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March 20, 2012

## 2010 CENSUS PLANNING MEMORANDA SERIES

No. 179

MEMORANDUM FOR        The Distribution List

From:                     Arnold Jackson *[signed]*  
                                Acting Chief, Decennial Management Division

Subject:                  2010 Census In Schools Research Final Report

The Census Bureau contracted with ICF International to conduct an independent assessment of the Census in Schools Program for the 2010 Census. Attached is the Census in Schools Research Final Report. We are issuing this document in our memorandum series for the record.

The Quality Process for the 2010 Census Test Evaluations, Experiments, and Assessments was applied to the review process. This report is sound and appropriate for completeness and accuracy, but it does contain some information that is outside the scope of what is relevant for decennial census operations.

If you have questions or comments about this document, please contact Mary Bucci at (301) 763-9925.

Attachment

March 12, 2012

# **Census in Schools Research Final Report**



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## Executive Summary

This report presents the findings from a research project undertaken on the Census in Schools (CIS) program for 2010, sponsored by the Census 2010 Publicity Office of the Communications Directorate of the U.S. Census Bureau and conducted by ICF International. The perspective adopted in the course of this project was a "forward-looking" one to examine the potential ways in which the CIS program can be improved, the methods that can be used to maintain the CIS program during the intercensal years, and the potential metrics that can be used to assess program success.

## Objectives

The project made use of focus groups and interviews to collect qualitative data about aspects of the Census in Schools program, augmented by a review of the literature, in addressing the following research questions:

- How can the CIS program targeting kindergarten through high school level students, teachers, and administrators be improved for the 2020 Census?
- How can the Census Bureau go forward during intercensal years to reach out to educators and students from kindergarten to the graduate level?
- What are the needs of school board members and college/university faculty regarding statistical literacy and statistics education, from the most basic level (kindergarten) to the most advanced (graduate studies)?
- What should be the metrics for measuring the impact of the Census in Schools program for both the intercensal years and the 2020 Census?

## Methodology

To address these research questions, the ICF Team conducted focus groups with school teachers in schools comprising Kindergarten through 12<sup>th</sup> grade, a focus group with college (2-year and 4-year) and university-level faculty members, and interviews with members of various school boards. The summaries of the focus groups and interviews were qualitatively analyzed, and, where appropriate, abstracted into tables that are presented in subsequent sections of this report. A total of 11 focus groups with 88 participants were held with K-12 teachers – five groups with 35 elementary school teachers and six groups with 53 middle school and high school teachers – in six locations. There was one focus group of nine college and university faculty held in Boston, Massachusetts. Nine school board members from the greater Washington D.C. area were interviewed by telephone.

## Findings

Key findings of the research included:

- Teachers stressed the importance of integrating the CIS materials with the curriculum and to align the materials with existing mandates and standards, allowing the materials to serve an existing mission and not add an additional burden.
- Teachers felt that the CIS program would be most effective if it occurred on an annual or regular basis instead of every 10 years.
- Teachers wanted materials that were “ready-made,” easy to use, short and simple, and relevant to students.
- Teachers also varied in the types of materials they preferred. While some felt that Web-based materials were preferable, others preferred paper-based materials due to the costs to them of photocopying.
- Teachers were not generally aware of the CIS program, but they were enthusiastic about the materials they saw during the focus groups.
- School board members, and to a lesser degree, teachers felt that going through a central point-of-contact at the state or district level was the best way to disseminate CIS materials and integrate them into the curriculum; some opposing voices felt that communications often slipped through the cracks at higher levels.
- College and university faculty found the Census Bureau Web site and data difficult to use and wanted a Web site that would provide students with an engaging experience with statistics.

## Recommendations

Ten key recommendations emerged from the research:

### **Recommendation 1: Integrate CIS materials into the existing curriculum of schools.**

Recommendation 1.1: Match CIS materials and activities to existing standards and mandates.

Recommendation 1.2: Ensure that CIS is placed into pacing guides<sup>1</sup> and that CIS material is integrated into popular textbooks.

Recommendation 1.3: Provide materials that are cross-curricular and that fit into multiple subjects.

Recommendation 1.4: Provide simple and easy-to-use materials that supplement existing subjects.

Recommendation 1.5: Involve educators in the adaptation and implementation of CIS materials.

### **Recommendation 2: Make materials relevant and able to be tailored.**

### **Recommendation 3: Provide materials in a wide variety of formats**

Recommendation 3.1: Provide both Web-based and paper-based materials.

Recommendation 3.2: Provide guidance for hands-on activities and events.

Recommendation 3.3: Seek out partners who can facilitate materials dissemination and activities.

### **Recommendation 4: Make CIS into a continuous annual program.**

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<sup>1</sup> Pacing guides are created by school districts used by teachers to determine what part of the curriculum is to be covered each day, which keeps them on track for testing purposes and facilitates in-district student transfers.

**Recommendation 5: Develop a multi-level, multi-pronged communication and dissemination plan.**

**Recommendation 6: Establish clear objectives to increase awareness of the CIS program among educators.**

**Recommendation 7: Schedule contact with attention to the school year and level of contact.**

**Recommendation 8: Provide easy-to-use materials/data/training for statistics and quantitative literacy for teachers, for students at the college level, and beyond.**

Recommendation 8.1: Take lessons from other Web sites with statistical resources.

**Recommendation 9: Consider materials that integrate quantitative literacy into a broader range of topics, mirroring writing/reading instruction.**

**Recommendation 10: Create a logic model<sup>2</sup> of the CIS program and map it to key metrics that the Census Bureau will assess to determine program success.**

Recommendation 10.1: Develop regular means of feedback from audience – CIS will need data collection at small levels and population levels.

Recommendation 10.2: Map metrics to types of data collection.

**Recommendation 11: Develop an application to track program activities and processes, fidelity of program implementation, feedback, and other metrics.**

Recommendation 11.1: Establish a regular system for reporting, distribution, and review of data to guide program improvements.

## Logic model and future questions

The report includes a logic model of the CIS program integrating information from a structured discussion with internal stakeholders at the Census Bureau, data from the focus groups and interviews, and information from a literature review. The model identifies the key activities of the CIS program and the most important outputs and outcomes of those activities; the model additionally shows how the activities and outputs of school, administrators and teachers, students, and parents play a role in determining the outcomes of the CIS program. The report concludes with questions that remain in prioritizing and implementing the recommendations and future research questions.

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<sup>2</sup> An example logic model is shown in Exhibit 5-43 on page 86 of the report.

## 1. Introduction

### 1.1. Scope

This report presents the findings from a research project undertaken on the Census in Schools (CIS) program for 2010, sponsored by the Census 2010 Publicity Office of the Communications Directorate of the U.S. Census Bureau and conducted by ICF International. The project made use of focus groups and interviews to collect qualitative data about aspects of the Census in Schools program, augmented by a review of the literature, in addressing the following research questions:

- How can the CIS program targeting kindergarten through high school level students, teachers, and administrators be improved for the 2020 Census?
- How can the Census Bureau go forward during intercensal years to reach out to educators and students from kindergarten to the graduate level?
- What are the needs of school board members and college/university faculty regarding statistical literacy and statistics education, from the most basic level (kindergarten) to the most advanced (graduate studies)?
- What should be the metrics for measuring the impact of the Census in Schools program for both the intercensal years and the 2020 Census?

To address these research questions, the ICF Team conducted focus groups with school teachers in schools comprising Kindergarten through 12<sup>th</sup> grade, a focus group with college (2-year and 4-year) and university-level faculty members, and interviews with members of various school boards. The summaries of the focus groups and interviews were qualitatively analyzed, and, where appropriate, abstracted into tables that are presented in subsequent sections of this report.

### 1.2. Intended Audience

The intended audience for this report includes internal stakeholders at the U.S. Census Bureau, regional Census in Schools program staff, and U.S. Census program chiefs.

## 2. Background

This chapter describes the CIS program along with its purpose and goals and summarizes the overarching research objectives.

### 2.1. Background Information on the CIS Program

The Census in Schools (CIS) program was first developed for Census 2000.<sup>3</sup> In that first iteration, nearly two million "Making Sense of Census 2000" teaching kits were distributed to K-12 teachers in all 50 states, the District of Columbia, and the five territories (Puerto Rico, U.S. Virgin Islands, American Samoa, Guam, and the Northern Mariana Islands.<sup>4</sup> ) The program distributed approximately 45 million copies of collateral materials listing census-related activities to be taken home by students. The program also included a number of local events around the country – many of which were initiated by the schools themselves.<sup>5</sup>

The CIS program for the 2010 Census, with the tag line "2010 Census in Schools: It's About Us," was more ambitious. Materials went out to approximately 118,000 K-12 school administrators in the 50 states, the District of Columbia, and the five territories. The student Take Home materials were available online in 28 languages. The target audience for the CIS program was estimated to be 58 million individuals. The 2010 CIS Program had three main components:<sup>6</sup>

- National and regional outreach to state and district level school administrators, educational leaders, chairpersons of boards of education, parent teacher organizations, school principals, teachers, and students
- Partnerships with the U.S. Department of Education and other national and local educational organizations
- Lessons and related materials for K-12 students and their teachers

These components were supported by publicity activities that included articles in print and on-line publications, national kick-off events, and regional events.

In 2000, the CIS program required teachers and school administrators to request materials, which were then sent to them via a fulfillment center. By 2010, most school systems relied on the Internet to fulfill a variety of needs, including the ability to download materials. The 2010 CIS program took advantage of

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<sup>3</sup> Lange, D. (2008). "2010 Census: Using the Communications Campaign to Effectively Reduce the Undercount." Testimony for Information Policy, Census and National Archives Subcommittee, Oversight and Government Reform Committee, Thursday, July 10, 2008.

<sup>4</sup> These figures are taken from <http://www.census.gov/dmd/www/hilites.html>, accessed on August 26, 2011.

<sup>5</sup> A summary of various research studies and evaluations of various aspects of Census 2000, including an evaluation of CIS materials and distribution, can be found in: U.S. Census Bureau (2004). *Summary Results of Individual Evaluations and Experiments from Census 2000*.

<sup>6</sup> Jefferson-Copeland, R., Roberts, B. A., Glasier, V., Reyes, L. P. & Prince, S. (2010). 2010 Census in Schools Staff Assessment, U.S. Census Bureau.

this capability by creating a comprehensive Web site that not only provided materials in electronic form for downloading but also a great deal of information for school administrators, teachers, and students.

The 2010 CIS program began in April of 2009 with full implementation begun in August. One indicator of CIS program activity was the number of unique page views and the number of downloads of materials from the CIS Web sites at both scholastic.com and census.gov. By May of 2010, PDF versions of various documents had been downloaded from scholastic.com over 380,000 times, with over 1.2 million page views, with the number of downloads and page views coming to a peak in March of 2010.<sup>7</sup> By September of 2010, the census.gov CIS Web site had over 750,000 unique visitors and over 8 million page views, with the same peak in March of 2010.<sup>8</sup>

In sum, the 2010 CIS program was one program with many parts:

- Materials, including lesson plans, maps, brochures, and hand-outs, that had to be easy to understand and engaging of the intended audiences
- Multiple audiences, including school administrators, principals, teachers, students, and parents, for whom the various materials had to be tailored
- Communication and outreach activities

All of these components were focused on addressing the goals and the purpose of the CIS program.

### 2.1.1. Goals and purpose of the CIS program

The goals and purpose of the CIS program flowed directly from the clearly articulated mission of the 2010 Census Integrated Communication Campaign:<sup>9</sup>

- Increase mail response
- Improve accuracy and reduce the differential undercount
- Improve cooperation with enumerators

The CIS specific program objectives included:<sup>10</sup>

- Mobilize teachers to develop a corps of student advocates for the census
- Make the print and online materials user-friendly
- Recognize and be sensitive to the diversity of the hard-to-count (HTC) population
- Illustrate the impact and benefits of the census on the local level
- Accommodate different learning styles

<sup>7</sup> Source: Scholastic, Inc. (2010). *It's About Us 2010 Census in Schools Digital Report*, 4/6/09 to 5/9/10.

<sup>8</sup> U.S. Census Bureau. (2010). *Web Metrics Report for April 2009 – September 10, 2010*.

<sup>9</sup> Jefferson-Copeland, R., Roberts, B. A., Glasier, V., Reyes, L. P. & Prince, S. (2010). *2010 Census in Schools Staff Assessment*, U.S. Census Bureau.

<sup>10</sup> U.S. Census Bureau (2009). *2010 Census: It's About Us Objectives*, internal planning document.

These goals and the CIS program were formulated partly in response to a trend with regard to Census mail response rates over the past 30 years. Between the years 1790 and 1950, the decennial census information had been collected by census enumerators, visiting all the households and conducting personal interviews. In 1960, the Census Bureau mailed census forms - for the first time - to urban residents. By the 1970 Census, the Census Bureau mailed forms to approximately 60% of all households, with enumerators being sent to those households which did not respond. Since starting the mail program in 1960, mail response rates fell each census until the 2000 Census.<sup>11</sup>

Programs such as Census in Schools hope to counter this long-term trend through innovative approaches that can ultimately reach into each household via the students and the schools in which they are taught and increase the awareness of and desirability of participating in the Census.

## 2.2. Research Objectives

In September of 2010, the Census Bureau awarded a Task Order to ICF International to conduct research on the Census in Schools program. In particular, the initial Task Order articulated five overarching objectives that the research would address. These were later modified to four overarching objectives as part of a contractual modification.

The overall research aims of this project included:

1. To identify improvements to the CIS program targeting kindergarten through high school level students, teachers, and administrators
2. To identify the best methods to be used in outreach to educators and students
3. To determine the needs of school board members and college/university faculty regarding statistical literacy and education
4. To identify and operationalize metrics that can be used to monitor future Census in Schools activities and program impacts.

As will be explained below, our overall approach to this research involved primary data collection using focus groups of schoolteachers, interviews with members of school boards, and one focus group with college (2- and 4-year) and university faculty members.

The perspective adopted in the course of this project was a "forward-looking" one. Examining the potential ways in which the CIS program can be improved, the methods that can be used to maintain the CIS program during the intercensal years, and the potential metrics that can be used to assess program success is more important than analyzing the events that took place in the past, during the 2010 Census. The data collection protocols were developed so that the topics covered in the focus groups and interviews were not about what happened to the 2010 Census, instead eliciting from respondents their

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<sup>11</sup> The mail response rate is defined as the ratio of unduplicated non-blank mail returns to the mail response universe; the participation rate is the ratio of unduplicated non-blank mail returns to the mail response universe minus undeliverable-as-addressed (UAA).

views of how the CIS program should work in the future, including what materials or processes are necessary.

Additionally, the focus of this project was on getting the perceptions and opinions from the potential and actual "consumers" of the CIS program: the teachers and school administrators who have or will be able to use the materials, lessons plans, maps, brochures and other program materials. The Census Bureau devoted many resources to developing these materials. Looking to the future, the ways in which these materials could be improved and augmented, not only for the 2020 Census, but also for use during the intercensal years, is of great importance to planning the evolution of this program.

The first section of the Methodology describes the research questions emerging from these objectives.



### 3. Methodology

This chapter describes the methods used to collect the qualitative information that is the subject of this report. It consists of the following sections:

- **Research Questions**– describing the questions to be answered by this research
- **Key Assumptions** – listing the assumptions held prior to data collection
- **Data Sources and Methods** – discussing the main sources of data
- **Focus Group and Interview Analysis** – summarizing the manner in which the focus group and interview data were analyzed

#### 3.1. Research Questions

The methodological approach taken was driven by the specific research questions that needed to be addressed in this project. Exhibit 3-1 below lists the individual research questions and the methodological approaches designed to address them.

**Exhibit 3-1: Research questions and methodological approach.**

Research Question	Methodological Approach
1. How can the CIS program targeting kindergarten through high school level students, teachers, and administrators be improved for the 2020 Census?	<ul style="list-style-type: none"> <li>▪ K-12 teacher focus groups from areas stratified by three levels of location (urban, suburban, rural), and two levels of mail response rates (high and low). Teachers were selected from areas predicted to be Hard-To-Count (HTC).</li> <li>▪ Interviews with members of school boards.</li> </ul>
2. How can the Census Bureau go forward during intercensal years to reach out to educators and students from kindergarten to the graduate level?	<ul style="list-style-type: none"> <li>▪ Same focus groups as noted above.</li> <li>▪ Interviews with members of school boards.</li> </ul>
3. What are the needs of school board members and college/university faculty regarding statistical literacy and statistics education, from the most basic level (kindergarten) to the most advanced (graduate studies)?	<ul style="list-style-type: none"> <li>▪ Focus groups consisting of college (2- and 4-year) and university faculty.</li> <li>▪ Interviews with school board members.</li> </ul>
4. What should be the metrics for measuring the impact of the Census in Schools program for both the intercensal years and the 2020 Census?	<ul style="list-style-type: none"> <li>▪ Same focus groups as above.</li> <li>▪ Literature review.</li> <li>▪ Stakeholder structured discussion sessions with Census staff to identify metrics that reflect CIS and Census Bureau priorities.</li> </ul>

## 3.2. Key Assumptions

The key assumptions of these research activities included:

1. The participants did not have to have knowledge of the CIS program in order to be a member of a focus group or to be interviewed.
2. Due to the time and logistical demands of focus group participation, monetary incentives would be paid to focus group participants to increase the willingness to come.
3. The research would adopt a forward-looking perspective, emphasizing the ways in which the CIS Program can be improved for the intervening intercensal years as well as for the 2020 Census.

## 3.3. Data Sources and Methods

Focus groups and interviews provided the primary data for this study. These were augmented by a structured discussion with Census Bureau staff and a literature review of school-based programs like CIS. Each of these is described in the next section.

### 3.3.1. Focus groups and interviews

Three types of education professionals were participants in the focus groups and interviews:

- Teachers in public and private schools with students in grades K-12
- College (2- and 4-year) and university faculty
- School board members at the local county level

Site selection, recruitment, and protocols of these groups differed slightly for each. Each is described in the sections below.

#### *Location selection for K-12 teacher focus groups*

Although this project involved qualitative data analysis, which is not concerned with generalizability in the same way as quantitative research methods, we nonetheless aimed to capture the thoughts, perceptions and opinions of a diverse range of K-12 schools, teachers and administrators in a structured fashion. The sites needed to reflect, at least to some extent, diversity among the teachers and schools who received the CIS Program materials, but with a focus on hard-to-count (HTC) areas since those are of most interest to the Census Bureau. Within census tracts with high HTC scores, the sampling strata consisted of three levels of urbanicity (rural, suburban and urban) and two levels of mail response rates. The sampling was a two-step process: first, define the sampling frame, or that set of census tracts from which the sample would be drawn; second, partition the sampling frame into the 6 strata defined by urbanity and mail response rates. The details are below.

The 2010 Census Planning Database was merged with the 2010 Census participation rate database to provide the initial set of census tracts (census tracts were drawn only from the 50 states and the District of Columbia). The resulting database contained 64,510 census tracts with valid 2010 mail response rate

information. All the census tracts were then placed into three categories based on the HTC scores from the planning database. The three HTC categories were created such that about one-fourth of the tracts were in the “low” mail response category, half of the tracts would be in the “medium” mail response category, and one-fourth of the tracts would be in the “high” mail response category.

We then constructed the sampling frame by selecting only the tracts in the category with “high” HTC scores, as those are areas of particular concern and focus for Census Bureau efforts. Specifically, 15,774 Census Tracts had high HTC scores. These tracts were partitioned into those with "high" mail response rates and "low" mail response rates, using 66% as the threshold for determining "high" and "low" mail response rates. The sampling frame is illustrated in Exhibit 3-2 below.

**Exhibit 3-2: Urban-rural status by level of mail response rate.**

	Mail response rate Category: Low (≤ 66%), High (>66%)			Total
	unknown	High	Low	
rural	1	167	275	443
suburban	0	1,446	1,162	2,608
urban	5	5,601	7,117	12,723
<b>Total</b>	6	7,214	8,554	15,774

We then randomly selected one site from each of the six targeted groups among these tracts with high HTC scores; namely, 1) an urban area tract with relatively high 2010 mail response rate, 2) an urban area tract with relatively low mail response rate, 3) a suburban area tract with relatively high 2010 mail response rate, 4) a suburban area tract with relatively low mail response rate, 5) a rural area tract with relatively high 2010 mail response rate, and 6) a rural area tract with relatively low mail response rate.

The number of schools in any one census tract is relatively small and can frequently be zero. Thus, the "catchment" area for identifying schools from which teachers were recruited was defined as the county containing the selected census tract. Exhibit 3-3 lists the six sites that were selected for the K-12 teacher focus groups.

**Exhibit 3-3: K-12 teacher focus group site selection.**

Urbanicity	2010 Mail response rate	County and State	2000 Mail response rate	2000 Population Size
rural	49% (Low)	Wilcox County, Alabama	47%	13,183
rural	83% (High)	Coos County, New Hampshire	82%	33,111
suburban	33% (Low)	Starr County, Texas	48%	53,597
suburban	81% (High)	Roane County, West Virginia	67%	15,446
urban	52% (Low)	Erie County, New York	60%	950,265
urban	79% (High)	Miami-Dade County, Florida	70%	2,253,362

The exhibit shows the urbanicity, 2010 census mail response rate, the county and state, the 2000 mail response rates for comparison, and the population for the county as of Census 2000. Of the sites selected, the two rural counties had mail response rates that were similar between the 2000 and the 2010 Census, one suburban and one urban county had a decline in mail response rates, and one suburban and one urban county evidenced an increase in mail response rates.

### *Recruitment of participants for K-12 teacher focus groups*

Teachers were recruited via e-mail with telephone follow-up. The recruitment campaign consisted of the following steps:

1. Recruiters obtained lists of public and private schools serving grades K-12 in each of the selected counties using the National Center for Education Statistics Web site.<sup>12</sup>
2. By going to each school's Web site, recruiters extracted the names of teachers and their e-mail addresses, along with contact phone numbers. It should be noted that not every school had a listing of teachers, nor did every school with a list of teachers display their e-mail addresses. Recruiters attempted to predict missing e-mail addresses based on the pattern of existing addresses in the school or county (for example, firstname.lastname@school.k12.state.us). ICF staff harvested as many teachers' names as possible, within the time constraints of the recruitment period.
3. Recruiters then sent e-mails to all the teachers. For those e-mails that "bounced" back with responses indicating an incorrect e-mail address, recruiters attempted to correct the e-mail address by checking with the school's Web site or by making another prediction of the correct e-mail pattern.
4. Some teachers responded immediately to the e-mail invitations – the positive responses were contacted to secure their commitment for participation.
5. A second wave of e-mails went out to non-responders several days after the first wave.
6. Recruiting staff followed up the e-mails with telephone calls to those teachers who did not respond to the e-mails, attempting to recruit them for the focus groups.

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<sup>12</sup> <http://nces.ed.gov/ccd/schoolsearch/>. The search parameters allow for the selection of all schools by state and by county, as well as by other characteristics. The site also allows downloading of search results as a Microsoft Excel file, which facilitated data capture of school information for the selected sites.

**Exhibit 3-4: Results of recruitment of teachers for focus groups.**

Loc	Schools in County as of 2008			Number of Teachers Contacted			Number Responding	Total YES	Confirmed	Participated
	Public	Private	Total	Sent	Undeliv.	Net Sent				
AL-Wilcox	8	1	9	159	43	116	15	14	14	14
NH-Coos	27	7	34	589	88	544	28	19	19	19
TX-Starr	27	1	28	545	33	512	14	9	9	9
WV-Roane	6	0	6	114	26	88	6	4	2	10
NY-Erie	229	90	319	1,659	174	1,485	69	31	28	18
FL-Dade	525	272	797	943	19	924	72	55	28	18
	<b>822</b>	<b>371</b>	<b>1,193</b>	<b>4,009</b>	<b>383</b>	<b>3,669</b>	<b>204</b>	<b>132</b>	<b>100</b>	<b>88</b>

Exhibit 3-5 above summarizes the recruitment results. The six sites contained a total of 1,193 public and private schools, for which we were able to obtain the e-mail addresses of over 4,000 teachers. Of these e-mail addresses, a little fewer than 10 percent were undeliverable. Of the e-mails delivered, a total of 132 teachers were recruited, with a final set of 100 who confirmed their participation immediately prior to the scheduled date for the focus group and 88 who participated in the focus groups.

The teachers in Roane County, WV, were recruited in a slightly different manner. Early in our recruitment, a contact told us that there would be an "in-service" training held in July. We chose to conduct the focus group after the in-service. As such, we recruited some teachers as described above, and, with the assistance of a school administrator at the training, we recruited additional focus group participants in person on the day of the focus group.

All K-12 teachers received a \$50 honorarium.

#### *Recruitment of college and university faculty and administrators*

College (2- and 4-year) and university faculty and administrators were recruited for a single focus group in the Boston, Massachusetts area. Via the Web, recruiters identified 32 colleges and universities in Boston. The colleges and universities were sorted into a random order. Recruiters contacted each college or university, in turn, and recruited faculty from various departments that were identified as having likely participants, such as departments of mathematics, statistics, and geography. Nine faculty participants were recruited. These faculty members also received an honorarium of \$50.

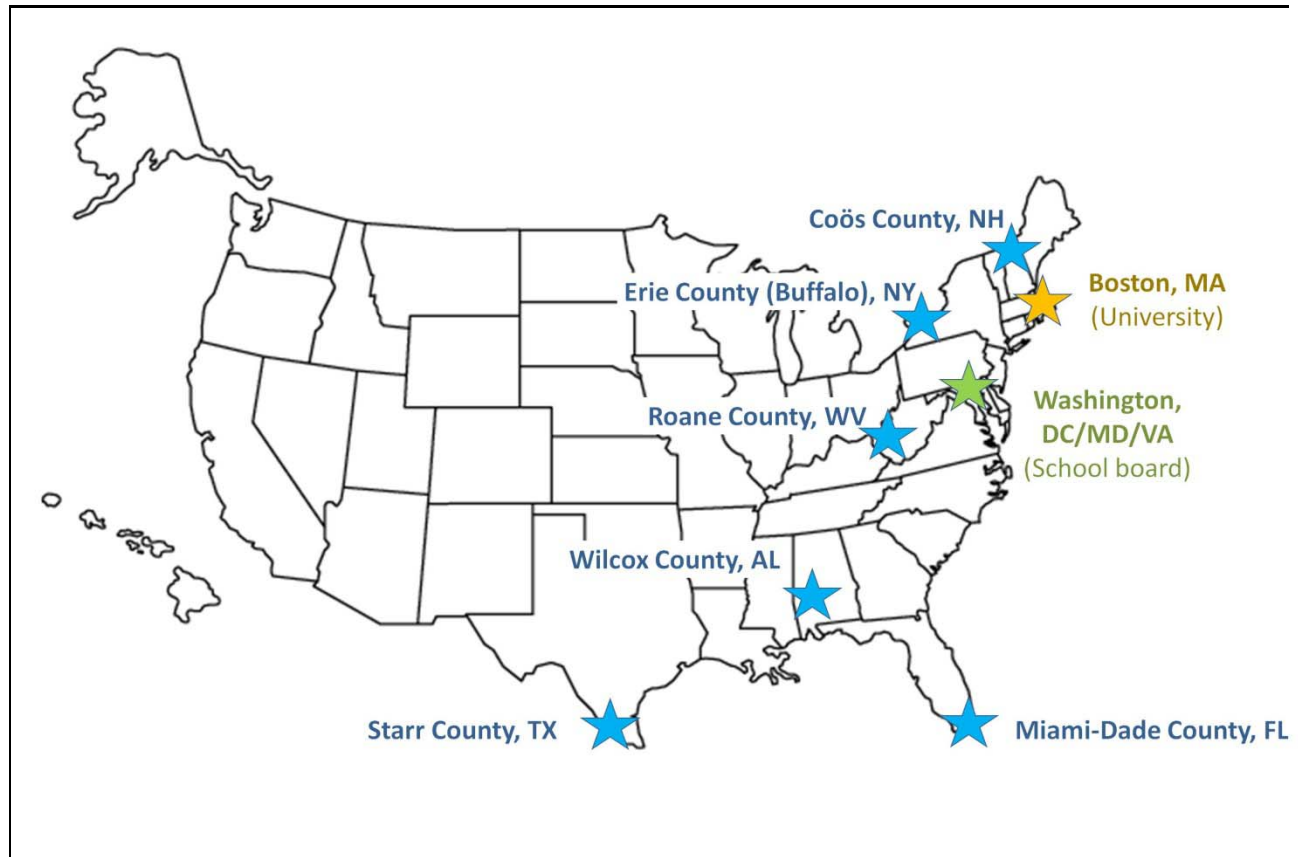
#### *Recruitment of school board members*

School board members were recruited for interviews from lists of school boards in counties in the immediate Washington, D.C. metropolitan area, including the "close-in" suburbs in Maryland and Virginia. We used interviews instead of a focus group for this population due to the difficulty of coordinating the schedules of these participants. Recruiters called each school board member and asked for their participation. School board members did not receive an honorarium.

### *Summary of locations for focus groups and interviews*

Exhibit 3-5 below shows the location of each site for all the focus groups and interviews. The map includes only the 50 states and the District of Columbia to mirror the sampling frame of census tracts from which sites were selected.

**Exhibit 3-5: Map of focus group and interview locations.**



### *Procedures for conducting focus groups and interviews*

The college/university focus group and the K-12 teacher focus groups in urban sites were held in professional focus group facilities. The suburban and rural counties did not have such facilities within reasonable driving distance. In these locations, the focus groups were held in local facilities, such as schools, libraries and community centers.

One or more observers from the Census Bureau attended each focus group. In those locations where professional focus group facilities were not available, portable partitions separated the observers from the focus group participants. Research staff audio-recorded the focus groups. After each focus group, the audio recordings were converted to digital audio files playable on any personal computer.

K-12 teachers at each site were divided into two grade levels: elementary and middle/high school. The grade levels that fell into those categories were determined by how the different schools divided

themselves. For example, if 6<sup>th</sup> grade was part of elementary school, 6<sup>th</sup> grade teachers were in the elementary school group; if 6<sup>th</sup> grade was part of middle school, 6<sup>th</sup> grade teachers participated in the middle/high school group. The division of grades was driven by differences in classroom structure between the two grade levels: elementary schools are generally structured such that students are in one classroom with one teacher who teaches most of the subjects, while in middle and high schools, students go to a variety of classes with teachers who specialize in no more than a few subjects.

Each focus group session used two research staff: a facilitator to lead the discussion and a recorder who took notes and summarized the interaction of participants as unobtrusively as possible. The focus group facilitator began each group by welcoming the participants and asking for the informed consent. The facilitator asked for permission to record the focus group. For the K-12 teacher focus groups, the facilitator also asked teachers to fill out a brief questionnaire on their background and experience as a teacher. The facilitator then led the focus group using a pre-established protocol.<sup>13</sup> When the focus group ended, participants received an honorarium payment of \$50 in cash and signed a receipt with their name and address for the funds.

The school board member interviews were conducted by research staff over the telephone. The audio portion of some, though not all, of the interviews were recorded. The interviewers were also summarized by the interviewer or by an assistant at the time of the interview.

All the protocols and related forms can be found in Appendices A through C of this report.

### *Topics covered*

Exhibit 3-6 summarizes the topic areas for the protocols used in the K-12 teacher focus groups and in the school board member interviews. There is a great deal of overlap in the topics covered in the two protocols, with certain questions allocated to one or the other group as appropriate. Each protocol began by introducing the CIS program and summarizing the procedure for the data collection.

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<sup>13</sup> The teacher focus group protocol and related forms were submitted to and received approval from the Office of Management and Budget in compliance with the Paperwork Reduction Act.

**Exhibit 3-6: Key domains for teacher focus groups and school board interviews.**

Topic areas	Teacher focus groups	School board interviews
Ways schools can get involved	X	X
How schools can become aware of program	X	X
Factors that may prompt schools to participate	X	X
Fit of program with curriculum	X	X
Materials and curriculum	X	X
Feelings about being a CIS point of contact for school	X	
Preference for central or school-based point-of-contact		X
Materials or process needed for CIS success	X	X
Preference for materials	X	X
Necessary materials	X	X
Best way to obtain materials	X	X
Benefits of making own materials	X	X
Use of Census Bureau Web site, such as “State Facts for Students”	X	X
Communication with Census representatives	X	X
Usefulness of direct access	X	X
Preferred communication modes	X	X
Out-of-class activities using CIS	X	X
Student/parent response to CIS materials	X	X
Views toward census	X	X
Teacher participation in CIS	X	X
Spread of participation	X	X
Added burden to workload	X	X
Statistical literacy		X
Biggest challenges facing schools		X
Training of newly-graduated teachers		X
Opportunities for teacher training		X
Role of Census Bureau in training teachers		X
Role of Census Bureau in teaching students		X
Most accessible training/teaching methods		X
Future development of CIS program	X	
Approaches to avoid	X	
Any topics missed today	X	



Exhibit 3-7 below summarizes the topic areas covered in the college/university focus group protocol.

**Exhibit 3-7: Key domains for college/university faculty focus groups.**

Topic areas
Statistical literacy
Challenges in statistics education
Help with challenges from outside organizations
Resources offered by outside organizations
Which ones to use and not use, and why
What resources wanted, but cannot find
Most frequently used online resources
Online resources
Use of Census Bureau resources for teaching and research
Areas for expanded resources (videos, newsletter, webinars, etc.)
Links on Census Bureau Web site to other statistical resources
In-person training
Awareness of Census Bureau in-person training
Prior use of training
Research collaboration and partnerships (Census Bureau Research Fellow Program)
Awareness of research collaboration opportunities
Prior participation in program
Recommendations for Census Bureau to partner with other organizations
Recommendations for Census Bureau to align educational efforts with counterparts in the international statistical community
Teacher preparation in statistical education
Role of the Census Bureau
Providing resources directly to students outside the classroom
Reaching a larger percentage of the college population
Increasing outreach to students to consider a career with the Census Bureau
Supporting statistics education at the college/university level
Increasing understanding of, and appreciation for, everyday use of statistics via leadership in statistics education
Any topics missed today

The investigative domains of this protocol were markedly different from those used with school teachers and school board members.

### 3.3.2. Structured discussion with Census Bureau staff

No one knows the Census in Schools program better than the Census Bureau staff responsible for its development and implementation. With this in mind, a structured discussion was facilitated with those

Census Bureau staff who had a deep understanding of the program, not only from a theoretical perspective but also from a practical implementation perspective. As stakeholders in ensuring the success of the program, these staff members also have the best appreciation for metrics that can be used to indicate improvement and success of the program.

The structured discussion employed the Nominal Group Technique (NGT)<sup>14</sup> to facilitate the discussion and achieve consensus. Prior to convening the group, each potential participant was sent a short "pre-session worksheet" to complete. The worksheet and the protocol is provided in Appendix E. This worksheet served as an initial poll of ideas for important metrics that the CIS program should use. The discussion facilitator arranged these pre-session ideas into categories for discussion. During the discussion, the facilitator presented the metrics listed in each category and then went around the room asking each participant to add to the list or comment on existing items on the list. After the participants had exhausted their additions to the list, participants voted on which metrics they felt were most important. During voting, some items were combined. The result of the voting was to identify which metrics in each category were most important for CIS to assess in the future to measure improvement and success.

The protocol covered three areas for metrics: CIS program activities, CIS program outputs, and CIS program outcomes. These metrics are defined in section 5.5.1, Overview of Logic Model: CIS Activities, Outputs, Outcomes and Impacts.

