing in-language materials and what were the outcomes?

What happened during the cognitive testing phase of the translated questionnaires and what were the outcomes?

Conclusion
The Census Bureau used an existing contract with DLS and extended it to include the overall translation services for the 2010 Census. The vendor was responsible for translations, editing, and review of the text. Once the contractor completed the translation work and sent the translated text back to the Census Bureau, available in-house reviewers assessed the quality of the translated work.

A major challenge was that there was not sufficient oversight of the translation work or a standardized quality assurance plan to evaluate the translations. The translation contract utilized for the 2010 Census was an add-on to an existing Spanish translation service contract, and it did not outline sufficient requirements for other in-language materials. This is the result of the time constraints around the translation process where resources such as the Census Bureau Translation Guidelines were not utilized by the translators. The guidelines were developed after the contract had already been in place and had not been officially vetted by the Census Bureau.

Heavy reliance on the contractor without strong in-house translators and reviewers proved to be another major challenge to the translation and review processes. The Census Bureau had a process that comprised of internal language experts to adjudicate discrepancies as well as subject matter experts who assisted with adjudication, although not all had language capabilities. Census Advisory Committee members and Census staff were asked to review the translations, but this was voluntary and based on their availability, and the timing most often did not comply with the official schedule in the contract.

As for cognitive testing, the Census Bureau cognitively tested the 2010 Mailout/Mailback self-administered census questionnaires in English and its translations in Chinese, Korean, Vietnamese, and Russian. The Spanish content was not included since the Census Bureau had pretested the Spanish content when preparing the English/Spanish bilingual questionnaire. The Census Bureau began the first round of cognitive interviews in February, 2008.

Time constraints posed challenges to the cognitive testing phase, as more time should have been allotted in the planning phase. Since the English content was required to be finalized before starting the translations and/or testing, it was difficult to implement changes when problems identified in translated languages could have been changed in the English content had adequate time been available. Additionally, delays in assembling groups together and finalizing feedback from the Census Bureau, in order to give contractors new question wording, caused tighter schedules for subsequent testing rounds.

Recommendations
- Create a comprehensive translation area to coordinate translation work across all operations.
- Establish an internal project management process for central oversight of the translation work that includes translations, contracting, review, and adjudication.
- Hire in-house translators/language experts, minimally for primary non-English languages.
- Require contractors and in-house staff to utilize the Census Bureau Translation Guidelines and the LRD.
- Utilize multiple translation vendors in place of relying on one contractor to ensure that translations are reviewed by a different vendor rather than the original translator.
- Expand the content of the LRD.
- Better integrate translation work with field and communications staff.
- Begin cognitive testing of translated materials as soon as possible after final English content is determined to provide sufficient lead-time to conduct adequate translation of questionnaires and other key materials.

- Conduct further cognitive testing, including navigational testing, in a time frame where it would still be possible to implement changes to any questionnaires or materials.
- Test all public use materials, such as advance letters and BC questionnaires, not just the Fulfillment questionnaires.
- Provide in-language staff with desktop language capabilities and software programs.

6.3   Be Counted/Questionnaire Assistance Centers

Were Be Counted/Questionnaire Assistance Center materials provided sufficiently to assist in-language respondents?

Conclusion

The BC/QAC operation created an additional option for populations with limited English proficiency to complete a questionnaire or receive questionnaire assistance in their native language. At operational peak, there were 38,827 BC/QAC sites confirmed in the Integrated Partner Contact Database with 9,670 of those being BC only sites.

BC Questionnaires in the five primary non-English languages, as well as English and Spanish for Puerto Rico, were distributed to the BC sites. Other in-language materials were made available to assist the QAC representatives and non-English speaking respondents at the sites. They included Language Identification Flashcards, LAGs, and TQA cards with phone numbers to the TQA lines available in English and the five primary non-English languages.

Findings show that more types of materials, such as LAGs specific to the BC questionnaires, could have been provided to the sites. Other findings show that more types of materials could have been provided to BC/QAC sites, such as Questionnaire Reference Books and answers to FAQs, in additional languages. The question remains whether some of the additional materials would be necessary in other languages since they were intended for the staff, not the respondents. Other findings included creating more in-language resources for BC/QAC staff and tailoring materials specific to these operations, such as Language Identification Flashcards customized to the BC operation.

Recommendations

- Create reference materials specific to the BC operation.
- Provide computer terminals/kiosks on site for staff to disseminate information in lieu of printed copies and to potentially collect data directly.
- Give staff the ability to print LAGs or have access to copies if needed for distribution.
- Provide more support materials to staff assisting in-language populations.
- Produce Questionnaire Reference Books and answers to FAQs in non-English languages.
- Further advertise language assistance that is available at different BC/QAC sites.

6.4 Telephone Questionnaire Assistance

What was the process for producing and distributing Telephone Questionnaire Assistance materials and what were the outcomes?

Conclusion
The TQA materials were produced by factoring in the following: (1) in-language needs estimates from the 2005 ACS data; (2) data on Census 2000 TQA Fulfillment requests, and (3) the assumption that the introduction of the English/Spanish bilingual questionnaire would decrease the demand for Spanish questionnaires. The quantities of the 2010 Census Fulfillment questionnaires and LAGs were based on this estimate and distributed to the TQA sites.

