

Counting on Higher Education: Teaching and Assessing Knowledge and Participation in the 2020 Census

Carah Ong Whaley, Dena Pastor, and Abraham Goldberg

Abstract

Mandated under Article 1, Section 2 of the United States Constitution, the decennial census determines the distribution of power and resources based upon population counts. College students are a hard-to-count population with limited knowledge about why the census matters and how to complete it. Politics and the global health pandemic made the 2020 Census exceptionally challenging. A university's center for civic engagement and students in a political science class collaborated with local, state, and national partners to develop and implement a campuswide 2020 Census Education and Engagement Program. Assessments of 2020 Census knowledge were administered to almost 2,000 students on a required university-wide Assessment Day. Subsequent data collection indicated knowledge about the 2020 Census is malleable, as evidenced by sizable gains over time as well as a positive relationship between census completion and participation in the 2020 Census Education and Engagement Program.

Keywords: census, civic learning, assessment, civic engagement



Mandated under Article 1, Section 2 of the United States Constitution, the decennial census determines the distribution of power based upon population counts, as well as the distribution of some \$1.5 trillion dollars from the federal government to states and localities, including funding for programs like Head Start, Medicare, SNAP, and Pell grants, as well as for roads and other public services (Reamer, 2020). In addition, census data are used by state governments to determine reapportionment and redistricting, and by state and local governments, businesses, and faith and community-based organizations for an array of decisions that affect American democratic governance, society, and economy (U.S. Census Bureau, 2019).

The stakes of responding to the census are high, as participation ensures that communities receive their fair share of power and resources; however, prior to the 2020 Census, over 20% of all adults, and 36%

of those ages 18–29, indicated that they definitely would not or probably would not participate (Cohn et al., 2020). People cited concerns about sharing information and distrust of government as influencing their likelihood of participating. 2020 Census participation challenges were compounded by the COVID-19 global pandemic, especially for college students across the country as the self-response window opened during the week that many were sent home as part of public safety measures. As a result, some students did not receive participation notices from the Census Bureau with instructions for completing the census. Furthermore, because of budget constraints and concerns about public distrust in government, the U.S. Census Bureau employed a highly decentralized approach to census education, encouraging self-organized Complete Count Committees (CCCs) by a range of actors, including local and state governments, nonprofit organizations, corporations, and institutions of higher education (U.S. Census Bureau, 2019). One author of

this article was appointed by the governor of their state to serve on their state's Complete Count Commission and served as an advisor to national higher education efforts.

Even in the best of circumstances, college students are a hard-to-count population as they are highly mobile and tend to be short-term renters. Perhaps even more consequential, as first-time participants, students are less likely to be knowledgeable about why the census matters and how to complete it. Furthermore, as first-time participants, students are less likely to understand that completing the census is a civic responsibility and that it directly benefits their communities. Of course, some parents may include their college students as living at home due to the temporal nature of college living, and some students may believe their parents are taking care of this responsibility for them. Federal guidelines, however, require students to be counted where they live for most of the year, which is often on campuses away from their hometown. Therefore, colleges and universities have a special responsibility to the communities in which they are situated to ensure a complete count of their student populations.

Drawing upon lessons learned from scholarship in the voter education and engagement literature (Bennion & Nickerson, 2016; Teresi & Michelson, 2015; Thomas & Brower, 2017), a university's center for civic engagement and students enrolled in a political science class developed and implemented a campuswide 2020 Census Education and Engagement Program. Because research indicates participation is more likely when people know how to participate and how census data are used (Pew Research Center, 2010), the program was designed specifically to educate students about the purposes of the census and the participation process. Focusing on educating students as a means to enhance participation in the census also better serves the civic mission of colleges and universities.

Below we describe the goals and components of the 2020 Census Education and Engagement Program, which form the basis for this research. We then outline our research questions and data collection efforts to better understand students' knowledge about the 2020 Census, the malleability of such knowledge, and to assess the effectiveness of the 2020 Census Education and Engagement Program. Following our results we provide our conclusions, limitations, and

future directions and implications.

Learning Objectives: 2020 Census Education and Engagement Program

In spring 2020, a university's center for civic engagement and students in a political science course co-created and co-implemented the campuswide 2020 Census Education and Engagement Program. Four learning objectives were created to capture how individuals should change as a result of participating in the program. Specifically, participation in the program was intended to facilitate students' ability to

- identify important purposes of the census,
- recall the logistics for participating in the 2020 Census,
- identify what kind of information is being obtained from individuals on the 2020 Census and laws pertaining to the use of personal information, and
- participate in and understand the value of the 2020 Census.