### **3.3.3. Literature review**

We conducted a literature review to help inform our understanding of which metrics were most important for the CIS program. We searched for literature about existing school-based programs, particularly behavior-change programs in the domains of education and public health. We searched for literature using computerized databases such as ProQuest, PubMed and PsycInfo. The searches included scientific journals in education and public health. The review was augmented by a number of government supplied materials, consisting of various research reports generated by Census Bureau staff or by contractors engaged by the Census Bureau.

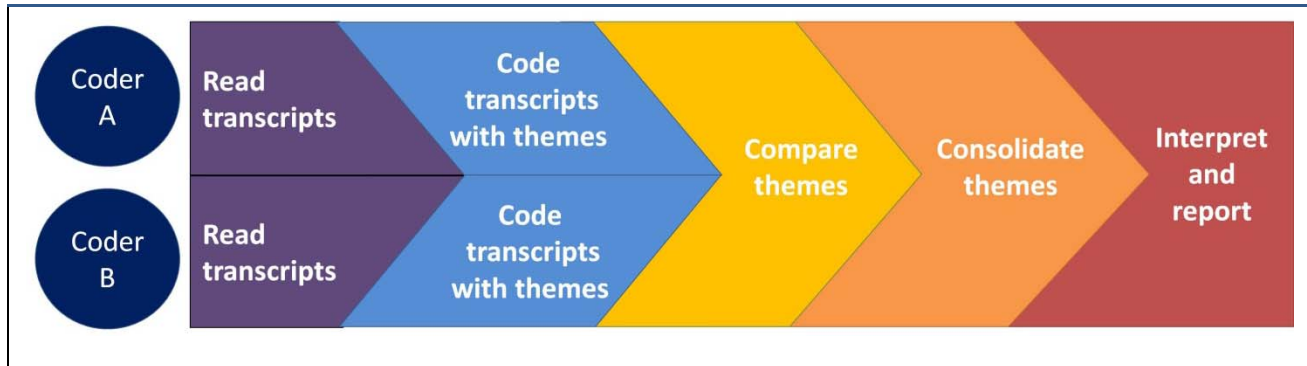
## **3.4. Analysis of Focus Groups and Interviews**

The focus group summaries and transcripts were illustrated using a process graphically depicted in Exhibit 3-8:

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<sup>14</sup> See, for example, Delbecq A. L. and VandeVen A. H, (1971). "A Group Process Model for Problem Identification and Program Planning," *Journal Of Applied Behavioral Science* VII (July/August, 1971), 466 -91.

**Exhibit 3-8: Qualitative analysis process.**



All focus group and interview transcripts were reviewed and analyzed by two coders. Each coder read all of the transcript of a focus group or interview once. Each then coded the transcript for themes. The two coders then jointly reviewed each other's work and developed a consensus of the final themes embedded in a particular set of transcripts. The themes across all the transcripts were consolidated into tables for reporting, with accompanying quotations or extractions from interviewer notes, and interpretations in the text.

## 4. Limitations to the Current Research

In this section we discuss the limitations of the current research. Researchers are concerned with how well the collected data reflect what is truly happening in reality for the particular participants in the study (sometimes referred to as “internal validity”) and how well the results generalize beyond the specific sample of individuals or groups who provided the data. The extent to which the data mirror reality and the results generalize to the broader population is constrained by various limitations emerging from the study design, the specific sample employed and the methods used to collect the data. In addition, there are also resource limitations of any project that constrain the ability of research to be more expansive, comprehensive, or detailed. Finally, the interpretation of the data and the subsequent recommendations should be considered in light of the limitations of the study team’s expertise. These limitations will be discussed in detail in this section.

### *Limitations of focus groups and interviews as qualitative research methods*

Focus groups and interviews have the advantage of providing richness of information among diverse participants. Qualitative research methods such as these allow researchers to examine issues in greater detail and depth than can be achieved in the same amount of time with a survey. Facilitators and interviewers can probe participants on the fly about interesting responses to gather more information, which is impossible to do in survey research. Qualitative research can also uncover subtleties and the reasons behind findings that might appear contradictory in quantitative research.

Qualitative methods cannot provide certain types of information, however. Qualitative methods cannot provide a quantitative assessment of what proportion of the population believes or does something. For example, in this report, one K-12 teacher focus group out of 11 total mentioned that it would be beneficial to pilot CIS program implementation in schools. However, if we were to explicitly ask each group if piloting is a good idea, we would have likely found more positive responses, and we would likely have even different numbers if we surveyed each individual. As such, we caution readers not to interpret the numbers in our report as a statement of the overall importance or representativeness of a given theme. Some important themes or ideas will only arise in one or a few focus groups. Our findings will be driven in part by what we specifically asked about in our protocol; as such, the popularity of certain themes relative to others may be driven by whether we asked about them specifically.

Qualitative methods generally collect data from small numbers of people. The goal of “sampling” in qualitative research is not representativeness of the sample to the population, as would be the concern in survey research. Qualitative research instead uses purposive sampling to ensure that participants are chosen who can shed light on the research questions. The small number of focus groups and interview participants, however, mean that idiosyncrasies of the participant population and their environment can alter the findings and make them less generalizable to other populations. In some sense, qualitative data can be context-specific and difficult to apply to the broader population with any degree of confidence.

Finally, qualitative data analysis is an interpretive process. We used multiple coders to assess the same data, alleviating the concern that the idiosyncrasies or biases of a single coder could drive the

interpretation. We also included as much data as possible in the form of quotations in the report to allow the reader to assess our interpretations.

The nature of qualitative research is to explore topics in their full context, rather than identifying statistically significant results or testing hypotheses. The usual parametric statistics cannot be used in qualitative research; rather the qualitative results can be used to provide direction for future quantitative research and to generate hypotheses. Thus, for example, while we can highlight a finding that arose more often in the elementary school focus groups than in the middle/high school groups, we cannot say that elementary school teachers are more concerned about the issue than middle/high school teachers. A related problem particular to focus groups is that we are reporting at the group level, and there is no way to disaggregate findings by any particular type of participant like there would be with survey data. As such, we cannot know how the thoughts of high school teachers might differ from middle school teachers, how math teachers differ from social studies teachers, and so on.

### *Limitations of the study populations included in focus groups and interviews*

The primary data reported here were gleaned from schoolteachers, school board members, and college/university faculty. The schoolteachers were selected to represent some diversity with regard to urbanicity and mail response rates, but the 88 participants will not reflect the diversity that exists among 1.5 million teachers at 125,000 schools. Furthermore, the selected sites were largely in the eastern U.S., with the exception of the site in Texas. As such, there may be issues specific to teachers in other regions that are not represented in the data. Thus, participants within focus groups should be considered "indicative" but not "representative". We found many common themes across the focus groups we conducted, providing some evidence of common concerns and beliefs across those populations we included; nonetheless, we cannot be sure that the geographic or other limitations of our study population did not impact the data we collected.

Likewise, school board members and college/university faculty were each recruited from a single metropolitan area. While the information these participants provided sheds light on issues important to the broader populations they represent, it is likely that there are other issues or concerns that we were unable to detect due to the limited populations included.

Furthermore, the data will be limited by the method of recruitment. Teachers were recruited primarily by e-mail during the months of June and July. Teachers who do not check their e-mail may have views that are not represented by teachers in our focus groups. For example, e-mail was cited as a useful way of reaching teachers to make them aware of the CIS program and to provide updates and support; it is possible that a survey of all teachers would find less enthusiasm for e-mail as a primary mode of contact.

### *Limitations emerging from the data collection instruments*

Every observation is influenced by the instrument used to record it, and the same is true for focus groups and interviews. This data collection was driven by a structured set of questions reflecting the information the Census Bureau desired to fully understand the needs and wants of the "consumers" of the CIS program. Qualitative research differs from survey research in that survey research gets specific

responses to the questions asked and no responses to questions not asked. In qualitative research, participants generally answer the questions researchers ask, but in a wide variety of ways, many of which are unanticipated or unique. Furthermore, participants may answer questions that researchers did not ask, nonetheless providing important information. The dynamic and interactive nature of focus groups provides another variable, as participants respond not only to the researcher's questions, but also to each other. On the whole, however, participants are likely to make statements related to the particular set of questions that the researchers ask. Throughout the results we highlight sections of the protocol related to each topic; the complete protocols appear in Appendix A: Teacher Focus Group Protocols and Moderator's Guide, Appendix B: College and University Focus Group Protocol and Moderator's Guide, and Appendix C: School Board Interview Guide. In reading the results and recommendations it is useful to keep in mind the questions that were asked and those that were not asked (but which may have arisen in certain focus groups).

### *Limitations due to the specific dynamics of the focus groups*

Certain features of the focus group situation could have impacted participants' comments. Focus groups were observed by Census Bureau staff from behind a one-way mirror in the focus group facilities and from behind a simple partition in other areas. The presence of these observers may have altered participants' responses. Furthermore, focus groups were recorded, and the knowledge of being recorded may have altered the participants' comments.

Characteristics of the group also have the potential to alter participants' comments. In some teacher focus groups, there was a mix of teachers who had prior experience with the CIS program and those who had no experience. In other groups, there were no teachers who were aware of the CIS program. Having experienced members in the focus group may have altered the comments of the non-experienced members. Furthermore, because we selected schools from a single county, participants often knew one another, particularly in the suburban and rural areas. While familiarity may make participants feel more comfortable, it may also make them more wary of expressing certain opinions.

Finally, facilitators differed across the groups. Personal subjective characteristics of the facilitator, such as speech pattern, voice tonal quality, body language, gender, race/ethnicity, or age, could have affected participants' responses.

### *Constraints on time and resources*

Several issues created time pressures during this one-year research study. These constraints are not research limitations in the same sense as those discussed above in that they do not necessarily impact whether the findings accurately represent the reality of the participants or generalize to other populations. These limitations reflect constraints on the scope of the research, however.

**Scope change and OMB approval:** At the beginning of the project, we were working under the assumption that the data collection instruments (originally a survey questionnaire for schools/teachers) would be submitted under an existing OMB clearance possessed by the Census Bureau for focus group work. We also believed that the names and contact information for schools and teachers would be

available via the database used by the Census Bureau to distribute the materials. Ultimately, neither assumption was tenable. The existing OMB clearance was not available for evaluation activities and could not be used to conduct the CIS research. An OMB submittal needed to be created and approved, resulting in the project timeline being extended by five additional months. This delay pushed recruitment into late spring, when teachers are busy finishing the school year. Furthermore, the license was scheduled to expire for the school/teacher database during the OMB approval process, leaving the survey with no sampling frame. Given the lack of a sampling frame, the scope of the project was changed, with a shift in study design from a survey to focus groups and interviews. The shift in scope, however, did provide an opportunity to shift more toward a “forward-looking” orientation and focus more closely on how to improve the CIS program and communicate with schools and teachers during the intercensal years.

**Shift in recruitment strategy for K-12 focus groups:** Our initial approach to recruiting teachers for the focus groups was to contact the central office of each school and attempt to work through that office to reach potentially-interested teachers. Over the course of several weeks, we failed to recruit many teachers and we were unable to schedule focus group times and locations due to the slow pace of the recruitment process. We recalibrated our recruiting process to instead recruit individual teachers by e-mail, inviting them to a pre-scheduled location at a specific date and time. Because we could only expect a small percentage of people contacted to agree to participate in a time-intensive data collection such as a focus group, we needed to reach many people quickly; e-mail allowed us to reach a large number of teachers over a short period of time. Teachers were able to respond definitively about their availability for the scheduled group, allowing us to quantify our progress in recruitment.

Rather than being a hindrance to recruitment, the delays described in this section turned out to be an advantage for recruiting school teachers, who are less busy in the summer than during the school year. Teachers also deliver on their commitment to attend focus group sessions at higher rates than the general population. In the end, we were able to recruit sufficient teachers to hit the recruitment cap set in the OMB submittal.

### *Limitations of the research team's expertise*

Our research team is highly experienced in the collection, analysis and interpretation of qualitative data from focus groups and interviews, and we have long experience translating qualitative research findings into actionable recommendations. None of us are education professionals, however. Additionally, while we are able to identify potential issues in program implementation, our expertise is not ideally aligned to provide specific guidance as to how to best implement all of our recommendations. Furthermore, there are many areas where Census Bureau staff will have more expertise than we do; some deficiencies in our recommendations are likely to result from our having an incomplete understanding of the CIS program and its functioning. These limitations may have some impact on the interpretation of the results and on the recommendations.

## 5. Results

This section presents the results of the 11 teacher focus groups, one college/university faculty focus group, 9 interviews with school board members, and one structured discussion with internal Census Bureau stakeholders, described in the Methods section (Chapter 3). First we will describe the characteristics of the participants in this research, followed by results for each of the four research questions.

### 5.1. Participant Characteristics

In this section, we describe the characteristics of the participants in the focus groups and interviews. We will first describe the number of participants by study population and geographic location, followed by school and individual characteristics of the K-12 teachers that participated in focus groups.

#### 5.1.1. Number of participants by population and location

The number of participants by participant type and location is shown in Exhibit 5-1 and Exhibit 5-2. There was one focus group of nine college and university faculty held in Boston, Massachusetts. Nine school board members from the greater Washington D.C. area were interviewed by telephone. Eleven focus groups were held with K-12 teachers – five with elementary school teachers and six with middle school and high school teachers – in six locations. As noted in the Methodology, the grade levels that fell into elementary school versus middle/high school were determined by how the different schools divided themselves; for example, if 6<sup>th</sup> grade was part of elementary school, 6<sup>th</sup> grade teachers were in the elementary school group; if 6<sup>th</sup> grade was part of middle school, 6<sup>th</sup> grade teachers participated in the middle/high school group.

Eighty-eight teachers participated in the 11 focus groups.



**Exhibit 5-1: Number and location of college/university faculty focus group and school board member interviews.**

Participant Type	Location	Number of Participants
College/University Faculty	Boston, Massachusetts (1 focus group)	9
School Board Members	Washington, D.C./Maryland/Virginia (individual interviews)	9

**Exhibit 5-2: Distribution of K-12 teacher focus group participants by location.**

Participant Type	Location	Number of Participants
Elementary School Teachers	Wilcox County, Alabama	7
	Coös County, New Hampshire	7
	Starr County, Texas	5
	Erie County, New York	8
	Miami-Dade County, Florida	8
Middle School Teachers	Wilcox County, Alabama	7
	Coös County, New Hampshire	12
	Starr County, Texas	4
	Roane County, West Virginia	10
	Erie County, New York	10
	Miami-Dade County, Florida	10
<b>Total Teachers</b>	<b>11 Focus Groups</b>	<b>88</b>

### 5.1.2. Demographic characteristics and other descriptive variables of K-12 teachers

At the eleven focus groups with K-12 teachers, we asked each teacher to fill out a brief questionnaire before the start of the focus group. The brief questionnaire asked about characteristics of the teachers' schools, their individual characteristics, and their prior involvement with Census in Schools. This section shows the results of the brief survey.

The first two exhibits show characteristics of the schools where teachers worked. Exhibit 5-3 illustrates the types of schools that teachers worked in. Nearly all teachers worked in public schools, while only two teachers worked in private schools and one worked in a charter school.

**Exhibit 5-3: Type of teachers' schools in focus groups (total = 88 K-12 teachers).**

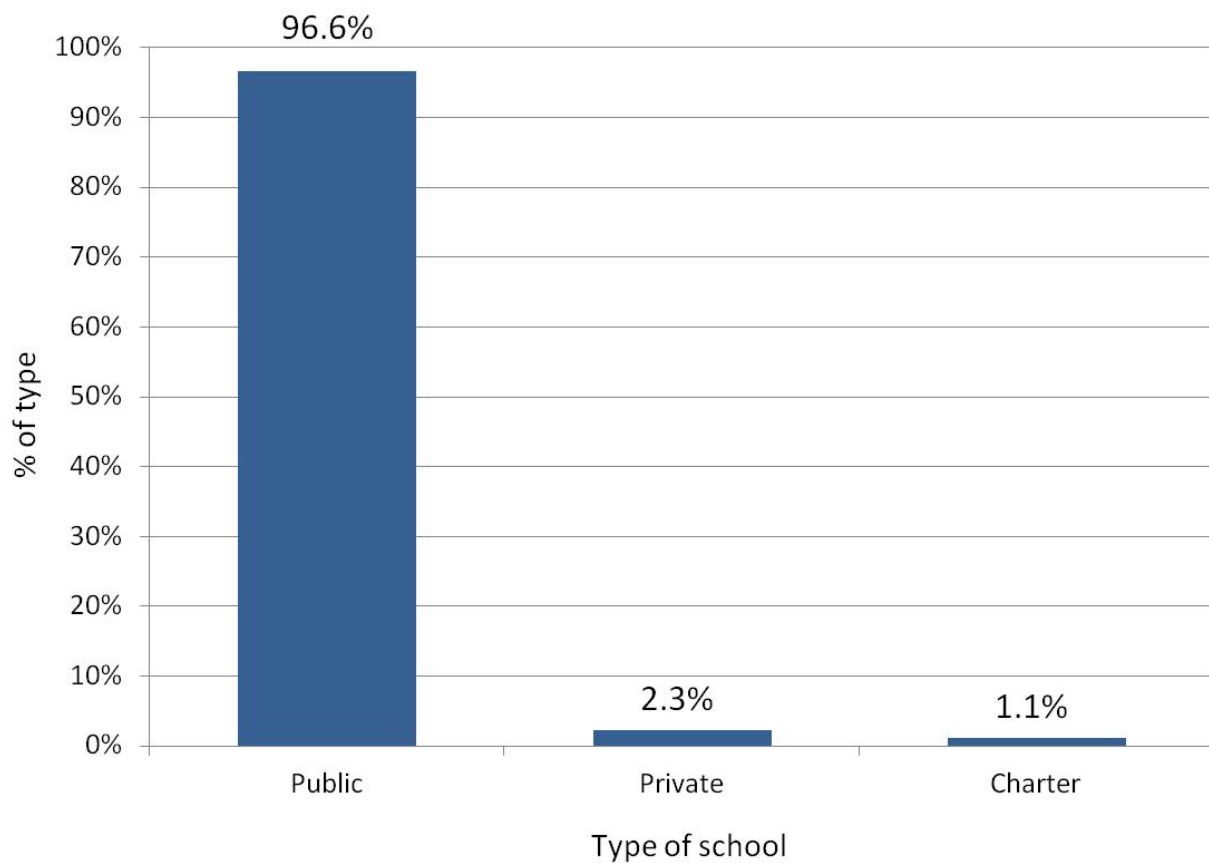
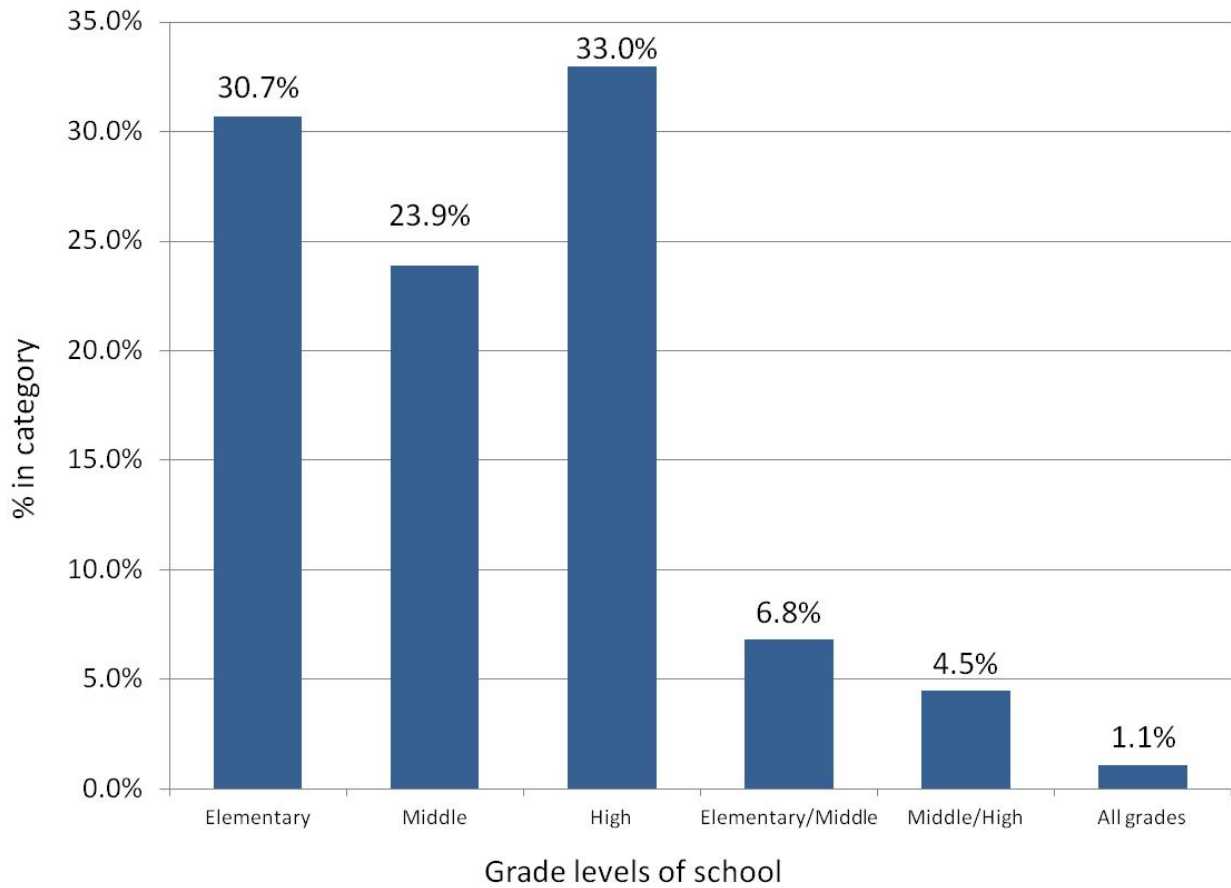


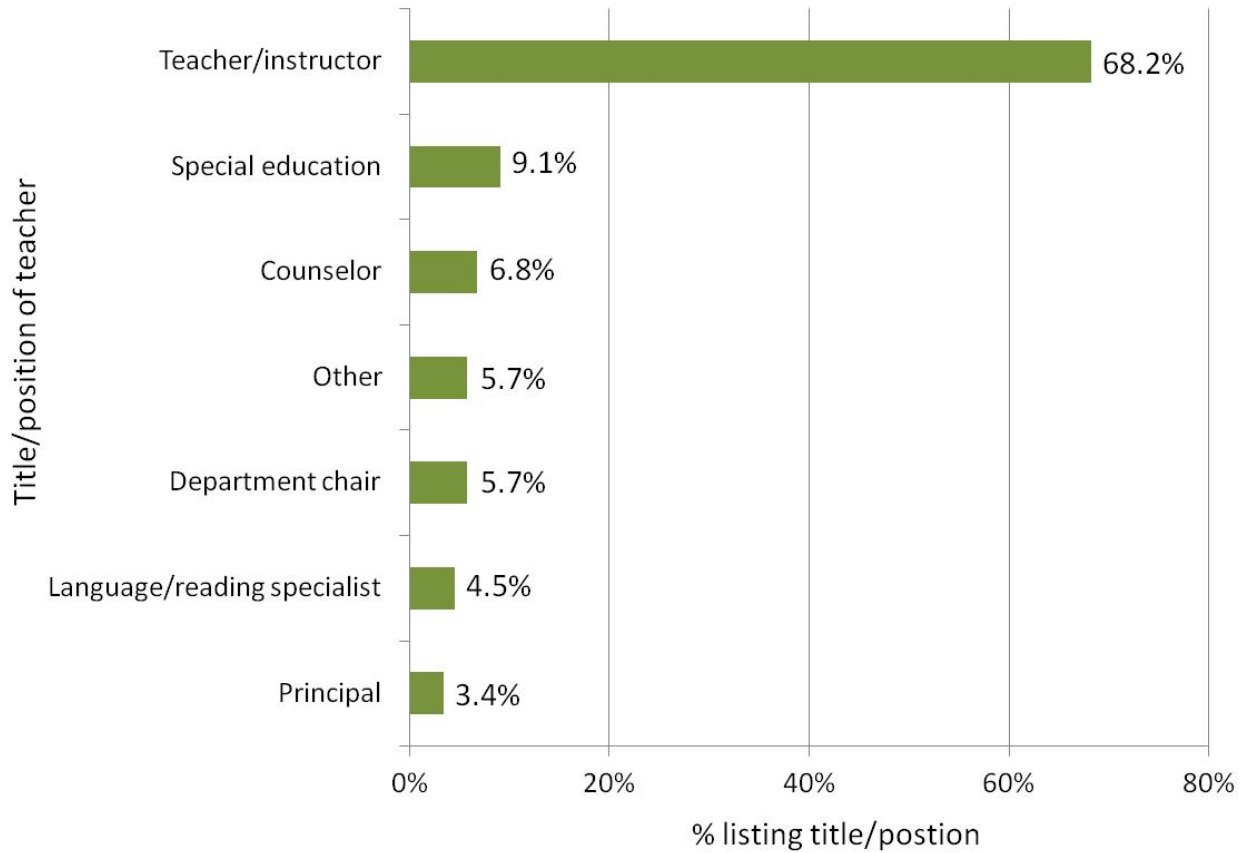
Exhibit 5-4 illustrates the grade levels of the schools in which teachers worked. About a third each work in elementary schools or high schools, while a quarter worked in middle school. The remainder worked in schools that covered multiple grade levels.

**Exhibit 5-4: Grade levels of teachers' schools in focus groups (total = 88 K-12 teachers).**



The next three figures show characteristics of the individual teachers. Over two-thirds of teachers were regular classroom teachers, as shown in Exhibit 5-5. Participants were also special education teachers, counselors, department chairs, language and reading specialists, principals, and other types of educators.

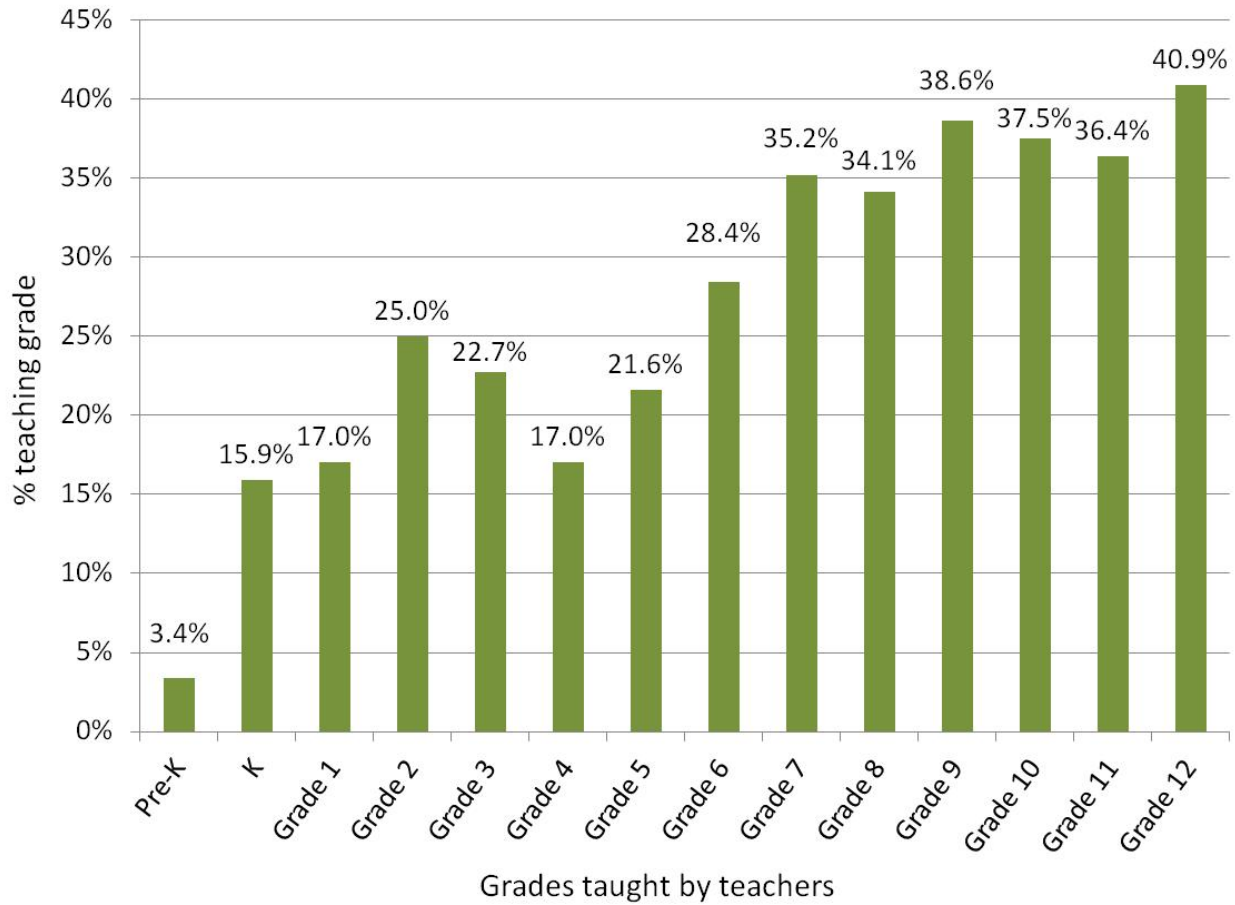
**Exhibit 5-5: Title/position of teachers in focus groups (total = 88 K-12 teachers).**



Note: Totals add to more than 100% as respondents could be included in more than one category.

Most teachers taught a range of grade levels, particularly those working in middle schools and high schools. Exhibit 5-6 shows the distribution of grades taught by the teachers.

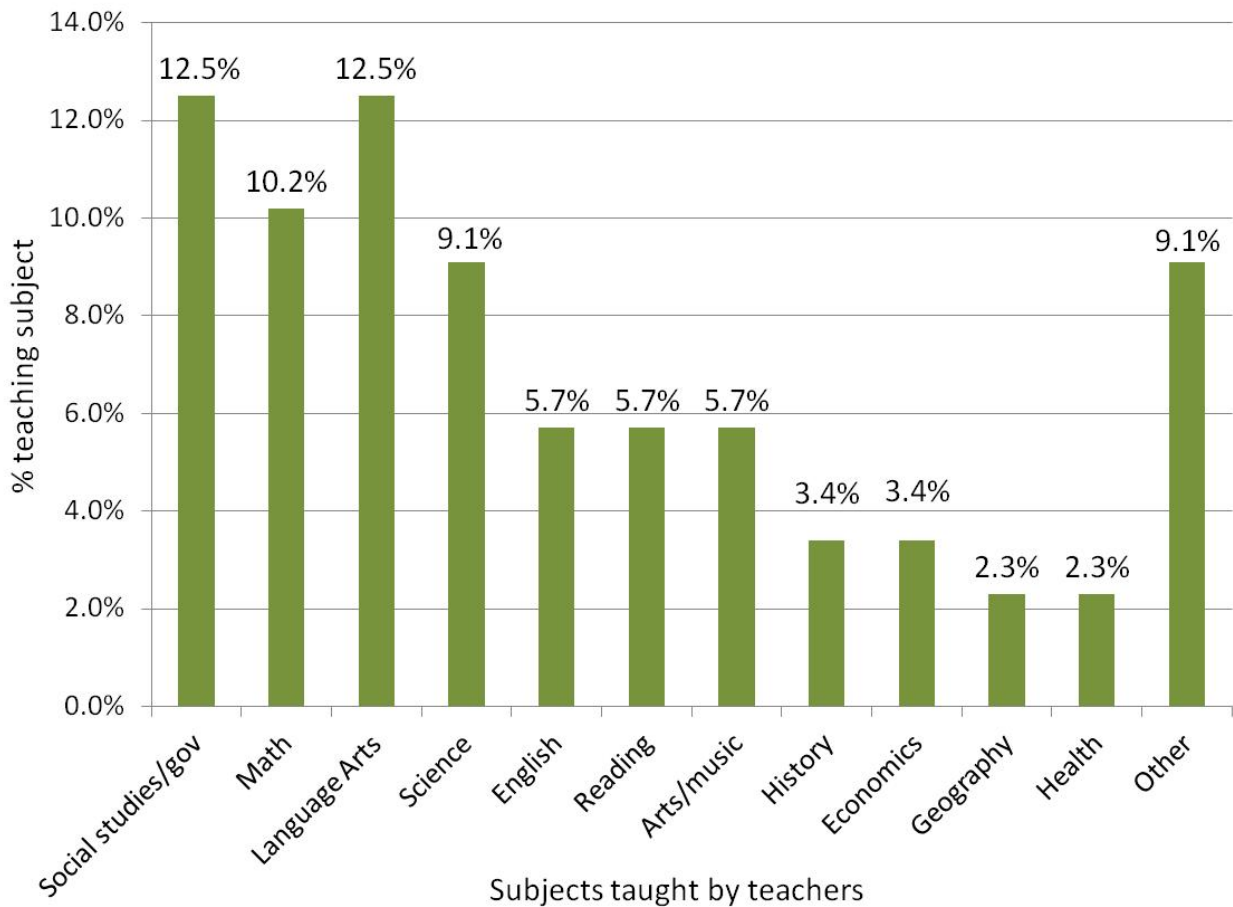
**Exhibit 5-6: Grade levels taught by teachers in focus groups (total = 88 K-12 teachers).**



Note: Totals add to more than 100% as respondents could be included in more than one category.

While most elementary school teachers teach a broad range of subjects due to the structure of their classes, middle and high school teachers tend to focus more on specific topic areas. Exhibit 5-7 shows the percentage of participants working in middle schools and high schools who taught different subjects. Social studies (including civics and government) were most represented along with language arts. These subjects were followed by math, science, English, reading, arts and music, and others.

**Exhibit 5-7: Subjects taught by teachers in focus groups (total = 60 middle and high school teachers).**



Note: Totals add to more than 100% as respondents could be included in more than one category.

Finally, we asked participants about their prior involvement in Census in Schools and the involvement of their school. Exhibit 5-8 shows the both teacher involvement and school involvement.

Teachers were only directly involved in the program when schools were greatly involved in Census in Schools. More than two thirds of teachers said that they and their schools were not involved.

**Exhibit 5-8: Teacher and school involvement in Census in Schools (total = 88 K-12 teachers).**

Involvement	School greatly involved	School somewhat involved	School involved a little	No response	School not involved	Total
Teacher directly involved	2 (2.4%)	5 (5.9%)	4 (4.7%)	0 (0%)	--	11 (12.9%)
Teacher not involved, school was	0 (0%)	5 (5.9%)	7 (8.2%)	2 (2.4%)	--	14 (16.5%)
Teacher not involved, school not either	--	--	--	--	60 (70.6%)	60 (70.6%)
<b>Total</b>	2 (2.4%)	10 (11.8%)	11 (12.9%)	2 (2.4%)	60 (70.6%)	85 <sup>a</sup> (100%)

Note: 3 respondents did not complete items.

## 5.2. Question 1: How Can the CIS Program Targeting Kindergarten Through High School Level Students, Teachers, and Administrators Be Improved for the 2020 Census?

We address Question 1 by looking at two main sources of data, the focus groups with elementary and middle/high school teachers and the interviews with school board members.