Results show there was an overall overestimation of Fulfillment questionnaires and mixed results for the estimation of LAGs. However, the availability of other non-print materials, such as those obtained from the 2010 Census Web site or through partnerships, may have decreased the demand for printed materials. Callers also had the option of providing their responses over the phone, but over 90 percent of the calls resulting in interviews were conducted in English.

Recommendations
- Make print-on-demand capabilities available for staff in lieu of pre-established quantities of materials.
- Research how emerging technologies and multi-mode data collection would diminish the need for printed materials.
- Provide guidance to staff on promoting TQA to different in-language groups.
- Research the need for supporting less frequently requested languages through TQA.

6.5 Materials

Were sufficient materials produced to support the program?

Conclusion
The Language Program produced in-language census questionnaires, LAGs, and other materials that included Language Identification Flashcards, Enumerator Job Aids, fact sheets, instructional manuals, reference materials, and articles for organizational newsletters, newspapers, and Internet publications. Feedback garnered from the lessons learned sessions identified the availability and content of materials as successes.

There were, however, concerns with limited space for text on the translated in-language questionnaires and literal translations of the English content that occasionally resulted in culturally offensive terms. Additional in-language materials created outside of Census Bureau Headquarters also increased possibilities of translation inconsistencies and/or negative feedback on materials that the agency did not officially produce. There were additional materials created later in the process, such as outreach materials and *It's Easy* videos, that should have been included in the planning stages.

In regards to the quantity of materials produced, findings show that there were more than sufficient materials produced, such as BC questionnaires, Language Identification Flashcards, and Questionnaire Reference Books to accommodate the demand from respondents. However, the initial print quantity of the LAGs and Enumerator Job Aids was underestimated, and additional sets were printed.

Recommendations
- Research how emerging technologies and multi-mode data collection could affect types of in-language materials that are needed.
- Customize materials, such as LAGs and Language Identification Flashcards, for different operations.
- Produce materials, such as Enumerator Job Aids and Notice of Visits, in additional languages.
- Research if additional materials, such as outreach materials or *It's Easy* videos, should have been included in the planning stage and how these materials can be expanded.
- Fully exploit the capability of the 2020 Census Web site for in-language materials.
- Conduct research on LAGs for additional ways to emphasize that they are not to be filled out, and conduct more testing to find ways to help respondents realize the guides are for assistance only and not to be filled out.

6.6   Data Capture/Processing

What happened during data capture and processing of in-language questionnaires?

Conclusion
The estimated data capture workload was overestimated for in-language questionnaires. Challenges pertaining to processing of in-language questionnaires included differences between the software used by the contractor and the Census Bureau that caused layout issues; limited space on the questionnaires for different language font sizes and translated texts that were often lengthier than the English text; and contractor limitations on meeting Census Bureau requirements for automated data capture. Information provided on unacceptable forms, such as LAGs with written responses as well as photocopies of questionnaires, were not captured. Approximately 10 percent of the in-language questionnaires returned with write-in responses in that language required translation by a specialized keyer.

Recommendations
- Research mixed-mode data collection and how in-language responses can be captured through different modes.
- Research how automated data collection could minimize many of the issues encountered with capturing paper responses of in-language questionnaires.
- Research best practices on handling special characters and accents on census responses.
- Allow flexibility for translated questionnaires and materials to have their own design, as the translated content is often lengthier than the English text.
- Provide additional lead-time for tuning optical recognition software for the questionnaires that are being scanned/recognized.

- Track returns of in-language materials not meant to be processed.
- Research ways in which information provided on unacceptable forms, such as LAGs with information written and mailed back by respondents, could be data captured.

6.7   Print Quantities

What were the criteria for determining quantities of in-language printed materials and what were the outcomes?

Conclusion
The Census Bureau used a systematic method that estimated and/or determined print quantities across operations. The print estimates were first based on: (1) Census 2000 print quantities; (2) the number of materials returned in Census 2000; and (3) a 25 percent contingency to each estimate. Then based on additional program requests and/or consultations made between staff members from divisions involved in the operations, the final print quantity was determined. Some languages were shown to possibly require a larger quantity and were increased accordingly. While the print/distribution operation was sufficiently coordinated between project/program areas, print quantities were overestimated due to additional program requests and efforts to reduce the risk of requesting a second printing.

Recommendations
- Research how emerging technologies and multi-mode data collection would diminish the need for printed materials.
- Make print-on-demand capabilities available for staff in lieu of pre-established quantities.
- Develop a process where program requests for additional quantities beyond the established estimates are officially evaluated.
- Utilize planning databases and ACS data to determine quantities of in-language print materials to create and distribute across the regions.

6.8   Schedule

How did the planned start and finish dates for each of the operations compare to the actual dates?

Summary
Based on the MAS critical path for the Language Program, all major activities were completed on time. Although not documented in the official MAS, there were internal delays in the review process of translated materials. The reviews were conducted on a voluntary basis, and it was difficult to enforce deadlines. While cognitive testing was completed on time, the Census Bureau was not able to allow additional rounds of testing in order to meet deadlines for forms development and printing.

Recommendation
- Build additional time into the schedule for translation review.

6.9 Reengineering the Program for the 2020 Census

Summarizing the successes and challenges from the 2010 Census experience and future recommendations, the following steps are proposed in reengineering the Language Program for the 2020 Census.

- Create a central translation area and hire in-house translators and language experts, minimally in the primary non-English languages, that oversee the translation and review process of in-language materials.

