Abstract
The 2007 National Census Test provided an opportunity to study the response results of two alternative Spanish/English bilingual questionnaire designs in areas that contained a relatively higher concentration of Spanish-speaking people with a potential need for English language assistance. Results from the 2005 National Census Test showed that while the bilingual form significantly increased self-response rates nationally, it yielded higher nonresponse rates for the household items, as well as race, compared to the English-only form. The 2007 National Census Test was conducted as a follow-up to the 2005 Test to determine if the bilingual form item nonresponse issues could be resolved through improved forms design and updated content. For the 2007 test, two different bilingual form designs with variations in cover letter placement were studied. This paper compares the two bilingual form designs to determine the better design and then compares that design to the English-only form.

Keywords: Bilingual, Census, Spanish, Response, Item Nonresponse

1. Introduction
The 2007 National Census Test (NCT) was conducted to determine if the bilingual questionnaire item nonresponse issues observed in previous tests could be resolved by improved questionnaire design and utilization of the 2008 Census Dress Rehearsal question wording. Moreover, this study provided the opportunity to study the impact of the bilingual questionnaire in areas that contain a relatively heavy concentration of Spanish-speaking people with a potential need for language assistance. Furthermore, this analysis provided the opportunity to confirm the 2005 NCT finding of increased response to the bilingual census questionnaire (Govern and Reiser, 2008).

The 2007 NCT was a follow-up to the 2005 NCT. One component of the 2005 NCT tested a bilingual questionnaire booklet with a side-by-side swim-lane design which provided two response columns, one in English and one in Spanish, each containing the same questions and response categories. Attached to the front of the questionnaire was a letter from the Director of the Census Bureau.

Results from the 2005 NCT showed that the bilingual questionnaire significantly increased the self-response rate nationally (by 2.2 percentage points for paper response, and 1.1 percentage points for total response), and more specifically, in areas where there was a high concentration of non-White or Hispanic populations (Bouffard and Tancreto, 2006). Moreover, the bilingual questionnaire resulted in a higher proportion of Hispanic persons listed than the English-only questionnaire. However, item nonresponse rates for the bilingual questionnaire were higher for all household-items (household count, undercount, tenure, and telephone number) and the Hispanic origin question compared to the English-only questionnaire. The first page of the questionnaire (containing only the household-level items) immediately followed the cover letter, and contained a lot of text with few response boxes. The findings suggested that respondents may have interpreted this page as an additional page of instructions, thus skipping it entirely. Other potential reasons for these item nonresponse discrepancies included question wording, translation, and differences in the responding populations (Bouffard and Tancreto, 2006).

2. Methodology

2.1 Panel Design
The 2007 NCT was a mailout test that consisted of a total of three panels: one control and two experimental. While all three panels contained the 2008 Census Dress Rehearsal content, the questionnaire design varied. The control panel was comprised of an English-only questionnaire, which had a bi-fold design. The two experimental panels contained variations of the 2005 bilingual questionnaire. One was a retest of the 2005 questionnaire design (with 2008 Dress Rehearsal content and some layout changes) while the other was intended to test an improved bilingual questionnaire design.

1 This report is released to inform interested parties of ongoing research and to encourage discussion of work in progress. Any views expressed are those of the authors and not necessarily those of the U.S. Census Bureau.
The first experimental panel, the retest of the 2005 questionnaire design, used a bilingual questionnaire booklet with a swim-lane format. This format displayed a letter from the Director of the Census Bureau as the first page of the booklet and collected full information for persons 1 through 6, with an extended roster for persons 7 through 12. This panel is referred to as the bilingual questionnaire with an attached cover letter.

In light of the 2005 NCT findings, it was hypothesized that detaching the cover letter from the booklet could allow household-level items to become more apparent to respondents due to less text preceding the questions, thus reducing nonresponse to these items. For that reason, the second bilingual panel utilized the bilingual swim-lane design with a separate cover letter. To utilize the additional two pages at the end of the booklet, resulting from detaching the cover letter, full information for persons 7 and 8 was collected with an extended roster for persons 9 through 12.

2.2 Sample Design

The 2007 NCT had an initial mailout sample size of 30,000 housing units equally allocated across the three panels. This resulted in a mailout size of 10,000 in each panel. The sample frame was constructed by first identifying the housing units with a need for Spanish language assistance or what we called “Spanish Assistance” housing units. All housing units in the mailout/mailback areas that had at least one person (age 15 or over) who spoke Spanish and did not speak English “very well” (based on Census 2000 data). All mailout/mailback housing units in tracts with at least 20 percent Spanish Assistance housing units were eligible for sample selection. A systematic sample selection was used to select 30,000 housing units (Bentley and Allmang, 2007).