### 5.2.1. Results for focus groups with K-12 teachers

This section discussed the results related to Question 1 from the 11 focus groups with 88 K-12 teachers. There were five focus groups with 35 elementary school teachers and six focus groups with 53 middle school and high school teachers. As noted in the Methodology, the grade levels that fell into elementary school versus middle/high school were determined by how the different schools divided themselves. The results are divided into the following topics:

- Important factors for school participation
- Fit of CIS materials/activities with curriculum
- Potential barriers to implementing CIS
- Desired characteristics of CIS materials/activities
- Desired types of materials/activities

Discussion of each topic will begin with an overview (highlighted in a box) of the questions from the focus group guide related to the topic. While most of the responses discussed in each topic were in response to these parts of the focus group guide, because focus groups discussions naturally flow back and forth between topics, we coded each transcript looking for themes, rather than coding strictly by the order of the questions we asked. This overview will be followed by two tables, one for the elementary school focus groups and one for the middle/high school focus groups, showing the main themes related to the topic, the number of focus groups in which the theme was discussed, and example quotations. Quotations were selected for each table based on how illustrative they were of the theme; additional quotations will be discussed in the text. Some themes do not include quotations if the theme was raised without further elaboration. The text will describe each theme and highlight areas of agreement between the elementary school focus groups and the middle/high school focus groups and themes that are unique to each.



### *Important factors for school participation*

Take a look at a list of some factors that may prompt schools to participate (on handout sheet). Which of these is important to you? Of all of them, which would you say is the most important?

- To make the next generation more aware of the importance or significance of the census to improve their response rates when they grow to be eligible to complete the census
- To make parents more aware of the importance or significance of the census to improve their response rates in the 2020 Census
- To ensure a fair representation of your school’s population or other target population
- To ensure a fair share of federal funding for your school population
- To build the perception of your school as a good public citizen
- Other factors?

Parent response: Do you think parent’s views of the census will change as a result of census-related class activities and Family Take Home Materials?

One of the opening questions asked what factors might prompt schools to participate in Census in Schools. Because one of the major factors was making parents more aware, we also include here responses from items appearing later in the focus group guide that discussed changes in parental views of the census as a result of CIS materials and activities. Exhibit 5-9 shows responses for the elementary school groups and Exhibit 5-10 shows responses for the middle/high schools groups.

Making students and parents more aware of the importance of the census was mentioned more often in the elementary school groups than in the middle/high school groups; the focus for the latter was more on ensuring the school population’s fair share of Federal funding. However, awareness of students and parents and funding were the top three factors mentioned at both school levels.

Federal funding was raised as an important motivator in the context of ongoing budget cuts and a potential selling point for the importance of the census to students, who might see reductions in favored activities, and to parents, who would be concerned about the impacts on the school and the community. One elementary school teacher noted, “In a time when everything is getting cut, 2010 would have been a big year for Census if they would’ve made that connection [to Federal funding] very clear, because we’re losing teachers, we’re losing sports, arts, numbers are going down. I think what hits home most is the loss of staff at schools.”

Given that the program was focused on schools, making students more aware of the importance of the census was seen as key, particularly for increasing future response rates. One middle/high school participant said, “If you’re talking about the future, I think make next generation aware is important. Most people don’t know the importance of filling out the forms, so they are left out. But kids will help for the future.”

**Exhibit 5-9: Important factors for school participation (Elementary).**

Theme	# of groups (5 total)	Sample quotations
Make students more aware	5	“If they’re made to see the importance of responding, and how important the census is, maybe they can respond when they’re of that age to respond.”
Make parents more aware	4	“In our community we have a lot of uneducated parents who don’t respond to school involvement or state and Federal issues. It’s important to get them involved and make them aware, because they usually shove it off.”
Kids will tell parents what they learned	3	“In our case, the majority of parents are Spanish speaking only. If the students are aware of it, and how it works and the benefits of it, they will tell their parents.” “They are great scouts, and they can tell the adults.”
Improve perception of census, alleviate parental concerns, fear, suspicion, confusion	2	“I found that the materials were very well done, because there is a fear of the unknown. A couple of parents said, ‘thank you’ because in the past they did not understand it fully, but because the children explained to them the importance, the materials were effective.” “Where I teach we have a lot of noncitizens and a lot of parents are scared of the consequences of filing out the form, so hopefully the information would trickle from children and change that perception.”
Involving parents in activities	1	“They even did the [heritage] doll [activity]. So the parents have to get involved because you have to help them sew and talk about it, you’re not going to just sit there and talk so if the kids are excited and you come home then you’re excited”
Relate census findings back to community	1	“But does the Census relate back to the community their findings? After the census is taken and evaluated, what is the growth of the community that might be helpful information to the parents?”
Ensure fair share of Federal funding	3	“I don’t think people understand it’s about the money – how much money goes to your school, how much money goes to your district and if they understood that’s why you’re asking, your school could get more money. We’re asking how many people live here so your school will get more money, your neighborhood will get some money.”
Be a good citizen/Teach civic responsibility	3	“The schools that I’ve worked in really consider themselves good public citizens and I think that one of the ways to reach them would definitely be to concentrate on that a little bit.”
Ensure fair representation of population	1	“We are a poor area, transient, people get missed and the inner city or those areas are not well documented or it's promoted and it's a whole lot harder because we see kids move in and out of the school district. So that piece of just being accurately counted and represented in those needs being accounted for.”

Note: “# of groups” represents the number of focus groups (5 maximum) in which the theme was mentioned.

**Exhibit 5-10: Important factors for school participation (Middle/High).**

Theme	# of groups (6 total)	Sample quotations
Ensure fair share of Federal funding	6	<p>“I think Federal funding is a strong point. My school hasn’t been affected yet, but many districts are downsizing and having a Reduction in Force (RIFs). They are increasing the number of students per teacher. If we get an accurate count, that will have a positive effect on all of us who work in the school district.”</p> <p>“I know that for students in my school, the [programs] that they like, such as sports, are getting cut.”</p>
Make students more aware	4	<p>“I think it is difficult to communicate with all the parents – the ones we are trying to reach are always the most difficult. The kids are who are going to make the impact.”</p>
Make parents more aware	3	<p>“I think it would improve parents more and draw greater connections between all of these [factors].”</p>
Improve perception of census, alleviate parental concerns, fear, suspicion, confusion	5	<p>“A lot of people are frightened by something like this, ‘cause they don’t know what it means. So instead of say, trying to find out what it means and what it’s for, they just don’t participate.”</p> <p>“A lot of people are afraid. They don’t want anyone to know they are here illegally. They think the Census will take information to Immigration, and be deported.”</p>
Kids will tell parents what they learned	4	<p>“The ESL students had no past experience [with the Census], nor do their parents, so they would see this at school and I would explain this to them and they will tell their parents and help them fill it out. It may not have been filled out otherwise.”</p>
Involving parents in activities	2	<p>“If the parents are the ones who fill this out in the end, would it be conceivable to have the parents come in one evening and to do this in mass and have someone help them fill out forms to make sure they get it done.”</p>
Need to educate parents directly	2	<p>“We gotta find a program to educate the ones providing the data, the parents.”</p> <p>“I think if you want to reach adults, it is not the best way to go through the child. Not every adult has a child.”</p>
Schools as trusted guides	1	<p>“At the high school level, we work with filling out FAFSAs, we work with a lot of them, and they come to us because they don’t know how to do it. We work with them all the time, with things the parents don’t know how to do because they feel safe with us.”</p>
Ensure fair representation of population	2	
Be a good citizen/Teach civic responsibility	1	<p>“Our district likes to be perceived well, in the surrounding area and region-wide, so if it’s a cheap and easy way for something to improve a schools profile.”</p>

Note: “# of groups” represents the number of focus groups (6 maximum) in which the theme was mentioned.

Reaching parents was seen as important in several groups due to parental suspicion and confusion about the purpose of the census. Concerns included interference with public assistance, problems with immigration due to undocumented status, and problems with child protective services or other strangers coming to the door. As one elementary school teacher noted, “I think we really need to make sure they are not going to be penalized for their answers with any other services they may receive: Medicaid or anything government. I think that holds them back – even down to free lunches, it’s a fear.”

Several middle/high school groups raised the need to use more direct communication with parents or adults in general (as many do not have children) if the goal is to have the adults complete their census forms. One elementary school suggested that relating census findings back to the community would illustrate the usefulness of the census to parents. Another middle/high school group noted that schools can act as trusted guides to communicate directly with parents, describing how they helped parents complete other Federal forms such as the Free Application for Federal Student Aid (FAFSA), which is required for college financial aid applications.

Beyond ensuring a fair share of Federal funding for the community and making students and parents more aware of the importance of the census, another important factor, particularly in the elementary school groups was teaching civic responsibility to students and having the school be a good citizen by participating. As one elementary school teacher noted, “It is important to have children and parents understand that as citizens, we have freedoms and privileges and these come with responsibilities and that is to act because it is important and critical and the right thing to do.”

#### *Fit of CIS materials/activities with curriculum*

How do you see the program as fitting into your curriculum?

In what ways do you foresee using the Census Bureau Web site for future school-related activities? “Show State Facts for Students” was designed to easily fit into grade 3-5 curriculum and is the most used feature on the site. Would something like this that is online and fits exactly into what you are teaching be more preferred than a new lesson plan?

How widely do you think participation will spread through your school? Will additional materials from the Census be an added burden to the normal workload? Can you give us some examples?

Themes related to the fit of CIS materials and activities into the curriculum are shown in Exhibit 5-11 for the elementary school groups and Exhibit 5-12 for the middle/high school groups.

**Exhibit 5-11: Fit of CIS materials/activities with curriculum (Elementary).**

Theme	# of groups (5 total)	Sample quotations
Importance of integration into existing curriculum	5	<p>“It would have to be something we can integrate into something we’re doing already. We could have someone sit down and look at the curriculum we teach; that would probably work well.”</p> <p>“It goes well with the curriculum we already implement.”</p> <p>“There were all kinds of maps, tables, and all the information could be integrated in all kinds of subjects.”</p> <p>“It is helpful for math because it teaches about average and median so it would be helpful. It would be reinforcement.”</p>
Importance of fit with standards, mandates and testing	5	<p>“Make sure that it becomes a part of the instructional process without taking away from anything else.”</p> <p>“If it’s connected to a standard then teachers will think, “If I do this, then I’m addressing this standard” and they can see the value.”</p> <p>“Since 42 states are moving to use common core standards, this is something a textbook publisher can take advantage of because they can unify information.”</p> <p>“It would help in the elementary school upper grades to align to the state testing requirements. The teachers could incorporate this knowing that it is kind of aligned to the state test, so they know this information is just as important. They spend much time drilling in those specific test areas. Teachers will be more prompt in getting this done.”</p> <p>“If they find out that they will be tested on civics in 2014, all of a sudden it is going to become a priority. Once they know that priority exists, then they will use it.”</p>
Annual/regular need in intercensal years	4	<p>“I think the fact that its every 10 years puts it to the side, but if it’s something that’s touched upon consistently, kind of like voting, it will help. It can’t just be that 10 year push. So when they’re in their own house, they can do their own census.”</p>
Cross-curricular	2	<p>“What I’ve seen emerging and what works well is to bring in different areas and create a unit, to bring in a math unit, the language arts unit and the social studies unit. Bringing in the various disciplines into it seems to be very popular at the present time, at least in this district.”</p>
Teacher involvement in material development	1	<p>“Many times we have people who don’t understand what we do in a classroom coming up with ideas for lessons, so we need to get teachers involved.”</p>

Note: “# of groups” represents the number of focus groups (5 maximum) in which the theme was mentioned.

**Exhibit 5-12: Fit of CIS materials/activities with curriculum (Middle/High).**

Theme	# of groups (6 total)	Sample quotations
Importance of integration into existing curriculum	5	<p>“To guarantee participation, it should fit into the curriculum that’s already been established. Many teachers believe that they have to follow the pacing guide and nothing else matters.”</p> <p>“I would like to see census material that has been created with my particular subject in mind, catered to what I’m teaching. We as teachers don’t have time to reinvent the resources.”</p>
Cross-curricular	5	<p>“I think it would be interesting to see a cross-curriculum project done. Then the kids see the link between all the classes, which is what they all struggle with.”</p>
Importance of fit with standards, mandates and testing	3	<p>“Everything is driven by the State’s standards. And then from there is where they build the pacing guides and focus calendars.”</p> <p>“We have so many things to do – it gets overwhelming to pick and choose what materials you are going to use. It could be a burden if it does not fit into your curriculum. But if it ties into testing and standards, if it is not a burden, it helps.”</p>
Importance of <i>not</i> being a mandate	2	<p>“They should NOT make it mandatory. It should be so dynamic that teachers WANT to do it. When something is mandatory, teachers do not want to do it.”</p>
Annual/regular need in intercensal years	3	<p>“The only way it’s going to work, is that it needs to be done each year. If not, kids will forget. You can’t skip a year.”</p>
Start at young age	1	<p>“I don’t know if educating the high school kids will make much of a difference because their ideas are already formed, their parents ideas are formed, but if you start with the elementary guys, they’re like ‘You’ve got to do this mom!’”</p>
Teacher involvement in material development	2	<p>“I’d hire the teachers in the schools, pay them a good wage to develop these lesson plans because they’re going to know what transfers across to what other people need to know.”</p>
Teachers central to implementation	2	<p>“I do think it’s important we be here though, because we want these programs to be teacher-friendly. I do believe we need to start at the top, but we’re the ones that have to implement.”</p>
Importance of selling the value and providing support	1	<p>“You’ve got to sell it. We’re going to help you accomplish what you already have to do and we’re going to have it embedded, and then people want to have you come in because you’re going to fill the void to help us accomplish our mission.”</p> <p>“You can’t just say “please, please, please do this, this is very important to us.” You have to provide some kind of support system just because there are so many demands on teachers.”</p>
Piloting in schools	1	<p>“Schools could be used as a pilot program to test it out to make sure those plans are working and students are getting the information that you’re wanting out there to them.”</p>

Note: “# of groups” represents the number of focus groups (6 maximum) in which the theme was mentioned.

A common theme in nearly all the groups was the importance of integrating the materials into the existing curriculum, particularly insofar as it could help support existing mandates and testing preparations. In reviewing the CIS materials, many felt that they could include them in their existing civics, social studies, math, reading, or history curriculum. As one elementary school teacher noted, “In looking at these lesson plans, I wouldn’t have a problem with it [using them], since I’m always looking for something that’s relevant. I think I could integrate it into some of our lesson plans. If I could implement a lesson plan that was already prepared, that would be great.” One high school teacher said that he would prefer “materials to enhance what I’m already doing, versus creating a whole unit, I think teachers would be more apt to use or adapt to their lesson than to create or make time for something not in our curriculum.”

While standards and testing were raised at both group levels, elementary school teachers seemed particularly focused on the need for the CIS materials to be aligned to standards and tests. Without that alignment, many teachers felt that the material would fall by the wayside. As one elementary school teacher noted, “This isn’t required. That’s what I’m hearing my teachers say, “I’m sorry but I can’t fit in it.” While teachers expressed a desire to see the material *aligned* with the standards, they generally did not want to see it *added* as a new standard or mandates. One middle/high school participant said, “We don’t want a mandated program; we want information available that we can use to help improve our program. If it’s mandated, we could care less about using it. I use this information ‘cause I like the information. I think we need more things that are teacher friendly and not forced upon us.” Several teachers noted that most states were currently adopting national standards, which would facilitate the ability of CIS to align materials with schools’ standards.

The middle/high school groups in particular noted the appeal of the CIS materials as being potentially cross-curricular or interdisciplinary. One middle/high school teacher suggested, “Maybe a week where you take the census, learn of the population for social studies; how to sort through the groups for math, look at the data; art maybe they make posters and promote involvement in census; and in English compare states in like an essay. That way they are getting a full effect of how the census all really works together.” Several teachers noted the trend toward cross-curricular teaching.

Another key theme at both group levels was the need to include census in the curriculum at regular intervals, not just every ten years. One elementary school teacher related, “I never really, as a kid, knew anything about census, then all of a sudden we got this whole two week burst of census information. It’s not losing sight of it because 10 years is a huge gap.” Participants suggested starting at a young age and building up the curriculum; as one middle/high school teacher noted, “You take the younger [students] and then the next year you give them a little bit more information and you make them a little more aware and you keep building on that until they are of an age to participate.”

A few groups noted the usefulness of involving teachers in material development and implementation. Groups suggested that teachers could develop materials and also see where the materials could fit into the curriculum. One elementary school teacher suggested, “If we do have teachers that are going to be implementing this for the Census Bureau, then they should go and see which textbooks are being used

by the district and recommend this to be used in lieu of these [specific] pages or in addition to these pages to help the teachers fit it into the curriculum.”

One middle/high school group also talked about the need for the Census Bureau to sell the program to teachers by showing the value to them in helping them do their jobs and by providing support to make implementation seamless. One teacher noted, “If you don’t see the value of having them coming into your class, if you don’t see the value of lesson plans, if it’s going to be too much work or not going to be compensated, you’re not going to be involved with it.” Finally, one middle/high school group discussed the value of conducting pilot studies in schools to test implementation and determine whether students were learning what they were supposed to from the materials.

### *Potential barriers to implementing CIS*

Will additional materials from the Census be an added burden to the normal workload? Can you give us some examples?

Are there any specific approaches you believe the Census in Schools program should avoid?

In discussing how best to implement the CIS program, participants raised several potential barriers to implementation. Exhibit 5-13 and Exhibit 5-14 show themes related to barriers for the elementary school groups and middle/high school groups, respectively.

Given the discussion of the importance of integrating the CIS materials into the existing curriculum, it was no surprise that a common barrier raised to implementation was a lack of time in the classroom and time pressures due to existing mandates, standards and testing. In response to a question about whether additional materials from the Census Bureau would be a burden, one elementary school teacher responded, “It depends on the subject. For math, it will help out, because we are already doing the graphs and bar graphs so this would be adding on to it. And for Social Studies too. But if the materials are a different thing, then it would be difficult to add to our workload.” One high school participant noted that his high school was shifting from 90-minute classes to 45-minute classes, putting increased time pressures on each session.

Many groups noted that buy-in from administrators could help in making time and space in the curriculum for CIS. One middle/high school teacher noted, “we need to start at the top and bring it down too. The principals are the instruction leaders; we need to get them more involved with the program. They sell the program, the teachers will buy it.” Administrators often need to approve activities such as having a speaker come in, and they can also facilitate the use of cross-curricular materials. One of the middle/high school groups talked about the need for teachers to buy into the program. One elementary school teacher noted the difficulty of getting school-wide buy-in for larger activities, particularly in schools that include a wide range of grade levels such as his, which included grades K-9. One of the middle/high school groups mentioned a related issue of trying to collaborate with other schools and meeting resistance.



**Exhibit 5-13: Potential barriers to implementing CIS (Elementary).**

Theme	# of groups (5 total)	Sample quotations
Time pressures in classroom (standards, testing, mandates)	4	<p>“I think that it will add to the burden of what we already have to do. Even though it’s user friendly, but from a teacher’s perspective, [it’s] “ohh, something else to do.” And you know, a lot of times if something isn’t tested, if it’s not there on the state test and we know that, we tend to put it aside.”</p> <p>“When you are under that kind of pressure, it has to be a welcome relief for teachers and something enjoyable for the kids, because if you ask teachers to take on more responsibility than they can take, it is probably going to be a no go.”</p>
Administrator buy-in	2	<p>“If administrators do not come into the classrooms, to see if this is taking place, some won’t do it. You’ll have some that will take it and go with it, and some that won’t.”</p> <p>“Our principal (or another administrator) has to approve the speaker coming in.”</p> <p>“If it is pre-approved, then we don't have to have a battle with the principal. And, if it fits into the[state standardized testing], has something to do with what is happening in the student's world, then you are good to go on the pre-approved.”</p>
Parents		
Low or uneven parental participation	2	<p>“It’s difficult because they’re all so different, and have different issues as to why they don’t participate or get involved with their kids or school activities. Every year it’s the same thing. We teachers try to get parents involved. We have different kids and different parents, but it’s always the same thing, they don’t get involved either.”</p>
Restrictions on parental involvement	1	<p>“The new standard in the district is in order for a parent to come and volunteer in the classroom or have any involvement with students they have to be finger-printed and background checked before they can come into a school building.”</p>
Political concerns	1	<p>“I have to be very careful in how I phrase things to my students. Parents are very demanding, so a guideline is very important, so I don’t feel very comfortable without a guideline to talk about it, because I have children who were not allowed to watch the president’s speech. We have to get parental consent in order for the kids to be able to watch the Obama speech.”</p>
Difficulty with school-wide buy-in	1	<p>“I think school-wide buy-in is extremely difficult, especially when dealing with a school that has K thru 9 levels, it is very difficult to get a school-wide buy in. It’s time and personalities.”</p>

Note: “# of groups” represents the number of focus groups (5 maximum) in which the theme was mentioned.

**Exhibit 5-14: Potential barriers to implementing CIS (Middle/High).**

Theme	# of groups (6 total)	Sample quotations
Time pressures in classroom (standards, testing, mandates)	4	<p>“We are in information overload. There are fabulous things out there that I don’t have time to read. Somebody had to make it a priority for me to do it.”</p> <p>“We have so many other tasks, with the testing and focus calendars, so if it is not on there, then it’s not important. Do it after FCAT. It happens in May – there are a few weeks until school is over.”</p>
Low or uneven parental participation	3	<p>“Some of this participation depends on the socioeconomic and cognitive status of the parents; there are cases where the children are taking care of the parents.”</p> <p>“Parents are too busy. Like me, I plan to do something, but in the evening I get tired and don’t do it. Then the next day I have other priorities.”</p>
Administrator buy-in	2	<p>“The administrators and superintendents are not aware, and this works against the teachers.”</p> <p>“Because of the multidisciplinary nature of what we’ve been talking about, to have a person who is a teacher be a contact person for the school, you’re generally only going to get that persons’ department’s opinion. If you want to get the true interdisciplinary application of those materials, those lessons, your contact person would have to be higher up in the food chain.”</p>
Need for teacher buy-in	1	<p>“Until the teachers understand that they need to educate the children about it, then it’s not gonna happen. Someone needs to sit down with the teachers and explain to them that we need you to do this, so the children will go home and influence their parents.”</p>
Difficulty collaborating with other schools	1	<p>“It’s a stretch to collaborate with other schools on a project like this. There needs to be more of an incentive; given career credits or however your school terms them. A get-out-of-staff-meeting-free card that will encourage collaboration. There are so many hurdles to jump over. Right now, I’m collaborating with another school district, and it’s ‘don’t, don’t, don’t.’ You need to know the rules or it gets challenging.”</p>

Note: “# of groups” represents the number of focus groups (6 maximum) in which the theme was mentioned.

Another key barrier was low parental participation or resistance. Teachers recognized that many parents faced time constraints with jobs in addition to pressures of their socioeconomic position or health status. Teachers expressed frustration with low turnout at school events. One elementary school teacher noted, “Once a month we have sessions for parents at our school on a theme or subject, and we also have few people attend. It’s always the same parents.” One elementary school teacher noted that his school was now requiring background checks on all adults entering the school buildings, including parents, which deterred participation, but other teachers in that county said they did not have such requirements. In another elementary school group, a teacher said that parents were sensitive to any possibility of political bias in the curriculum, noting that she had to get parental consent for students to watch a Presidential speech.

### *Desired characteristics of CIS materials/activities*

What materials or processes do you think are necessary for the Census in Schools program to be a success?

The materials provided by the Census in Schools are a key part of the program. What types of materials do you think are necessary, and what is the best way to obtain them? Which types of materials do you foresee as being the most useful or the most popular, and which may be less useful or popular? (To aid your thought process we have provided examples of materials from the 2010 Census in Schools program). Do you think designing your own materials is beneficial as well?

The final two topics concern the desired characteristics the CIS materials and activities (easy to use, multilingual, etc.) and desired types of activities (paper books, Web-based, mock Census, etc.). This section discusses the characteristics that teachers wish to see in CIS materials. Exhibit 5-15 and Exhibit 5-16 show themes related to characteristics of materials for elementary school groups and middle school groups, respectively.

Middle/high school groups in particular raised the desire to have materials be relevant to students and help make connections to real-world topics. One middle/high school teacher said, “The question I answer over and over again is ‘Why do I have to learn this,’ so to be able to tie it in why they have to do it and give it some real world relevance.” Teachers suggested activities such as discussing, ““These are the results of the census. If you were a Congress person and you had to allocate funding for health care programs, based on the census information, what part of the country should you focus on?’ Make it real for them.”

Along those lines, many groups raised the need for materials to appear in a variety of languages, particularly Take Home materials for parents. English, Spanish, Creole, Chinese, and Farsi were all mentioned as languages spoken by students and parents.

**Exhibit 5-15: Desired characteristics of CIS materials/activities (Elementary).**

Theme	# of groups (5 total)	Sample quotations
“Ready-made,” easy to use	4	<p>“We would use these materials directly. This is very good. We have a lack of time, so there is no time to create our own.”</p> <p>“So many teachers may just thank you for making their lives easier.”</p> <p>“Develop some lessons that can accompany the material; those should be ‘simple’ and ‘to the point.’ They should be very user friendly for the teachers so they don’t spend so much time having to prepare for this one lesson. Or some ideas how to integrate it.”</p> <p>“It’s easier to take something and then make adjustments if you want to. Or if you don’t have to, it’s even better! (laughs)”</p>
Activities for substitute teachers	1	<p>“If there was some good thing you can give to a [substitute teacher]. This could actually be a nice thing to have if you are in a rush to put something together and not really explain it yourself, are they going to be able to understand it to give to students.”</p>
Short-duration activities	3	<p>“You wouldn’t want something that you would do this every day—so if you just had a day that you had a little extra time somewhere that you could fit it in.”</p> <p>“A mini-lesson here and there, I don’t want something that’s going to take two weeks to focus on, but something that really hits home.”</p>
Multilingual	3	<p>“Because we have such a tri-cultural society we need to reach all the multilingual students, at least request for it in Spanish or Creole.”</p> <p>“Parents will like the Spanish materials. They will ignore English papers.”</p>
Connection to real world, relevant to kids	2	<p>“What’s going to hit those kids eyes are the total number of boys and girls at each of the age levels and the population went down at every single child’s age. So kids are like, ‘Well, my classes are getting smaller,’ things are changing. It’s interesting for kids to see that the data affects them.”</p> <p>“My students learn better when I connect it to real life.”</p>
Fit with grade level	2	<p>“[With regard to State Facts] The nickname of flowers and all that stuff are good for second graders, but these numbers are too big for 1st graders.”</p>
Tailored	2	<p>“It would be nice to have more choices because the demographics of your class can vary from year-to-year, so you can pick what works best.”</p>
Free	2	<p>“New York State published a book on New York state history, and it was free for 4th grade teachers. What a great reference and tool it was. We got class sets in the district and it was nice to pull out and use.”</p>

Note: “# of groups” represents the number of focus groups (5 maximum) in which the theme was mentioned.

**Exhibit 5-16: Desired characteristics of CIS materials/activities (Middle/High).**

Theme	# of groups (6 total)	Sample quotations
Connection to real world, relevant to kids	5	<p>“Something visual that shows the impact of Federal funding on their community.”</p> <p>“My students have to relate. Why does it matter to me? They do not realize the social services that they use are a direct result of the survey. Some kind of material that would help them make that correlation between their lives and the material.”</p>
Multilingual	4	<p>“Bilingual, trilingual pamphlets. English, Spanish and Creole.”</p>
“Ready-made,” easy to use	3	<p>“It needs to be user friendly and quick and easy. We don’t have time to read everything. If it’s activities that can be used right on the spot, I’d be more apt to use it.”</p> <p>“We need stuff that is simple, relevant, and to the point.”</p>
Fit with grade level	3	<p>“You have to get little kids very familiar with the idea of census takers through plays and hands-on activities, and then at your middle school level, you kind of need to get more into the ‘What is it?’, ‘What’s the importance if it?’, ‘Why do we need to do it?’ At the high school level, we need to get into actually doing the census and preparing it. We have to teach it in different ways to our different levels because that’s what we work with.”</p>
Short-duration activities	2	<p>“I remember looking at the pages of the lessons online and I was going to apply the lesson plans, but it was so lengthy, and I don’t have time to read all that. What would work is stuff that we could use – bell ringers, graphs. Short, 5-10 minute stuff that they could grasp and interpret.”</p> <p>“Every teacher needs some time to get things together, so this would be great in the meantime for them to get busy.”</p>
Tailored	2	<p>“Skill level based modules where you could have a higher math group, median group and a work in progress group.”</p> <p>“It needs to be able to be used at different levels of differentiation of instruction. Some kids would like to see it on a computer, some would like to read about it, etc.”</p>
Targeted demographically	1	<p>“I think we’d also like to know, what is the demographic that’s not filling out the census? So we can target them.”</p>
Practices skills/thinking	2	<p>“The analysis and working with text and pulling information it has some purpose. It’s something interpretative, and making value judgments. The material accesses a variety of skills.”</p>
Avoid one approach	2	<p>“What to avoid would be to have one approach. It would be good for the Census to have things that can cater to several subjects. Census needs to cater to different cultural audiences.”</p> <p>“For some schools materials work best in paper form, for some online works better. It depends on the resources that the schools have.”</p>

Note: “# of groups” represents the number of focus groups (6 maximum) in which the theme was mentioned.

Many of the groups at both school levels mentioned wanting materials that were “ready-made” or easy to use. Teachers were generally uninterested in creating entirely new materials on their own, although some expressed interest in modifying existing materials to fit their needs. One elementary teacher responded to the materials, saying, “I think this is good, and gives the teacher some idea, and we can kind of work with it as it is and tweak it to make it fit.” A middle/high school teacher echoed that sentiment, suggesting, “Giving a teacher a little guide would be good, and from there teachers will develop their own things. And they’ll personalize them.” Teachers expressed enthusiasm for activities they could use directly; as one elementary school teacher said, “We’re so busy, to be able to pull out a lesson plan or maybe just use it step-by-step, it’s so fantastic and that helps you to apply it to the class.” On elementary school group also raised the utility of ready-made and easy-to-understand activities for substitute teachers to use.

A related theme was that teachers were looking for short duration activities to supplement their curriculum or fill in gaps. As one middle/high school participant put it, “It doesn’t need to be a whole bunch of lessons. I don’t have time to teach all this stuff to—*pause*—we just don’t.” One participant noted that the lessons she had seen looked lengthy, and she was more interested in short activities she could incorporate, such as “bell ringers,” which are short activities used to get students doing something as they enter the classroom.

Teachers were interested in materials that fit by grade levels and that could be tailored for their particular students and their learning needs in a given year. One middle/high school group stated that it would be useful to know which demographic groups had the lowest mail response rates so that they could be targeted. In a related theme, a couple of middle/high school groups noted the need to avoid taking one approach to the materials, as different subjects might need different types of materials and different schools would find that different types of materials would work best. This issue was raised in the next section on desired types of materials.

Other desired characteristics included the materials being free, which was raised in two elementary school groups, and materials that allowed students to practice higher-level skills and thinking, which was raised in middle/high school groups.

### *Desired types of materials/activities*

The materials provided by the Census in Schools are a key part of the program. What types of materials do you think are necessary, and what is the best way to obtain them? Which types of materials do you foresee as being the most useful or the most popular, and which may be less useful or popular? (To aid your thought process we have provided examples of materials from the 2010 Census in Schools program). Do you think designing your own materials is beneficial as well?

Do you think your school will do anything to promote the census in addition to in class lessons or activities? For example, make school-wide announcements?

Participants listed a wide variety of activities that CIS could use, listed in Exhibit 5-17 for the elementary school groups and Exhibit 5-18 for the middle/high school groups. Referring back to the suggestion about avoiding one approach, teachers expressed widely varying needs for the kinds of materials they needed and could access. For example, several teachers expressed that Web-based materials were preferred and that paper-based materials were not necessary for their schools. Other teachers, however, noted that they could only print in black-and-white and thus preferred to be provided materials in color. Others expressed that they had to pay for copy paper and even toner; as such, paper-based materials such as workbooks were preferable.

Likewise, while Web-based activities, such as games, audio files, apps and videos were mentioned, others cautioned that students did not always have access to computers in the classroom and especially at home. One teacher cautioned, “If you were giving homework to students that are coming from families that are having harder times they may not be able to access online resources to do their homework.” Similarly, Smart Boards or interactive white boards came up in several groups as technology that is spreading, but other teachers expressed a desire for transparencies, posters, and materials requiring less technology.

Hands-on activities, particularly conducting a mock census looking at grade-appropriate characteristics, were a popular suggestion. Teachers also suggested that participation in the census and in the CIS program might be boosted by contests, incentive programs for students, and incentive programs for schools. One teacher suggested, “They could put a little thing at the bottom of the census that you tear off, like the box tops, bring it back to school and if the school gets so many then they get some kind of little prize from the government. Sometimes what means virtually nothing to you means a lot down here in the trenches.”

**Exhibit 5-17: Desired types of materials/activities (Elementary).**

Theme	# of groups (5 total)	Sample quotations
Hands-on activities and events: Skits, special days	5	<p>“The students can play that they are the government and can be given a budget and they have to determine how that budget is spent.”</p> <p>“In our grade, we have a wonderful theme where each child takes a paper doll home, works with their parents and talks about their heritage and where they come from.”</p>
Mock census	3	<p>“Perhaps some child friendly census they could practice each year – counting pencils or something - and getting more sophisticated as the grades go up.”</p>
Sample form	1	<p>“The materials that were included were the exact replica of what you receive in the mailbox.”</p>
Website for teachers	4	<p>“Availability online would be great because we are all trying to save money.”</p>
Printable lessons	2	<p>“So many Web sites have "make your own" materials; you just print them off and staple them.”</p>
Take home materials for parents	4	<p>“The National Center for Education has a whole list on their Web site of free brochures that you can get and send home to parents. I’ve ordered bulk, 500 for the whole school, something for every grade, that’s something schools can order and send home.”</p>
Printed/paper-based/workbooks	3	<p>“This info is awesome and would be best presented in a workbook so I don’t have to make copies.”</p> <p>“The schools say they are not going to make copies unless the teachers provide paper. The budgets are tight.” “And toner. We all have different challenges in terms of resources.”</p>
Answer key	1	<p>“I see you guys have the answers at the bottom. Kids can pick up on that and copy the answers right away. I think it is better when they can’t see the answers, or have them on a separate sheet, or the back.” “I like it to be self-checking.”</p>
Website/computer activities for students	3	
Activities	3	<p>“The more interactive the Web sites are, the more likely [students are] to go on and learn and tell parents things.”</p> <p>“When they get on the computer they can get that tunnel vision and so they are only looking at that one particular thing and not seeing that bigger, broader picture.”</p>
Link on school Web site	1	<p>“We also have students that do search the school Web site. It wouldn’t hurt to post it on our Web site so kids can go in and (see these materials themselves).”</p>
Lack of access to computers	1	<p>“I like this one [referring to materials], but it depends on students having access to a computer.”</p>
Videos	3	<p>“Video appropriate to each grade level. Something that can motivate them so I can show them as warm up and that then</p>



		introduces them so they are motivated to participate.”
Cartoons	2	“Even the cartoons kids’ watch, like Dora the Explorer and have them talk about it.”
Articles/Readings	2	“In our district every grade level subscribes to Scholastic News – maybe getting them to print an article in their monthly news magazine about the census. If they were to just incorporate something once a year.”
Speakers from the Census Bureau	2	“If you could get people who are doing census work around the camp communities to come in and be a guest speaker in a class. I’ve done that a lot and I’ve found that for just a little portion of a class, they can tell their experience and why they were doing it, can make it real as they see a person in this community who takes time out of their regular job to work a few hours on their weekend.”
Incentive program for schools	2	“If we had an incentive program out there, that schools could work toward, I think you’d get better participation.”
Contests	1	“Do like YouTube, so students in class can be more creative (create a song) have that a part of the census to see who has the best.”
Writing prompts	1	“We have an emphasis in writing so we can have writing prompts on the importance of the census.”
Posters/Maps	1	“Having things in the school that are going to catch kids eyes, having them think and ask questions, are going to be vital.”
Other: Historical data, physical objects (ruler), census van, jingles, college student teachers, postcard exchange	4	<p>“The historical stuff with the early census material, which I think is available. My daughters were very interested in seeing how in one particular household there were six or seven different last names.”</p> <p>“We have all types of carnivals and fairs – last summer the SPAM truck came through. There could be a census van to help engage parents, and something colorful for the children. Crayons, rulers, something to make it fun. So while the children are doing crafts the parents are being talked to about census.”</p> <p>“Music and jingles? It’s a proven fact that children learn the ABC song before they learn the alphabet, if they could rap to the beat, they can learn it.”</p> <p>“We are so connected to the University of Buffalo to get some of the college students into the community to volunteer and teach classes about this. The government classes at the high school as well, the seniors (to teach a class).”</p> <p>“My class participated in one of those postcard things where a different classroom in all 50 states signed up to fill out postcards and we talked about the things that are important to us in where we live, then we mailed the postcards out to each state. I would cover up the state name on the postcard, talk about the pictures and they would try to figure out where the postcard came from.”</p>

Note: “# of groups” represents the number of focus groups (5 maximum) in which the theme was mentioned.