- Further integrate the Language Program into other operational areas. The Language Program should work with these areas so that language assistance is put into consideration when developing operational plans.

- Research how multi-mode data collection impacts the demand for in-language materials. Study how changes in data collection methods will impact in-language support.

- Investigate how emerging technologies will redefine the Language Program. Consider how new technologies will impact the language selection process, types and quantity of in-language materials created, and modes in which data will be captured and processed.

7 Related 2010 Census Assessments, Evaluations, and/or Experiments

- 2010 Census Bilingual Questionnaire Assessment
- 2010 Census Integrated Communications Program Assessment
- 2010 Census Observing Census Enumeration of Non-English-Speaking Households in the 2010 Census Assessment
- 2010 Census Telephone Questionnaire Assistance Assessment
- 2010 Census Be Counted and Questionnaire Assistance Center Assessment
- 2010 Census Content and Forms Design Program Assessment
- 2010 Census Nonresponse Followup Operations Assessment
- 2010 Census Update Enumerate Operations Assessment
- 2010 Census Forms Printing and Distribution Program Assessment
- 2010 Census Decennial Response Integration System Paper Questionnaire Data Capture Assessment

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Appendix A: *It's Easy* Video Downloads for All Languages

(Period of 01/01/10 – 08/31/10)

Language	Downloads	Language	Downloads	Language	Downloads
Spanish	27,443	Bengali	384	Czech	121
Mandarin	11,856	Punjabi	339	Romanian	115
Cantonese	9,241	French	298	Croatian	110
English	6,115	Thai	281	Turkish	110
American Sign Language	3,474	Armenian	258	Hungarian	109
Korean	2,583	Polish	242	Cebuano	108
Vietnamese	1,880	Amharic	227	Gujarati	108
English-LGBT	1,550	Italian	214	Dari	99
Hindi	1,252	Yiddish	212	Dutch	96
Russian	1,162	Albanian	211	Bulgarian	93
Japanese	910	Khmer	172	Haitian Creole	93
Arabic	574	Hebrew	162	Chamorro	87
Portuguese	574	Ukrainian	161	Serbian	84
Tamil	547	Swahili	159	Tongan	84
Spanish-LGBT	499	Navajo	150	Chuukese	66
Farsi	485	Lao	148	Lithuanian	66
Telugu	478	Marshallese	147	Ilocano	62
Urdu	472	Greek	141	Somali	61
German	466	Malayalam	141	Samoan	60
Burmese	458	Hmong	133	Tigrinya	53
Tagalog	453	Nepali	127	Dinka	50

Source: Executive Briefing Reports on 2010 Census Website Metrics

Appendix B: Examples of Translation Issues Relayed to Field

Vietnamese

#1:
Concern: Translation of the word "census." The translation of "diêu tra" was found to be offensive to some, since it may be translated as "to investigate." All instances of the word were replaced with "thông kê."

Documents Affected: D-1(V) (Vietnamese Fulfillment questionnaire); D-10(V) (Be Counted questionnaire – Vietnamese), D-60(Vietnamese), Language Reference Dictionary

Solution: Online versions of the Fulfillment questionnaire, Language Assistance Guide, and Language Reference Dictionary had been corrected and posted.

Issues: Questionnaires and Language Assistance Guide were printed before the issue was elevated.

Russian

#1:
Concern: Translation for the phrase "Native Hawaiian" was repeated twice for Person 1 in the Race question. The second answer category should actually have been translated as "Guamanian or Chamorro."

Current:

☐ Коренной житель Гавайев
☐ Коренной житель Гавайев

Should have been:

☐ Коренной житель Гавайев
☐ Гуамец или чаморро

Documents Affected: D-10(R) Be Counted - Russian

Solution: Questionnaire Assistance Center representatives were alerted that if a respondent wished to identify themselves as "Guamanian" or "Chamorro" (for Person 1), they could by checking the "Some other Race" checkbox and writing in their race.

☐ Иная раса — *укажите название расы.* ☑

Issues: Questionnaires had already been printed and distributed.

#2:

<u>Concern</u>: Translation for the phrase "If someone who has no permanent place to stay is staying here on April 1, 2010, count that person. Otherwise, he or she may be missed in the census." The date was translated as "February 1, 2010."

Current:

> • Если кто-либо, не имеющий постоянного места жительства, находился здесь 1 февраля 2010 г., этого человека следует вписать в бланк переписи. В противном случае он может оказаться не посчитан.

Should have been:

> • Если кто-либо, не имеющий постоянного места жительства, находился здесь 1 апреля 2010 г., этого человека следует вписать в бланк переписи. В противном случае он может оказаться не посчитан.

<u>Documents Affected</u>: LAG D-60(Russian)

<u>Solution</u>: Online version of LAG had been corrected and posted. QAC representatives were alerted that all residence rules in that section do refer to April 1, and the number of people counted in Question #1 should be reflected as of that date.

<u>Issues</u>: LAGs had already been printed and distributed.

Korean

#1:

<u>Concern</u>: Translation for the term "county" had been translated as the term "country." This occurred on the second page of the questionnaire with the address section.

Current:

국가

<u>Documents Affected</u>: D-10(K) Be Counted – Korean

<u>Solution</u>: Questionnaire Assistance Center representatives were alerted that if they were assisting the user in filling out the questionnaire, that they indicated their "county" in the write-in line instead of country for their current address.

<u>Issues</u>: Questionnaires had already been printed and distributed.