2.3 Mailing Strategy

Every housing unit in the test was sent an advance letter as the first contact. The advance letter informed the households that they would soon be receiving a request to complete a questionnaire for the 2007 NCT. The advance letter for the bilingual panels had the bilingual swim-lane design.

The second mailing was the initial questionnaire package. Housing units received a paper questionnaire and a first-class postage-paid return envelope. Also included in the mailing package was a letter from the Director of the Census Bureau that encouraged the households to respond.

The third mailing was a reminder mailing. The reminder mailing asked the housing units to respond to the census test if they had not done so already. Note that the reminder mailing was an English-only postcard for the control panel. However, since the additional Spanish translation required more space than was available on the postcard, the bilingual panels received a letter (with a swim-lane design) instead of a postcard.

The fourth and final mailing was a targeted replacement questionnaire. A replacement questionnaire was sent to all housing units that had not responded by a pre-determined date. Accompanying the questionnaire was a letter from the Director urging response. Note that the replacement questionnaire was the English questionnaire for all panels, including the bilingual panels. While the preference would have been to have a bilingual replacement questionnaire, the replacement questionnaire workload and timing for the 2010 Census cannot accommodate variations in the replacement mailing, and our goal was to simulate the planned 2010 mailing strategy to the extent possible.

2.4 Variance Estimation

We computed standard errors for all estimates using a jackknife replication procedure. The housing units selected at each hit were assigned sequentially to one of 250 replicates. This assignment approach also accounted for clustering of persons within a household in computing errors for person-level estimates, since persons within households were contained in the same replicate.

Note that Puerto Rico, group quarters, and areas in the 2008 Census Dress Rehearsal (San Joaquin County, California and nine counties in North Carolina) were excluded.

The decision to have 250 replicates was based on the desire to obtain the most precise variance estimation, which suggests a larger number of replicates while still maintaining a sufficient replicate size.
2.5 Calculation of Self-Response Rates

The self-response rate is a measure of respondent behavior with regard to responding to the census test. The numerator is the number of sample cases for which we received a nonblank, primary return. A return is considered to be blank if fewer than two census items are completed, regardless of the language column. If more than one response was received for a housing unit, we selected a primary return. The denominator is the number of sample cases minus the number of sample cases identified by the United States Postal Service as “undeliverable as addressed”. The self-response rate is weighted to account for the sample design. The formula is on the next page.

\[
\text{Self-response rate}_{\text{panel}} = \frac{\# \text{ of nonblank, primary returns}}{\text{sample size} - \text{UAA}} \times 100\%
\]

2.6 Calculation of Item Nonresponse Rates

Item nonresponse rates were computed as indicators of potential data quality issues. The analysis of item nonresponse rates was restricted to nonblank, primary returns. Furthermore, the calculations are restricted to initial questionnaires, since the bilingual treatment was not applied to the replacement questionnaires. The formula for item nonresponse rates is

\[
\text{Item nonresponse rate}_{\text{panel}} = \frac{\# \text{ of records with missing data for a particular item}}{\text{total number of records}} \times 100\%
\]

3. Limitations

3.1 Uncontrolled Variation

The bilingual design has certain inherent characteristics that cause variation from an English-only questionnaire. For instance, the bilingual questionnaires for the 2007 NCT were booklets that were not folded in half like the English-only questionnaire. Therefore, each bilingual questionnaire was mailed in a larger envelope than the English questionnaire. All of the bilingual mailing materials, including the questionnaire, advance letter, cover letter, and reminder letter had swim-lane formats. Due to space constraints, the bilingual panels utilized reminder letters instead of reminder postcards. Given these types of variations, we will be unable to determine what impact, if any, these factors play in any significant differences in the evaluation measures between the bilingual questionnaires and the English-only questionnaire. That is, we evaluated the bilingual questionnaires with all of the changes as a package, and we could not tease out the individual effects of any one factor. However, since the 2007 bilingual design replicates the planned 2010 bilingual design, it was important that we understand the combined effects of the implementation strategy.