**Exhibit 5-18: Desired types of materials/activities (Middle/High).**

Theme	# of groups (6 total)	Sample quotations
Printed/paper-based/workbooks	4	“If you do it by e-mail the teachers have to print themselves. There is an issue of paper and toner.”
Videos	4	“High school kids are visual learners. When I show a video, they’re more focused on the subject. Videos are better than pamphlets.”
Website for teachers	4	“If it were a Web site we could interact with and have some type of blogging or something, that might be of some interest.”  “I think what would help if the statistics were readily available so each teacher could go online and see all of it and the results of the census and then figure out what they can use and how to use it and letting us case-by-case integrate it.”
Order form	1	“Being able to order what you might need online. Add a list of items online so that people can see what’s being sold and they can get more information [and download it].”
Website/computer activities for students	3	
Social media	3	“I want the district to have a Facebook page. It’s not met with a lot of support because of the negative connotations. If we had a Facebook page with a link to the Census information kids would read that stuff.”
Activities	2	“Interactive forums so if there is a project where students may need to work together, where they work together online.”
Audio files	2	“If you had a podcast, kids would listen to that.”
eBook	1	“I found out in my class [the students] actually use those [eBooks].”
Apps	1	“Apps, that’s where everything is; iPhone, iPad. Apps are fun. But it’s just another addition to the Web site.”
Lack of access to computers	2	“I think there needs to be a mixed offering of materials because up here there are limitations on Internet access.”
Posters/Maps	3	“Kids like maps that have transportation information where states/counties get larger and smaller. Kids should get really quick feedback from these visuals regarding their questions and not have to defer to other research to get answers to their questions.”
Incentives for students	3	“I use incentives a lot. It takes a lot of my own money, but it works for me. I give prizes and treats to kids and parents to come to meetings. Kids tell their parents, if they don’t come to the school, they won’t get the toy or treat. I get more parents to come than the other teachers.”
Incentive program for schools	3	“Mini-grants, where the government gives us paper, or pencils and pens if you do certain activities with your kids, and turn in a deliverable. Two reams of copy paper and we will follow you anywhere!”
Hands-on activities and events: Skits, special days	3	“A play is a wonderful way to get information out to kids because they like doing it and they learn from it.”

Mock census	3	“At the beginning of the year we talk about data collection and the scientific method. Lots of students don’t know each other when they come in the 9th grade, so we do an activity. They write down things that they want to learn about other students, and they make up their own questionnaire. It’s like a mini census in a way, I’ve been doing that for 25 years.”
Sample form	3	“And also send the forms out, a copy or two at the schools, so you can discuss it and say, ‘This is going to come in your mail, this is really what it looks like, these are the questions.’”
Take home materials for parents	3	“It may help to mail this out with quarter grades to give that added sense of importance of improving education at the school.” “Some students of mine don’t even bring backpacks – it might not ever make it home. We have programs at school that involve a parent.”
Contests	2	“A poster contest, like the poster being displayed in the school or across the state. I would be glad to do something like that where some of my kids have a chance of being honored in some way.”
Physical objects	2	“A magnet on your refrigerator! That says ‘Don’t forget the census!’ What about a pencil! Or those little rubber bracelets that they like.” “For me the great idea would be to give every kid a calculator, they would never forget the census.”
Transparencies	1	
Smart boards	1	
Other: Technology, Geography Bowl, peer programs, school direct calling system, comic strips, video games	3	“We were introduced to a program that showed statistics moving over a period of time...with something like that we could use maybe on a state basis where we can show students growth or the increase and decrease of the state populations.” “Maybe contact the National Geographic Society since they run the whole geography bowl for the country. And they do maps also.” “When I teach reading, I also use comic strips like these materials. They willingly read it and they remember it.” “Create games that kids like to do. Do you have [Nintendo] DSi for the census? I have a 4 year old who is really good at this. It may sound crazy, but a lot of people don’t get educated by reading.”

Note: “# of groups” represents the number of focus groups (6 maximum) in which the theme was mentioned.

### 5.2.2. Results for school board members

This section discussed the results from the nine telephone interviews conducted with school board members from districts in the Washington D.C. area. The results are divided into the following topics:

- Important factors for school participation
- Fit of CIS materials/activities with curriculum
- Potential barriers to implementing CIS
- Desired characteristics and types of CIS materials/activities
- Suggestions for improving CIS
- Responses from different audiences

Discussion of each topic will begin with an overview (highlighted in a box) of the questions from the interview guide related to the topic. While most of the responses discussed in each topic were in response to these parts of the interview guide, because interviews naturally flow back and forth between topics, we coded each transcript looking for themes, rather than coding strictly by the order of the questions we asked. This overview will be followed by a table showing the main themes related to the topic, the number of interviews in which the theme was discussed, and example notes. As interviews were not recorded, quotations are not included; we instead include excerpts from the interviewer's notes, which may refer to the school board member in the third person. Excerpts were selected for each table based on how illustrative they were of the theme; additional notes will be discussed in the text. The text will describe each theme and highlight areas of agreement and disagreement between the school board members.

#### *Important factors for school participation*



One of the opening questions asked what factors might prompt schools to participate in the CIS program, shown in Exhibit 5-19. Ensuring a fair share of Federal funding and ensuring fair representation of the school's population were the most often cited. One school board member noted Federal funding and fair representation were important to school administrators and this was a key benefit to schools

that CIS could focus on. One school board member noted, however, that while these factors were important, much of their district’s funding was not tied to data from the census.

Making students more aware was also an important factor, mainly out of skepticism that the program could really impact parents. Some school board members noted the same parental misconceptions, lack of trust and fears toward the Census that the teachers had mentioned in their focus groups.

A couple of school board members noted civic responsibility as important motivators for participation, and one noted that the program sparked good classroom discussions about racial categories.

**Exhibit 5-19: Important factors for school participation (School board).**

Theme	# of interviews (9 total)	Interview notes
Ensure fair share of Federal funding	5	This would be key for them; strenuous economic times, we have an opportunity to be heard; census data affect school budgets; then the other factors fall into place. Census data affect funding, including Title I, determines where schools, roads will be built. Important, however there is an annual Federal Impact Study that parents have to fill out, represents a lot of funding.
Ensure fair representation of population	5	Fair representation is #1 but all are important. Definitely a plus; young people want the right thing to be done, this will pique their interest.
Make students/next generation more aware	4	Not sure how well it increases parental response rates, but may be effective for students. You want young people to respect the census, don’t know if it will change parental attitudes.
Make parents more aware	2	Works in a district with a large number of undocumented students and is very diverse. Trust of this whole process is not strong in some schools and neighborhoods. It's really important to be able to counter that and be able to explain the advantages are, as opposed to this fear of being identified, and why should we participate.
Build perception of school as good public citizen/ teach civic responsibility	2	That is what they are all about.
Improve perception, alleviate concerns, fear, suspicion, confusion	1	Makes the census not as scary, gives idea to provide representation in Congress – that’s what they stress. They wanted to take the fear out of giving data to census, give students a voice; focus on correcting the misconceptions about the census, eliminate the suspicions about the government asking for information.
Other: Sparked interesting classroom conversations	1	They had interesting conversations about actual census questions and student’s reactions to some of these – especially racial categories seem like from a bygone era.

Note: “# of groups” represents the number of interviews (9 maximum) in which the theme was mentioned.

*Fit of Census in Schools materials/activities with curriculum*

How do you see the program as fitting into the curriculum in your schools?

The interviews focused next on the fit of the CIS program into the curriculum. Themes related to the fit of Census in Schools with the curriculum are shown in Exhibit 5-20.

As mentioned by the teachers, school board members also say “ready-made” materials are important. School board members, however, more often talked about ready-made materials as those that were already pre-tailored for the curriculum. This again pointed to a potential benefit of going through a central office, in that it could do the work of tailoring the materials for the district’s curriculum. One school board member felt that the materials were “ready to use” and that teachers could incorporate them as they saw fit.

As with the teachers, school board members felt that materials needed to be aligned with the curriculum, particularly with standards, or teachers would not see the value of including Census in Schools materials. Curriculum are often directed by “pacing guides” that keep all grade levels within a district on the same path, and CIS would have to be integrated into those guides to become integrated with the curriculum. Several school board members mentioned how their districts had integrated materials into specific subjects, such as social studies, math, geography and history, and they discussed how the materials had provided a heightened sense of relevance to those topics, particularly for math.

**Exhibit 5-20: Fit of CIS materials into curriculum (School board).**

Theme	# of interviews (9 total)	Interview notes
Ready-made	4	<p>They might be willing to periodically do it if you provided them with materials. But they won't create it or do it on their own. It will probably be viewed that way [as a burden]. If it comes to the instructional departments and supervisors who can package it in a way that they really don't have to figure out its sort of plug and play.</p>
Importance of fit with standards, mandates and testing	4	<p>Census Bureau provided educational materials, she worked with Census Bureau to ensure every principal received the materials. Teachers were provided with lessons that met core standards, literacy, reading/writing, civic responsibility. Department of Curriculum and Instruction reviewed the materials.</p> <p>All material has to be tied with standards. We don't have common standards, or a national standard. Challenge is to identify standards ahead of time, might be early for Social Studies, for a national set of standards. States will always emphasize their local history and events. Census has to "fight for space" in the pacing guides; ease of use for the teacher in meeting standards.</p> <p>What sometimes happens is they go to the Web site and pull down standards by State, this would point them to particular materials, this would be extremely useful to them.</p>
Importance of fit with curriculum	3	<p>High school specialist, 9-12 grades CIS materials are a "good fit". Has feeling that 8<sup>th</sup> grade civics/government would welcome the materials; good fit in U.S. history classes, government classes.</p> <p>Unless our social studies teachers or curriculum people can see exactly where they would fit it in with the curriculum, it's probably not going to happen.</p>
Fit of CIS materials into specific subjects	3	<p>Also besides government classes, they used a lot in Grade 8 U.S. history, Grade 10 U.S. History, AP class in Human Geography – how people moved across the country, how are services apportioned.</p> <p>She challenged government teachers to present it as an opportunity to participate in government, representative democracy. Teacher said materials were "wonderful" for government, AP Human Geography.</p> <p>Math teachers are always fighting the concept of what value is it to learn math - statistical piece of the Census, and that impact on local/state/national budgets, determining trends, if put together appropriately, would be of interest to young people.</p>

Note: "# of groups" represents the number of interviews (9 maximum) in which the theme was mentioned.

*Potential barriers to implementing CIS*

Will additional materials from the Census be an added burden to the normal workload? Can you give us some examples?

Are there any specific approaches you believe the Census in Schools program should avoid?

In discussing how best to implement the CIS program, school board members raised several potential barriers to implementation, shown in Exhibit 5-21. As with the teachers, school board members noted time pressures in the classroom due to standards and mandates as a key barrier to implementation. One school board member mentioned timing as an important issue, noting that the beginning of the year was challenging, as administrators and teachers aim to just get the school year off to a good start.

School board members also noted varying interest among teachers and students as a barrier to consistent implementation of the program. One school board member noted a lack of presentation hardware in secondary schools as a challenge. Another school board member suggested that CIS avoid asking schools to report back on their activities, as it would be a burden.

**Exhibit 5-21: Potential barriers to implementing CIS (School board).**

Theme	# of interviews (9 total)	Interview notes
Time pressures in classroom (standards, testing, mandates)	2	Would have to replace something else in curriculum.  Big selling point - what is the value to the local school? Principals feel inundated with things going on in their school, county, state, national - could be perceived as just one more thing to do.  Keep reminding people; there won't be a lot of enthusiasm at the opening of school for CIS and other programs that are "dumped on" the schools.
Varying level of teacher support	1	Always a challenge with things like this; highly dependent on individual teachers at times, even when you have good connections with department chairs or principals.
Varying levels of student interest	1	Thinks this will depend on the grade level - elementary might be more interested in it, because they are more engaged, Head Start students are less engaged.
Lack of hardware in classrooms	1	He sees challenge is the access to hardware, especially at the secondary level. Elementary schools are pretty well supplied with presentation hardware (whiteboards).
Do not ask schools to track success	1	Tricky to track success - if you ask schools to report back on what they are doing, this is an added burden on them.

Note: "# of groups" represents the number of interviews (9 maximum) in which the theme was mentioned.



*Desired characteristics and types of CIS materials/activities*

What materials or processes do you think are necessary for the Census in Schools program to be a success?

The materials provided by the Census in Schools are a key part of the program. What types of materials do you think are necessary, and what is the best way to obtain them? Which types of materials do you foresee as being the most useful or the most popular, and which may be less useful or popular? Do you think designing your own materials is beneficial as well?

While the school board members did not have as many specific ideas about CIS materials as the teachers did, they did have some ideas, shown in Exhibit 5-22. Several school board members expressed satisfaction with the current materials. Web-based materials were mentioned by several school board members, and one said that they would not need any hard copy materials because their teachers were able to project information onto screens. Other school board members, however, cautioned that some schools do not have the capacity to project materials, that Internet access may not be available, and that there are costs to schools and teachers of printing and photocopying. As such, many school board members favored paper copies, workbooks, posters and maps. One school board member noted, however, a desire for an interactive map that students could manipulate, and another noted that games were engaging for students.

A couple of school board members noted that they appreciated the multilingual materials available for Census in Schools.

**Exhibit 5-22: Desired characteristics and types of CIS materials/activities (School board).**

Theme	# of interviews (9 total)	Interview notes
Existing materials were satisfactory	3	Nothing was missing - actually they had a wide variety of resources; campaign materials - they had t-shirts, stickers, Dora the Explorer materials - they took advantage of all of it. They did an outstanding job of marketing, which made it easy for them.
Web site	3	For next census, Web-based materials will be more and more important. This would be good for scenario-based questions, real cases, using data to answer questions or solve problems (like county planning offices do to plan roads).  Materials online is the way they would use them; they would not need hard-copy, their schools have ability to project the information on screens.
Paper copies/ workbooks	2	All their materials were excellent, especially the flyers (to promote awareness). They primarily used print-based. They could link to the Web but didn't need as much because they had a Census person providing them with the materials they requested.  Lean toward receiving printed materials, Internet access may not be available, cost of printing.
Posters/board postings	2	A temptation might be to go to entirely Web-based content. The danger is making assumptions about people's hardware capacity at schools – they may not have the equipment. Don't abandon physical materials, especially posters (with the Web address on it).  Poster are worth weight in gold, no money for Xeroxing anything; teachers are always looking for things to hang up.
Maps	2	They used the lesson plan ideas, she sent them to department chairs for review and comment. In last round of program, everyone LOVED the maps; they love getting resources (visual) rather than reading selections.  Would like to see interactive maps, that students could answer questions, move items on a map.
Multilingual	2	Census Bureau translated some of the materials into certain languages for them; translations were very beneficial.  Languages, culture: all of their official materials use five languages, mostly for parents, for students - Spanish and English. But if you want to communicate to parents, you need French, Chinese, Vietnamese, and Amharic (these are their 5 languages).
Other: educational games	1	Educational games are a great way to capture kid's attention; it engages them; competition and problem-solving.

Note: "# of groups" represents the number of interviews (9 maximum) in which the theme was mentioned.

### *Suggestions for improving CIS*

What materials or processes do you think are necessary for the Census in Schools program to be a success?

School board members had several suggestions for improving CIS, shown in Exhibit 5-23. One school board member noted that the program was positive, well-coordinated, enjoyable, and free of missteps, so she had no suggestions for improvement. One noted the need for having the program continually, not just every ten years, echoing a recommendation from the teacher groups. A related suggestion was to create a timeline of what needed to occur throughout the intercensal period, to maintain institutional memory for the next census.

Other school board members suggested linking the program to service learning outside the classroom,, improving marketing by bringing in a celebrity or making a clear and personal pitch as to the importance of the census; and putting lesson plans on a Web site.

**Exhibit 5-23: Suggestions for improving CIS (School board).**

Theme	# of interviews (9 total)	Interview notes
Program was a positive experience so no improvement needed	1	Was a coordinated effort, she enjoyed it. She didn't see any missteps. Bureau made her job easy - was an easy sell, everything was right on the Web site, was full of information.
Annual/regular need in intercensal years	1	There should be periodic reminders about the census, not just every 10 years. This is the only way to continually educate so that elementary students, will be at different level, will remember the experience.
Clarify timeline	1	Establishing a timeline is difficult. It's part of the curriculum, but it's only a current event every 10 years. Need an organized timeline of what happens +2 years, +4 years, keep alive the institutional memory or corporate memory. Irregular timeline would be a pitfall. Average "life" of a teacher is 3-5 years.
Link to volunteerism outside classroom	1	"Service learning" would provide kids an opportunity for kids to volunteer – for example, maybe hand out flyers, involve community service, how do their actions bring about change. Bring in the volunteerism aspect as part of a learning process; check volunteer-connection Web sites.
Market with entertainer or athlete	1	Some of the outreach that looks a little contrived - you have to be very careful. Maybe you get an athlete or entertainer to make a pitch - that can work but you have to think it through and do it well. Pilot it to a number of different audiences.
Make it sound important and personal	1	Still feel we need to look for ways to say it's important and affects everyday lives, otherwise is seen as large and impersonal, why bother with it.
Lesson plans on Web site	1	Would be awesome to put lesson plans on the Census Bureau Web site.

Note: "# of groups" represents the number of interviews (9 maximum) in which the theme was mentioned.

### *Responses from different audiences*

Student/Parent response - How do you think your students will react to Census in Schools materials? Do you think their views of the Census will change as a result of Census-related class activities and Family Take Home Materials? Do you think parent's views of the Census will change as a result of Census-related class activities and Family Take Home Materials?

Teacher response - How widely do you think participation will spread through your schools? Will additional materials from the Census be an added burden to the normal workload? Can you give us some examples?

School board members discussed the responses to the CIS program they received or expected in the future from parents, students and teachers, shown in Exhibit 5-24. A couple of school board members noted positive response from parents toward CIS activities, particularly one involving a Census Bureau representative. One school board member raised a concern also raised in the middle/high school teacher focus groups that parents/adults needed to be directly targeted, saying, "I think it's the question is it census in the schools, or census with the families? The schools can be a conduit to families; it doesn't have to be something that's done in school." She went on to note that partnering with National PTAs could be a better approach for the Census Bureau to reach parents.

One school board member noted that the leadership of students was key to the success of one event, generating excitement among fellow students and increasing turnout by parents.

As for teachers, for the most part school board members described positive responses, particularly when they saw the value to their teaching of using CIS materials. In one district the program was successfully promoted through the connection to school funding, and others promoted the materials by showing teachers how the materials fit with their existing curriculum. Another school board member noted that showing appreciation for the work of teachers would yield a positive response. Finally, one school board member suggested that teachers would be willing to do online training for background in the program.

**Exhibit 5-24: Responses from different audiences (School board).**

Theme	# of interviews (9 total)	Interview notes
<b>Parents</b>		
Saw positive parent response	2	<p>She did see parent response. When a parent sits in the audience and sees their children involved, you can tell. Some parents came up after.</p> <p>Just by having the materials translated, having a Census Bureau person come to events in person to answer questions, that was extremely useful, especially for hard to reach. They had a fantastic person.</p>
If target is parents, should market towards parents rather than students	1	<p>The question is what's your target? It's not children? Our concern was, and continues to be, if you want to reach parents—you need to reach <i>parents</i>. You don't want to reach classroom teachers. It's a different audience and a different communication. To believe kids are gonna go home and tell their parents about the census is probably not a realistic approach. You need to look more closely at how to reach parents through PTA programs, through flyers, or electronic communications that schools could distribute.</p>
<b>Students</b>		
Student involvement and student leadership helped generate excitement	1	<p>What worked best about those, for the launch, the majority of the program was done by students, generated a lot of excitement, they ran the program and performed. If you involve students and they involve parents, that will affect the turnout.</p>
<b>Teachers</b>		
Positive teacher response due to materials	3	<p>Teachers were comfortable; materials were "ready to use" and teachers could incorporate as they saw fit.</p> <p>Nobody expressed the feeling that it was too much of a burden to be involved in this – it's part of their curriculum across the nation.</p>
Positive teacher response due to how program was described	1	<p>Way it was presented by Board and Superintendant was a strong promotion based on need for school funding. Teachers may be overburdened, but this was "a no-brainer." In that regard, she saw energy/synergy among teachers, students, parents.</p>
Map with what they are already doing	1	<p>Extent it can be aligned with what they are already doing is good, also would be good to provide maps, need to highlight the benefits to them.</p>
Make teachers feel appreciated	1	<p>Teachers always appreciate feeling they are important to the process, when we beat up on them so much, they've gotten a negative impression throughout the media. Teachers can be a bit defensive; any time they can be approached with a message that what they do is important, we're not slamming them, that's a great avenue.</p>
Teacher online training	1	<p>Background training – teachers would be willing to do this online.</p>

Note: "# of groups" represents the number of interviews (9 maximum) in which the theme was mentioned.

### 5.3. Question 2: How Can the Census Bureau Go Forward During Intercensal Years to Reach Out to Educators and Students From Kindergarten to the Graduate Level?

We address question 2 by looking at two main sources of data, the focus groups with elementary and middle/high school teachers, and the interviews with school board members.

#### 5.3.1. Results for focus groups with K-12 teachers

This section discussed the results from the 11 focus groups with 88 K-12 teachers. There were five focus groups with 35 elementary school teachers and six focus groups with 53 middle school and high school teachers. The results are divided into the following topics:

- Level of awareness of CIS
- Modes of contact to increase awareness of CIS and communicate with Census Bureau representatives
- Points-of-contact for getting into schools
- Access to Census Bureau representatives

As above, discussion of each topic will begin with an overview (highlighted in a box) of the questions from the focus group guide related to the topic. While most of the responses discussed in each topic were in response to these parts of the focus group guide, because focus groups discussions naturally flow back and forth between topics, we coded each transcript looking for themes, rather than coding strictly by the order of the questions we asked. This overview will be followed by two tables, one for the elementary school focus groups and one for the middle/high school focus groups, showing the main themes related to the topic, the number of focus groups in which the theme was discussed, and example quotations. Quotations were selected for each table based on how illustrative they were of the theme; additional quotations will be discussed in the text. Some themes do not include quotations if the theme was raised without further elaboration. The text will describe each theme and highlight areas of agreement between the elementary school focus groups and the middle/high school focus groups and themes that are unique to each.

#### *Level of awareness of CIS*

We'd like to start by discussing ways in which schools can become involved in the Census in School program – the decision process schools may go through to sign up as a Partner. How can schools become aware of the program, and what may prompt your school to sign up? Let's talk about awareness first:

How can schools become aware of the program?

Each focus group began by discussing awareness of the CIS program. Exhibit 5-25 shows themes for the elementary school groups, and Exhibit 5-26 shows themes for middle/high school groups.

**Exhibit 5-25: Level of awareness of CIS (Elementary).**

Theme	# of groups (5 total)	Sample quotations
Lack of awareness of program/materials	4	<p>“This is the first time I've heard of this program.”</p> <p>“I asked my own children, if they knew anything or learned anything in school about [the census] and all three, they said no, and they are in a different districts.”</p> <p>“The materials did a good job of covering the concepts that we need to cover as teachers, but there is a gap in getting the materials into the teachers hands.”</p>
Positive response after awareness in focus group	4	<p>“I think this looks great. They’re all like this, right?”</p> <p>“Did you guys see this? Class Census? This is cool.”</p>
Recognition, but no engagement	2	<p>“We just sent a package [of the materials] home with the students. I remember that top sheet (points to one).”</p> <p>“I know we received some papers and we handed them out to the kids. Our principal announced it, but I don’t know where it went from there.”</p>
Awareness by accident	1	<p>“It was a fluke, someone had shown me them [the materials].”</p>

Note: “# of groups” represents the number of focus groups (5 maximum) in which the theme was mentioned.

**Exhibit 5-26: Level of awareness of CIS (Middle/High).**

Theme	# of groups (6 total)	Sample quotations
Lack of awareness of program/materials	4	<p>“I honestly don’t remember if my school participated or not. If we did, we didn’t do a very good job.”</p> <p>“I’ve never heard of it. I’d like to hear more about it.”</p>
Recognition, but no engagement	2	<p>“I saw the lessons plans that you all provided, I don’t know if we were part of the program or not, but I remember seeing them.”</p>
No guidance	1	<p>“The reason why I am concerned about the program is because all of a sudden my department said, “Here” and gave me a poster for the census. Well, I said, this is great, I’ll put it up, but where is the rest? Am I supposed just teach from this? What am I looking for? I had to go online and research it myself. Because that poster wasn’t going to be enough. I did on my own, no one else told me to do it.”</p>

Note: “# of groups” represents the number of focus groups (6 maximum) in which the theme was mentioned.



In most of the focus groups, participants expressed a lack of awareness about CIS and the program materials. Many elementary school teachers in particular expressed excitement about the materials after viewing them in the focus group. A few participants expressed that the materials they saw looked familiar, but that they had not been used in the classroom. One elementary school teacher said that she was aware only because someone else had happened to show her the materials; she then spread the word to the rest of the school by getting on the agenda for a faculty meeting. A teacher from the middle/high school groups noted that he had received a CIS map, but that he received no further guidance about what other materials were available.

### *Modes of contact to increase awareness of CIS and communicate with Census Bureau representatives*

We'd like to start by discussing ways in which schools can become involved in the Census in School program – the decision process schools may go through to sign up as a Partner. How can schools become aware of the program, and what may prompt your school to sign up? Let's talk about awareness first:

How can schools become aware of the program?

Teachers suggested a wide variety of modes of communication that CIS could use to make them aware of the program and keep them updated. These modes also included ways to communicate with Census Bureau representatives during the program. Exhibit 5-27 and Exhibit 5-28 show themes related to communication modes for elementary school teachers and middle/high school teachers, respectively.

For the most part, teachers felt that e-mail was the best way to reach them and the best way for them to communicate with Census representatives. As one elementary school teacher noted, "E-mail!! That is how we all got here," referring to the fact that they had been notified of the focus group by e-mail. Another elementary school teacher noted that she was able to get e-mails on her phone. Teachers noted that e-mail is commonly used in their districts to broadcast information. E-mail was also more popular than telephone with teachers because of the ability to receive and write e-mail messages at their convenience. As one elementary school teacher noted, "I'm more apt to find through my e-mail than to check through my voice messages. I'm real terrible about that." Because teachers are often busy in their classrooms, it is difficult to find an appropriate time to reach them by telephone. Not all teachers felt positively about e-mail, however, expressing that they may not open it or that it was unfortunate that they heard about most programs through e-mail.

**Exhibit 5-27: Modes of contact to increase awareness of CIS and communicate with Census Bureau representatives (Elementary).**

Theme	# of groups (5 total)	Sample quotations
E-mail	4	<p>“Everything is done by e-mail. Our principals and superintendents use it, so we are up to speed in responding.”</p> <p>“When you need it, you can get the question down, and then when the Census Bureau representative gets back to you, you can take that message when you are ready. “</p> <p>“Most of the programs I have become aware of are usually through e-mail. Most of it seems to come through my e-mail, unfortunately.”</p>
Workshops/training/presentations to teachers	4	<p>“It would be helpful to have a workshop about it, maybe once a semester. First, how to implement it, then meet again to see how it went, and talk about new ideas and how it can be improved.”</p>
Website	4	<p>“There should be a place on the Web site, such as a ‘contact us’ link for us to be able to use. It’s just that do you have enough people to answer all the questions within a short amount of time? The kids have short attention spans and might need answers fast.”</p>
Parent/PTA meeting	3	<p>“We also have Monday PTA meetings, and they have ongoing workshops. So the more a Census person comes in the more knowledgeable the parents will be.”</p>
Other: Special event, newspaper ad, postcard, teacher Web site, libraries	3	<p>“If there was a little postcard in my mailbox that had a Web site and tells me the resources, I’m going to stick that in my files and use it.”</p> <p>“Many teachers have Web sites, and I put links up for students and parents to use, so now I will link [CIS materials] on mine. Teachers from other districts use it. I have teachers from New York City using my [Web site].”</p>
Telephone		
Secondary mode if e-mail not working	1	
Not preferred	1	<p>“Personal contact by telephone, you’re in the middle of class and things don’t always go according to schedule and the times don’t always jive up.”</p>
Survey	1	<p>“Once the process of implementing the materials has started, a few months down the line you can send out a survey that asks whether the teachers are having problems, if they can tell us which lessons they like best. At the same time it would be an opportunity for the teachers to constantly see it and be reminded that they should be using the materials. I like to be given feedback on things that I’m doing.”</p>

Note: “# of groups” represents the number of focus groups (5 maximum) in which the theme was mentioned.

**Exhibit 5-28: Modes of contact to increase awareness of CIS and communicate with Census Bureau representatives (Middle/High).**

Theme	# of groups (6 total)	Sample quotations
E-mail	5	<p>“I am anticipating the way you would use it is through e-mail if you had a question. Maybe if I needed more copies of the materials I would contact the Census.”</p> <p>“E-mail goes straight to you and when you’re free you can e-mail back.”</p>
Unlikely to open	1	<p>“I’m wondering why I want to hear from the Census? Because if I see an e-mail that says Census Bureau I probably wouldn’t open it, it’s junk mail to me.”</p>
Workshops/training/presentations to teachers	3	<p>“Come and talk to the teachers on service day, when all the teachers are together.”</p> <p>“Set up a training or a webinar, so the teacher could do it on their own time.”</p> <p>“If you wanted to get participation, you could go through the teacher education center; hold a mini workshop for 3 master plan points, which is the school district’s idea of giving mini coins that you could convert them into teacher recertification credits.”</p>
Website	3	<p>“School districts do have Web sites and links for parents for more information on certain things and links for teachers as well.”</p> <p>“It would be nice to have a link to a media presentation that’s short and sweet and tells everything in a way that’s easy.”</p>
Parent/PTA meeting	3	<p>“Have their kids perform and invite parents to watch their kids or invite them to a ballgame, then present it before the ballgame.”</p>
Advertising	3	<p>“Use more media, commercials on TV, in Spanish. Stress the fact that information is not shared with Immigration.”</p>
Other: CIS Partnerships, local/community leaders	2	<p>“Maybe contact the National Geographic Society since they run the whole geography bowl for the country. And they do maps also.”</p> <p>“Our pastors and local churches also get word out—that is very efficient way.”</p> <p>“The schools are based on emphasis of community, so anything you do in the schools have to be brought in by the community.”</p>
Telephone not preferred	1	<p>“If you call a teacher you’re playing telephone tag.”</p>
Listserv	1	<p>“Listservs are helpful; I can ask other teachers what they are doing to teach several subjects. We come up with better ideas when we collaborate with other teachers rather than when we are simply handed materials that we are not necessarily invested in.”</p>
Mail	1	<p>“Direct mailing or into our school mailboxes. That would be a good way if its paper, its more real than e-mail you ignore. Specifically something curriculum related for my area.”</p>

Note: “# of groups” represents the number of focus groups (6 maximum) in which the theme was mentioned.

Workshops, presentations, and trainings were also mentioned frequently in the focus groups as a way to increase awareness about CIS. Several districts have professional development centers that hold workshops and training, sometimes for continuing education credit. As one elementary school teacher noted, “We have a staff development center – so if there was a representative from Census who could teach a class for the teachers, just for awareness. The classes are taught all year long, after school hours, or a summer program, a short conference they could attend.” One teacher expressed preference for a Web-based presentation that teachers could complete at their own leisure. Another suggested a series of workshops to first introduce the program and then follow-up with implementation and elicit feedback.

Websites were commonly cited as a useful mode for reaching teachers. One elementary school teacher expressed that the Web was a common resource for teaching materials, saying, “It is very easy to search out programs on the computer. When we try to cover a certain subject, all we have to do is Google it and up it comes.” Teachers suggested that the CIS Web site should include brief media presentations that describe the program and a kind of “hotline” link to submit questions from students about the census that would be answered quickly. Several teachers also noted that schools and school districts had their own Web sites that could link to or host CIS materials.

Many teachers were aware of the need to increase awareness among parents and, as such, suggested that presenting at parent/PTA meetings or events that include parents, such as sporting events, would be an effective mode of communication. One teacher noted the need to advertise thoughtfully, saying, “‘Census’ is a scary word, people somehow attach it to the government. Maybe ‘open house’ would be a friendlier word. Have an open house, and touch upon the census.”

Middle and high school teachers were particularly attuned to the need to reach the broader community of stakeholders, mentioning advertising and reaching out to local leaders as ways to reach the community. Several teachers also mentioned partnerships with organizations such as the National Geographic Society and an organization called the Center for Civic Education that provides information and training on the constitution.

Other ideas included using a listserv, mail (such as a postcard that could be filed), libraries, or special events. With respect to special events, one elementary teacher noted that one program had a “liaison breakfast, which she described as “a chance for the children in each school to exhibit their work that they do throughout the year in several of the different categories. All the liaisons attend the Youth Fair for recreation, and all of the materials are passed out, and people have breakfast and get information about things that are going to happen in the rest of the year.” Another suggestion for communication between teachers and CIS was to conduct a survey after a few months of implementation; some participants, however, expressed that they would only complete such a survey if it were mandatory, while others suggested that a mandatory survey would be a significant burden.

*Points-of-contact for getting into schools*

How can schools become aware of the program?

What is your general feeling about being a Census in Schools point of contact for your school?

Related to the issue of awareness was the issue of at what level was the best point-of-contact for getting CIS materials disseminated. Exhibit 5-29 shows themes related to points-of-contact for the elementary school groups, and Exhibit 5-30 shows these themes for the middle/high school groups. Only in one middle/high school group was the state-level mentioned as a potential avenue for disseminating materials, primarily because teachers often signed into a state board of education Web site where materials could be promoted. Generally, the district level was the highest level mentioned for disseminating CIS materials to a wide audience. The district level was brought up in the context of fitting CIS materials into the curriculum, as permission and buy-in would need to come from higher levels to integrate materials. The district office would also be able to disseminate materials to every school. As one middle/high school participant noted, “If they send the information to the superintendent, he or she will pass that to the principal. Then if they feel like they wanted to do it in the schools, they’ll send it to the counselors from there.”

Groups also raised school level contacts, such as a school administrator or department/grade chair as a potentially powerful contact, particularly since such contacts would pass on only relevant information and would have the power to implement materials into the curriculum. For example, one middle/high school teacher said, “There are some people that never read their e-mails or they never seem to get anything, but if your principals have it and they go to the teachers and say, ‘We have this program,’ then no one can say they didn’t know about it.”

With respect to administrators, principals were most often mentioned, but one middle/high school participant noted, “If it says something about social studies, usually the secretary can make that match and get the resource to you.” One middle/high school participant also noted the need for administrators to be involved to unblock access to Web sites such as the CIS Web site.