#2:

Concern: In the race question, the translation for the phrase "Mark one or more boxes" had been translated as the phrase "Mark only one box". This occurred across all persons, for all questionnaires.

Current:

가구원 **1**의 인종은 무엇입니까**?** *하나에만* ☒ *표시를 하십시오.*

Documents Affected: D-1(K) (Korean Fulfillment questionnaire); D-10(K) Be Counted – Korean, and the D-60(Korean)

Solution: Questionnaire Assistance Center representatives were alerted that if they were assisting the user in filling out the questionnaire, that they may indicate more than one race. Online versions were updated as soon as possible.

Issues: Questionnaires and LAGs had already been printed and distributed.

#3:

Concern: The title of the BC questionnaire envelope said "English form enclosed" instead of "Korean form enclosed".

Solution: Questionnaire Assistance Center representatives were alerted that if they were assisting the users, the questionnaire inside is in Korean.

Issues: Questionnaires had already been printed and distributed.

Appendix C: Total Web Page Hits

2010 Census Language Assistance Guide Downloads Reporting Period: January 1, 2010 – August 31, 2011

Language Assistance Guide Downloads - Source: /2010.census.gov/2010census/pdf/	2010												2011								Cumulative
	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	
LAG_Albanian.pdf	141	102	295	198	136	46	52	37	43	27	34	49	51	25	7	10	20	8	10	5	1,296
LAG_Amharic.pdf	117	113	311	136	87	34	40	29	34	22	31	51	63	34	3	13	10	2	24	15	1,169
LAG_Arabic.pdf	366	323	1,233	396	191	60	50	41	42	34	42	40	40	18	7	9	4	5	4	-	2,905
LAG_Armenian.pdf	92	107	289	151	101	36	42	29	32	21	28	40	38	17	8	11	7	5	4	3	1,061
LAG_Bengali.pdf	118	175	519	250	133	50	53	48	48	32	57	58	50	23	12	10	8	5	7	2	1,658
LAG_Bulgarian.pdf	102	102	268	134	107	38	46	32	37	26	30	42	42	21	5	6	5	2	5	1	1,051
LAG_Burmese.pdf	147	138	968	144	96	34	43	29	32	22	27	47	52	24	3	10	5	5	29	8	1,863
LAG_Cebuano.pdf	81	62	127	134	105	34	60	36	47	44	33	42	47	21	7	12	8	3	10	2	915
LAG_Chamorro.pdf	83	85	111	122	105	32	42	30	33	20	28	42	41	20	4	8	7	2	4	2	821
LAG_Chinese-Simplified.pdf	544	1,015	4,405	791	252	69	64	44	52	31	101	43	45	22	3	8	6	5	3	2	7,505
LAG_Chinese-Traditional.pdf	1,231	942	4,919	648	223	96	66	55	55	30	45	44	44	22	15	10	13	10	10	3	8,481
LAG_Chuukese.pdf	73	57	90	125	96	40	42	30	34	20	31	39	42	18	8	5	11	3	6	-	770
LAG_Croatian.pdf	109	102	269	143	115	34	42	28	34	24	35	39	42	16	6	6	4	1	7	-	1,056
LAG_Czech.pdf	111	73	187	154	103	39	46	32	39	23	35	46	48	21	5	6	9	2	4	2	985
LAG_Dari.pdf	81	63	131	127	113	38	47	35	40	27	31	42	44	16	8	7	6	4	4	4	868
LAG_Dinka.pdf	63	47	79	117	85	31	40	32	32	19	26	49	58	29	4	10	5	3	17	2	748
LAG_Dutch.pdf	90	92	303	139	111	32	47	41	37	29	38	52	45	19	7	9	6	3	5	1	1,106
LAG_Farsi.pdf	160	382	1,036	408	231	59	66	50	53	38	34	42	42	17	7	13	6	5	6	1	2,656
LAG_French.pdf	297	268	898	319	192	89	63	51	70	44	48	53	47	19	11	11	11	5	5	-	2,501
LAG_German.pdf	257	225	561	604	154	73	64	53	63	33	84	60	56	19	17	10	14	6	8	8	2,369
LAG_Greek.pdf	95	96	253	138	92	37	46	30	39	20	31	41	51	23	9	16	56	4	11	3	1,091