The 2020 Census Education and Engagement Program centered efforts on understanding and addressing motivational and informational barriers students face to completing the census. Given widespread public distrust in government, the effort relied on collaboration across campus and leveraged the influence of trusted individuals, organizations, and their networks. Further, the students collaborated with local, state, and national partners to design and implement the learning-centered get-out-the-count campaign. Student organizers and faculty participated in a day-long learning trip to the U.S. Census Bureau headquarters in Suitland, Maryland, which included a meeting with the Census Bureau director appointed by President Donald J. Trump. During the semester, students also regularly participated in state and local Complete Count Committee meetings to learn about the census and challenges facing it. Course assignments used for program development purposes included interviewing members of hard-to-count communities, such as students and marginalized populations, to learn what messages would most resonate. Students then designed communications and organized educational opportunities to meet learning objectives and to increase student participation in the 2020 Census.

A range of tactics was deployed as part of the 2020 Census Education and Engagement Program, including in-person and virtual classroom visits by trained student leaders equipped with educational materials on the census, in-person and virtual town halls with experts, bus advertisements, door hangers used for canvassing high density off-campus housing complexes, and a strategically designed social media campaign across platforms. The program also included tabling at key events and highly trafficked public spaces on campus prior to the university's changing operations in response to the global pandemic. Critical information and direct links to the census online portal were sent via a campuswide email and text message. Census materials were also included in a global alert for one week in April 2020 in the university's course instructional tool system. The program also included a global reminder from the university's registrar to complete the 2020 Census when students were registering for Fall 2020 courses or checking in for May 2020 graduation. Every aspect of the 2020 Census Education and Engagement Program required the student organizers to collaborate with units across Academic Affairs, Students Affairs, Communications and Marketing, and the business operations of the university.

The 2020 Census Education and Engagement Program organizers also collaborated with leaders of the institution's Assessment Day in February 2020, which required all enrolled students with 45–70 credit hours to complete a series of assessments in a variety of different areas. The authors of this article developed the 2020 Census Assessment, a multiple-choice instrument created to address the learning objectives, and it was administered to nearly 2,000 students participating in Assessment Day. After students completed the instrument, proctors said:

We would like to encourage you to participate in the upcoming census, as it is an important part of our country's governmental process. If you reside on or off-campus in [the community where the campus is located], you are counted here and it will impact local funding, political representation, and other decisions.

A link to the 2020 Census Education and Engagement Program's website with additional learning materials about the census

was also provided. Thus, in addition to all components of the 2020 Census Education and Engagement Program, almost 2,000 students were encouraged to learn about and participate in the 2020 Census following completion of the instrument.

Research Questions

The development of the 2020 Census Education and Engagement Program and the partnership with the institution's required Assessment Day provided a ready-made opportunity to develop and test research questions focused on this work. An ideal approach to assessing the effectiveness of the 2020 Census Education and Engagement Program would include three phases. In the pretest phase, a test aligned with the program's learning objectives would be developed and administered to all students. In the intervention phase, students would be randomly assigned either to participate or not participate in various combinations of program elements. In the posttest phase, all students would again complete the same test that was administered during the pretest phase. This ideal approach would allow for the (a) examination of change over time in knowledge for students who did and did not participate in various aspects of the program, (b) investigation into various threats to internal validity, and (c) potential ability to claim that the program is the cause of changes in student knowledge.

Typical of most assessment of programs in higher education, our approach falls short of the ideal, as it would be impossible to use random assignment and irresponsible to shield any students from important global messages about the census. A strength of our approach is the development of the 2020 Census Assessment, a measure aligned with the 2020 Census Education and Engagement Program's learning objectives. This assessment was administered in February 2020 to a random sample of almost 2,000 students and yielded information about what college students did and did not know about the 2020 Census. The administration of the 2020 Census Assessment served as a pretest, as most facets of the 2020 Census Education and Engagement Program had yet to be implemented at the time of completion. The pretest data were used to answer the following research question (RQ):

RQ1: What do students know and not know about the 2020 Census?

All students enrolled at the institution (i.e., not just those who participated in the February 2020 Assessment Day) were invited to complete the 2020 Census Assessment in late April of that year, along with a survey inquiring about their participation in the 2020 Census Education and Engagement Program and other related activities. For those who participated in the February administration (pretest), the April administration served as a posttest. The data from students completing both pretest and posttest were used to address four additional research questions:

RQ2: To what extent does students' knowledge about the 2020 Census change over time?

RQ3: To what extent are students participating in activities developed for and promoted by the 2020 Census Education and Engagement Program?

RQ4: Is change in knowledge about the 2020 Census related to participation in 2020 Census Education and Engagement Program activities?