Other respondents noted that higher levels of contact, such as at the district or school administrator level might fall into busy hands. One middle/high school respondent noted, “There a lot of loopholes between the superintendent and curriculum coordinator before it gets down to the teachers. They get a lot of e-mails and it just escapes them.” With respect to school administrators, one elementary school teacher said, “If you really want to get teachers involved, you kind of got to bypass the administration because they have got too much to do.”

**Exhibit 5-29: Points-of-contact for getting into schools (Elementary).**

Theme	# of groups (5 total)	Sample quotations
District-level	3	<p>“Down the chain of command; superintendent to principals and principals to us. So it comes straight from the top, so we know we have to implement it.”</p> <p>“There are usually administrators of education or someone higher up, not that teachers don’t count because we do, but someone who disseminates that information throughout the district.”</p> <p>“The head honchos at the district will delegate to an administrator who will delegate to a responsible teacher that will take action.”</p>
School administrator	2	<p>“At least at our school, if the administrator bought into it and said it would be a good idea we would take that.”</p> <p>“Tell the principals so they can tell us what’s online, and to implement it within the subjects.”</p>
Subject/department/grade level chairs	1	<p>“There is usually someone who is in charge of each subject and also the grade level chairs; it helps to ask for the subject chairs, somebody who has a particular interest in social studies.”</p>
Teachers	2	<p>“If you really want to get teachers involved, you kind of got to bypass the administration because they have got too much to do. Things are a lot more effective when things are put into the hands of an interested teacher who is willing to volunteer. Administrators just have too many requirements on their plate.”</p>
“User friendly” process	2	<p>“I was thinking “user friendly”—make it friendly! To where it’s less complicated, and where it’s less frustrating.”</p> <p>“It depends on how it is presented. I love the idea, and I know most teachers would love to get on board too. But if it is something that is rote and boring, then no. It has to be done right.”</p>
Lack of time	1	<p>“[In response to question about being a POC] Again, you look at time. <i>(participants nod/laugh in agreement)</i>”</p>
Don’t want to be pressured	1	<p>“Not being pressured. Pressure can bring about agitation and frustration, and the lack of wanting to carry out a task. It’s like darts are being thrown at you, to get this done and get this done; and making it seem more significant than things that you’re already doing.”</p>

Note: “# of groups” represents the number of focus groups (5 maximum) in which the theme was mentioned.

**Exhibit 5-30: Points-of-contact for getting into schools (Middle/High).**

Theme	# of groups (6 total)	Sample quotations
State-level	1	“If something comes up at the state level and they stick it on [their Web site], we at least just check it even if it’s not in our area we sort of go, ‘Ok, what’s going on?’”
District-level	5	“Resources slip from the superintendent, and then to the principal, who will then give things out to the curriculum coordinator or department head.” “If the right people are contacted in the district, it will happen, or the central office. They will have a massive mail-out to all the schools.”
Not preferred	1	“There a lot of loopholes between the superintendent and curriculum coordinator before it gets down to the teachers. They get a lot of e-mails and it just escapes them.”
School administrator	5	“You have to go to the principals first. Administrators need to give approval.” “The principal would have to appoint [a teacher]. You can’t walk into the school and say guess what I was appointed point of contact to Census Bureau. It wouldn’t work.”
Subject/department/grade level chairs	3	“Resources get into my hands more consistently if it comes from the social studies department head.” “Target to upper heads. If I get an e-mail from my principal, I get 20 of them a day, so I might scan it, but if I get it from the head of my department that’s different. I’m more apt to pay attention to it.”
<b>Teachers</b>		
Lack of time	3	“General feeling is that I don’t want one more thing on my plate.” “How many meetings and how much extra work?”
Financial compensation	2	“I know a lot of teachers who would do it if they were compensated financially by the Census because of the extra time teachers would need to spend working on this.” “Give them 250 bucks and they will volunteer for it.”
Prior experience	1	“I have done similar things for other organizations in the past, and since this relates to what I’m doing I would have no problem with doing this and I would know who to share this information with.”
Need for champion	1	“Somebody has to be excited about it in your school, finding believers in your school to implement this and keep it going or else it will be dropped.”
Important	1	“I feel great about it, because it’s so important, especially in the rural areas.” “We (teachers) come in contact with more of tomorrow’s future than anyone else, so we touch the whole nation. Start off with the school, and we can be the POC so we can get the word out.”

Note: “# of groups” represents the number of focus groups (6 maximum) in which the theme was mentioned.

Teachers had mixed feelings about being points-of-contact, with particular concerns centering on the time required to do it. As one middle/high school teacher said, “We are asked to teach so many things and it is spiraling out of control. You can't just add this on.” Teachers expressed the need for not feeling pressured and for having an enjoyable, easy, and “user-friendly” process. Financial compensation for serving as a liaison was raised in two of the middle/high school groups. One teacher in the middle/high school groups noted prior experience serving as a point-of-contact for another program, and one group mentioned the need for a champion within the school. Teachers in one of the middle/high school groups expressed positive feelings about serving as a point-of-contact due to the importance of the materials for their students.

### *Access to Census Bureau representatives*

Do you foresee any reason for you to interact with the Census directly, for example, by contacting a Census representative? Do you think that direct access to a Census representative would be helpful? If so, what type of communication modes do you prefer? For example, do you prefer personal contact via telephone or via e-mail?

In addition to discussing best modes of communication and points of contact for communication with CIS, participants also discussed the value of direct contact with Census Bureau representatives. Exhibit 5-31 and Exhibit 5-32 show comments related to access for elementary school groups and middle/high school groups, respectively. Around half the groups mentioned direct access as useful for answering questions, getting specific information about materials or answers to census-related questions for the community, and answering student questions about the census for class projects. Several groups mentioned that contact with teachers needed to be continual to support implementation of CIS into the curriculum and to remind teachers about the program. One focus group each in the elementary school and middle/high school groups mentioned the utility of site visits from Census Bureau representatives in informing teachers about the program.



**Exhibit 5-31: Access to Census Bureau representatives (Elementary).**

Theme	# of groups (5 total)	Sample quotations
Direct access	2	<p>“Direct access would be helpful if we have questions, to get answers straight from the source rather than from somewhere else that might not be reliable. It would help us to get specific, detailed information to pass it on to other people.”</p> <p>“We have such a multicultural background here that many may have questions about population categorizations that may be inquired about on the census form. As teachers we may need to ask the Census these questions.”</p>
Continual contact	2	<p>“You need that interaction. You don’t just put it out there and just let the teachers or administrators be the sole implementers of sort. Constant contact is necessary.”</p> <p>“[Contact] annually, even if it’s just an e-mail that keeps me in the loop. ‘Hey, there are some resources for you to use.’”</p>
Site visits	1	

Note: “# of groups” represents the number of focus groups (5 maximum) in which the theme was mentioned.

**Exhibit 5-32: Access to Census Bureau representatives (Middle/High).**

Theme	# of groups (6 total)	Sample quotations
Direct access	3	<p>“In my case it’s how many steps to get to that Census representative. The easier the better.”</p> <p>“Maybe for a presentation for small classes. Like for social studies class or if there are a group of kids doing a research project or community based project and they need to find out more about something.”</p>
Continual contact	1	<p>“Periodic contact and continual communication is key.”</p>
Site visits	1	<p>“Direct visitations would be nice. Meeting with us as a group would keep us informed.”</p> <p>“It’s also beneficial to have face time and actually have the Census person there at least once a year to make it seem more human. It can be so much data and paperwork.”</p>

Note: “# of groups” represents the number of focus groups (6 maximum) in which the theme was mentioned.

### 5.3.2. Results for school board members

This section discussed the results from the nine telephone interviews conducted with school board members from districts in the Washington D.C. area. The results are divided into the following topics:

- Level of awareness of CIS
- Modes and points of contact for communication with the Census Bureau
- Preferred ways to disseminate information to the community

Discussion of each topic will begin with an overview (highlighted in a box) of the questions from the interview guide related to the topic. While most of the responses discussed in each topic were in response to these parts of the interview guide, because interviews naturally flow back and forth between topics, we coded each transcript looking for themes, rather than coding strictly by the order of the questions we asked. This overview will be followed by a table showing the main themes related to the topic, the number of interviews in which the theme was discussed, and example notes. As interviews were not recorded, quotations are not included; we instead include excerpts from the interviewer’s notes, which may refer to the school board member in the third person. Excerpts were selected for each table based on how illustrative they were of the theme; additional notes will be discussed in the text. Some themes do not include excerpts if the theme was raised without further elaboration. The text will describe each theme and highlight areas of agreement and disagreement between the school board members.

#### *Level of awareness of CIS*

We’d like to start by discussing ways in which schools can become involved in the Census in School program – the decision process schools may go through to sign up as a Partner. How can schools become aware of the program, and what may prompt your schools to sign up? Let’s talk about awareness first:

How can schools become aware of the program? Will this awareness lead to participation?

Each interview began by discussing awareness of CIS, and themes related to awareness are shown in Exhibit 5-33. School board members generally found that awareness began at higher levels, such as the state board of education or the superintendent, or subject department chairs in the central office. One school board member noted that things sent directly to schools “get lost” and people don’t know what to do with materials. One school board member noted that there was a general lack of awareness of the great material on the Web site and that CIS needed to do more to make teachers aware of the available resources.

**Exhibit 5-33: Level of awareness of CIS (School board).**

Theme	# of interviews (9 total)	Selected interview notes
For those that were aware, awareness began at high levels and worked its way down	4	<p>One of the first things that must happen is buy-in support from Board of Education. She prepared a Board Action Summary that was approved at a Board meeting to proclaim Census in Schools week. From that action item, supported by the superintendent, all schools in the system were called on – students, parents, too – to celebrate Census in Schools week. Committee Organizer for County Government wanted to get the schools involved in the Census, which was the origin of CIS Week. They did an official resolution proclaiming it CIS Week. Memo went to each principal, encouraging them to engage in activities.</p> <p>CIS contacted superintendent's office, who passed it on to him, they had multiple meetings with a person from the Census Bureau and school system, talked about ways they could communicate the info.</p> <p>Had experience with the program over the past couple of years, they directed materials to his schools. Things sent directly to schools “get lost,” people don’t know what to do with these materials. Is more effective to send to central office, someone like him to preview and present to department chairs, articulate expectations in terms of its use. Most school divisions have someone designated as a primary point of contact for history/social science/government. Most states have an association of these people – National Council of Social Studies, state department of education – leverage that person at the state level, work through their contacts, distribution list, you’ll hit the majority of school districts.</p> <p>Mailing came to superintendant, assistant superintendant brought her the materials and she ran with it. They made materials available in the guidance office, they encouraged students to take the materials home, encourage parents to fill out the census.</p>
Lack of awareness of program/materials	1	Existing material on the Web is "great" - but how will they find it? Need to get the word out that it's there. She can see the need for us to be doing these surveys because she had not been aware of the program at all. Educators doing research are aware that there are census data but they may not be aware of all the teaching resources.

Note: “# of groups” represents the number of interviews (9 maximum) in which the theme was mentioned.

*Modes and points of contact for communication with the Census Bureau*

As an administrator, would you prefer to see the Census Bureau work through the school board or superintendent's office to establish points of contact for the entire administrative unit, or would it be better for the Census Bureau to contact individual schools directly?

Do you foresee any reason for you to interact with the Census directly, for example, by contacting a Census representative? Do you think that direct access to a Census representative would be helpful? If so, what type of communication modes do you prefer? For example, do you prefer personal contact via telephone or via e-mail?

Related to awareness, school board members discussed modes and points of contact for communicating with Census Bureau representatives, shown in Exhibit 5-34. A majority of school board members preferred that CIS go through a central contact at the state or district level, suggesting that this would facilitate deliveries of material and distribution of materials to the appropriate grade levels and that it would provide the necessary authority to implement the program. One school board member noted that if the materials did not come down from the school hierarchy, there would not be much of an impact, as someone higher up would have to give it their blessing. One school board member contradicted the notion of using a central point of contact, however noting that direct contact with teachers would be most effective, although also the most involved.

Several school board members noted that the CIS Web site was useful for promoting awareness of CIS and disseminating materials. One school board member noted that she had looked at the Web site and "sees wonderful possibilities." Other school board members strongly recommended direct in-person contact with Census Bureau representatives to facilitate implementation of CIS. A couple of school board members mentioned that it would be nice for the Census Bureau to initiate contact with them. One liked the idea of having a representative available for questions without having a formal scheduled meeting. There was some disagreement over the best timing for initial contact; one participant suggested that early communication was best, while another felt that contact began too early, particularly for teachers who were only focused on the current year. School board members' responses seemed to suggest that earlier contact at higher levels was necessary for infiltrating the bureaucratic structure, but that at lower levels contact could be timed closer to implementation.

**Exhibit 5-34: Modes and points of contact for communication with the Census Bureau (School board).**

Theme	# of interviews (9 total)	Selected interview notes
Prefer central point of contact at higher levels rather than directly contacting schools	8	Probably would be best to work with central office, don't contact schools directly, this would be beneficial for schools as well, central warehouse can make deliveries.  Probably would go better through the state apparatus who have a little more clout with the local schools; that, and selling those groups, get their input on what is the best way to filter down the material. Obviously grade levels need different materials. Will be tough, can be a huge bureaucratic jumble - time needed to do this, systems can become cynical.
Website	3	Everything was right on the Web site, was full of information.
In-person contact/in-person training	3	Personal contact is always best; fact that they could sit down and get their questions answered, explain their dynamics, craft ideas together.  She would like to have a regional professional development opportunity where someone from Census Bureau would present the data, the program, how to use the materials.
E-mail	2	People pay more attention to e-mail than phone right now. At least college-age on down. People will e-mail or text more often.
Census should initiate contact	2	It's always nice to have them contact you, if someone contacted his office and wanted to come by and share some tips, that would be enormously helpful.
Timing of contact is important	2	Early communication is good; certainly to get the word out, would be effective.  The problem is I think you all started way too early. You started when schools were really focused on the <i>current</i> school year; they weren't looking a year out. The only people you should target more than a year out are the instructional supervisors. But to contact teachers—they're not making those decisions a year in advance.
Direct access	1	I think there would be value to that, but it would be a huge undertaking in terms of budget and impact. Doesn't know how realistic it is.
Direct contact to teachers	1	Most effective would be direct contact with teachers - this is also the most involved thing to do.
Automated phone calls	1	Automated phone calls to schools
No scheduled call, just available for questions	1	Just having people available for questions, rather than a scheduled weekly call.

Note: "# of groups" represents the number of interviews (9 maximum) in which the theme was mentioned.

*Preferred ways to disseminate information to the community*

Do you think your schools will do anything to promote the Census in addition to in class lessons or activities? For example, make school-wide announcements?

A few school board members suggested ways that the Census Bureau could disseminate information to the community, shown in Exhibit 5-35. Some school board members mentioned that their districts had done special events, such as having a “Census Bus” and student-led performances. Announcements from schools to parents through their Web sites or automated phone systems were also suggested. Some larger districts have community relations or public relations offices that can disseminate messages to the school community. Finally, one school board member suggested the need for multiple contacts with the community; they used their Web site, their automated phone system, flyers at school events, and notices in the weekly staff newsletter.

**Exhibit 5-35: Preferred ways to disseminate information to community (School board).**

Theme	# of interviews (9 total)	Interview notes
Special event	2	They had a communications plan for CIS, they had identified hard-to-count areas . They had "Census Bus" come in one high school, at a middle school had a community event, a publicity blitz. What worked best about those, for the launch, the majority of the program was done by students, generated a lot of excitement, they ran the program and performed.  They also do community events (ex. at malls); always had flyers, and CIS rep attended these events.
Announcements	2	Would be hard in D.C. because they have so many schools, but for announcements - they have the capability to send automatic calls to parents (district level or individual school level).  A little 10-20 second blurb announcing the census coming could be done. Should be shorts bites of information. Most school systems and individual schools probably have Web pages.
Need multiple contacts	1	With any such program, have to be multiple messages - Web, automated phone calls to schools, handing out info at "Back to School" night. Put it in electronic staff weekly newsletter 3-4 times.
Community Relations office	1	[School district] has a community relations office that handles all media, is hooked into local cable channel, that channel promoted the census pretty regularly. They also do Web stories and they did Web announcements; pushes it to all of their member schools. They also have internal publications for administrators that did a blast message, and they did press releases.

Note: “# of groups” represents the number of interviews (9 maximum) in which the theme was mentioned.

## **5.4. Question 3: What are the needs of school board members and college/university faculty regarding statistical literacy and statistics education, from the most basic level (kindergarten) to the most advanced (graduate studies)?**

We address question 3 by looking at two main sources of data, the interviews with school board members and the focus group with college and university faculty.

### **5.4.1. Results for school board members**

This section discussed the results related to statistical literacy from the nine telephone interviews conducted with school board members from districts in the Washington D.C. area. As above, discussion of the topic will begin with an overview of the questions (highlighted in a box) from the interview guide related to the topic, followed by a table showing the main themes related to the topic, the number of interviews in which the theme was discussed, and example notes. As interviews were not recorded, quotations are not included; we instead include excerpts from the interviewer’s notes, which may refer to the school board member in the third person. Excerpts were selected for each table based on how illustrative they were of the theme; additional notes will be discussed in the text. The text will describe each theme and highlight areas of agreement and disagreement between the school board members.

*Statistical literacy*



Distinct from the teacher focus groups, school board members were asked about statistical literacy among teachers and students and how the Census Bureau could help. It's noteworthy that most respondents did not feel that they were in a position to comment on this topic. Responses from those who commented are shown in Exhibit 5-36.

School board members had mixed views as to whether the Census Bureau could help teach students and teachers about statistics. One felt that students did not see the topic as important, and another expressed disbelief that the Census Bureau could really teach teachers about statistics. Others, however, felt that census data gave a "human dimension" to statistics and that teachers often used data in their work.

In general school board members felt that teachers were only exposed to very basic statistics, if at all. One school board member suggested that the Federal Reserve had useful materials and training for teachers and that CIS could include training materials on its Web site.



As far as students, one participant noted that students had varied backgrounds in math, and that materials would need to engage students to be successful.

**Exhibit 5-36: Statistical literacy (School board).**

Theme	# of interviews (9 total)	Interview notes
Census Bureau could not help teach students and teachers statistics	2	<p>There is a huge disconnect between what we see as important and what [students] see as important. Maybe in conjunction with schools or states, they could do something. Maybe do a pilot program in a couple of districts - this could be a big gamble.</p> <p>Honestly, I can't see the Census Bureau teaching out teachers how to do statistical data analysis (<i>laughing</i>).</p>
Census Bureau could help teach students and teachers statistics	2	<p>It's extremely important, embedded in many of their standards, they welcome any help; using census data would be one way to do this, it has a "human dimension" and natural entrée to introducing and understanding statistics.</p> <p>They use data for everything they do, teachers aren't necessarily statistically literate, she is responsible for promoting the ability of both teachers and students to understand statistics. They use data to understand other countries, to understand U.S. history, geography, patterns. If data were displayed in "student friendly ways" teachers wouldn't have to adapt it for use in the classroom. If Census Bureau sent out trainers to teach teachers how to use data, it would be "awesome"</p>
Statistical competency in teachers/training opportunities	2	<p>Of course [they have training opportunities] if they teach math; maybe not so much for history and social science teachers – they need to work on that. Depends on the level of statistics – percentages, etc. probably yes, more high-level, depends on their background.</p> <p>In general, probably most have been exposed to some level, but probably pretty rudimentary.</p>
Recommended in-person training about statistics and put more statistics training on Web site	1	<p>Look at the Federal Reserve's materials and outreach as an example. They have people you can contact who will come to your school and offer professional development for teachers. Would give Census Bureau another "in" to the community. Also things put on their webpage that would train teachers in using census statistics and making connections and links from data to funding and services.</p>
Biggest challenge is students' diverse backgrounds in statistics/math	1	<p>The level of math capability needed to be able handle that information; we have tremendous gaps in math backgrounds, must be correctly packaged, even in terms of how the materials look – splashy to get kids' attention and see value in it, any relations to day-to-day situations.</p>

Note: "# of groups" represents the number of interviews (9 maximum) in which the theme was mentioned.

### 5.4.2. Results from college/university faculty focus group

This section discussed the results from the focus group with 9 college and university faculty held in Boston, Massachusetts. The results are divided into the following topics:

- Challenges to statistics education
- How Federal agencies can help
- Teaching resources
- Potential sources of “expanded” resources
- Training, research collaboration and teacher preparation
- Reaching and recruiting college populations

Discussion of each topic will begin with an overview (highlighted in a box) of the questions from the focus group guide related to the topic. While most of the responses discussed in each topic were in response to these parts of the focus group guide, because focus groups discussions naturally flow back and forth between topics, we coded each transcript looking for themes, rather than coding strictly by the order of the questions we asked. This overview will be followed by a table showing the main themes related to the topic, whether the focus group had consensus or mixed views about the theme, and example quotations. Quotations were selected for each table based on how illustrative they were of the theme; additional quotations will be discussed in the text. Some themes do not include quotations if the theme was raised without further elaboration. The text will describe each theme and highlight areas of agreement and disagreement within the focus group.

#### *Challenges to statistics education*

We’d like to begin by talking about how you see the current landscape of statistical literacy in the U.S., particularly among college students.

Other than funding and budgets, what are the biggest challenges facing you and your college/university today in statistics education?

The focus group started the discussion by talking about challenges to statistics education that they faced, as shown in Exhibit 5-37. The group agreed that students, particularly in the humanities, were fearful of math or anything numerical; students in engineering were an exception. Students also feel that statistics are not important, partly because the subject is not required in all college curricula or only introductory courses are required.

Another challenge faculty mentioned was finding qualified statistics instructors at the college level who could balance theoretical considerations with applications of statistics. Between different subjects it could be difficult for students to make the bridge between different approaches toward and uses of statistics. Others noted that taking statistics courses was not the important focus, but there was instead a need to infuse quantitative literacy and skills-building into a range of subjects, just like reading and writing are infused into all subject areas.

**Exhibit 5-37: Challenges to statistics education (College/University).**

Theme	Consensus	Mixed	Selected Quotations
Fear of anything numerical or involving math	x		<p>“Among humanities students there is a general fear of any kind of numbers.”</p> <p>“Engineering students are much more relaxed when I give them figures in statistics.”</p>
Student perception that statistics aren't important	x		<p>“They don't think it's important. I've been working with the social work program so it has to come from you that they need this because they just want to help people.”</p> <p>"I didn't see statistics until it was mandatory for my Ph.D. program and I failed it the first time I took it."</p>
Many students take only introductory statistics	x		<p>“The majority of Americans are taking statistics at the community college level. They take their intro to statistics class, they transfer into a 4-year college, and they never see statistics again.”</p>
Lack of qualified college-level instructors in statistics	x		<p>“Most people who teach statistics are not statisticians. Everybody thinks they can teach it so you have mathematicians teaching it in one way, then you have subject area people like economists teaching it. Their knowledge of statistics is a mile wide and inch deep.”</p> <p>“Sometimes it's too theoretical and sometimes it's too applied.”</p> <p>"There is a phobia of both math and statistics among teachers. You need people who are trained in a subject area when they have students who are resistant to the topic."</p>
Must make distinction between statistics as a subject and "quantitative literacy"	x		<p>“If you read any of the stuff on quantitative reasoning or quantitative literacy, they all say it's not a course. A lot of us are talking about it like it's a course. One of the things I tried at my school is to say we are writing across the curriculum. There's a real issue with reading comprehension, a lot of this stuff has to do with reading well and understanding what you're reading.”</p> <p>“We need to infuse stats education throughout the classes like we've done with teaching writing.”</p>
Poor preparation in K-12		x	<p>“Students don't know how to fact check. They seize upon one particular fact, in many cases, completely misinterpret it.”</p> <p>“I'm wondering if this is a cultural problem. When I first came to the United States, I had to take a statistics course. I tested out of it.”</p> <p>“Students coming out of high school really don't have a strong foundation in statistics.”</p>

While participants largely felt that students coming out of high school were poorly prepared in statistics or knowledge of research, another participant felt that his non-U.S. high school had prepared him well for college statistics.

*How Federal agencies can help*

In what way do you think Federal agencies could become more involved in K-12 or high school in order to beef up these areas?

- Which of these challenges could outside organizations help you meet?
- What, specifically, could these organizations do to help the students, the educational process, and you as an educator?
- In what ways do you see them as being particularly well-suited to contribute to a solution?

The group went on to discuss how Federal agencies such as the Census Bureau could improve statistical preparation in K-12 or high school, as shown in Exhibit 5-38. Participants suggested that internships could be useful, as well as grants or incentives for students to study statistics. Others suggested making the Web site appeal more to youth, enough so that they would want to use it outside of class. A potential suggestion for improving the appeal of materials included videos that could teach about statistics in an approachable way. Another participant, however, felt that statistics required a lot of practice, and by setting up expectations that it would be only fun, you would lose students as they discovered that it also involved work.

**Exhibit 5-38: How Federal agencies can help (College/University).**

Theme	Consensus	Mixed	Selected Quotations
Census Bureau internships for high school students	x		<p>“One way this could happen at the college level, is for the Census Bureau to place kids in internships. This could even work at the high school level.”</p> <p>“Have special grants or incentives for kids to study statistics.”</p>
Make Census Bureau Web site more friendly for students to use	x		<p>“Make the Web site friendlier to kids. I would like the Census to place project and lesson plan ideas on the Web site.”</p> <p>"I need my kids to find [the Web site and data] interesting when they leave my class. I want them to take a stats class because they want to, not because we are forcing them to."</p>
Fund development of "fun" ways to teach statistics, such as short videos		x	<p>“Have grants to develop little videos that teach the students about statistics and demystify it.”</p> <p>“I don't think teaching it in a fun way can work with statistics. Students must practice a lot in order to grasp many of these math and stats concepts. You might lose kids by middle school, since they will expect it to be fun and it's not.”</p>

### *Teaching resources*

Some outside organizations offer teaching resources such as data to illustrate descriptive statistics which might appeal to students interested in learning with real-world data, or with a multivariate dataset.

- What organizations come to mind when you think of these types of resources?
- Which, if any, do you use? Why do you use some and not others?
- What are some resources which you would like to have, but cannot find?

Faculty listed many resources that they use to find data to bring life to statistics, shown in Exhibit 5-39. Several listed Web sites such as Federal Web sites, university resources (Data and Story Library), and other Web sites such as baseball-reference.com. Others used online statistical software to teach students. Faculty felt that census data were difficult to access and were not always compatible with the online statistical software that students used. One participant noted that the source of the data was less important than the interest of students in the data.

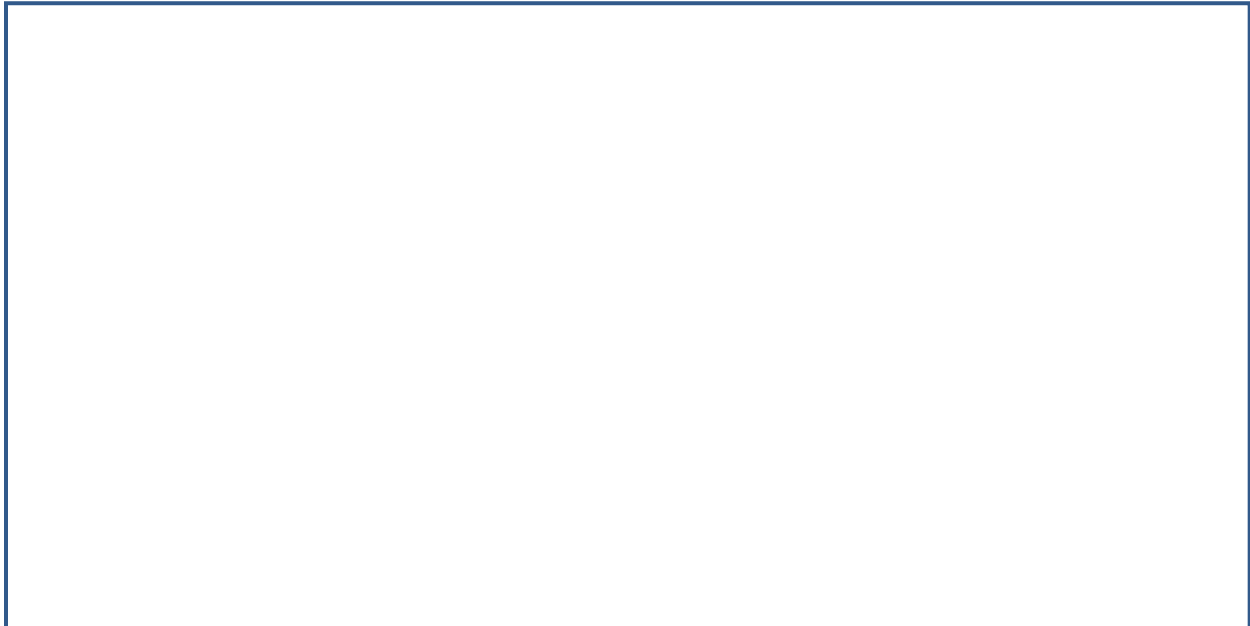
Faculty listed specific characteristics that they wanted to see in these resources, such as the ability to work with raw data online, instead of just having aggregated data. Helping professors publish in peer-reviewed journals was suggested as a worthwhile activity, as was having an online site to display student projects.

One participant noted that students with visual disabilities have particular issues with statistical Web sites as most of them have a lot of information that reading software has difficulty parsing.

Exhibit 5-39: Teaching resources (College/University).

Theme	Consensus	Mixed	Selected Quotations
Websites with statistics or data available	x		<p>“Good examples: Centers for Disease Control site, U.S. Department of Education site, Department of Justice site.”</p> <p>“The Census Bureau should look at <a href="http://baseball-reference.com">baseball-reference.com</a>”</p> <p>“The DASL - Data and Story Library. The way the data is organized is really good”</p> <p>“I think most people think that the Census Bureau provides the total number for voting and the population of a city. There are so many other things that are included in the data.”</p>
Offer online statistical software	x		<p>“I've been using Fathom, which is software for teaching statistics.”</p>
Use data interesting to students	x		<p>“When I’m teaching stats, it doesn't matter what the data is, it just matters that the students are interested in the data.”</p>
Aggregated vs. raw data	x		<p>“We want the data online where we can pull out what we want like race, gender and so forth.”</p>
Juried journals	x		<p>“The journals for college and university level instructors, such as Journal of Statistics and Education ... these are journals that require authors to submit their papers to the journal with their dataset. We could have students help professors publish in these articles too.”</p>
Online sites for student projects	x		<p>“What if there were some way for students to participate in putting their projects online if they were good enough and other students could see their work. Creating some type of recognition for students.”</p>
Adapt sites to students with visual disabilities	x		<p>“Students with visual problems have a difficult time going through our Web site so reduce the amount of stuff on the Web site. Jaws (reading software) helps but the Web site is so packed that it doesn't know what to tell the students.”</p>

*Potential sources of “expanded” resources*



While faculty viewed the list in the box above, they listed a wide variety of resources they felt would be useful, listed in Exhibit 5-40. One suggested that a “market differentiator” for a textbook would be to link to census data as a theme throughout. Another thought that the Census Bureau could use social media such as Twitter to broadcast messages. Another participant felt that in-person tutoring was better than anything online for teaching students. Another felt that having data organized and readily available for different lessons would be useful resources. Other suggestions included having guest experts in statistics to speak in schools and classrooms and linking government statistical agencies together.

**Exhibit 5-40: Potential sources of “expanded” resources (College/University).**

Theme	Consensus	Mixed	Selected Quotations
Textbooks with a central theme throughout the text	x		“There's a gazillion stats books that are hard to tell apart. If there was a theme throughout the textbook, that would be a market differentiator. The book could connect students to the data on the Census Web site.”
Use Twitter for short statistics messages	x		“Does Census have a Twitter feed? Maybe they could have the "misconception of the day" on their Web site?”
Increase resources for one-on-one student tutoring of peers	x		“Anything that could increase one-on-one tutoring for students will be better than online resources.”
Organize data in a way useful for teachers	x		“Something organized for teachers so we don't have to keep taking time looking for it. Like organized data that is organized for teaching purposes, like exponential data, Simpson's paradox, linear data.”
Invite experts to speak at schools	x		“Have statistics experts/guest speakers come into schools to talk to different groups of kids. Like a statistics for journalists seminar.”
Encourage government agencies to link to other agencies with statistical data	x		“The government Web sites need to talk to each other in order to integrate it better and making it more accessible to students.”

*Training, research collaboration and teacher preparation*

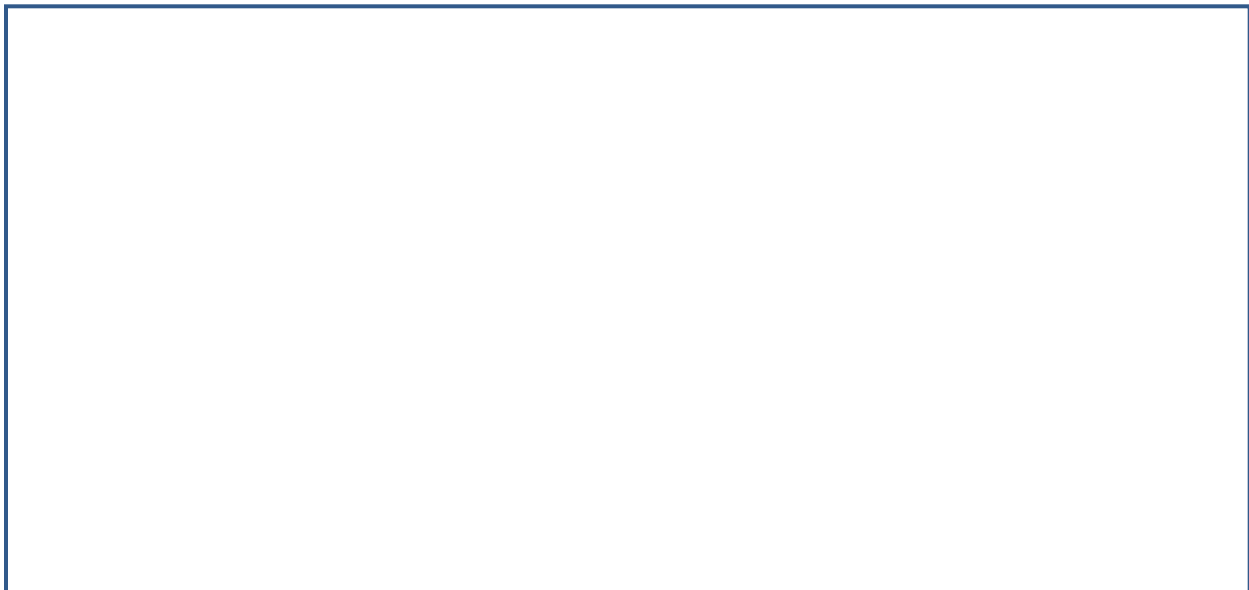




Exhibit 5-41 discusses awareness of training and research programs from the Census Bureau and thoughts related to preparation of teachers trained at their college/university for teaching statistics. For the most part, faculty were not aware of training and research collaboration opportunities offered by the Census Bureau. One participant suggested that they should partner with the American Statistical Association to promote these opportunities, and another suggested that it might be useful to have these opportunities available remotely.



Participants agreed that teachers were poorly prepared for teaching statistics, with a very small amount of time devoted to the topic. Faculty suggested that the Census Bureau could help by sending expert speakers to show them how to use materials, how to teach the curriculum and making statistical software available to students. Faculty noted that it would help teachers to have materials tailored to curricular standards, echoing the other focus groups and interviews. Furthermore, they echoed the time pressures faced by teachers who needed to prepare students for testing.