LAG_Gujarati.pdf	150	193	709	394	153	49	54	43	39	25	34	42	50	20	10	13	9	5	7	3	2,002
LAG_Haitian.pdf	132	123	259	201	139	39	50	32	43	24	30	41	39	18	7	11	5	4	8	1	1,206
LAG_Hebrew.pdf	115	101	236	152	101	41	43	29	44	22	30	42	41	20	7	6	5	4	3	2	1,044
LAG_Hindi.pdf	356	451	861	533	159	51	66	54	43	37	38	44	59	22	9	8	7	8	5	1	2,812
LAG_Hmong.pdf	168	148	334	171	131	60	63	60	55	59	68	66	68	43	46	54	47	27	39	25	1,732
LAG_Hungarian.pdf	151	123	613	169	141	58	61	40	40	37	35	53	43	27	8	13	14	10	8	6	1,650
LAG_Ilocano.pdf	72	61	152	133	96	35	45	30	36	27	32	40	47	17	4	4	5	2	6	2	846
LAG_Italian.pdf	155	116	327	185	132	47	50	40	45	31	39	45	48	21	15	10	12	9	6	4	1,337
LAG_Japanese.pdf	368	782	3,940	994	459	183	127	79	140	111	80	87	87	38	22	22	33	17	18	16	7,603
LAG_Khmer.pdf	110	105	218	142	88	31	40	27	31	20	27	40	56	28	3	6	8	1	9	2	992
LAG_Korean.pdf	1,109	1,757	4,720	1,069	272	62	44	47	39	51	44	51	52	25	3	11	7	3	15	8	9,389
LAG_Lao.pdf	98	83	184	126	95	33	41	29	34	23	27	44	50	43	9	8	9	5	23	7	971
LAG_Lithuanian.pdf	77	66	162	136	103	40	40	29	37	23	35	42	38	16	4	5	6	2	3	2	866
LAG_Macedonian.pdf	-	-	729	153	97	42	47	30	31	21	29	45	44	18	6	4	4	2	6	1	1,309
LAG_Malayalam.pdf	142	116	271	187	174	71	89	160	50	39	56	72	55	33	13	9	12	8	11	6	1,574
LAG_Marshallese.pdf	80	55	105	143	98	41	39	29	35	24	31	37	45	16	8	12	11	7	10	7	833
LAG_Navajo.pdf	76	65	137	131	88	32	40	31	30	21	31	49	51	51	7	12	5	6	13	7	883
LAG_Nepali.pdf	246	126	768	240	135	58	56	50	48	35	43	47	47	21	16	11	40	14	11	6	2,018
LAG_Polish.pdf	291	416	1,872	391	279	86	55	45	50	33	41	48	45	25	20	14	7	4	4	4	3,730
LAG_Portuguese.pdf	287	230	1,033	800	206	84	83	50	82	83	45	50	41	18	10	7	7	3	4	2	3,125
LAG_Punjabi.pdf	125	116	327	171	106	36	44	28	34	24	29	42	40	17	6	5	6	1	4	5	1,166
LAG_Romanian.pdf	101	204	327	166	147	48	52	44	50	38	52	57	54	27	16	21	18	15	16	15	1,468
LAG_Russian.pdf	197	354	2,236	372	206	75	50	34	44	146	46	47	47	31	10	8	8	6	4	2	3,923
LAG_Samoan.pdf	99	87	141	126	105	38	46	32	35	28	32	45	46	21	6	7	10	3	6	6	919
LAG_Serbian.pdf	176	189	344	185	116	39	42	32	38	25	34	42	45	21	6	8	4	2	5	2	1,355
LAG_Somali.pdf	131	139	292	201	122	51	54	38	54	36	44	53	65	46	31	27	20	11	16	8	1,439
LAG_Spanish.pdf	1,789	2,211	9,407	7,045	862	189	147	109	176	3,095	184	63	65	39	24	23	28	22	22	15	25,515
LAG_Swahili.pdf	100	85	271	157	127	76	45	32	38	24	30	40	39	14	5	7	8	2	7	2	1,109

File																					Total
LAG_Tagalog.pdf	231	263	540	235	146	70	84	73	49	35	42	48	51	21	7	5	10	17	19	4	1,950
LAG_Tamil.pdf	121	178	863	214	166	60	148	162	64	39	39	44	46	24	10	15	12	12	17	9	2,243
LAG_Telugu.pdf	112	154	587	178	131	36	60	45	40	26	44	56	39	15	4	5	7	3	5	4	1,551
LAG_Thai.pdf	150	120	572	181	123	46	57	44	69	37	43	40	39	14	10	7	4	5	8	4	1,573
LAG_Tigrinya.pdf	75	50	134	118	96	32	41	30	31	20	29	41	48	29	6	7	7	2	25	8	829
LAG_Tongan.pdf	80	72	96	119	102	34	50	31	32	45	42	52	52	25	15	10	7	8	9	18	899
LAG_Turkish.pdf	126	138	725	190	183	47	48	33	39	28	37	45	44	21	12	8	11	5	6	4	1,750
LAG_Ukrainian.pdf	88	96	458	146	99	33	39	29	32	20	28	37	50	26	3	8	4	2	8	2	1,208
LAG_Urdu.pdf	167	135	452	150	99	34	41	29	31	20	26	41	50	31	3	10	5	1	26	9	1,360
LAG_Vietnamese.pdf	362	493	4,094	996	309	96	61	43	41	23	34	46	41	23	7	10	6	3	9	5	6,702
LAG_Yiddish.pdf	163	85	244	170	110	41	57	36	43	20	30	43	52	18	21	8	6	5	5	3	1,160
TOTALS BY MONTH	12,934	14,855	56,992	22,948	9,329	3,225	3,360	2,630	2,788	5,061	2,489	2,828	2,907	1,427	585	639	655	354	609	301	146,916