3.2 Census Test Environment

Census test results may differ from results in a decennial census due to differences in media attention, advertising, partnership activities, and other activities that affect response behavior. Thus, we cannot make any inferences concerning public reaction to a decennial census bilingual questionnaire based on a census test.

4. Results

The results of the 2007 NCT are presented in three parts. First, self-response rates are compared across all three panels. Next, we focus on comparing the two bilingual questionnaires’ designs. Specifically, we examined item nonresponse rates. Finally, after determining which bilingual questionnaire was better, based on pre-specified measurable criteria, we compare that questionnaire to the English-only questionnaire.

4.1 Comparison of Self-Response Rates Across All Panels

This analysis explores the effect of the bilingual questionnaire on response to the census test, as compared to the English-only questionnaire. Table 1 contains the self-response rates for all three panels and presents the differences among the three panels.
As expected, the initial questionnaire self-response rates did not differ significantly between the two bilingual panels. The bilingual questionnaire, regardless of the design, achieved significantly higher initial questionnaire self-response compared to the English-only panel (2.0 percentage points higher for the separate cover letter and 1.4 percentage points higher for the attached cover letter). This increase in the self-response rate is impressive when you consider the population of interest is traditionally harder to enumerate. This test was designed to study the bilingual questionnaire in areas with a high proportion of Spanish-speaking population with a potential need for language assistance. Thus, the increase in self-response rates, particularly for the initial questionnaires, suggests that the bilingual questionnaires were successful in eliciting response from these households. Therefore, it is worthwhile to examine the two bilingual questionnaires to determine if one results in lower item nonresponse rates than the other.

Table 1. Self-Response Rates, Differences, and Standard Errors (in percent) by Panel for Initial Questionnaires

<table>
<thead>
<tr>
<th>Questionnaire</th>
<th>Percent</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilingual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Separate letter</td>
<td>33.8</td>
<td>0.5</td>
</tr>
<tr>
<td>Attached letter</td>
<td>33.1</td>
<td>0.5</td>
</tr>
<tr>
<td>Difference (Separate – Attached)</td>
<td>0.6</td>
<td>0.7</td>
</tr>
<tr>
<td>English-only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Separate – English-only</td>
<td>31.7</td>
<td>0.5</td>
</tr>
<tr>
<td>Attached – English-only</td>
<td>2.0*</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
* Denotes statistically significant difference using a Bonferroni multiple comparison critical value of approximately 2.1.

4.2 Comparison of the Two Bilingual Questionnaires

4.2.1 Item Nonresponse Rates by Panel

One measure of interest when comparing the two bilingual questionnaires is data quality, particularly item nonresponse rates. In addition to indicating the extent to which a particular item may be subject to nonresponse error, patterns of item nonresponse may indicate questionnaire design issues.

For this analysis, we calculated item nonresponse rates for the four household-level data items (household count, undercount, tenure, and phone number) and six person-level data items (relationship, sex, age/year of birth, Hispanic origin, race, and overcount). When computing rates for the bilingual questionnaires, total item nonresponse took into account both language columns; that is, an item was missing if and only if there was neither a response in the English column nor the Spanish column. Furthermore, the person-level item nonresponse rates were restricted to persons 1 through 6. [Recall that the bilingual questionnaire with the separate cover letter collected full information for persons 1 through 8 followed by an extended roster for persons 9 through 12. However, the attached cover letter design only collected full information for persons 1 through 6 with an extended roster for persons 7 through 12.] Since all replacement questionnaires were English-only questionnaires regardless of the panel assignment, the item nonresponse rates were calculated only for the initial questionnaires.

No critical differences were found between the two bilingual designs in the person-level item nonresponse rates as seen in Table 2. This was expected since the two questionnaires looked the same for persons 1 through 6. The only exception was that the sex nonresponse rate was significantly higher for the bilingual questionnaire with an attached cover letter (3.0 percent) compared to the separate cover letter design (2.5 percent). Since this is the only difference in the person-level item nonresponse rates and the person-level content was identical between the two designs, we attribute this difference to random error.
Table 2. Item Nonresponse Rates and Standard Errors (in percent) by Panel for Bilingual Initial Questionnaires