**Exhibit 5-41: Training, research collaboration and teacher preparation (College/University).**

Theme	Consensus	Mixed	Selected Quotations
<b>In-person training</b>			
Publicize via the American Statistical Association	x		"American Statistical Association would be interested in working with the Bureau on this, having talks and events available remotely."
Low awareness		x	(One person responded with awareness)
Could be conducted remotely to increase participation as well as awareness		x	
<b>Research collaboration and partnerships</b>			
Some awareness		x	(One person had heard of it)
<b>Teacher preparation</b>			
Inadequate at their college/university	x		"We only have a 3-4 week unit, this is bad." "Elementary education [students] take a three-semester sequence, stats is taught in just a small unit during the very last sequence."
Census Bureau should send expert speakers	x		"My textbook in journalism has only four pages about stats, can there be experts coming into the classrooms to elaborate on these four pages?"
Create teaching materials tailored to state and local requirements	x		"Supporting K-12, those curricula are moving targets, from state to state, from district to district, from elementary to middle school or from middle school to high school."
Fund availability of statistical software	x		"I can't have the kids buy the software (TinkerPlots, Fathom), but can we partner with them so that kids can have access to this software?"
Lack of time allotted to stats as well as "teaching for the test"		x	"Teachers are more interested in what the kids need to know... not really emphasize the stats knowledge."

*Reaching and recruiting college populations*

Finally, we'd like to explore the role of the U.S. Census Bureau within academe.

- How can the Census Bureau amplify the ways in which it provides resources direct to students outside the classroom?
- How can the Census Bureau reach a larger percentage of the college population?
- What means would you suggest the Census Bureau use to increase outreach to students to consider a career with the Bureau? What material, programs, or internships might play a part in this effort?

Finally, faculty discussed how the Census Bureau could reach and recruit college populations, shown in Exhibit 5-42. Faculty suggested that internships, public service announcements on popular television channels, and connecting the Census materials to a variety of subject areas would be a way to reach college students.

To encourage students to consider a career with the Census Bureau, faculty suggested publicizing census data through apps, moving up the release of individual-level data, and modeling the process of using census data from start to finish.

**Exhibit 5-42: Reaching and recruiting college populations (College/University).**

Theme	Consensus	Mixed	Selected Quotations
<b>How can Census reach the college population?</b>			
Internships	x		
Public service announcements	x		“Public service announcements on the channels that kids watch, commercials. It's all about impressions.”
Tie Census Bureau statistics to other subject areas	x		“Have the Census Bureau's Web site tie stuff to different majors.”
<b>How can Census encourage entry into the stats profession?</b>			
Tie into informatics	x		
Publicize via apps available through iPads, iPhone, etc.	x		“iPads, iPhone, iTouch, if there's an app formed, I would think this would be great.”
Move up public release of raw data to less than 70 years after collection	x		“The Census waits 70 years before data is placed on the Web site for public use; could we move that up?”
Demonstrate processes used by census to analyze data	x		“If students could see the whole process from start to finish that would be helpful for kids to see the benefit of statistics.”

## 5.5. Question 4: What Should Be the Metrics for Measuring the Impact of the Census In Schools Program for Both the Intercensal Years and the 2020 Census?

To address Question 4, we relied on the structured discussion with internal Census Bureau stakeholders, results from the focus groups and interviews, detailed in the previous sections, and a literature review.

### 5.5.1. Overview of Logic Model: CIS Activities, Outputs, Outcomes and Impacts

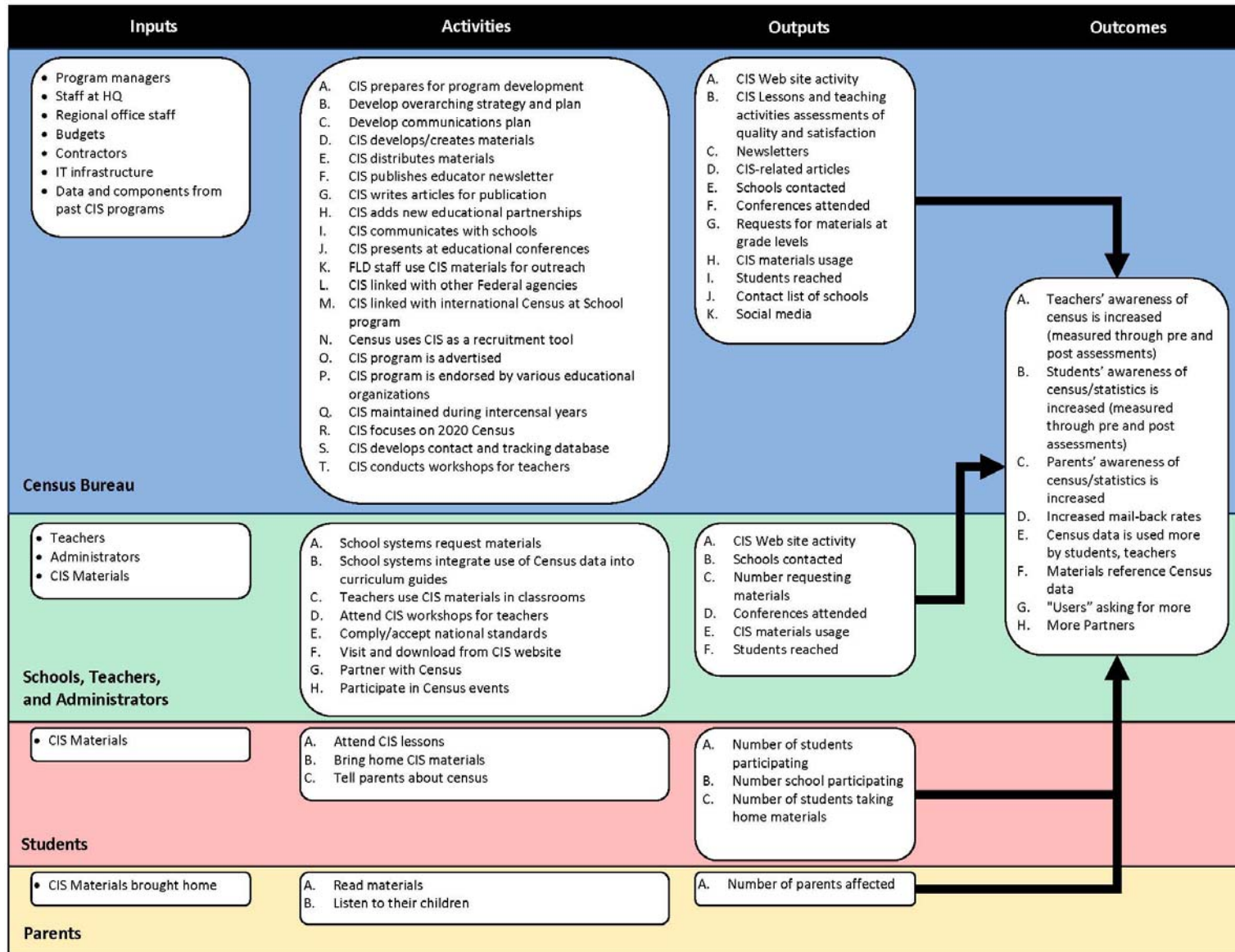
Based on the structured discussions, we propose a preliminary logic model for the CIS program shown in Exhibit 5-43. The column labels across the top of the model are the type of metrics, and the row labels down the left side of the model show the populations who are stakeholders and key players in the functioning of the CIS program. We defined the metrics as follows:

- **Inputs** are resources, such as people, money, infrastructure, data and materials that feed into a program and serve as the foundation for its activities. For some populations, these resources are the result of activities and outputs from other populations; for example, CIS materials are a resource for students only if they receive them in the classroom.
- **Activities** are the processes, tools, events, technologies, and actions that are an intentional part of the program implementation. They can be undertaken by someone at Census, by a teacher in a school, by a student, or by a parent, for example. Not all activities need to be conducted by the Census Bureau. Activities are often measured as a “yes-or-no” measure: Did we do this, or did we not do this?
- **Outputs** are the direct products of program activities and may include types, levels and targets of services to be delivered by the program. They are most often quantifiable and can be represented by numbers such as, number of schools using CIS materials, or number of students exposed to CIS, for example.
- **Outcomes** are specific changes in the program participants’ or target population's behavior, knowledge, skills, or level of functioning. "Mail response rates" are an example of an outcome.

Four populations play a role in the logic model: Census Bureau; schools, teachers and administrators; students; and parents. Each population has associated inputs, activities, outputs and outcomes.

For the Census Bureau, inputs include all of its personnel, its budget, infrastructure, and past data and knowledge from prior CIS programs. With these inputs, the Census Bureau conducts a number of activities related to CIS. These include preparation and planning stages for the intercensal and decennial years; development and distribution of materials by mail and through the Web site; communication through newsletters, articles, conferences and field staff; development and maintenance of partnerships with educational organizations, other Federal agencies, and the international Census at School program run by the American Statistical Association (ASA) Program; communicating with schools and conducting training for teachers; and developing and maintaining a contact and tracking database to assess program metrics and contact information for schools and

Exhibit 5-43: Tentative logic model in support of identification of metrics.



partners. These activities lead to outputs related to the dissemination of materials to schools and through the Web site, satisfaction with and use of materials in schools, and students and parents reached. These outputs contribute to the program outcomes.

Schools, teachers and administrators have personnel, budgets, and infrastructure as inputs also. Schools systems and teachers can conduct activities such as requesting CIS materials, integrating the materials into the curriculum and standards, using the materials in the classroom, visiting the CIS Web site, and working with the Census Bureau in other ways, such as through attending workshops. Outputs of these activities include use of materials and the Web site and students reached with CIS materials. These outputs contribute to the program outcomes.

Students ideally have CIS materials as their key input. Their activities are to attend lessons in school about CIS, bring home CIS materials to share with their parents, and talk to their parents about the Census. Key outputs include the number of students participating in school, bringing materials home and talking to parents. These outputs contribute to the program outcomes.

Finally, parents have CIS materials as their key input. Activities are reading the take-home materials and talking with their children about the Census. A key output is number of parents reached by the CIS program.

All of these processes are intertwined. Without Census activities, for example, key inputs are missing for schools, students and parents. All of these processes feed into the key outcomes, which include awareness of the census for teachers, students and parents; increased mail response rates of the decennial Census forms; and other outcomes that feed back into the activities, such as greater use of Census data by teachers and students, increased reference to the Census in other educational materials, requests from the educational community for more and new materials, and more partners for the program.

The metrics shown in Exhibit 5-43 came primarily from the structured discussion with Census Bureau staff, discussed below.

### **5.5.2. Results from Structured Discussion With Census Bureau Staff**

Prior to the structured discussion with Census Bureau staff, we asked participants to generate a list of key metrics for the CIS program, which we categorized into activities, outputs and outcomes. During the discussion, participants added to each list and then voted on their top priorities.

#### ***Activities***

The list for activities is shown in Exhibit 5-44. The list includes the original list generated from the pre-discussion worksheet, along with additional changes and items, which are shown in italics.

**Exhibit 5-44: List of activities from CIS structured discussion.**

- A. CIS prepares for program development
  - 1. Complete an evaluation of the 2010 CIS experience
  - 2. Review current Census Bureau activity and interest in Statistics in Schools
  - 3. Identify and conduct research (such as in person visits) with other Statistics in Schools programs in other state, federal and international agencies including Statistics Canada, the Department of Agriculture - Kids' zone, and post secondary studies
  - 4. Identify and secure contractors for lesson preparation
  - 5. Identify and secure contractors for Web presence, games
  - 6. Share lessons with educational partners for their input, review, and validations
  - 7. Identify "test" schools for K-12 and Post Secondary lessons and feedback – could use the Census Bureau's establish schools and university partners
- B. CIS adds new educational partnerships
- C. CIS develops/creates materials
  - 1. Lessons and teaching activities
  - 2. Materials that incorporate statistics from other Federal agencies (e.g., CDC data)
  - 3. Materials that have curricula for use in math, statistics, geography, biometrics, business, marketing, actuarial sciences, geriatric sciences, tourism, career planning
  - 4. Teaching materials tailored for pre-K through 12<sup>th</sup> grade
  - 5. K-8 materials in English and Spanish
  - 6. Adult English as a second language materials for the core K-college program
  - 7. Materials tailored for introductory-level college/university
  - 8. Online training for data access and use for specific areas of study
- D. CIS distributes materials
  - 1. Uploads materials on Web site
  - 2. Sends materials to schools
- E. CIS publishes educator newsletter every week/month/quarter/year
- F. CIS writes articles to publish/appear in educational print (i.e., newsletters, magazines)
- G. CIS communicates with schools
  - 1. Communicates with:
    - State School Board members
    - State superintendents of Schools
    - Local superintendents of schools
      - 1. *For these, use existing lists to minimize costs.*
      - 2. *Focus toward the top*
    - Principals
    - Educational supervisors
  - 2. Types of communication/interaction?
- H. CIS presents at *and attends* educational conferences
  - 1. At least X number of times per year
  - 2. At high priority conferences
  - 3. *Identify local/D.C. conferences*
- I. School systems request materials for specific grade levels
- J. School systems integrate use of Census data into curriculum guides
  - 1. Integrate into discipline x, y, and z
- K. Teachers use CIS materials in classrooms (measured by asking principals and teacher

- assessments)
- L. FLD staff use CIS materials for outreach
  - M. CIS program is linked with other Federal agencies
  - N. CIS program is linked with international Census at Schools program through ASA
  - O. Census uses CIS as a recruitment tool
    - 1. *Internships*
    - 2. *Ambassador program*
    - 3. *Partner with colleges*
  - P. CIS program is advertised and endorsed for use by the state boards of education, education organizations such as the American Statistical Association, the National Council for Social Studies, the American Academy of Actuaries.
  - Q. CIS solicits input
    - 1. Tracks best practices through teacher blog
    - 2. Reviews comments section on Web site
    - 3. Advisory board of teachers/parents/students to provide feedback
  - R. *Continuity of communication – ties to various activities*
  - S. *CIS develops list of contacts and track materials. Database.*
  - T. *CIS workshops for teachers (over summer)*
    - 1. *Train the trainer workshop*
    - 2. *Leverage partnerships*
  - U. *Schools' acceptance of national standards*
  - V. *Website:*
    - 1. *Use existing*
    - 2. *Podcasts*
    - 3. *Link to newsletter*
  - W. *Focus on regional level, develop partnerships*
  - X. *Social media*
  - Y. *Develop/host national competition, geography bee*
    - 1. *Scholarship?*
    - 2. *Sponsors*
  - Z. *Verify receipt of materials – teachers*
    - 1. *Mail-back postcard*
    - 2. *Send directly to teachers*
  - AA. *Integrated Partner Contact Database (IPCD) and CIS databases linked*
  - BB. *Continuing education credit course for teachers*
  - CC. *Communications plan – ongoing*
    - 1. *Target right people and organizations*
    - 2. *Feedback*
  - DD. *Overarching plan/strategy -> formal*
  - EE. *Feedback*

During voting, participants ranked their top five activities, with their most important activity receiving 5 points, their second most important activity receiving 4 points, and so on. At the time of voting, the participants noted that many related items could be grouped together. For example, items G, Q, R, X, CC and EE all related to having a communications plan, and DD, having an overarching plan or strategy, was



needed prior to having a communications plan. This combination, with 44 points, was voted by far the most important activity for the Census Bureau to undertake for Census in Schools, shown in Exhibit 5-45.

**Exhibit 5-45: Planning most important CIS activity (CIS structured discussion).**

**#1 most important activity (44 points)**

- DD. Overarching plan/strategy -> formal
- CC. Communications plan – ongoing
  1. Target right people and organizations
  2. Feedback
- G. CIS communicates with schools
  1. Communicates with:
    - State School Board members
    - State superintendents of Schools
    - Local superintendents of schools
      1. For these three, use existing lists to minimize costs.
      2. Focus toward the top
    - Principals
    - Educational supervisors
  2. Types of communication/interaction?
- Q. CIS solicits input
  1. Tracks best practices through teacher blog
  2. Reviews comments section on Web site
  3. Advisory board of teachers/parents/students to provide feedback
- R. Continuity of communication – ties to various activities
- X. Social Media
- EE. Feedback

The next three most important activities were related to creating the CIS materials, preparing for program development, and distributing materials, shown in Exhibit 5-46.

**Exhibit 5-46: Runners-up for most important activity (CIS structured discussion).**

**#2 most important activity (19 points)**

- C. CIS develops/creates materials
  1. Lessons and teaching activities
  2. Materials that incorporate statistics from other Federal agencies (e.g., CDC data)
  3. Materials that have curricula for use in math, statistics, geography, biometrics, business, marketing, actuarial sciences, geriatric sciences, tourism, career planning
  4. Teaching materials tailored for pre-K through 12th grade
  5. K-8 materials in English and Spanish
  6. Adult English as a second language materials for the core K-college program
  7. Materials tailored for introductory-level college/university
  8. Online training for data access and use for specific areas of study

**#3 most important activity (8 points)**

- A. CIS prepares for program development
  1. Complete an evaluation of the 2010 CIS experience
  2. Review current Census Bureau activity and interest in Statistics in Schools
  3. Identify and conduct research (such as in person visits) with other Statistics in Schools programs in other state, federal and international agencies including Statistics Canada, the Department of Agriculture - Kids' zone, and post secondary studies
  4. Identify and secure contractors for lesson preparation
  5. Identify and secure contractors for Web presence, games
  6. Share lessons with educational partners for their input, review, and validations
  7. Identify "test" schools for K-12 and Post Secondary lessons and feedback – could use the Census Bureau's establish schools and university partners

**#4 most important activity (6 points)**

- D. CIS distributes materials
  1. Uploads materials on Web site
  2. Sends materials to schools

Other activities receiving votes included having a tracking database for contacts and materials (AA, 3 points), advertisement/endorsement of CIS by outside educational organizations (P, 2 points), CIS workshops for teachers (T, 2 points), CIS publishes educator newsletter on a regular basis (E, 1 point), and Census Bureau uses CIS as a recruiting tool (O, 1 point).

**Outputs**

The list of CIS output metrics is shown in . The list includes the original list generated from the pre-discussion worksheet, along with additional changes and items, which are shown in italics.

**Exhibit 5-47: List of outputs from CIS structured discussion.**

- A. Extent of educational partnership support
  1. Link to CIS on Web site
  2. Conference support
- B. Number of lessons and teaching activities on CIS Web site
- C. Number of hits, downloads, and forwards of materials (including lessons and teaching activities) on CIS Web site
- D. Number of people who receive the educator newsletter
  1. Number of subscribers/educators who initially receive newsletter
  2. Number of times educator newsletter is forwarded
  3. Number of educators added to e-mail list in specified time period
- E. Number of articles appear in educational print
  1. How many newsletters/magazines article appears in
  2. Circulation of newsletters/magazines in which article appears
- F. Number of schools/districts and contacts within schools/districts with whom Census has communicated
- G. Number of conferences at which CIS presents
  1. How many educators attended presentations
  2. How many students taught by educators attending presentations

- 3. How many people we talked to (track in database)*
- H. Number of requests for materials at grade levels x, y, and z
  - I. How many pre-service college and university educational programs include the use of census materials?
    - 1. How many college/university students who are future teachers were affected?
    - 2. How many pre-service teachers plan to use census data in their future classrooms?
  - J. Number of students *and teachers* affected by school systems integrating the use of Census data into curriculum guides
    - 1. *By grade level (helps focus efforts)*
  - K. User evaluation of CIS materials
    - 1. Methodology
      - Web survey
      - Focus group
    - 2. Target population
      - Educational supervisors
      - College/university pre-service educational professors
      - Teachers
      - *Parents*
      - *Students*
  - L. *# CIS partners and # contacts with partners (at schools and other organizations)*
    - 1. *Which schools receiving materials (track in database)*
  - M. *Feedback on materials*
  - N. *Contact list of schools*
    - 1. *At least one contact per school*
  - O. *Social media*
    - 1. *Twitter follows*
    - 2. *Facebook*
  - P. *Pilot program in schools – consider local schools*
  - Q. *Census schools*
    - 1. *# of these*
    - 2. *Level of investment*
    - 3. *Regions in which they exist – hard-to-count areas*
  - R. *Quick Response (QR) code tracking – direct to Web site*

During voting, participants ranked their top five outputs, with their most important output receiving 5 points, their second most important output receiving 4 points, and so on. At the time of voting, the participants noted that many related items could be grouped together. For example, K and M both related to user feedback on materials; F, L and N all related to tracking contacts; and O and R related to social media. The top five outputs are shown in Exhibit 5-48.

**Exhibit 5-48: Top five most important outputs (CIS structured discussion).****#1 most important outputs (26 points)**

- K. User evaluation of CIS materials
  - 1. Methodology
    - Web survey
    - Focus group
  - 2. Target population
    - Educational supervisors
    - College/university pre-service educational professors
    - Teachers
    - Parents
    - Students
- M. Feedback on materials

**#2 most important output (16 points)**

- F. Number of schools/districts and contacts within schools/districts with whom Census has communicated
- L. # CIS partners and # contacts with partners (at schools and other organizations)
  - 1. Which schools receiving materials (track in database)
- N. Contact list of schools
  - 1. At least one contact per school

**#3 most important output (15 points)**

- J. Number of students and teachers affected by school systems integrating the use of Census data into curriculum guides
  - 1. By grade level (helps focus efforts)

**#4 most important output (10 points)**

- O. Social media
  - 1. Twitter follows
  - 2. Facebook
- R. QR code tracking – direct to Web site

**#5 most important output (9 points)**

- I. How many pre-service college and university educational programs include the use of Census materials?
  - 1. How many college/university students who are future teachers were affected?
  - 2. How many pre-service teachers plan to use Census data in their future classrooms?

The most important output was deemed to be feedback from users about the CIS materials. After that, tracking of contacts was the next most important area of outputs. The third most important output related to the reach of CIS via integration with the curriculum guides. After that, tracking by social media was important, followed by reach of Census materials in pre-service educational programs for teachers.

Other outputs receiving votes included Web site hits and downloads (C, 5 points), number of requests for materials by grade level (H, 5 points), and pilot programs in schools (P, 3 points).

## Outcomes

The list for outcomes is shown in Exhibit 5-49. The list includes the original list generated from the pre-discussion worksheet, along with additional changes and items, which are shown in italics.

### Exhibit 5-49: List of outcomes from CIS structured discussion.

- A. Teachers’ awareness of Census is increased (measured through pre and post assessments)
- B. Students’ awareness of Census/statistics is increased (measured through pre and post assessments)
- C. Parents’ awareness of Census/statistics is increased
- D. Increased mail response rates
- E. *Census data are used more (by students and teachers)*
- F. *Materials reference Census data*
  - 1. *Curricula/class materials*
  - 2. *Textbooks*
- G. *“Users” asking for more (users=teachers, students, etc.)*
  - 1. *Sharing resources with others (teachers, students, parents)*
- H. *Partners exist and are active in Census (e.g., events) – create ambassadors*

Since there were fewer outcomes listed, during voting, participants ranked their top three outcomes, with their most important outcome receiving 3 points, their second most important outcome receiving 2 points, and their third most important outcome receiving 1 point.

The top three outcomes were students’ awareness of Census (B, 8 points), increased mail response rates (D, 6 points), and parents’ awareness of Census (C, 5 points). Other outcomes receiving votes included Census data being used more (E, 4 points), educational materials referencing Census data (F, 3 points), teachers’ awareness of the Census (A, 2 points) and having active Partners (H, 2 points).

### 5.5.3. Results from Focus Groups And Interviews

In this section we pull some of the most often mentioned themes and convert them to potential metrics that the CIS program could monitor to assess the success of the program.

Exhibit 5-50 shows key themes from the focus groups and interviews along with potential metrics.

**Exhibit 5-50: Metrics from focus groups and interviews.**

Theme	Metric
Awareness	% of teachers aware of CIS (OP) % of teachers familiar with CIS materials (OP)
Fit with curriculum	Teacher/Administrator ratings of fit with curriculum (OP) Teacher ratings of burden to use materials (OP) % of states/districts where CIS materials fit with standards (OP) Teachers use materials with current curriculum (A)
Need for annual/regular curriculum	Number of years each decade curriculum used (OP)
Cross-curricular	Teachers report cross-curricular use of CIS materials (A)
Relevance for students	Teachers ratings of relevance (OP) Student ratings of relevance (OP)
Materials easy-to-use	Teacher ratings of ease of use (OP) Teacher ratings of amount of time required to prepare to use materials (OP)
Materials accessible in a variety of modes	Census makes materials accessible in variety of forms (A) Number of forms of available materials (OP) % of teachers able to access, use materials (OP) Teacher satisfaction with access (OP) % students able to access, use materials (OP)
Motivations for schools to participate	Students more aware of Census (OC) Parents more aware of Census (OC) Parents have more positive attitudes toward Census (OC) Community gets fair share of Federal funding (OC)
Census effectively communicates with teachers	Teacher/Administrator ratings of satisfaction with mode, frequency of communication (OP) Teacher/Administrator ratings of accessibility of Census representatives (OP) Number of school districts into which CIS successfully disseminates (OP) Number of schools into which CIS successfully disseminates (OP) Teacher/Administrator ratings of satisfaction with dissemination process (OP) Teacher/Administrator ratings of satisfaction with guidance in implementing CIS (OP) Teachers/Administrators willingness to serve as point-of-contact (A) Satisfaction of teachers/administrators with serving as point-of-contact (OP)
Census reaches teachers	Reach of teachers by e-mail (OP) Attendance of teachers at Census-sponsored workshops/trainings (OP)

Note: A = Activities; OP = Outputs; OC = Outcomes

Key metrics are divided into activities, outputs and outcomes, as with the structured discussion above. The key domains addressed by these metrics includes awareness of CIS by key stakeholders; fit/integration with existing curriculum so as to help teachers with their existing mission and reduce burden; desired characteristics of the curriculum as far as being annual/regular, cross-curricular uses, relevant to students, easy to use, and accessible in a variety of modes; assessing whether motivations to

participate occur as outcomes of the CIS program; and effectiveness and reach of communication between the Census Bureau and educators.

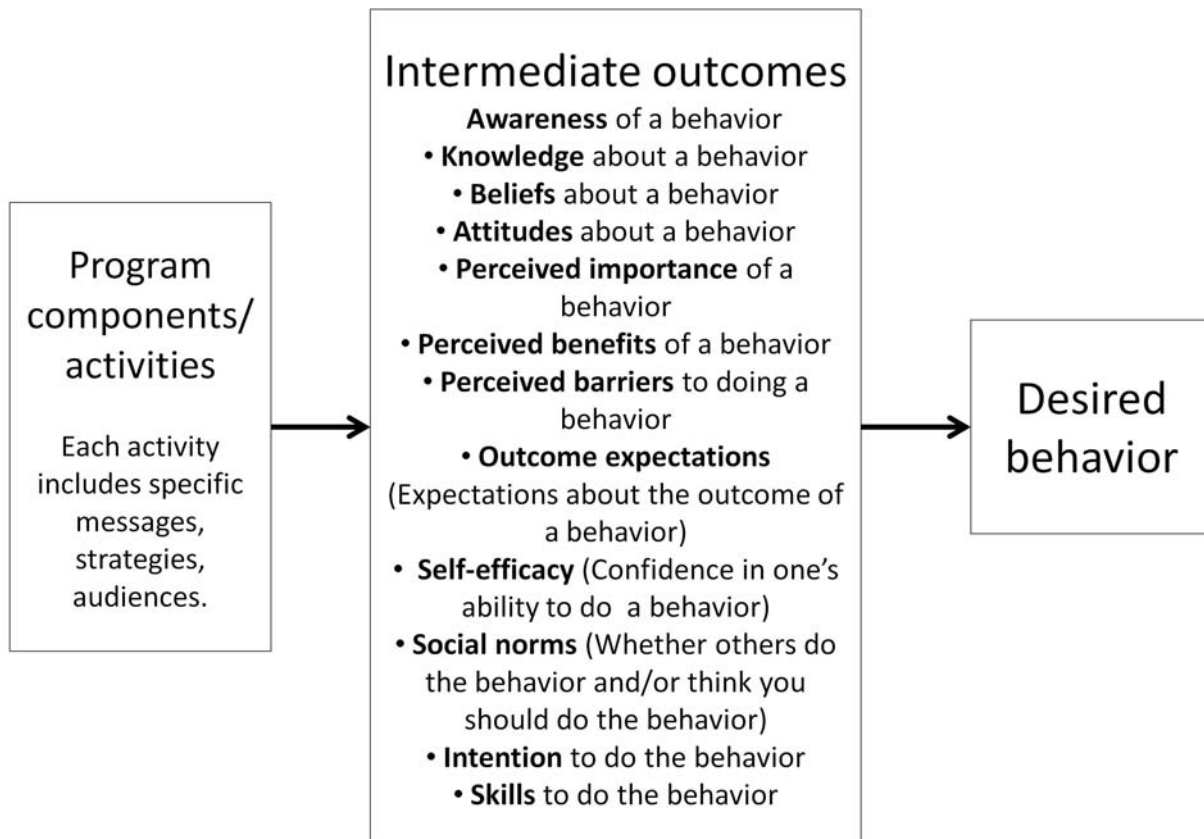
#### 5.5.4. Metrics and logic models from the literature review

Our literature review, which included articles detailed in an annotated bibliography in Appendix D: Annotated Bibliography for Literature Review, looked specifically at the metrics used to assess school-based programs, particularly in public health and environmental education, many of which included parents as a secondary audience. We additionally bring to the discussion key principles and theories from behavior change programs in general. We will summarize key aspects of the programs in the literature review and their metrics to inform the logic model and metrics of the CIS program.

#### *Behavior change theories help connect program activities to desired outcomes*

Many programs, particularly in public health, use logic models based in behavior change theories. These theories posit key predictors of behavior change that can serve as intermediate outcomes prior to the desired behavior or eventual outcome. Many times it is difficult to assess behavior accurately, particularly through self-reported measures; measurement of intermediate outcomes such as knowledge or attitudes, however, can only be done through self-reported measures. Exhibit 5-51 shows a basic logic model that includes the key predictors of behaviors from behavior change theories.

**Exhibit 5-51: Key predictors of behavior from literature review.**



Program planners choose the intermediate outcomes that have been shown in prior research to be most strongly related to the desired behavior and then design their program activities and messages to target those predictors. For example, if one problem that lowers mail response rates is that parents are not confident that they can fill out the census form properly (low self-efficacy), then program activities such as Take Home materials should focus on showing parents how to complete the form or how to enlist their child in helping them, and new program activities might be developed to increase parental self-efficacy.

A complexity of using logic models is that this process should be considered for all the desired behaviors that the program hopes will occur. In the preliminary logic model in Exhibit 5-43, desired behaviors in the CIS program logic model include the activities of schools and teachers, students, and parents as well as certain outcomes such as mailing back census forms. The CIS program can produce “breakout” logic models for each of these behaviors in determining how to design specific program activities and messages; these models can detail all the intermediate factors that lead to the desired behavior.

### *Logic models guide the metrics to be assessed*

Using logic models is useful in program design to ensure that the program is targeted toward key predictors of the desired behavior. It is important, however, to then develop metrics to assess whether the program is having the desired impact on those intermediate outcomes. Thus outcome measures may not only include the desired behavior, but also the key intermediate factors chosen, such as knowledge, attitudes, or beliefs.

In the programs we reviewed for the literature review, only one mentioned process evaluation, which assesses the program activities and outputs to ensure that the program is functioning as planned. Many programs fail to appreciate the needs to include assessments of activity and output metrics. When a program falls short of its objectives, it is important to know whether the shortfall was because the program did not work or whether the shortfall was due to improper or incomplete implementation of the program. In a case such as the CIS program, proper implementation of the program depends not only on the activities of the Census Bureau but also the activities of schools and teachers. Exhibit 5-52 illustrates in a general sense the key metrics that programs use to assess whether the program is being implemented as planned and reaching the target audience in the desired way.



**Exhibit 5-52: Key metrics related to process evaluation.**

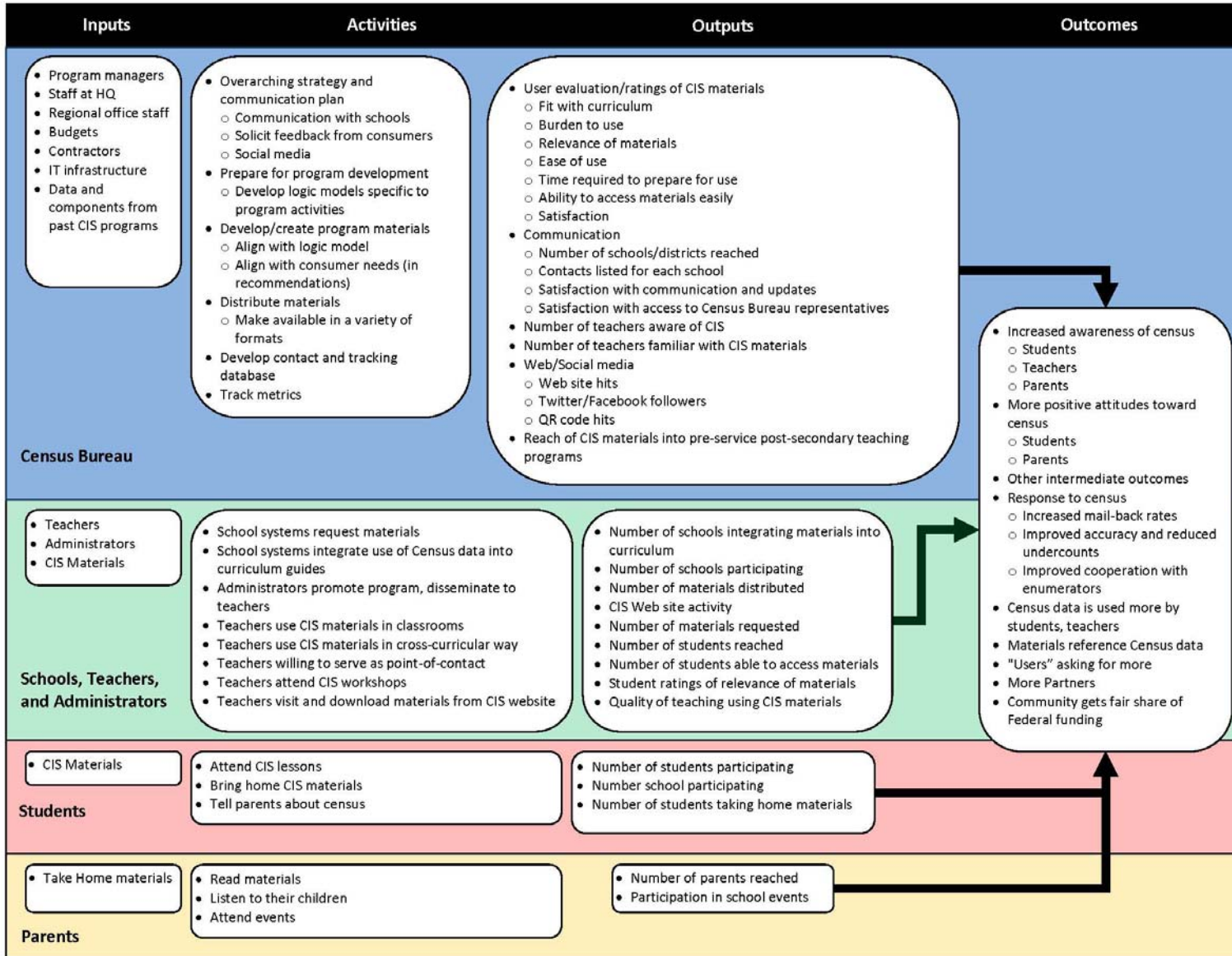
Key process evaluation questions	Associated metrics
Did the necessary program activities occur?	Checklist of key activities (as determined by logic model)
Did the activities occur completely and with high quality?	Quality of implementation Accuracy of information dissemination Fidelity - completion of all necessary parts of an activity Fit with audience needs
To what extent did the program reach its target audience?	Awareness of the program Participation in the program Materials distributed
How did the target audience respond to the program?	Satisfaction Positive attitudes toward the program Perceived importance of the program

With the CIS program, process evaluation is in some ways cyclical. If the program activities of the Census Bureau are implemented, completely and with high quality, that will maximize the ability of the program to reach schools and teachers. If they are satisfied with the program and feel it is important, they will implement their activities to disseminate the program to students.