Source: Executive Briefing Reports on 2010 Census Website Metrics

	2010												2011								
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Cumulative
albanian.php	1,624	1,554	6,079	3,228	1,006	385	328	200	265	261	240	54	0	0	0	0	12	47	31	43	15,357
amharic.php	1,339	1,329	4,319	2,673	1,597	314	272	167	204	202	193	40	0	0	0	0	11	30	27	31	12,748
arabic.php	2,173	2,292	7,883	3,960	1,628	624	458	283	366	373	356	52	0	0	0	0	16	66	50	53	20,633
armenian.php	1,581	1,625	5,942	2,791	994	314	265	178	180	192	173	29	0	0	0	0	9	26	22	29	14,350
bengali.php	623	1,040	3,127	1,962	790	260	228	139	149	156	147	29	0	0	0	0	9	25	32	31	8,747
bulgarian.php	734	608	1,768	1,130	588	214	209	132	139	141	129	40	0	0	0	0	4	27	21	22	5,906
burmese.php	908	853	3,373	1,477	690	231	204	125	134	149	128	19	0	0	0	0	11	30	26	35	8,393
cebuano.php	726	601	1,561	1,071	729	189	211	146	136	122	121	25	0	0	0	0	8	23	37	21	5,727
chamorro.php	657	544	1,445	999	608	197	194	119	132	128	112	23	0	0	0	0	8	17	26	32	5,241
chinese-simplified.php	6,091	64,565	49,095	20,033	5,283	616	574	397	665	441	1,322	591	483	552	492	372	496	649	728	551	153,996
chinese-traditional.php	7,444	10,402	28,749	14,432	5,044	553	520	380	367	369	422	501	403	318	409	387	331	170	199	234	71,634
chuukese.php	656	622	1,718	1,264	660	232	235	185	277	206	215	39	0	0	0	0	3	25	27	36	6,400
croatian.php	686	629	1,666	1,092	582	207	202	124	130	132	130	28	0	0	0	0	4	14	28	16	5,670
czech.php	635	541	1,461	968	531	204	183	109	123	125	111	19	0	0	0	0	6	23	17	23	5,079
dari.php	580	590	1,342	979	520	184	200	106	105	107	101	21	0	0	0	0	4	15	20	19	4,893
dinka.php	554	527	1,054	917	495	181	184	116	104	102	97	19	0	0	0	0	3	10	14	23	4,400
dutch.php	800	789	2,054	967	634	236	224	135	167	179	159	35	0	0	0	0	11	40	36	25	6,491
farsi.php	1,001	2,064	5,659	3,042	1,420	347	287	169	199	199	185	35	0	0	0	0	23	62	43	85	14,820
french.php	1,747	1,664	4,807	2,310	1,070	414	387	241	321	338	351	72	0	0	0	0	26	79	61	102	13,990
german.php	1,441	1,375	3,878	1,940	1,035	471	432	267	342	367	397	82	0	0	0	0	25	117	111	121	12,401
greek.php	738	704	2,055	1,160	630	272	285	217	196	211	306	42	0	0	0	0	10	38	19	23	6,906
gujarati.php	903	1,009	3,487	983	776	261	227	129	163	149	139	26	0	0	0	0	8	25	19	30	8,334
haitian-creole.php	743	745	1,725	1,082	598	202	188	102	114	117	110	25	0	0	0	0	57	24	19	15	5,866
hebrew.php	930	898	2,463	1,449	724	288	240	136	129	161	150	24	0	0	0	0	12	36	25	35	7,700
hindi.php	8,269	17,361	28,409	32,607	12,303	558	351	201	217	237	207	45	0	0	0	0	20	57	53	85	100,980
hmong.php	733	745	2,091	1,212	647	284	266	157	195	203	204	46	0	0	0	0	6	91	80	78	7,038
hungarian.php	691	648	2,054	1,110	653	238	219	131	125	131	127	24	0	0	0	0	10	28	28	33	6,250
ilocano.php	701	627	1,868	1,258	731	251	243	140	153	153	125	23	0	0	0	0	4	52	32	26	6,387
italian.php	1,239	1,234	3,674	1,684	746	270	293	175	204	232	234	47	0	0	0	0	13	68	53	72	10,238
japanese.php	2,097	3,234	10,231	3,880	2,126	656	592	378	724	557	421	89	0	0	0	0	45	231	300	231	25,792
khmer.php	587	548	1,578	959	551	188	200	106	105	100	102	29	0	0	0	0	6	18	17	21	5,115
korean.php	27,144	73,312	62,984	47,182	21,605	486	482	380	386	949	902	397	355	282	389	320	316	164	167	186	238,388
lao.php	544	541	1,449	865	484	181	195	102	101	116	100	25	0	0	0	0	4	12	11	20	4,750
lithuanian.php	452	396	944	728	465	173	186	105	96	107	94	20	0	0	0	0	4	10	16	13	3,809