<table>
<thead>
<tr>
<th>Item</th>
<th>Separate Letter</th>
<th>Attached Letter</th>
<th>Difference (Separate - Attached)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Person Items</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship</td>
<td>1.2 (0.2)</td>
<td>1.3 (0.2)</td>
<td>-0.1 (0.3)</td>
</tr>
<tr>
<td>Sex</td>
<td>2.5 (0.2)</td>
<td>3.0 (0.2)</td>
<td>-0.5 (0.3)*</td>
</tr>
<tr>
<td>Age/Year of Birth</td>
<td>0.7 (0.1)</td>
<td>0.8 (0.1)</td>
<td>-0.1 (0.2)</td>
</tr>
<tr>
<td>Hispanic Origin</td>
<td>4.0 (0.3)</td>
<td>4.6 (0.4)</td>
<td>-0.6 (0.5)</td>
</tr>
<tr>
<td>Race</td>
<td>14.6 (0.7)</td>
<td>14.6 (0.6)</td>
<td>0.0 (1.0)</td>
</tr>
<tr>
<td>Overcount</td>
<td>3.0 (0.3)</td>
<td>3.1 (0.3)</td>
<td>-0.1 (0.4)</td>
</tr>
<tr>
<td><strong>Household Items</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household Count</td>
<td>4.7 (0.4)</td>
<td>5.5 (0.4)</td>
<td>-0.8 (0.6)</td>
</tr>
<tr>
<td>Undercount</td>
<td>13.6 (0.7)</td>
<td>12.7 (0.6)</td>
<td>0.8 (0.9)</td>
</tr>
<tr>
<td>Tenure</td>
<td>5.0 (0.4)</td>
<td>5.1 (0.4)</td>
<td>-0.1 (0.6)</td>
</tr>
<tr>
<td>Phone number</td>
<td>9.6 (0.6)</td>
<td>9.7 (0.5)</td>
<td>-0.1 (0.8)</td>
</tr>
</tbody>
</table>

Note: standard errors are in parentheses.
* Denotes statistically significant difference between the bilingual questionnaires at \( \alpha = 0.10 \) level.
** Person item nonresponse rate calculations are restricted to persons 1 through 6.

Recall that in the 2005 NCT, the bilingual questionnaire yielded higher item nonresponse rates for all household-level items compared to the English-only questionnaire. It was hypothesized that, with an attached cover letter, the “Start Here” page (containing all of the household level questions) may have appeared to be an additional page of instructions rather than the first page of questions (Bouffard and Tancreto, 2006). Thus, it was believed that by removing the cover letter from the booklet, the questions on the “Start Here” page would become more noticeable, resulting in lower item nonresponse. In other words, it was hypothesized that the alternative bilingual questionnaire design (the separate cover letter) would achieve significantly lower household item nonresponse rates than the modified 2005 design (the attached cover letter). Unfortunately, this was not realized. There were no significant differences in the household-level item nonresponse rates between the two bilingual questionnaire designs.

It should be noted that as a result of several content changes between the 2005 and 2007 NCTs, the amount of text on the bilingual questionnaire increased and appeared more crowded. While we hypothesized that the removal of the cover letter would decrease the household-level item nonresponse rates, the crowded appearance of the new bilingual questionnaire (specifically on the “Start Here” page) may have negated this attempt at making the household-level questions more apparent to the respondent. Thus, the crowdedness of the questionnaire may have contributed to the high household-level item nonresponse rates across both designs. An image of the bilingual questionnaire “Start Here” page (which contains the household-level questions) is shown in Attachment 1.

4.2.2 Selecting a Better Bilingual Questionnaire Design

The criteria for determining the better bilingual questionnaire design are self-response rates and item nonresponse rates. In terms of the self-response rates, there were no statistical differences between the two bilingual questionnaire designs for the initial questionnaire or the total responses. There also were no significant differences in the household-level item nonresponse rates. And, in general, the person-level data items did not differ between the two questionnaires in terms of item nonresponse. However, since the magnitude of the self-response increase was larger for the bilingual questionnaire with a separate cover letter and it collects full information for persons 7 and 8, we will continue the analysis in this paper by comparing the bilingual questionnaire with a separate cover letter to the English-only questionnaire.