**5.5.5. Integrated logic model for the CIS program**

Exhibit 5-53 displays a logic model that integrates the results of the structured discussion, including the assessment of the importance of different activities, outputs and outcomes; the results of the focus groups and interviews with the “consumers” of the program: K-12 teachers, school board members and college/university faculty; and the literature review. The Census Bureau can use a model such as this to display priorities, illustrate ideas about how the program should work, fill in gaps, and identify key metrics.

Exhibit 5-53: Final CIS logic model integrating structured discussion, qualitative data and literature review.



## 6. Key Lessons Learned, Conclusions and Recommendations

This section addresses the key lessons learned and conclusions from this research and the recommendations for the CIS program that emerge from the research. First this section will highlight several key strengths of the CIS program identified by participants and desired characteristics that already exist in the CIS program. Then we will provide recommendations by each research question to be answered. In both the strengths and recommendations, we will include references back to the exhibits and sections in the Results to allow readers to track back to the relevant data behind each recommendation. We will conclude this section by highlighting remaining questions with respect to implementing these recommendations.

### 6.1. Strengths of The Current CIS Program

Teachers, school board members and college/university faculty identified many existing strengths of the CIS program along with desired characteristics that already map to the existing program (although these audiences may not have been aware that these features already exist in the current program). Overall, teachers looking at the CIS materials during the focus group had a positive response to them and seemed glad to know about them for their future teaching. Key areas of strengths include:

- ***Fit with existing curriculum:*** Many teachers noted that the materials could be fit into their existing coursework, particularly in subjects such as math, civics and social studies. Several teachers also noted that they liked that the materials could be used for cross-curricular teaching, which is something that is gaining importance as a focus in schools (Exhibit 5-11, Exhibit 5-12, Exhibit 5-19).
- ***Desired characteristics of CIS materials:*** Several teachers and school board members noted that they felt the materials could be used directly – that they were “ready- made” and did not require a lot of preparation or adjustment. Other teachers recommended that there be materials in multiple languages, which is something that the CIS program has done with the take-home materials. Several teachers were enthusiastic about the potential for Census-related materials to provide relevance to their particular lessons and subjects. Teachers were also appreciative that the materials were free (Exhibit 5-15, Exhibit 5-16, Exhibit 5-22).
- ***Types of available materials:*** Many teachers and school board members liked to have materials for teachers and students available on the Web, which CIS already provides. Others preferred paper materials due to the cost of photocopying and printing at their schools or the lack of projecting equipment; the key issue here is getting paper-based materials into the hands of these teachers (Exhibit 5-17, Exhibit 5-18, Exhibit 5-22).

The CIS program has a strong foundation that it can build upon through greater awareness of the program and stronger integration with existing curricula.

## 6.2. Question 1: How Can the CIS Program Be Improved for the 2020 Census?

We present three main recommendations related to the first research question about how the CIS program can be improved for the 2020 Census.

### **Recommendation 1: Integrate CIS materials into the existing curriculum of schools.**

Recommendation 1.1: Match CIS materials and activities to existing standards and mandates.

Recommendation 1.2: Ensure that CIS is placed into pacing guides and that CIS material is integrated into popular textbooks.

Recommendation 1.3: Provide materials that are cross-curricular and that fit into multiple subjects.

Recommendation 1.4: Provide simple and easy-to-use materials that supplement existing subjects.

Recommendation 1.5: Involve educators in the adaptation and implementation of CIS materials.

### **Recommendation 2: Make materials relevant and able to be tailored.**

### **Recommendation 3: Provide materials in a wide variety of formats**

Recommendation 3.1: Provide both Web-based and paper-based materials.

Recommendation 3.2: Provide guidance for hands-on activities and events.

Recommendation 3.3: Seek out partners who can facilitate materials dissemination and activities.

### 6.2.1. Recommendation 1: Integrate CIS materials into the existing curriculum of schools

One of the strongest recommendations emerging from the teacher focus groups (Exhibit 5-11, Exhibit 5-12) and school board interviews (Exhibit 5-20) was the need to integrate CIS materials into the existing curriculum. By doing so, the CIS program accomplishes several important objectives: 1) Providing support to teachers in meeting the existing standards; 2) making CIS a help and not a burden to teachers; and 3) making the value of CIS materials obvious to teachers, increasing administrator and teacher buy-in and, ultimately, increasing participation in the CIS program.

This recommendation has the following sub-recommendations:

#### *Recommendation 1.1: Match CIS materials and activities to existing standards and mandates*

Teachers and administrators stressed that a key burden and barrier to implementation of CIS was the time pressure created by standards, mandates and testing requirements. As such, they suggested that CIS could use as a selling point the value of the materials in meeting existing standards and mandates. While adapting to the standards of each state and thousands of school districts is a near-impossible task, it may become easier as the Common Core State Standards Initiative moves forward. All but 6 states have adopted the core standards as of fall 2011,<sup>15</sup> making it potentially easier for CIS to integrate materials into a curriculum that will be used by most of the country.

<sup>15</sup> <http://www.corestandards.org/in-the-states>

***Recommendation 1.2: Ensure that CIS is placed into pacing guides and that CIS material is integrated into popular textbooks***

Many teachers expressed that their day-to-day classroom teaching is directed by pacing guides that keep each school and grade level on the same path. Pacing guides are created by school districts and used by teachers to determine what part of the curriculum is to be covered each day, which keeps them on track for testing purposes and facilitates in-district student transfers. These teachers recommended that CIS should work with districts early enough to ensure a place in the pacing guides. Likewise, some teachers expressed that they would be more likely to use CIS materials if they knew what textbook pages they could replace; some teachers and college faculty expressed that having the materials directly integrated into textbooks could also facilitate integration of Census materials and data.

***Recommendation 1.3: Provide materials that are cross-curricular and that fit into multiple subjects***

Some teachers expressed that the current materials lent themselves to cross-curricular projects. Overall, the potential for the CIS materials to cross subjects was well-recognized and perceived as a strength of the topic of the Census. This recommendation relates also to Recommendation 9, consider materials that integrate quantitative literacy into a broader range of topics, mirroring writing/reading instruction.

***Recommendation 1.4: Provide simple and easy-to-use materials that supplement existing subjects***

Many teachers expressed that materials that were “ready-made” and easy-to-use were preferable to materials that required a lot of preparation or adaptation, given the time constraints of their jobs (Exhibit 5-15, Exhibit 5-16). Teachers also appreciated short activities and activities that could supplement particular lessons; one voiced that the existing lesson plans seemed lengthy and difficult to integrate.

***Recommendation 1.5: Involve educators in the adaptation and implementation of CIS materials***

Given the difficulties of tailoring CIS materials to the standards of every different school district, CIS should consider developing a standard process with steps for adapting and tailoring materials that schools and districts could replicate. This process should be informed by teachers and administrators as it will likely be used by these educational professionals within each district. One teacher focus group echoed a recommended activity that arose in the internal stakeholder structured discussion, which was to pilot approaches to integrating materials into the curriculum in schools. Such piloting would allow CIS to test processes and approaches for adapting materials and assess their likelihood of success.

**6.2.2. Recommendation 2: Make materials relevant and able to be tailored**

Many teachers expressed that the Census data could add relevance to subjects such as math, social studies and government (Exhibit 5-15, Exhibit 5-16). Others expressed that they would like to be able to increase the relevance of materials to their students by tailoring them to their particular geographic

region, school demographics, and current economic and political issues of interest. Given the modern pace of the news cycle and content on the Internet, Census in Schools will be most relevant if it can keep up with the issues of the day. Likewise, while static content will be useful to those looking for pre-packaged, “ready-made” materials, using the power of computing to help teachers generate content specific to their region, grade levels, standards, or other parameters could provide powerful tailoring that will increase relevance of the materials within each classroom. An interactive but easy-to-use Web site where teacher could enter basic data, perhaps through drop-down menus, could allow teachers to search for and select material tailored to the grade level, subject area, skills to target, desired learning mode and language. Perhaps teachers could also further tailor the materials to their geographic area by having certain fields auto-populate from census data when teachers enter their address.

### **6.2.3. Recommendation 3: Provide materials in a wide variety of formats**

#### ***Recommendation 3.1: Provide both Web-based and paper-based materials***

Some teachers and administrators expressed a preference for having materials accessible from the Web. Teachers already turn to the Internet to search for teaching resources, and it is convenient for many to be able to print materials for their classes. Some schools also use interactive classroom boards that allow teachers to project materials and use them in an interactive way. Students also find Web-based activities to be engaging, providing another route to increasing awareness of the Census among students.

Many other teachers, however, stressed that physical materials such as workbooks, posters, maps and even transparencies were still desirable and, for many, the most accessible form of materials. Focus group participants in one school district noted that they had to pay for photocopy paper and toner in their schools, making paper-based materials appealing. Others noted that materials in color were more appealing than those in black-and-white, but they lacked the capacity to print in color. Many schools and students’ homes have limited or no Internet connectivity, making Web-based activities inaccessible. While Internet access is likely to continue to increase over time, budget limitations may continue to make physical materials an important component of the CIS program (Exhibit 5-17, Exhibit 5-18).

#### ***Recommendation 3.2: Provide guidance for hands-on activities and events***

Many teachers expressed interest in activities such as a mock census or practice completing sample forms (Exhibit 5-17, Exhibit 5-18). Among the school board members, many recalled events that they held in school and within the community (Exhibit 5-35). Students should have a central role in leading and directing such activities, which will increase their ownership over and therefore enthusiasm about the activities (Exhibit 5-24). Their enthusiasm will, in turn, attract higher attendance and participation from parents.

#### ***Recommendation 3.3: Seek out partners who can facilitate materials dissemination and activities***

Teachers mentioned many potential partners who could work with Census to promote CIS materials on the Web and to create interesting activities for students. One idea was to partner with National

Geographic for the Geography Bee (Exhibit 5-16). One teacher focus group listed a wide variety of online portals that they used to find teaching resources and interactive tools, including Beep, Discovery Learning, Gizmo, Brain Pop, KIA (Know It All), Webenglish, and Thinkfinity.

### 6.3. Question 2: How Can the Census Bureau Go Forward During Intercensal Years to Reach Out to Educators and Students?

We present four main recommendations to address the second question about how the Census Bureau can reach out to educators and students during the intercensal years.

**Recommendation 4: Make CIS into a continuous annual program.**

**Recommendation 5: Develop a multi-level, multi-pronged communication and dissemination plan.**

**Recommendation 6: Establish clear objectives to increase awareness of the CIS program among educators.**

**Recommendation 7: Schedule contact with attention to the school year and level of contact.**

#### 6.3.1. Recommendation 4: Make CIS into a continuous annual program

Many teachers and school board members expressed that having a program every 10 years was not an effective way to increase student awareness about the census or to maintain an effective and efficient process of communication and dissemination of materials (Exhibit 5-11, Exhibit 5-12, Exhibit 5-20). Having only a decennial CIS program means that students are generally exposed only once and no more than twice to the Census. Teachers suggested that students be exposed on a regular basis, with the curriculum building by grade level.

Having a regular program also feeds into Recommendation 1, integrating CIS into the curriculum. It is difficult to have a program that occurs every 10 years without it being an “add-on” to the curriculum. By providing materials and support each year, CIS can more easily integrate into existing lessons and activities that meet standards and mandates. Having an annual program allows for more consistent feedback from teachers and students about the program, and CIS can be responsive to changing needs in the curriculum over time. A continuous program can also bring in other Census Bureau data, such as the American Community Survey, which covers a broader range of topics than the decennial census.

Returning to the logic model, having a regular program requires “inputs” and “activities” that occur on a regular basis. As such, we recommend that the Census Bureau put in the resources (the input) needed to ensure that activities can occur throughout the intercensal years.

### **6.3.2. Recommendation 5: Develop a multi-level, multi-pronged communication and dissemination plan.**

A key concern coming from the internal stakeholders group was the need for an overarching communication plan; this was ranked as the most important activity by the group (Exhibit 5-45). Likewise, the focus groups and interviews demonstrated that having a communication plan will be essential to ensuring that materials reach the right people, that the materials are integrated into the curriculum, and that administrators and teachers are aware of and buy in to presenting CIS materials (Exhibit 5-29, Exhibit 5-30, Exhibit 5-34).

“Multi-level” refers to the need to reach contacts at the executive level (school boards, states, districts), the school level (administrators, department chairs/heads, grade chairs/heads), and the classroom level (individual teachers). While many felt that working through central offices and boards of education would provide an effective avenue for disseminating information, others felt that it was easy for information to fall through the cracks at those levels. School-level heads provide an important role in finding and filtering programs and materials. Teachers can provide enthusiasm and be a “champion” for programs within a school. Ultimately, CIS materials need to get into the hands of teachers to have the desired impact on students and parents. Teachers will also provide the most direct feedback about the effectiveness of the program materials. As such, CIS will need to include as part of the communication plan a strategy for directing communications to all levels and will need to remain flexible about the communication approach.

“Multi-pronged” refers to the need to reach all audiences through a variety of modes. While teachers cited e-mail as an effective means of communicating with them, our particular set of participants may prefer e-mail more than the general population, given that we recruited them primarily through e-mail. Participants cited a wide variety of communication modes, including Web sites, workshops and training, and mailed materials as avenues for reaching them. As noted in Recommendation 3.3 above, many teachers use online portals to find teaching resources, which could provide another avenue for reaching teachers.

Finally, on the note of having a flexible plan, many participants expressed an interest in having direct contact with a Census Bureau representative to ask questions about CIS or the Census, but few were interested in having formal scheduled meetings (Exhibit 5-31, Exhibit 5-32, Exhibit 5-34). The Census Bureau should initiate contact and maintain regular contact to check-in and express availability, which should suffice for most teachers.

### **6.3.3. Recommendation 6: Establish clear objectives to increase awareness of the CIS program among educators.**

Related to the communication plan is the clear need for CIS to increase awareness of the program among educators. A common theme across the teacher focus groups was a lack of familiarity with the program, and many teachers were enthusiastic about the materials once they looked at them (Exhibit 5-25, Exhibit 5-26). Lack of awareness represents a huge missed opportunity for CIS, as the materials themselves are appealing and potentially useful to teachers in meeting their standards. Tied to the



communication plan recommended above, the CIS program should establish measurable objectives that specify a desired level of awareness within a given time frame over the course of the next year, two years, five years and ten years, with the eventual goal of 95%+ awareness of CIS among teachers. Objectives related to awareness should be a key metric for assessing the success of the most important activity for CIS, the communication plan.

#### **6.3.4. Recommendation 7: Schedule contact with attention to the school year and level of contact.**

As part of the multi-level communication plan, the CIS program should pay special attention to the timing of contact with different levels of contacts (Exhibit 5-34). Contact with central, higher level staff should probably begin early, given that time will be necessary to integrate materials into the curriculum, to receive needed approvals, and to establish a plan for disseminating materials throughout a state or district. Communication with teachers will probably be most effective just prior to and during implementation of specific CIS materials and lessons; teachers are busy with day-to-day concerns and are less likely to have time or mental resources to devote to concerns that are a year or more away.

### **6.4. Question 3: What are the Needs of School Board Members and College/University Faculty Regarding Statistical Literacy and Statistics Education?**

We present two main recommendations to address the third question about the needs of school board members and college/university faculty regarding statistical literacy and statistical education.

#### **Recommendation 8: Provide easy-to-use materials/data/training for statistics and quantitative literacy for teachers, for students at the college level, and beyond.**

Recommendation 8.1: Take lessons from other Web sites with statistical resources.

#### **Recommendation 9: Consider materials that integrate quantitative literacy into a broader range of topics, mirroring writing/reading instruction.**

##### **6.4.1. Recommendation 8: Provide easy-to-use materials/data/training for statistics and quantitative literacy for teachers, for students at the college level, and beyond.**

College and university faculty expressed an interest in having resources that would increase statistical and quantitative literacy among pre-service teachers and other college students in a way that was accessible, relevant and fun, as well as easy to use for instructors and students (section 5.4.2). While these faculty are teaching statistical topics that are more advanced than would be found in K-12, they similarly desire materials that are easy to use and pre-packaged to some degree. Faculty suggested short videos that make learning statistics fun (such as those featured at [khanacademy.org](http://khanacademy.org)) (Exhibit 5-38) and organizing data in a way that makes it easy for faculty to teach about specific topics (Exhibit 5-39).

***Recommendation 8.1: Take lessons from other Web sites with statistical resources.***

One way for the Census Bureau to provide such materials would be to look at some of the Web sites recommended by faculty that they use in teaching statistical topics (Exhibit 5-39). Faculty highlighted the Centers for Disease Control and Prevention (CDC), the U.S. Department of Education, and the Department of Justice as having useful Web sites; likewise a school board member mentioned that the Federal Reserve had a good Web site and training resources (Exhibit 5-36).

As an example of making data available and useful, the Web site for the CDC's Behavioral Risk Factor Surveillance System (<http://www.cdc.gov/brfss/>) allows users to plot trends in health behaviors and risk factors over time, create color-coded maps of data across the U.S., and even run statistical models, including logistic regression, all on the Web site. The interface is user-friendly and the desired data are easy to find. Data can be downloaded in simple ASCII format, which is compatible with nearly any statistical software, and in SAS Transport format, which is easy to use with common software packages used by researchers. Some faculty mentioned that they have their students use free online software, making simple data formats essential; Census Bureau data can be difficult to extract and use in such software.

Faculty also mentioned the Data and Story Library (DASL) at Carnegie Mellon University as a Web site with well-organized data. The site includes simple stories illustrating statistical concepts using data available on the site.

Faculty wanted the Census Bureau Web site to be user-friendly for their students so that they would be interested in using the data beyond a given course (Exhibit 5-38). They wanted sites that allowed students to share projects, sites that were not too densely packed with information to make it easier for students with visual impairments to use reading software (Exhibit 5-39), and links between Federal statistical Web sites (Exhibit 5-40).

**6.4.2. Recommendation 9: Consider materials that integrate quantitative literacy into a broader range of topics, mirroring writing/reading instruction.**

A key idea from the faculty focus group that the CIS program should consider for the entire program is that the focus of the program should be on quantitative literacy as a set of skills similar to reading and writing, rather than a focus on statistics as a subject like history or biology (Exhibit 5-37). Students need the skills to read and interpret data, display data, make inferences and think about causality. These skills relate to statistics but extend beyond them and are applicable across a broad range of topics. If the Census Bureau moves forward to make CIS a continuous program, this orientation could provide the program relevance, create a clear case for integrating into the curriculum, and retain broad appeal across a wide variety of educators who might not otherwise believe that "statistics" is relevant to their subject areas.

## 6.5. Question 4: What Should be the Metrics for Measuring the Impact of the CIS Program for Both the Intercensal Years and the 2020 Census?

We present two main recommendations to address the fourth and final question about the metrics that the CIS program should use to measure the program’s impact during the intercensal years and the 2020 Census.

### **Recommendation 10: Create a logic model of the CIS program and map it to key metrics that the Census Bureau will assess to determine program success.**

Recommendation 10.1: Develop regular means of feedback from audience – CIS will need surveys at small geographic levels and by population groups.

Recommendation 10.2: Map metrics to types of data collection with a planned frequency.

### **Recommendation 11: Develop an application to track program activities and processes, fidelity of program implementation, feedback, and other metrics.**

Recommendation 11.1: Establish a regular system for reporting, distribution, and review of data to guide program improvements.

#### **6.5.1. Recommendation 10: Create a logic model of the CIS program and map it to key metrics that the Census Bureau will assess to determine program success.**

The CIS program should develop a clear logic model and map it to key metrics that assess activities, outputs and outcomes (Section 5.5). A key planning tool to behavior change programs in populations is a logic model. The logic model outlines the “theory” of the program and how it is thought to work, connecting activities to outputs to outcomes, such as mail response rates. The logic model also allows for a program to map key metrics that need to be assessed to understand whether a program is working the way it is supposed to. By assessing all the right metrics, a program can distinguish between shortcomings that occur because the program was not implemented fully versus shortcomings that arise because the “theory” of how the program should work was not correct. The logic model and metrics allow programs to easily detect and repair trouble spots, plan for the future, and anticipate problems to proactively develop solutions.

#### ***Recommendation 10.1: Develop regular means of feedback from audience – CIS will need data collection at small geographic levels and by population groups.***

The internal stakeholder group expressed that feedback from users of CIS program materials was the most important output for the CIS program (Exhibit 5-48). The metrics developed from the focus groups and interviews also rely heavily on feedback from teachers (Exhibit 5-50). The logic model should include key indicators of success that should regularly be measured through systematic data collections such as focus groups, surveys, and Web-based feedback. Different types of data collection will provide different sources of information.

**Recommendation 10.2: Map metrics to types of data collection.**

Related to the above recommendation, CIS should create a matrix of all the key indicators with the sources where the data will come from. Exhibit 6-1 provides a simple example of a few metrics mapped to the sources of data where they can be obtained (often more than one source) and the frequency of data collection from each source.

**Exhibit 6-1: Example matrix that maps metrics to data sources and frequency of data collection.**

Metrics	Source(s)	Frequency of data collection
Number of contacts made with school districts	Program tracking database	Weekly
Teacher ratings of ease of use of materials	Web site survey	Monthly
	Population-based survey	Annually
Teacher ratings of fit with curriculum	Population-based survey	Annually
	Focus groups	Prior to launch of new materials
Percent of schools with at least one contact listed	Program tracking database	Monthly

**6.5.2. Recommendation 11: Develop an application to track program activities and processes, fidelity of program implementation, feedback, and other metrics.**

The CIS program is in need of an automated tracking system to store contact information for districts, superintendents, principals and teachers as well as to track key metrics. The Partnership Program currently used a tracking system (the Integrated Partnership Contact Database [IPCD]) to track contact information for partners as well as their commitments and activities, and the activities of Census staff. CIS should develop a similar program with several key improvements: 1) The program should include an audit trail that tracks changes to a record and keeps different versions – a problem with the IPCD is that users can overwrite existing information, and the system has no way of tracking the old information or even that a change was made; 2) All program metrics should be included in one application for ease of using all the data.

**Recommendation 11.1: Establish a regular system for reporting, distribution, and review of data to guide program improvements.**

Collecting data is only useful if the results are used to help the program improve and to guide future development of program activities. Some data metrics will need to be tracked more frequently than others, and some periods of time will require more tracking than others. The CIS program should establish a process and schedule of reporting and review of data. The review should include comparison of the metrics against established objectives also developed and updated on a regular basis that may differ depending on the objective.

## 6.6. Future questions for planning, implementation and research

These recommendations provide a synthesis of ideas from the “consumers” of the CIS program – teachers, school board members and college/university faculty – and from internal stakeholders and common program planning models. Many key issues remain to be resolved prior to implementing any of these recommendations. We outline several important considerations for CIS moving forward from this research.

### 6.6.1. Prioritizing the recommendations

This report provides 11 recommendations, many with sub-items, for a total of over 20 items. CIS will need to determine the priority among these recommendations, given the limited resources and staff that all programs must work with. Some important recommendations may take longer to implement, which means that they will need to be started earlier. Some recommendations will need to be completed while others fit best later in the planning process. For example, Recommendation 5 to develop a multi-level, multi-pronged communication plan, is a complicated and detailed planning stage that may need to be started immediately; this activity will likely extend over a long period of time and will continue to be maintained in some form continuously (assuming that CIS becomes a continuous program). Other recommendations, however, like Recommendation 8 to create easy-to-use materials for college and university faculty, can be postponed until resources are available to focus on that task. Furthermore, recommendations such as Recommendation 2 to provide ways to tailor materials, are far less important than increasing awareness of the CIS program; once teachers know about the current materials, then it will be possible to provide additional features for the program.

CIS should turn to the logic model, modified as the program wishes, to determine which activities most closely align with its program goals and desired outcomes. Those activities that conceptually drive the program toward meeting its objectives should have top priority.

### 6.6.2. Implementation considerations

Many of the recommendations will immediately elicit questions about how to go about implementing the recommendation. In this section, we suggest two major approaches to addressing a key recommendation from this research, creating a plan for integrating the CIS program with the existing curriculum of schools and school districts. We suggest 1) a top-down approach and 2) a bottom-up approach, both of which can be implemented simultaneously.

**Top-down approach.** As mentioned in the recommendation, all but six states have adopted the Common Core Standards. These standards include standards in math; the math standards include a section on statistics. The CIS program can align materials to fit with these standards, but it is likely that CIS will need to reach out to the Common Core State Standards Initiative and the National Governors Association Center for Best Practices, which developed the standards, to more fully understand how best to integrate the CIS program with these standards that states are adopting.

**Bottom-up approach.** While CIS can mirror materials with the common core standards to efficiently integrate the materials with curricula that many schools will be using, the day-to-day implementation of CIS will need to be tested at the school level. We recommend that CIS plan to conduct ongoing research to assess how materials are able to be integrated into school districts and classrooms. Research methods that will provide CIS with the needed data include key informant interviews with district points-of-contact, schools administrators and teachers; focus groups with these populations to get feedback on potential materials and implementation strategies; and potentially piloting implementation in a number of schools.

### 6.6.3. Future research and implementation questions

We end the report with a sample list of potential questions that the CIS program will need to address in the future to fully understand the workings of the CIS program, how it can best be implemented, and what its effects are.

Program process and implementation:

- What process works best for disseminating materials to schools? Who are the best contacts?
- What practices work best within school districts for implementing CIS in classrooms?
- What is the best method of disseminating CIS materials? To what extent can materials be disseminated via the Web site? To what extent is there a need for a method of disseminating paper-based materials?
- What is the quality of teaching emerging from the CIS materials? Are teachers able to use the materials correctly? Do the materials help teachers disseminate accurate information about the census?
- How much preparation does it require for teachers to use the materials? Do the materials help teachers manage their preparation and classroom time, or are the materials an additional burden?
- What is the best method to train teachers about using the CIS program? Is training required or are the materials sufficient and easy to use?
- What features need to be included in a tracking system? How can the system be designed to make it easy for Census Bureau staff to enter data and track important metrics?
- What sources of data are needed to track all the key metrics? How often should each source of data be collected? How often should the data be reviewed?
- What is the best way to solicit feedback from teachers? How can we solicit feedback without it being burdensome to teachers? How can we solicit feedback in a systematic way to avoid any biases due to self-selection (with a Web feedback survey, for example)?

Program effects

- What do students think about the CIS program? Do students find the material relevant?
- Do the CIS materials increase student interest in statistics and other topics related to census data?

- Do the CIS materials change student knowledge and attitudes about the census? Do they improve statistical literacy among students?
- Which materials are most efficacious in increasing knowledge and improving attitudes toward the census? Which are more effective in increasing statistical literacy?
- To what extent are parents aware of their child’s exposure to the CIS program? What do children tell their parents about the materials? Does the CIS program have an effect on parental attitudes toward the census?

## 7. Acknowledgements

Every research project represents the combined and coordinated effort of many people, and this one is no exception. The authors gratefully acknowledge the efforts and wisdom of the Team at the Census Bureau: Michelle Green, Stacey Jordan, Tasha Boone, Adrienne Oneto, Bettye Moohn, Beverly Roberts, Carol Foley, Elizabeth Ann Dimler, Eric Newburger, Jonathan Zapata, Joungsun Min Miller, JR Wycinsky, Kathleen Kephart, Keith Woodling, Laura Sewell, Mary Bucci, Megan Kindelan, Mike Lotti, Monica Wroblewski, Peter Miller, Troy King, Vicki Glasier, Willette Allen, Steve Jost, Burton Reist, Renee Jefferson-Copeland, and Barbara G. Zamora-Appel.

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## 9. Appendices

## Appendix A: Teacher Focus Group Protocols and Moderator's Guide

### CIS Focus Group Consent Form

Thank you for taking part in this important study for the Census Bureau. Our goal today is to gather information that will support the Census Bureau in shaping the Census in Schools program for the future and the 2020 Census. What you tell us today will help us better understand the needs of administrators and teachers to encourage their participation in the program and to help them convey the importance of the Census to children and their parents more effectively. The session will last 90 minutes.

As moderators and observers we conform to ICF Institutional Review Board requirements by protecting your confidentiality as you participate in this focus group. It is also important that each of you agrees to respect and protect each other's privacy. By consenting to participate in this group, you agree to protect the confidentiality of all other group participants and to keep any information you hear today in strict confidence. This means you will not discuss anything you hear today with anyone outside of this group. Please be aware, however, that we cannot guarantee that other participants will uphold this pledge of confidentiality. If you are concerned about this risk, you should tell us if you would rather be interviewed individually, limit your participation in the group to what you are comfortable discussing, or not participate in the study at all.

We will take notes on what was said today. In the notes we produce after the end of the group, we will not link your name to anything you said. In our report to the Census Bureau, whenever we use a direct quote we will not reveal the source of the quote.

Your participation is voluntary. During the group discussion, you do not have to answer every question or discuss anything you do not wish to. You may stop participating at any time with no negative consequences. If you leave the session before the end you will still receive the \$50. If you agree to participate, please print and sign your name below and write in the date.

Please note that we cannot conduct this focus group unless the protocol and the informed consent forms display valid OMB Control Numbers. Furthermore, you do not need to participate unless the protocols and forms have a valid OMB Control Number. The OMB Control Number is: 0607-0966. This collection expires September 30, 2011.

*I have read and understand the information about this discussion group. I understand that I can stop participating in the group discussion at any time without penalty. I understand that, while confidentiality cannot be guaranteed, ICF will take steps to keep my responses private.*

(Print) \_\_\_\_\_

First Name

Middle Initial

Last Name

Date

(Signature) \_\_\_\_\_

## CIS Focus Group Protocol and Moderator’s Guide

### INTRODUCTION

*(Welcome participants)* - Thank you in advance for choosing to participate in this research. We greatly appreciate your time and participation.

*(Introduce moderator/recorder)* - My name is \_\_\_\_\_ and this is *(introduce co-moderator and/or recorder)* \_\_\_\_\_. We work for ICF International—an organization that conducts research to evaluate programs like the Census in Schools program. In addition to you here today, we will be visiting with a number of administrators and teachers who participated in the Census in Schools program in other parts of the country. At the end, we will compile everything we have learned from all our visits into a report that will be provided to the Census Bureau.

*(Explain Census in Schools program)* - The Census Bureau established the Census in Schools program as an integral component of the communications campaign. Census in Schools helped to educate the next generation about what the Census means to their country, community, and family. When local schools decide to include Census ideas in their curriculum, students learned about the important role the Census has played throughout American history and increased their awareness of the upcoming 2010 Census. For students who came from homes where English may be a second language or where there is a low level of participation in the decennial count, the Census in Schools program also represented an opportunity for students to teach their parents about the importance of participating in this national, civic exercise and the central role it plays in the annual allocation of more than \$400 billion of government funding.

*(Focus participants in on objectives)* - The goals of our discussion today are to ask you to provide your insight into ways that the program can be continued and improved, and what changes may benefit the program for the 2020 Census. In other words, we want to know what will work, what will not work and ways that the program can be improved. You are in an excellent position to help us with that because you can inform us about your organization’s experience as a Census in Schools participant and the process of implementing the program in your schools. Your perspectives are of great value to us no matter how involved you were compared to other Census in Schools participants.

*(Explain focus group procedure)* - The session today will last 90 minutes, and we will not take a formal break. Please feel free to leave the room at any time if you need to. Each of us has a role to play.

- I serve as an impartial data gatherer and discussion regulator (if applicable)-, with help from my co-moderator \_\_\_\_\_.
- Our note-taker serves as a recorder of what you are saying — please know that s/he is not recording your names.
- You serve as experts based on your experience with the Census in Schools Program.

*(Voluntary Participation/Privacy Act)* - Your participation is voluntary – if you choose not to participate, or if you don’t wish to answer a question, there won’t be any negative consequences to you. No data or response will be linked to any individual by name. If we quote something you said in our report, we will

not identify you or your school as the source of the quote. We will analyze your responses as part of a group.

We are asking all of you to maintain confidentiality, and we need to know that we can count on each of you. Can we all agree that what is said in this room stays in this room?

*(Hand out informed consent document to participants and review with the group)* This is a statement for you to sign. It assures us that you are volunteering to participate and it assures you we are taking steps to keep your information private. Please read the statement and sign it before we get started. *(Allow 2-3 minutes for participants to read and sign. Obtain signed agreement from all participants)*

Please note that we cannot conduct this focus group unless the protocol and the informed consent forms display valid OMB Control Numbers. Furthermore, you do not need to participate unless the protocols and forms have a valid OMB Control Number. The OMB Control Number is: 0607-0966. This collection expires September 30, 2011.

*(Explain ground rules)* - To make our discussion go smoothly, it helps to lay out some ground rules:

- Please speak clearly and one at a time.
- Please avoid sidebar conversations.
- There are no right or wrong answers.
- We want to hear the good and the bad.
- We respect and value differences of opinion.

I will read some questions throughout the session for you to discuss. Feel free to expand beyond these specific questions in your answers. The best focus groups are those where participants feel free to explore ideas without limiting them to specific answers.

*(Check for participant questions)* - Are there any questions before we begin?

## QUESTIONS AND PROMPTS

**Note:** *Throughout the questions, if the Focus Group participants all represent a single school, we'll substitute the actual name of that school for "your school." So, for example, we'd say "about how Polk Elementary School became involved..."*

1. We'd like to start by discussing ways in which schools can become involved in the Census in School program – the decision process schools may go through to sign up as a Partner. How can schools become aware of the program, and what may prompt your school to sign up? Let's talk about awareness first:

1a. Awareness – How can schools become aware of the program? Will this awareness lead to participation?

1b. Decision – Take a look at a list of some factors that may prompt schools to participate (on flip chart or handout sheet). Which of these is important to you? Of all of them, which would you say is the most important?

- To make the next generation more aware of the importance or significance of the Census to improve their response rates when they grow to be eligible to complete the Census
- To make parents more aware of the importance or significance of the Census to improve their response rates in the 2020 Census
- To ensure a fair representation of your school’s population or other target population
- To ensure a fair share of federal funding for your school population
- To build the perception of your school as a good public citizen
- Other factors?

1c. Context – How do you see the program as fitting into your curriculum?

2. Now we’d like you to think of specific items such as materials and curriculum that may both benefit the goal of Census in Schools, which is to increase participation rate in the Census, and teaching children in the class room. I’ll open up first for your general comments and then I’ll introduce some specific topics that I’d like to hear more about.

2a. General - What is your general feeling about being a Census in Schools point of contact for your school?

2b. What materials or processes do you think are necessary for the Census in Schools program to be a success? (*Refer interviewee back to the seven factors listed in 1b*)

2c. Materials - The materials provided by the Census in Schools are a key part of the program. What types of materials do you think are necessary, and what is the best way to obtain them? Which types of materials do you foresee as being the most useful or the most popular, and which may be less useful or popular? (To aid your thought process we have provided examples of materials from the 2010 Census in Schools program). Do you think designing your own materials is beneficial as well?

2c. Census Bureau Website – In what ways do you foresee using the Census Bureau Website for future school-related activities? “Show State Facts for Students” was designed to easily fit into grade 3-5 curriculum and is the most used feature on the site. Would something like this that is online and fits exactly into what you are teaching be more preferred than a new lesson plan?