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																					Total
malayalam.php	571	545	1,557	1,226	585	203	196	128	125	143	114	25	0	0	0	0	5	12	19	15	5,469
marshallese.php	416	365	777	1,025	561	164	174	115	108	120	97	24	0	0	0	0	8	12	18	13	3,997
navajo.php	599	548	1,209	983	568	209	215	147	169	168	170	34	0	0	0	0	9	67	65	57	5,217
nepali.php	1,104	605	2,376	983	584	195	194	114	133	106	109	26	0	0	0	0	0	0	0	0	6,529
polish.php	1,073	1,396	5,577	1,046	1,390	375	234	172	204	187	190	39	0	0	0	0	20	47	42	52	12,044
portuguese-eu.php	972	4,796	7,020	10,646	980	374	312	214	229	256	235	48	0	0	0	0	26	65	50	101	26,324
punjabi.php	700	663	2,149	1,483	688	229	219	124	127	144	129	26	0	0	0	0	10	13	20	19	6,743
romanian.php	600	552	1,478	970	632	218	194	119	120	122	123	28	0	0	0	0	6	18	18	16	5,214
russian.php	1,272	1,709	8,074	2,856	1,453	410	347	199	224	346	282	448	318	238	307	259	187	97	64	84	19,174
samoan.php	587	538	1,543	929	538	179	182	113	105	121	109	22	0	0	0	0	4	14	13	25	5,022
serbian.php	731	741	1,459	1,009	527	206	195	124	152	121	129	31	0	0	0	0	6	19	21	19	5,490
somali.php	637	571	1,543	987	533	180	205	106	131	128	126	26	0	0	0	0	9	21	35	31	5,269
spanishla.php	1,342,163	3,448,108	199,246	33,829	8,659	1,614	1,013	846	1,478	20,679	1,210	1,322	1,101	982	1,383	1,141	1,014	561	439	722	5,067,510
swahili.php	645	584	1,531	1,025	618	181	190	116	122	113	116	32	0	0	0	0	11	21	20	29	5,354
tagalog.php	2,755	3,834	7,626	5,669	4,192	383	322	252	158	137	130	21	0	0	0	0	8	116	63	45	25,711
tamil.php	722	856	3,249	1,570	739	430	319	174	168	157	144	26	0	0	0	0	5	23	41	25	8,648
telugu.php	751	762	3,721	1,729	744	258	220	117	140	154	135	27	0	0	0	0	6	16	22	26	8,828
thai.php	683	648	2,090	1,088	626	223	207	155	368	148	170	23	0	0	0	0	6	28	33	28	6,524
tigrinya.php	494	461	1,109	777	489	180	181	100	95	99	93	22	0	0	0	0	6	16	12	12	4,146
tongan.php	526	452	995	821	480	173	184	110	102	111	116	32	0	0	0	0	5	21	22	17	4,167
turkish.php	609	629	2,458	1,137	669	242	194	133	146	185	208	35	0	0	0	0	10	28	34	22	6,739
ukranian.php	540	522	1,651	936	569	185	173	100	92	90	108	24	0	0	0	0	9	14	15	11	5,039
urdu.php	893	845	2,721	1,622	734	240	213	116	114	141	139	27	0	0	0	0	6	20	22	16	7,869
vietnamese.php	2,035	3,130	14,582	4,834	2,169	594	336	209	154	194	191	348	238	157	194	164	128	52	56	115	29,880
yiddish.php	1,215	1,221	3,649	1,840	848	330	244	145	153	148	144	26	0	0	0	0	6	22	23	33	10,047
TOTALS BY MONTH	1,441,064	3,671,297	541,382	244,414	99,518	18,656	16,227	10,425	12,530	32,030	13,027	5,357	2,898	2,529	3,174	2,643	3,045	3,672	3,562	3,933	6,131,383

Source: Executive Briefing Reports on 2010 Census Website Metrics

	2010												2011								Cumulative
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	
2010_Questionnaire_Info.pdf (English)	160	2,255	38,760	23,275	9,244	2,807	1,247	752	640	803	581	434	589	610	618	660	493	342	313	379	84,962
2010_Questionnaire_Info_Copy_6pg.pdf (Mailout 6pg)	38	508	2,034	363	137	24	29	36	9	8	12	9	13	10	16	12	11	4	8	33	3,314
2010_Bilingual_Questionnaire_Info.pdf (English/Spanish)	28	269	4,865	2,699	855	277	148	139	182	2,150	272	122	115	135	125	104	101	68	73	67	12,794
2010_Bilingual_Questionnaire_Info_12pg.pdf (English/Spanish Pages)	10	137	952	453	248	135	112	60	60	49	49	48	66	51	53	48	39	32	19	28	2,649
2010_Bilingual_Questionnaire_Info_booklet.pdf (English/Spanish Booklet)	8	82	202	9	5	3	11	5	2	2	16	3	4	4	4	4	5	7	1	2	379
2010_Questionnaire_Info_Copy.pdf (Mailout Booklet)	13	165	8,071	19,246	2,170	889	703	752	236	77	95	109	145	141	140	122	111	90	80	81	33,436
Example_Chinese.pdf (Booklet)	8	65	304	182	137	90	95	79	69	70	113	53	75	38	15	17	26	14	20	9	1,479
Example_Chinese_6pg.pdf (Pages)	5	87	1,850	394	153	51	52	33	36	23	45	42	49	49	5	12	4	4	17	6	2,917
Example_Korean.pdf (Booklet)	6	55	248	180	113	47	75	37	39	57	45	47	59	31	5	9	13	9	18	10	1,103
Example_Korean_6pg.pdf (Pages)	7	130	1,117	387	127	37	40	40	34	33	32	46	52	33	5	10	4	3	23	1	2,161
Example_Russian.pdf (Booklet)	6	61	188	162	115	49	79	38	41	114	44	46	60	35	10	12	10	6	21	10	1,107
Example_Russian_6pg.pdf (Pages)	6	58	611	190	112	40	40	32	29	29	29	42	40	47	4	8	4	2	10	3	1,336
Example_Spanish.pdf (Booklet)	9	74	437	270	165	63	85	51	57	144	54	46	46	23	10	13	17	8	6	5	1,583
Example_Spanish_6pg.pdf (Pages)	20	301	4,621	1,515	233	65	59	43	50	491	47	43	50	29	7	9	8	1	22	11	7,625
Example_Vietnamese.pdf (Booklet)	6	58	184	162	81	42	73	35	32	22	42	40	45	22	10	8	10	7	6	6	891
Example_Vietnamese_6pg.pdf (Pages)	8	82	1,352	323	125	75	44	31	31	21	29	39	43	18	3	9	6	4	8	8	2,259
info_as_question.pdf (American Samoa)	5	42	129	124	86	37	41	29	34	22	30	44	45	35	12	8	14	8	15	7	767
info_cnmi_question.pdf (Northern Mariana Islands)	4	39	114	121	86	39	40	28	32	19	29	41	48	61	34	22	12	12	28	14	823
info_guam_question.pdf (Guam)	4	46	156	146	97	43	51	32	37	34	35	54	73	74	51	50	33	20	62	39	1,137
Info_quest_en_6pg.pdf (Info Questionnaire Pages)	4	54	859	268	95	51	55	39	51	29	42	56	77	44	36	41	32	21	24	17	1,895
Info_quest_en_book.pdf (Info Questionnaire Booklet)	8	54	749	269	104	55	54	34	41	24	38	44	52	27	13	12	20	13	7	6	1,624
info_vi_question-eng.pdf (Virgin Islands English)	5	56	219	157	106	51	48	45	50	30	43	74	105	101	96	106	98	69	82	89	1,630
info_vi_question-spa.pdf (Virgin Islands Spanish)	5	43	121	112	82	37	40	31	30	23	27	43	40	47	3	5	4	2	14	3	712
PR_Question.pdf (Spanish/Puerto Rico Booklet)	4	45	198	160	99	43	42	43	35	21	36	40	41	23	10	8	7	2	3	8	868
PR_Question_6page.pdf (Pages)	4	41	136	137	99	35	44	36	31	25	35	41	42	18	7	3	6	3	4	1	748
TOTALS BY MONTH	381	4,807	68,477	51,304	14,874	5,085	3,307	2,480	1,888	4,320	1,820	1,606	1,974	1,706	1,292	1,312	1,088	751	884	843	170,199