4.3 Comparison of the Bilingual Questionnaire with a Separate Cover Letter to the English-Only Questionnaire

The person-level item nonresponse rates for the English-only questionnaire and bilingual questionnaire with a separate cover letter were not statistically different (see Table 3) except for two items, Hispanic origin and race. The race item nonresponse rate was significantly higher for the bilingual questionnaire compared to the English-only questionnaire. However, this difference was not surprising, as there were more Hispanic persons reported on the bilingual questionnaire compared to the English-only questionnaire and, as past research has shown (del Pinal, 2003), Hispanic respondents are less inclined to answer the race question than non-Hispanics.
The Hispanic origin item nonresponse rate was significantly lower for the bilingual questionnaire compared to the English-only questionnaire. Prior research has shown that the item nonresponse rate for the Hispanic origin question is higher among non-Hispanics than Hispanics (del Pinal, 2003; Alberti, 2006). Recall that in the 2005 NCT, item nonresponse for the Hispanic origin question was higher on the bilingual questionnaire. Note that content changes were made to the Hispanic origin question between the 2005 and 2007 NCTs. The 2005 NCT version offered either a ‘yes’ or ‘no’ response option, whereas the 2007 NCT version contained detailed response options, which was believed to be an improvement from the 2005 version.

Table 3. Item Nonresponse Rates (in percent) by Panel for Initial Questionnaires

<table>
<thead>
<tr>
<th>Person Items**</th>
<th>Separate Letter Bilingual</th>
<th>English</th>
<th>Difference (Separate - English)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship</td>
<td>1.2 (0.2)</td>
<td>1.2 (0.2)</td>
<td>-0.0 (0.3)</td>
</tr>
<tr>
<td>Sex</td>
<td>2.5 (0.2)</td>
<td>2.8 (0.2)</td>
<td>-0.3 (0.3)</td>
</tr>
<tr>
<td>Age/Year of Birth</td>
<td>0.7 (0.1)</td>
<td>0.8 (0.1)</td>
<td>-0.2 (0.2)</td>
</tr>
<tr>
<td>Hispanic Origin</td>
<td>4.0 (0.3)</td>
<td>5.0 (0.4)</td>
<td>-1.1 (0.5)*</td>
</tr>
<tr>
<td>Race</td>
<td>14.6 (0.7)</td>
<td>12.4 (0.6)</td>
<td>2.2 (1.0)*</td>
</tr>
<tr>
<td>Overcount</td>
<td>3.0 (0.3)</td>
<td>2.8 (0.3)</td>
<td>0.2 (0.4)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Household Items</th>
<th>Separate Letter Bilingual</th>
<th>English</th>
<th>Difference (Separate - English)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household Count</td>
<td>4.7 (0.4)</td>
<td>1.9 (0.3)</td>
<td>2.8 (0.4)*</td>
</tr>
<tr>
<td>Undercount</td>
<td>13.6 (0.7)</td>
<td>11.3 (0.6)</td>
<td>2.3 (0.9)*</td>
</tr>
<tr>
<td>Tenure</td>
<td>5.0 (0.4)</td>
<td>2.9 (0.3)</td>
<td>2.1 (0.5)*</td>
</tr>
<tr>
<td>Phone number</td>
<td>9.6 (0.6)</td>
<td>7.9 (0.5)</td>
<td>1.7 (0.8)*</td>
</tr>
</tbody>
</table>

Note: standard errors are in parentheses.
*Denotes statistically significant difference between the bilingual and English-only questionnaires at α = 0.10 level.
**Person item nonresponse rate calculations are restricted to persons 1 through 6.

As shown in Table 3, the bilingual questionnaire with the separate cover letter had significantly higher item nonresponse rates compared to the English-only questionnaire for the household level items (household count, undercount, tenure, and phone number). However, we believe the increase in item nonresponse rates may still be a function of the design of the questionnaire. As mentioned earlier, the underlying assumption of the hypothesis that resulted from the 2005 NCT was that the large ratio of text to response boxes resulted in the respondents misinterpreting the first page of the questions (the “Start Here” page) as all instructions. As a result, respondents skipped the questions and began the questionnaire with the person-level questions on the next page. While we attempted to improve this by detaching the cover letter, the change in questionnaire content and format resulted in a crowded-looking “Start Here” page with an abundant amount of text compared to few response boxes. We hypothesize that the crowdedness of the new bilingual questionnaire (particularly the first page) could be the cause of the high item nonresponse rates to the household questions.