2d. Communication - Do you foresee any reason for you to interact with the Census directly, for example, by contacting a Census representative? Do you think that direct access to a Census representative would be helpful? If so, what type of communication modes do you prefer? For example, do you prefer personal contact via telephone or via e-mail?

2e. Out-of-Class efforts - Do you think your school will do anything to promote the Census in addition to in class lessons or activities? For example, make school-wide announcements?



2f. Student/Parent response - How do you think your students will react to Census in Schools materials? Do you think their views of the Census will change as a result of Census-related class activities and Family Take Home Materials? Do you think parent's views of the Census will change as a result of Census-related class activities and Family Take Home Materials?

2g. Teacher response - How widely do you think participation will spread through your school? Will additional materials from the Census be an added burden to the normal workload? Can you give us some examples?

3. Now let's talk about what Census should be doing to develop Census in Schools as a strong and successful program. In your answers to these questions, we hope to find creative suggestions for ways to attract and engage educators in the years leading to the next Census, with the understanding that financial support may not be feasible as a mainstay. Keeping this in mind:

3a. Are there any specific approaches you believe the Census in Schools program should avoid?

4. If we've missed any topics today, do you have anything to add?

## **CONCLUSION**

*Remind the group that we ask them not to discuss any comments they heard in the group today.*

This concludes our discussion. Thank you for taking the time to share your opinions and experiences with us. Your thoughts are valuable to our efforts to inform the Census in Schools program on these matters. We will now distribute the \$50 payment and we will ask each of you to sign a receipt.

**CIS Focus Group Acknowledgement of Receipt of Payment**

I acknowledge receipt of the \$50 payment for participating in the CIS Focus Group in [city, state] on [date]

Name, printed

Signature

## **Appendix B: College and University Focus Group Protocol and Moderator's Guide**

**College/University Focus Group: CIS Focus Group Consent Form**

Thank you for taking part in this important study for the Census Bureau. Our goal today is to gather information that will support the Census Bureau in shaping the Census in Schools program for the future and the 2020 Census. What you tell us today will help us better understand the needs of higher-level educators such as colleges and universities in terms of statistics education to support future Census efforts. The session will last 90 minutes.

As moderators and observers we conform to ICF Institutional Review Board requirements by protecting your confidentiality as you participate in this focus group. It is also important that each of you agrees to respect and protect each other’s privacy. By consenting to participate in this group, you agree to protect the confidentiality of all other group participants and to keep any information you hear today in strict confidence. This means you will not discuss anything you hear today with anyone outside of this group. Please be aware, however, that we cannot guarantee that other participants will uphold this pledge of confidentiality. If you are concerned about this risk, you should tell us if you would rather be interviewed individually, limit your participation in the group to what you are comfortable discussing, or not participate in the study at all.

We will take notes on what was said today. In the notes we produce after the end of the group, we will not link your name to anything you said. In our report to the Census Bureau, whenever we use a direct quote we will not reveal the source of the quote.

Your participation is voluntary. During the group discussion, you do not have to answer every question or discuss anything you do not wish to. You may stop participating at any time with no negative consequences. If you leave the session before the end you will still receive the \$50. If you agree to participate, please print and sign your name below and write in the date.

*I have read and understand the information about this discussion group. I understand that I can stop participating in the group discussion at any time without penalty. I understand that, while confidentiality cannot be guaranteed, ICF will take steps to keep my responses private.*

(Print) \_\_\_\_\_

First Name	Middle Initial	Last Name	Date
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(Signature) \_\_\_\_\_

## College/University Focus Group: CIS Focus Group Protocol and Moderator’s Guide

### INTRODUCTION

*(Welcome participants)* - Thank you in advance for choosing to participate in this focus group. We greatly appreciate your time and willingness to be here.

*(Introduce moderator/recorder)* - My name is \_\_\_\_\_ and this is *(introduce co-moderator and/or recorder)* \_\_\_\_\_. We work for ICF International—an organization that conducts evaluations of Federal programs.

*(Explain Census in Schools program)* - The U.S. Census Bureau established the Census in Schools program as an integral component of the communications campaign for the 2010 Census. Census in Schools helped to educate K-12 students about what the Census means to their country, community, and family. When local schools decided to include Census ideas in their curriculum, students learned about the important role the Census has played throughout American history and increased their awareness of the upcoming 2010 Census. For students who came from homes where English may be a second language or where there is a expectation of a low level of participation in the decennial count, the Census in Schools program also represented an opportunity for students to teach their parents about the importance of participating in this national, civic exercise and the central role it plays in the annual allocation of more than \$400 billion of government funding.

In addition to meeting with you here today, we will be conducting focus group s with representatives of elementary, middle, and high schools that participated in the Census in Schools program in other parts of the country. At the end, we will compile everything we have learned from all our visits into a report that will be provided to the Census Bureau.

*(Focus participants in on objectives)* - The goals of our discussion today are to ask you to provide your insight into ways that the program can be continued and improved, and what changes may benefit the program for the 2020 Census. One of the key research questions in our study of the CIS program asks “What are the needs of executive-level educators regarding statistical literacy and the types of materials Federal statistical agencies could provide to be most helpful with regards to statistics education, from the most basic level (kindergarten) to the most advanced (graduate studies)?” We have invited you here today to help answer this question.

*(Explain focus group procedure)* - The session today will last 90 minutes, and we will not take a formal break. Please feel free to leave the room at any time if you need to. Each of us has a role to play.

- I serve as an impartial data gatherer and discussion facilitator *(if applicable-, with help from my co-moderator \_\_\_\_\_)*.
- Our note-taker serves as a recorder of what you are saying — please know that s/he is not recording your names.
- You serve as experts based on your knowledge of statistics in higher education.

*(Voluntary Participation/Privacy Act)* - Your participation is voluntary – if you choose not to participate, or if you don't wish to answer a question, there won't be any negative consequences to you. No data or response will be linked to any individual by name. If we quote something you said in our report, we will not identify you or your college or university as the source of the quote. We will analyze your responses as part of a group.

We are asking all of you to maintain confidentiality, and we need to know that we can count on each of you. Can we all agree that what is said in this room stays in this room?

*(Hand out informed consent document to participants and review with the group)* This is a statement for you to sign. It assures us that you are volunteering to participate and it assures you we are taking steps to keep your information private. Please read the statement and sign it before we get started. *(Allow 2-3 minutes for participants to read and sign. Obtain signed agreement from all participants)*

*(Explain ground rules)* - To make our discussion go smoothly, it helps to lay out some ground rules:

- Please speak clearly and one at a time.
- Please avoid sidebar conversations.
- There are no right or wrong answers.
- We want to hear the good and the bad.
- We respect and value differences of opinion.

I will read some questions throughout the session for you to discuss. Feel free to expand beyond these specific questions in your answers. The most productive focus groups are those where participants feel free to explore ideas without limiting them to specific answers.

*(Check for participant questions)* - Are there any questions before we begin?

## QUESTIONS AND PROMPTS

**Note:** *Throughout the questions, if the Focus Group participants all represent a single college or university, we'll substitute the actual name of that school for "your school." So, for example, we'd say "about how MIT became involved..."*

### Statistical Literacy

We'd like to begin by talking about how you see the current landscape of statistical literacy in the U.S., particularly among college students.

1. Other than funding and budgets, what are the biggest challenges facing you and your college/university today in statistics education?
  - Which of these challenges could outside organizations help you meet?
  - What, specifically, could these organizations do to help the students, the educational process, and you as an educator?
  - In what ways do you see them as being particularly well-suited to contribute to a solution?

2. Some outside organizations offer teaching resources such as data to illustrate descriptive statistics which might appeal to students interested in learning with real-world data, or with a multivariate dataset.
  - What organizations come to mind when you think of these types of resources?
  - Which, if any, do you use? Why do you use some and not others?
  - What are some resources which you would like to have, but cannot find?
3. What online resources for teaching statistics from outside entities (that is, not your textbook publisher or university) do you most frequently use with your students or recommend for their use?
  - How would you like to see these changed or expanded?

### Online Resources

4. The Census Bureau hosts a wide variety of datasets and statistical products on its Website. These offer resources for such teaching needs as data to illustrate various statistical concepts that might appeal to students as well as multivariate datasets that can serve as the basis for a series of lectures on conducting comprehensive data analysis. Some of the questions that we are interested in include:
  - Which online Census Bureau resources do you most frequently consult for teaching?
  - Which online Census Bureau resources do you most frequently consult for your own research?
  - Which online Census Bureau resources do you recommend for your students' use?
  - Would you like to see expanded offerings on the Census Bureau Website? What would those be?
  - If you do not use the Census Bureau as a resource, what resources do you use for your teaching or research needs?
5. In which of these areas would you most like to see expanded resources: (prompt if necessary)
  - Publishing an electronic journal or newsletter for college/university level instructors
  - Hosting a discussion list, webinars, or newsgroups (online community)
  - Hosting a professional Web site for college faculty
  - Hosting materials for college administrators
  - Hosting free statistical data
  - Hosting demonstrations of programming languages
  - Hosting a student Web site
  - Hosting online workshops and mentoring programs for students
  - Online course materials
  - Online texts
  - Interactive learning modules
  - Online survey-design tools
  - Online data analysis tools
  - Videos
  - Computer games

6. Would you like to see more links from the Census Bureau Website to statistical resources produced by other government or private organizations? For which organizations?

### **In-Person Training**

7. The Census Bureau offers training materials and conducts workshops and other events to help increase customer awareness, access, understanding and use of information collected by the Census Bureau. Some courses are Internet based, while other courses are held near Census Bureau headquarters in Washington, D.C. Customized programs are available and group training is available on request.
  - Before coming to this group, were you aware of Census Bureau in-person training opportunities?
  - Have you ever used Census Bureau In-person training?
  - Do you know of anyone who has?
  - If yes, what did you or your colleague think about it?

### **Research Collaboration and Partnerships**

8. The Census Bureau participates in the American Statistical Association, National Science Foundation, Census Bureau Research Fellow program. This program allows senior statisticians, social scientists, computer scientists, geographers, and others to come to the U.S. Census Bureau as Research Fellows for a period of 6 to 12 months to use Census Bureau data sets and interact with Census Bureau staff.
  - Before coming to this group, were you aware of Census Bureau research collaboration opportunities?
  - Have you ever participated in this program?
  - Do you know of anyone who has?
  - If yes, what did you or your colleague think about it?
  - Would you recommend that the Census Bureau develop additional partnerships with agencies or organizations such as NASA, EPA, or the Institute for Education Statistics?
  - How would you recommend that the Census Bureau more closely align its education efforts with its counterparts in the international statistical community?

### **Teacher Preparation**

9. Now we'd like to talk about teacher preparation at your college/university. Teachers explore problems that require them to formulate questions; collect, organize, analyze, and draw conclusions from data; and apply the basic concepts of probability.
  - At your college/university, do primary and secondary teaching students receive statistical education through the mathematics or statistics departments, or solely through their program within the School of Education?
  - To your knowledge, do students in your School of Education receive any instruction based on Census Bureau materials or using Census data?
  - Can you suggest ways that Census materials or data could be further integrated into teacher training at your college/university?



- How could the Census Bureau encourage greater interdepartmental communication and team teaching to more clearly illustrate the connections between statistics and the social sciences?
- How could the Census Bureau support the design of materials and tools for improving the way statistics is taught to pre-service teachers?

### **Role of the U.S. Census Bureau**

10. Finally, we'd like to explore the role of the U.S. Census Bureau within academe.

- How can the Census Bureau amplify the ways in which it provides resources direct to students outside the classroom?
- How can the Census Bureau reach a larger percentage of the college population?
- What means would you suggest the Census Bureau use to increase outreach to students to consider a career with the Bureau? What material, programs, or internships might play a part in this effort?
- What do you see as the key roles the Census Bureau currently plays in supporting statistics education at the college/university level?
- What is your opinion on how the Census Bureau can most effectively increase understanding of, and appreciation for, everyday use of statistics via leadership in statistics education?

### **Wrap-up**

11. If we've missed any topics today, do you have anything to add?

### **CONCLUSION**

*Remind the group that we ask them not to discuss any comments they heard in the group today.*

This concludes our discussion. Thank you for taking the time to share your opinions and experiences with us. Your thoughts are valuable to our efforts to inform the Census in Schools program on these matters. We will now distribute the \$50 payment and we will ask each of you to sign a receipt.

**College/University Focus Group: CIS Focus Group Acknowledgement of Receipt of Payment**

I acknowledge receipt of the \$50 payment for participating in the CIS College/University Focus Group in [city, state] on [date]

Name, printed

Signature

## Appendix C: School Board Interview Guide

## INTRODUCTION

*(Welcome participants)* - Thank you in advance for choosing to participate in this research. We greatly appreciate your time and participation.

*(Introduce moderator/recorder)* - My name is \_\_\_\_\_ and this is *(introduce co-moderator and/or recorder)* \_\_\_\_\_. We work for ICF International—an organization that conducts research to evaluate programs like the Census in Schools program. In addition to you here today, we will be visiting with a number of administrators and teachers who participated in the Census in Schools program in other parts of the country. At the end, we will compile everything we have learned from all our visits into a report that will be provided to the Census Bureau.

*(Explain Census in Schools program)* - The Census Bureau established the Census in Schools program as an integral component of the communications campaign. Census in Schools helped to educate the next generation about what the Census means to their country, community, and family. When local schools decide to include Census ideas in their curriculum, students learned about the important role the Census has played throughout American history and increased their awareness of the upcoming 2010 Census. For students who came from homes where English may be a second language or where there is a low level of participation in the decennial count, the Census in Schools program also represented an opportunity for students to teach their parents about the importance of participating in this national, civic exercise and the central role it plays in the annual allocation of more than \$400 billion of government funding.

*(Focus participants in on objectives)* - The goals of our discussion today are to ask you to provide your insight into ways that the program can be continued and improved, and what changes may benefit the program for the 2020 Census. In other words, we want to know what will work, what will not work and ways that the program can be improved. You are in an excellent position to help us with that because you can inform us about your school division's/your school system's/the D.C. public schools' experience as a Census in Schools participant and the process of implementing the program in your schools. In addition, you may be able to provide a perspective on statistical literacy among teachers and students in your schools, which is another area of interest for the Census Bureau. Your perspectives are of great value to us no matter how involved you were compared to other Census in Schools participants.

*(Explain focus group procedure)* - The session today will last 90 minutes, and we will not take a formal break. Please feel free to leave the room at any time if you need to. Each of us has a role to play.

- I serve as an impartial data gatherer and discussion regulator (if applicable)-, with help from my co-moderator \_\_\_\_\_.
- Our note-taker serves as a recorder of what you are saying — please know that s/he is not recording your names.
- You serve as experts based on your experience with the Census in Schools Program.

*(Voluntary Participation/Privacy Act)* - Your participation is voluntary – if you choose not to participate, or if you don't wish to answer a question, there won't be any negative consequences to you. No data or

response will be linked to any individual by name. If we quote something you said in our report, we will not identify you or your administrative unit as the source of the quote. We will analyze your responses as part of a group.

We are asking all of you to maintain confidentiality, and we need to know that we can count on each of you. Can we all agree that what is said in this room stays in this room?

*(Hand out informed consent document to participants and review with the group)* This is a statement for you to sign. It assures us that you are volunteering to participate and it assures you we are taking steps to keep your information private. Please read the statement and sign it before we get started. *(Allow 2-3 minutes for participants to read and sign. Obtain signed agreement from all participants)*

Please note that we cannot conduct this focus group unless the protocol and the informed consent forms display valid OMB Control Numbers. Furthermore, you do not need to participate unless the protocols and forms have a valid OMB Control Number. The OMB Control Number is: 0607-0966. This collection expires September 30, 2011.

*(Explain ground rules)* - To make our discussion go smoothly, it helps to lay out some ground rules:

- Please speak clearly and one at a time.
- Please avoid sidebar conversations.
- There are no right or wrong answers.
- We want to hear the good and the bad.
- We respect and value differences of opinion.

I will read some questions throughout the session for you to discuss. Feel free to expand beyond these specific questions in your answers. The best focus groups are those where participants feel free to explore ideas without limiting them to specific answers.

*(Check for participant questions)* - Are there any questions before we begin?

## QUESTIONS AND PROMPTS

**Read:** *Throughout the questions, we will refer to “your schools;” by this we mean the schools administered by your school division/by your school system/in the D.C. public schools.*

1. We’d like to start by discussing ways in which schools can become involved in the Census in School program – the decision process schools may go through to sign up as a Partner. How can schools become aware of the program, and what may prompt your schools to sign up? Let’s talk about awareness first:

1a. Awareness – How can schools become aware of the program? Will this awareness lead to participation?

1b. Decision – Take a look at a list of some factors that may prompt schools to participate (on flip chart or handout sheet). Which of these is important to you? Of all of them, which would you say is the most important?

- To make the next generation more aware of the importance or significance of the Census to improve their response rates when they grow to be eligible to complete the Census
- To make parents more aware of the importance or significance of the Census to improve their response rates in the 2020 Census
- To ensure a fair representation of your school’s population or other target population
- To ensure a fair share of federal funding for your school population
- To build the perception of your school as a good public citizen
- Other factors?

1c. Context – How do you see the program as fitting into the curriculum in your schools?

2. Now we’d like you to think of specific items such as materials and curriculum that may both benefit the goal of Census in Schools, which is to increase participation rate in the Census, and teaching children in the class room. I’ll open up first for your general comments and then I’ll introduce some specific topics that I’d like to hear more about.

2a. General – As an administrator, would you prefer to see the Census Bureau work through the School Board or Superintendent’s office to establish points of contact for the entire administrative unit, or would it be better for the Census Bureau to contact individual schools directly?

2b. What materials or processes do you think are necessary for the Census in Schools program to be a success? (*Refer interviewee back to the six factors listed in 1b*)

2c. Materials - The materials provided by the Census in Schools are a key part of the program. What types of materials do you think are necessary, and what is the best way to obtain them? Which types of materials do you foresee as being the most useful or the most popular, and which may be less useful or popular? (To aid your thought process we have provided examples of materials from the 2010 Census in Schools program). Do you think designing your own materials is beneficial as well?

2c. Census Bureau Website – In what ways do you foresee using the Census Bureau Website for future school-related activities? “Show State Facts for Students” was designed to easily fit into grade 3-5 curriculum and is the most used feature on the site. Would something like this that is online and fits exactly into what your instructors are teaching be more preferred than a new lesson plan?

2d. Communication - Do you foresee any reason for you to interact with the Census directly, for example, by contacting a Census representative? Do you think that direct access to a Census representative would be helpful? If so, what type of communication modes do you prefer? For example, do you prefer personal contact via telephone or via e-mail?

2e. Out-of-Class efforts - Do you think your schools will do anything to promote the Census in addition to in class lessons or activities? For example, make school-wide announcements?

2f. Student/Parent response - How do you think your students will react to Census in Schools materials? Do you think their views of the Census will change as a result of Census-related class activities and Family Take Home Materials? Do you think parent's views of the Census will change as a result of Census-related class activities and Family Take Home Materials?

2g. Teacher response - How widely do you think participation will spread through your schools? Will additional materials from the Census be an added burden to the normal workload? Can you give us some examples?

3. In addition to the goals of the CIS program mentioned earlier, the program also has the potential to strengthen statistical literacy among teachers and students across grades K through 12. We are also speaking with university-level educators to get a sense of how the Census Bureau can support statistical literacy among college students, especially those who may go into the teaching profession. We'd like to ask you how the Census Bureau could help teachers and students in your schools improve their statistical literacy.

3a. Other than funding and budgets, what are the biggest challenges facing your schools in terms of statistical literacy?

3b. Do you believe newly-graduated teachers are adequately trained in statistics and their use in daily life?

3c. Do teachers in your system have adequate opportunities through in-service training or other methods to obtain a good familiarity with statistics and their use?

3d. How could the Census Bureau play a role in helping your teachers strengthen their statistical knowledge – for example through online or in-person training, online tutorials, or a Website where teachers can learn more about statistics?

3e. What about for your students? How could the Census Bureau help them form a base of knowledge in statistics?

3f. What methods of statistical literacy training from the Census Bureau do you believe would be most accessible to your teachers and most easily fit in with their competing demands? What methods would be most accessible to students?

4. Now let's talk about what Census should be doing to develop Census in Schools as a strong and successful program. In your answers to these questions, we hope to find creative suggestions for ways to attract and engage educators in the years leading to the next Census, with the understanding that financial support may not be feasible as a mainstay. Keeping this in mind:

4a. Are there any specific approaches you believe the Census in Schools program should avoid?

5. If we've missed any topics today, do you have anything to add?

## **CONCLUSION**

*Remind the group that we ask them not to discuss any comments they heard in the group today.*

This concludes our discussion. Thank you for taking the time to share your opinions and experiences with us. Your thoughts are valuable to our efforts to inform the Census in Schools program on these matters.



## Appendix D: Annotated Bibliography for Literature Review

### Health Program Models

**Neumark-Sztainer, D., Haines, J., Robinson-O'Brien, R., Hannan, P. J., Robins, M., Morris, B., & Petrich, C. A. (2009). 'Ready. Set. ACTION!' A theater-based obesity prevention program for children: a feasibility study. *Health Education Research, 24, 3, 407-420.***

Evaluation of a theater-based after-school obesity prevention program based on Social Cognitive Theory. Process evaluation metrics (assessment of outputs) included program participation, satisfaction and perceived impact among students and parents. Participation was assessed with attendance sheets, and satisfaction and impact (including behavioral intentions) were measured with surveys of students and parents. Outcome evaluation metrics for students were based in the constructs of Social Cognitive Theory and included desired behavioral outcomes (healthy eating, physical activity, reduced television viewing, response to satiety cues); child personal factors (self-efficacy and enjoyment of desired behaviors, weight concerns, body satisfaction and self-worth); and home environmental factors (availability/accessibility of fruits/vegetables, family support for physical activity/reduced television time, parent discussion about weight).

**Price, S. M., Huhman, M., & Potter, L. D. (2008). Influencing the Parents of Children Aged 9–13 Years: Findings from the VERB™ Campaign. *American Journal of Preventative Medicine, 34, 6, S267-S274.***

Evaluation of CDC's VERB program in which children were targeted with media to improve their physical activity and parents were a secondary target audience. Metrics included parents' awareness of VERB and parents' attitudes toward physical activity, belief about their ability to influence their child's physical activity, belief about the importance of their child's physical activity, perceived barriers to their children engaging in physical activity, and behavioral support (attending child sporting events, providing transportation for physical activity, being physically active with child).

**Elder, R. W., Nichols, J. L., Shults, R. A., Sleet, D. A., Barrios, L. C., Compton, R., et al. (2005). Effectiveness of school-based programs for reducing drinking and driving and riding with drinking drivers: A systematic review. *American Journal of Preventive Medicine, 28, 288-304.***

A review of 13 evaluation studies of school-based programs to reduce drinking and driving and riding with drunk drivers. Logic model include school-based health promotion as the key activity. Short-term outcomes are knowledge of consequences of and alternatives to drinking and driving, development of refusal and other skills, and change in perceived social norms about the acceptability and prevalence of drunk driving. Middle-term outcomes include changes in attitudes and behavioral intentions, and peer, media and societal influences. Long-term behavioral outcomes include not drinking and driving or riding with a drunk driver, and long-term impacts are reduced fatalities/injuries from alcohol-related crashes.

**Hahn, R., Fuqua-Whitley, D., Wethington, H., Lowy, J., Crosby, A., Fullilove, M, et al. (2007). Effectiveness of universal school-based programs to prevent violent and aggressive behavior: A systematic review. *American Journal of Preventive Medicine, 33, S114-S129.***

A review of school-based programs to reduce violence and aggressive behaviors such as bullying. Logic model includes metrics related to social competency skills, attitudes toward violence, and social environment, including norms around violence.

### **Environmental Education Program Models**

**Connor, J., Hay, M., & Coleman, G. (2006). Extension through education programs with kids - who are we educating? Australian Pacific Extension. Last retrieved on April 19, 2011 from [http://www.regional.org.au/au/apen/2006/refereed/2/3073\\_connorj.htm](http://www.regional.org.au/au/apen/2006/refereed/2/3073_connorj.htm).**

School-based program about land and animal management. This evaluation assesses parental awareness about the program from their children. Parents were surveyed by telephone three to seven days after the presentation of the program in class. Metrics included awareness of the program, awareness of specific codes related to animal management, and intention to change animal management behaviors.

**Legault, L & Pelletier, L. G. (2000). Impact of an environmental education program on students' and parents' attitudes, motivation, and behaviours. Canadian Journal of Behavioral Science, 32, 4, 243-250.**

Survey-based evaluation of the impact of an environmental education program on students and their parents. Metrics included knowledge about ecological issues, attitudes toward the environment, motivation toward the environment, and frequency of environmental behaviors.

**Volk, T. L. & Cheak, M. J. (2003). The effects of an environmental education program on students, parents, and community. The Journal of Environmental Education , 34, 4, 12-15.**

Evaluation of an environmental education program using both quantitative and qualitative methods. The program “is a skill development program designed to help learners take an in-depth look at environmental issues in their community, to make data-based decisions about those issues, and to participate in issue resolution.” Quantitatively-measured metrics included student critical thinking skills, including making conclusions, making inferences, identifying bias; and environmental literacy, including knowledge, skills and behaviors. Qualitatively-measured metrics included extent of program impact on students reading/writing abilities, motivations, skills and behaviors; student interest in the environment and behaviors toward the environment; awareness and perceived importance of the program for students, teachers, parents and community members; and attitudes toward the program among students, teachers, parents and community members.

### **General evaluation and metrics issues**

**Newton, X. A., & Llosa, L. (2010). Toward a more nuanced approach to program effectiveness assessment: hierarchical linear models in K-12 program evaluation. American Journal of Evaluation, 31(2), 162-179.**

Discusses the methodological challenge for evaluators of connecting program implementation factors measured at the classroom or teacher level with individual student outcomes. Addresses the potential benefits of multi-level modeling statistical techniques to provide appropriate estimates of program outcomes and determining which factors (activities and outputs) are related to program outcomes.

**Green, L., & Kreuter, M. (2004). *Health Program Planning: An Educational and Ecological Approach*. (4<sup>th</sup> ed.). New York: McGraw Hill.**

Details the steps of the PRECEDE-PROCEED planning model, which includes all the planning stages of a program, program implementation, and evaluation. A popular and comprehensive logic model framework specifically designed for health promotion but applicable to other behavior change programs.

**Glanz, K., Rimer, B. K., and Viswanath, K. (2008). *Health Behavior and Health Education: Theory, Research, and Practice*. (4<sup>th</sup> ed.) San Francisco, CA: John Wiley and Sons, Inc.**

Provides an overview of the major behavior change theories in public health. Useful for understanding key constructs in behavior change theories that can inform logic models, program messages and metrics to assess.

## Appendix E: Structured Discussion Protocol for Census Bureau Stakeholders

### Identifying New Metrics

#### Census in Schools (CIS) Program

CIS Internal Stakeholder Pre-Session Worksheet	E-2
CIS Structured Discussion Protocol and Moderator’s Guide	E-3

## CIS Internal Stakeholder Pre-Session Worksheet

### INTRODUCTION

Thank you for completing this worksheet. We greatly appreciate your time and participation.

ICF is helping the Census in Schools (CIS) program determine what CIS needs to measure to establish whether the program is successful and assess whether the program is working the way it should. ICF will conduct a structured group discussion with you and other representatives from the Census Bureau to identify and prioritize measures that will enable the Census Bureau to track the overall operations and success of the Census in Schools (CIS) program.

The first step in this process is for you to brainstorm your own list of things that the CIS program should measure and keep track of to determine whether the program is successful. **Please do not discuss your responses with anyone else at the Census Bureau** – for this first step, it is important that you come up with your own ideas. During the group discussion, we will review and consolidate your recommendations, and ICF will create a final report summarizing the findings.

In the space below, please list as many measures as you can think of that the CIS program might want to keep track of to assess the success of the program and to determine whether it is working the way that program staff think it should work. Consider the following to help you get started:

- Measures might be related to CIS/Census staff, field staff, schools, school officials/administrators, school teachers, students, and parents.
- Measures might assess activities, awareness, attitudes, materials/messages disseminated, use of materials, knowledge.
- Think about the perfect CIS program: What would that look like? What would you need to measure to know that the program had gone perfectly?
- What are the main goals and objectives of every stage of the program? What would you need to measure to know that you had reached those goals and objectives?

Now start your list here:

## CIS Structured Discussion Protocol and Moderator’s Guide

### Note: Materials needed for structured discussion

- **Two flip charts if possible – one that will contain prepared lists, another with blank sheets**
- **Markers**
- **Index cards (10-20 per person)**
- **Pens/pencils for participants**
- **Paper pads for participants**
- **Audio recorder**

### INTRODUCTION

*(Welcome participants)* - Thank you in advance for participating in this research. We appreciate your time and willingness to come.

*(Introduce moderator/recorder)* - My name is \_\_\_\_\_ and this is *(introduce co-moderator and/or recorder)* \_\_\_\_\_.

*(Focus participants in on objectives)* - The goals of our discussion today are to identify and prioritize metrics that can be used to assess the successful operations and impact of the Census in Schools Program for the 2020 Census, as well as during the intercensal years. You are in an excellent position to help us with this because you bring a wealth of personal experience as well as hopes and aspirations for the Census in Schools program. Your perspectives are very valuable to us, regardless of the degree to which you were involved in the program.

*(Explain focus group procedure)* – The session today will last three hours, and we will take a formal break about half-way through. Please feel free to leave the room at any time if you need to.

*(Explain the nominal group technique)*. We will be using a method for today's discussion called "The Nominal Group Technique". This method is designed to elicit consensus from group members on a set of issues, in a structured fashion. The specifics of the method will become apparent as we go along.

During our discussion, each of us has a role to play.

- I serve as the discussion facilitator and regulator
- Our note-taker serves as a recorder of what you are saying
- You serve as subject matter experts based on your experience.

*(Explain ground rules)* - To make our discussion go smoothly, it helps to lay out some ground rules:

- Please speak clearly and one at a time
- Turn off all electronic devices
- Please avoid sidebar conversations
- Respect and value differences of opinion
- In this room, all of you are equal participants, regardless of where in the Census Bureau hierarchy you are situated

Are there any questions before we begin?

## QUESTIONS AND PROMPTS

Prior to this meeting, we sent you a short pre-session worksheet requesting that you identify those measures of the Census in Schools program that would demonstrate successful implementation and impact of the program. We summarized your responses in several lists that we will use to guide our discussion.

*(Focus participants on "metrics")* But first, we need to define what constitutes a "metric".

*(Open flip chart, and tear off sheet and paste somewhere in the room so that all can see)*

### We define a metric as:

*an **activity, output, or outcome** that can be tracked by the Census Bureau that directly measures program success or is correlated with CIS program success (e.g., greater awareness of the census in hard-to-count areas; higher mail response rates).*

*(Explain the three key terms for participants and distinguish among them: activity, output, outcome)*

- **Activities** are the processes, tools, events, technology, and actions that are an intentional part of the program implementation. They can be undertaken by someone at Census, by a teacher in a school, by a student, or by a parent, for example.
- **Outputs** are the direct products of program activities and may include types, levels and targets of services to be delivered by the program. They are quantifiable and can be represented by numbers such as, number of schools using CIS materials, number of students exposed to CIS, and so on.
- **Outcomes** are the specific changes in program participants' or target population's behavior, knowledge, skills, status or level of functioning. "Mail response rates" is an example of an outcome.

We have categorized your suggestions from the pre-session worksheet according to whether they are activities, outputs, and outcomes.

*(Lists will be already on the flip chart, and we will tear off sheets and put them around the room as the discussion takes place)*

## Activities as Metrics

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First, we will consider **ACTIVITIES**.

*(Facilitator reads list of all the activities on Flip Chart, and these are hung on the walls)*

Now, let's go around the room and add a bit more to this list. We are looking for additional ideas right now – we will discuss the ideas in more detail later.

*(Prompt participants for additional activities. Use round-robin technique until no more ideas are generated)*

We'd like to start by discussing which activities, if measured, constitute Census in Schools Program success. *(Turn to Flip Chart)*

- *Facilitator reviews item by item, asking:*
  - Why is that important to measure?
  - How should Census measure it (e.g., through a system? Formally? Informally?)
  - How frequently should Census measure it?
  - What are the challenges and barriers to measuring it?
  - What are the costs associated with measuring it? Is it feasible?
  - Who within Census should "own" this measure?

*(Nominal Voting Process occurs)*

Now we'd like to have you vote on the lists we've already discussed. The goal is to have at the end of this process a group consensus based upon your consolidated prioritization of the most important metrics for activities, outputs, and outcomes.

*(The voting process is described below – this will be the same for activities, outputs, and outcomes)*

- *Give each group member a stack of index cards. Ask each group member to identify, for example, the ten responses that they feel are most important, identifying each response on a separate index card by the letter it has been assigned on the flipchart.*
- *Next, ask the group members to rank order the ten responses they selected in order of priority, from one to ten (ten being the highest priority, and one being the least high priority). They should do this by writing the rank order value of each response next to the letter for the response on their index card. When done, ask the group members to reorganize their index cards in alphabetical order.*
- *Reading from the flipchart, read through the list of responses in alphabetical order. As you read out the letter corresponding with a response, ask each group member to state the rank (if any) that they gave it.*
- *Aggregate all the ranks for each response on the flip chart. Those responses with the highest aggregated value constitute the top priorities for the group.*
- *If necessary, a second round of rankings can be done to further reduce the responses to a group decision.*

## Outputs as Metrics

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Next, we will consider **OUTPUTS**.

*(Facilitator reads list of all the OUTPUTS on Flip Chart, and these are hung on the walls)*

Now, let's go around the room and add some more ideas to this list. We are looking for additional ideas right now – we will discuss them in more detail later.

*(Prompt participants for additional outputs. Use round-robin technique until no more ideas are generated)*

Let's now discuss which outputs, if measured, constitute Census in Schools program success. *(Turn to Flip Chart)*

- *Facilitator reviews item by item, asking:*
  - Why is that important to measure?
  - How should Census measure it (e.g., through a system? Formally? Informally?)
  - How frequently should Census measure it?
  - What are the challenges and barriers to measuring it?
  - What are the costs associated with measuring it? Is it feasible?
  - Who within Census should "own" this measure?

*(Nominal Voting Process occurs)*

### **Outcomes as Metrics**

---

Finally, we will consider **OUTCOMES**.

*(Facilitator reads list of all the OUTCOMES on Flip Chart, and these are hung on the walls)*

Now, let's go around the room and add some more outcomes to this list. We are looking for additional ideas right now – we will discuss these outcomes in more detail later.

*(Prompt participants for additional outcomes. Use round-robin technique until no more ideas are generated)*

Let's discuss which outcomes, if measured, constitute Census in Schools program success. *(Turn to Flip Chart)*

- *Facilitator reviews item by item, asking:*
  - Why is that important to measure?
  - How should Census measure it (e.g., through a system? Formally? Informally?)
  - How frequently should Census measure it?
  - What are the challenges and barriers to measuring it?
  - What are the costs associated with measuring it? Is it feasible?
  - Who within Census should "own" this measure?

*(Nominal Voting Process occurs)*

### **Cautions and Concerns**

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5. Are there any specific measures you believe the Census in Schools program should avoid?

**Wrap-Up**

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6. If we've missed any topics today, do you have anything to add?

**CONCLUSION**

This concludes our discussion. Thank you for taking the time to share your opinions and experiences with us. Your thoughts are valuable to our efforts to inform the Census in Schools program on these matters.