Source: Executive Briefing Reports on 2010 Census Website Metrics

Appendix D: Print Quantity of Language Assistance Guides

Language Assistance Guides – Print Quantity

Language	Print Quantity	Distributed To Questionnaire Assistance Centers	Initial Pre-Printed Amount for Telephone Questionnaire Assistance	Percentage Distributed
Chinese – Simplified	100,600	84,039	3,000	86.52
Korean	99,600	84,039	2,000	86.38
Russian	97,600	84,039	250	86.36
Spanish	138,300	84,039	40,000	89.69
Vietnamese	99,600	84,039	2,000	86.38
Albanian	97,300	84,039	0	86.37
Amharic	97,300	84,039	0	86.37
Arabic	97,400	84,039	100	86.39
Armenian	97,400	84,039	100	86.39
Bengali	97,300	84,039	0	86.37
Bulgarian	97,300	84,039	0	86.37
Burmese	97,300	84,039	0	86.37
Cebuano	97,300	84,039	0	86.37
Chamorro	97,300	84,039	0	86.37
Chinese - Traditional	98,550	84,039	1,250	86.54
Chuukese	97,300	84,039	0	86.37
Croatian	97,300	84,039	0	86.37
Czech	97,300	84,039	0	86.37
Dari	97,425	84,039	7	86.27
Dinka	97,300	84,039	0	86.37
Dutch	97,300	84,039	0	86.37
Farsi	97,350	84,039	50	86.38
French	97,375	84,039	75	86.38
German	97,350	84,039	50	86.38
Greek	97,300	84,039	0	86.37
Gujarati	97,300	84,039	0	86.37
Haitian Creole	103,300	84,039	6,000	87.16
Hebrew	97,300	84,039	0	86.37
Hindi	97,350	84,039	50	86.38

Language	Print Quantity	Distributed To Questionnaire Assistance Centers	Initial Pre-Printed Amount for Telephone Questionnaire Assistance	Percentage Distributed
Hungarian	97,300	84,039	0	86.37
Ilocano	97,300	84,039	0	86.37
Italian	97,400	84,039	100	86.39
Japanese	97,400	84,039	100	86.39
Khmer	97,300	84,039	0	86.37
Laotian	97,300	84,039	0	86.37
Lithuanian	97,300	84,039	0	86.37
Malayalam	97,300	84,039	0	86.37
Marshallese	97,300	84,039	0	86.37
Navajo	97,300	84,039	0	86.37
Nepali	97,300	84,039	0	86.37
Polish	97,400	84,039	100	86.39
Portuguese	97,450	84,039	150	86.39
Somali	97,450	84,039	250	86.49
Tagalog	97,400	84,039	2	86.28
Tigrinya	97,325	84,039	7	86.36
Punjabi	97,300	84,039	0	86.37
Romanian	97,300	84,039	0	86.37
Samoan	97,300	84,039	0	86.37
Serbian	97,300	84,039	0	86.37
Swahili	97,300	84,039	0	86.37
Tamil	97,300	84,039	0	86.37
Telugu	97,300	84,039	0	86.37
Thai	97,300	84,039	0	86.37
Tongan	97,300	84,039	0	86.37
Turkish	97,300	84,039	0	86.37
Ukrainian	97,300	84,039	0	86.37
Urdu	97,300	84,039	0	86.37
Yiddish	97,300	84,039	0	86.37

Source(s): 2010 Language Guide Contract, BC/QAC Kit Specifications, DRIS Fulfillment Solution Plan