RQ5: Did students complete the 2020 Census and is completion related to participation in 2020 Census Education and Engagement Program activities?

Although the pretest/posttest data is not ideal in that it is based only on students who chose to complete the assessment at posttest, it can be used to understand whether knowledge about the 2020 Census is malleable (RQ2), to ascertain levels of participation in the 2020 Census Education and Engagement Program (RQ3), to explore the relationship between program participation and changes in knowledge (RQ4), and to capture 2020 Census participation (RQ5).

Methods

Measures

Two measures were created for the 2020 Census Education and Engagement Program. The 15-item 2020 Census Assessment was created to assess the student learning objectives of the program. The 2020 Census Program Participation Survey was developed to ascertain the extent to which students ex-

perienced and participated in activities developed for or promoted by the 2020 Census Education and Engagement Program. Some items on the survey also asked about related activities outside the program (e.g., viewing non-program-related social media posts about the 2020 Census). Because the intention was to pinpoint what students do and do not know, only item-level results for the 2020 Census Assessment were considered.

Procedures

The 2020 Census Assessment was administered twice: once in early February 2020 during Assessment Day (pretest) and again in late April 2020 (posttest). The 2020 Census Participation Survey was administered along with the 2020 Census Assessment, but only during the posttest administration.

Pretest

All 3,274 students with 45–70 credit hours going into the Spring 2020 semester at the institution were required to complete a series of assessments during Assessment Day in February 2020. The 2020 Census Assessment was administered to a random subset of these students ($N = 1,947$). After completing the assessment, proctors encouraged students to learn about and complete the 2020 Census, and a link to the 2020 Census Education and Engagement Program's website was provided.

Posttest

In April 2020 all students at the university (about 20,000) were sent an email inviting them to take the 2020 Census Assessment and 2020 Census Program Participation Survey. Participation was voluntary. After responding to each item on the 2020 Census Assessment, students were provided with feedback (i.e., whether they got the item right/wrong) and shown results from those who had completed the survey at pretest. This step was added to make survey completion not only interesting, but educational and fun. To entice students who participated at pretest to voluntarily participate at posttest, their name was entered in a lottery to win a \$10 gift card.

Participants

Pretest Sample

The pretest sample included 1,947 students and was used to answer RQ1, which addressed what students knew and did not

know about the 2020 Census. Demographic information for this sample was obtained through university records and missing for two students. Of the remaining 1,945 students, 70% were sophomores and 30% were juniors. With respect to gender, 59% self-identified as female and 41% as male (given those options). With respect to race, 74% identified as White, 6% as Black, 7% as Asian, and 6% as Hispanic. All other race categories or combinations of categories were each represented by <5% of the sample.

Pretest/Posttest Sample

The number of students choosing to participate in the posttest administration was low, which might partly be attributable to the mass disruptions caused by COVID-19. Only 162 students participated, and of those, only 122 had pretest data. Results from the 122 students who participated in both pretest and posttest administrations were used to answer RQ2–RQ5, which address whether knowledge changes over time, exposure to and participation in the 2020 Census Education and Engagement Program activities, whether change in knowledge is related to program exposure, and whether participation in the 2020 Census is associated with participation in the 2020 Census Education and Engagement Program.

Demographic information for this sample was obtained through university records and missing for one student. Of the remaining 121 students, 72% were sophomores and 28% were juniors. With respect to gender, 79% self-identified as female and 21% as male (given those options). With respect to race, 70% identified as White, 7% as Black, 6% as Asian, and 5% as Hispanic. All other race categories or combinations of categories were each represented by <5% of the sample.

We explored the extent to which student characteristics and pretest item responses differed for those who did and did not elect to participate at posttest using chi-square tests of independence. Only one item out of the 15, Item 3, yielded statistically significant results, $X^2(1) = 12.87, p < .001$. Specifically, 57% who elected to participate in the posttest obtained the correct answer at pretest compared to 40% who correctly answered at pretest but did not participate in the posttest. Thus, more students who chose to participate in the posttest were aware that the primary purpose of the

census is to count how many persons (not citizens) are residing in the United States. We also considered demographic differences for those students from the pretest sample who did and did not choose to participate in the posttest. No differences were found with respect to year in college ($X^2(1) = .24, p = .623$) or race ($X^2(5) = 2.46, p = .783$), but differences were found with respect to gender ($X^2(1) = 21.78, p < .001$). Specifically, more females than males voluntarily participated at posttest. Thus, the subset of students who chose to participate in the posttest differs somewhat from the larger pretest sample.

Results

RQ1: What do students know and not know about the 2020 Census?