Upon additional analysis of the household-level data, we discovered that 103 (or 3.3 percent) of the initial bilingual questionnaires with the separate cover letter were entirely missing the household-level data. By comparison, only 9 (or 0.3 percent) of the initial English-only questionnaires were missing all of the household-level data. When these questionnaires were removed from the universe (that is, those missing all household-level items), we found that the bilingual household item nonresponse rates became more comparable to the English-only household item nonresponse rates (as shown in Table 4). The only difference occurred in the question on tenure where the English-only questionnaire actually had a significantly higher item nonresponse rate than the bilingual questionnaire. With the same question wording, there is no hypothesis-based explanation for the difference in the item nonresponse rates, so it is likely random error. This indicates that those respondents who skipped the entire first page of the bilingual questionnaire were the primary drivers of the high household-level item nonresponse rates relative to the English-only questionnaire.
Table 4. Item Nonresponse Rates (in percent) by Panel for Initial Questionnaires Excluding Questionnaires Missing All Household-Level Items

<table>
<thead>
<tr>
<th>Household Items</th>
<th>Separate Letter Bilingual</th>
<th>English</th>
<th>Difference (Separate - English)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household Count</td>
<td>1.5 (0.2)</td>
<td>1.6 (0.2)</td>
<td>-0.1 (0.3)</td>
</tr>
<tr>
<td>Undercount</td>
<td>10.7 (0.6)</td>
<td>11.0 (0.6)</td>
<td>-0.4 (0.8)</td>
</tr>
<tr>
<td>Tenure</td>
<td>1.8 (0.2)</td>
<td>2.6 (0.3)</td>
<td>-0.8 (0.4)*</td>
</tr>
<tr>
<td>Phone number</td>
<td>6.5 (0.5)</td>
<td>7.6 (0.5)</td>
<td>-1.1 (0.7)</td>
</tr>
</tbody>
</table>

Note: standard errors are in parentheses.
* Denotes statistically significant difference between the panels at $\alpha = 0.10$ level.

We further examined the impact of the returns that were missing all of the household-level data. The purpose was to determine if the missing household-level data could be attributed to a questionnaire design issue (specifically the crowded “Start Here” page) or a function of the respondents (i.e. whether the respondents who skipped the household-level items also skipped almost all of the person-level items). Across the two bilingual experimental panels, there were a total of 206 (or 3.3 percent) bilingual initial questionnaires that were missing all of the household-level data. Since there were no critical differences in the respondents between the two bilingual designs, we combined them to examine item nonresponse rates by the amount of household-level data that were missing. The results showed similar person-level item nonresponse rates between those questionnaires missing all of the household-level items compared to those with at least one household-level item response. Thus, we believe the number of bilingual questionnaires with all of the household-level items missing may be attributed to the questionnaire design.

5. Conclusions

The bilingual questionnaire, regardless of the design, achieved significantly higher initial questionnaire self-response rates compared to the English-only questionnaire (2.0 percentage point increase for the separate letter, 1.4 percentage point increase for the attached letter) when mailed to households in areas believed to need language assistance. This increase in the self-response rates of the bilingual questionnaire compared to the English-only questionnaire implies that the bilingual questionnaire was successful in gaining response from areas containing a high proportion of Spanish-speakers with a potential need for language assistance. This confirms the positive self-response results for the bilingual questionnaire found in the 2005 NCT, although the test lacked the media attention of a census environment.

However, the high household-level item nonresponse rates realized in the 2005 NCT were not improved by the cover letter design change. The bilingual questionnaire with a separate cover letter did not achieve significantly lower household-item nonresponse rates compared to the attached cover letter design. Thus, the separation of the cover letter from the bilingual booklet did not make the household questions more apparent when implemented in conjunction with the 2008 Census Dress Rehearsal content. The 2008 Census Dress Rehearsal content increased the amount of text on the “Start Here” page, causing it to appear more crowded than the 2005 questionnaire design.

Given the relatively larger gain in the self-response rates for the population and the ability to collect full information for persons 7 and 8, the recommended bilingual design for the 2010 Census is the bilingual questionnaire with a separate cover letter, which is also the design for the 2008 Census Dress Rehearsal. Beyond the 2010 Census, further research should be conducted into the design of a bilingual questionnaire that will minimize the ratio of text to response boxes on the first page, thus making the household-level questions more apparent in hopes of improving response.

References


Bentley, Michael and Allmang, Kellye (2007) “Sample Specifications for the 2007 Census Bilingual Form Study,” U.S. Census Bureau Internal Memorandum, February 27.

Attachment 1. Bilingual Questionnaire Household Page

**2007 National Census Test**

This is your official U.S. Census form. It is quick, easy, and your answers are protected by law. Please complete your form in the language most comfortable for you and return it today.

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**Start here**

Use a blue or black pen.

The Census must count every person living here on July 15, 2007.

Before you answer Question 1, count the people living in this house, apartment, or mobile home using our guidelines.

- Count all people, including babies, who live and sleep here most of the time.

The Census Bureau also conducts counts in institutions and other places, so:

- Do not count anyone living away either at college or in the Armed Forces.
- Do not count anyone in a nursing home, jail, prison, detention facility, etc., on July 15, 2007.
- Leave these people off your form, even if they will return to live here after they leave college, the nursing home, the military, jail, etc. Otherwise, they may be counted twice.

The Census must also include people without a permanent place to stay, so:

- If someone who has no permanent place to stay is staying here on July 15, 2007, count that person.
- Otherwise, he or she may be missed in the census.

1. How many people were living or staying in this house, apartment, or mobile home on July 15, 2007?

   Number of people = [ ]

2. Were there any additional people staying here July 15, 2007 that you did not include in Question 1?

   Mark X: all that apply.
   - Children, such as newborn babies or foster children
   - Relatives, such as adult children, cousins, or in-laws
   - Nonrelatives, such as roommates or live-in baby sitters
   - People staying here temporarily
   - No additional people

3. Is this house, apartment, or mobile home——

   Mark X: ONE box.
   - Owned by you or someone in this household with a mortgage or loan? Include home equity loans.
   - Owned by you or someone in this household free and clear without a mortgage or loan?
   - Rented?
   - Occupied without payment of rent?

4. What is your telephone number? We may call if we don’t understand your answer.

   Area Code = [ ] - [ ] - [ ]

**Prueba Nacional del Censo del 2007**

Este es su cuestionario oficial del Censo de los EE.UU. Es fácil y rápido de contestar y sus respuestas están protegidas por ley. Por favor, complete su cuestionario en el idioma que se siente más cómodo y devuélvalo por correo hoy.

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**Comience Aquí**

Use un boligrafos de tinta azul o negra.

El Censo tiene que contar a cada persona que vive aquí el 15 de julio de 2007.

Antes de contestar la Pregunta 1, cuente a las personas que viven en esta casa, apartamento o casa móvil usando nuestras instrucciones.

- Cuenta a todas las personas, incluyendo a bebés, que viven y duermen aquí la mayor parte del tiempo.

La Oficina del Censo también lleva a cabo cuestionarios en instituciones y otros lugares, por lo tanto:

- No cuente a alguien que no viva aquí por estar en la universidad o en las Fuerzas Armadas.
- No cuente a alguien que está en un hogar de convalecencia, carcel, prisión, centro de detención, etc., el 15 de julio de 2007.
- No incluya a estas personas en su cuestionario aunque vivieron o viven aquí después de salir de la universidad, hogar de convalecencia, carcel, etc. De otra manera, serán contadas dos veces.

La Oficina del Censo también tiene que incluir a las personas sin un lugar permanente donde quedarse, por lo tanto:

- El alguien sin un lugar permanente donde quedarse se está quedando aquí el 15 de julio de 2007, cuente a esa persona.
- De lo contrario, puede que no se contara en el censo.

1. ¿Cuántas personas vivían o se quedaban en esta casa, apartamento o casa móvil el 15 de julio de 2007?

   Número de personas = [ ]

2. ¿Hubo personas adicionales quedándose aquí el 15 de julio de 2007 que usted no incluyó en la Pregunta 1?

   Marque X todas las que apliquen.
   - Niños, tales como bebés recién nacidos o hijos de escuela (foster)
   - Parientes, tales como hijos adultos, primos o parientes políticos
   - Personas que no son parientes, tales como compañeros de cuarto o amigos que viven en el hogar
   - Personas que se quedan aquí temporalmente
   - No hay personas adicionales

3. ¿Es esta casa, apartamento o casa móvil——

   Marque X: UNA casilla.
   - Propiedad suya o de alguien en este hogar con una hipoteca o préstamo? Indica la cantidad sobre el valor líquido de la casa.
   - Propiedad suya o de alguien en este hogar libre y sin deuda (sin una hipoteca o préstamo)?
   - Arrendada?
   - Ocupada sin pago de alquiler?

4. ¿Cuál es su número de teléfono? Puede que lo llamemos si no entendemos su respuesta.

   Código de Área = + Número = [ ] - [ ] - [ ]