Learning Objective 1

The majority of items on the 2020 Census Assessment were aligned with the first learning objective, which is to understand the purpose of the 2020 Census. The percentage of students who answered Learning Objective 1 items correctly ranged from a low of 41% for Item 3 to a high of 88% for Item 11 (see Pretest Sample column in Table 1). At least 75% of students selected the correct response on Items 11 and 15, which inquire about the use of 2020 Census information to inform the allocation of federal, state, and local resources. This purpose of the census appears to be well known by students. A sizable percentage of students were also aware that the census is *not* used to do any of the following: determine who has not paid taxes (Item 13; 73%); locate people living in the country without documentation (Item 10; 65%; this was important given misinformation circulating at the time); determine who can vote (Item 14; 57%); and help decide whether conscription would be needed in the next major military conflict (Item 1; 63%). Although these results indicate the majority of college students can identify how census information is used, they still point to sizable percentages of students who responded that census information can be used for purposes it is not in fact used for. It's also important to note that assessing what mis-, dis-, and misinformation students were exposed to about the 2020 Census was beyond the scope of this study.

For Item 3, which asked: "The primary purpose of the census is to count how many _____ are residing in the United States," only 41% of students selected the

Table 1. Learning Objective 1 Results

Item #	Item (correct answer bolded)	Percentage selecting correct response			Difference (posttest–pretest)	X ²	p	McNemar's test (df = 1)
		Pretest/posttest sample		Pretest				
		Pretest sample	Posttest					
11	Information collected from individuals in the 2020 Census will be used to: Inform how federal and state resources for schools, emergency services, roads, etc. are allocated to localities. (True/False)	88	98	90	8	8.33	.004**	
15	Information collected from individuals in the 2020 Census will be used to: Inform your local government about making changes in your community. (True/False)	75	82	79	3	0.44	.505	
13	Information collected from individuals in the 2020 Census will be used to: Determine which individuals have not paid taxes. (True/False)	73	100	84	16	7.00	.008**	
10	Information collected from individuals in the 2020 Census will be used to: Locate people living in the country without documentation. (True/False)	65	89	71	18	15.12	<.001**	
14	Information collected from individuals in the 2020 Census will be used to: Determine who can vote. (True/False)	57	81	61	20	14.40	<.001**	
All of these are purposes of the nationwide census conducted by the U.S. Census Bureau EXCEPT:								
1	a. To provide data necessary for determining representation in state and federal government	63	87	66	21	18.78	<.001**	
	b. To help decide whether conscription would be needed in the next major military conflict							
	c. To assist in the understanding of the population of the United States							
	d. To help determine how much money communities will get from the government							

Table continued on next page

Table 1. Continued

Item #	Item (correct answer bolded)	Percentage selecting correct response		Difference (posttest–pretest)	X ²	p	McNemar's test (df = 1)
		Pretest/posttest sample					
		Pretest	Posttest				
<p>The primary purpose of the census is to count how many _____ are residing in the United States.</p>							
	a. Adults						
3	b. Voters	41	57	68	11	4.67	.031*
	c. Citizens						
	d. Persons						
<p>Census data is used to make decisions regarding funding for all of these EXCEPT:</p>							
	a. Public education						
2	b. Medicare	49	49	73	24	4.84	.028*
	c. Pell Grants						
	e. Military bases						
12	Information collected from individuals in the 2020 Census will be used to: Determine how much taxes individuals will pay. (True/False)	44	44	62	18	11.00	.001**
4	The census is required by the U.S. Constitution. (True/False)	49	43	63	20	14.40	<.001**

Note. For the pretest sample, N = 1,947 for all items except 13 and 2, where N = 887. For the pretest/posttest sample, N = 122 for all items except 13 and 2, where N = 45. Sample sizes depended on which version of the 2020 Census Assessment was completed.
 *p ≤ .05. **p ≤ .01.

correct answer of “persons,” compared to 45% who selected the incorrect answer of “citizens.” It is important to recall that the Trump administration made a bid to include a question about citizenship on the 2020 Census and explicitly aimed to exclude immigrants living in the United States without government documents from census counts, which could account for such a low correct response rate for this item.

Slightly less than half of students knew that the census is required by the U.S. Constitution (Item 4) or that census information is *not* used to determine how much tax individuals will pay (Item 12). Just less than half of students knew census data were used to make decisions about funding public education, Medicare, and Pell grants, but not military bases (Item 2). These results suggest that students need opportunities to develop knowledge about why the census matters and its value in democratic and social institutions.

Learning Objective 2

The 2020 Census Assessment included two items related to Learning Objective 2 regarding college students knowledge of how to go about participating in the 2020 Census. One assessment item inquired how a student who is from out-of-town but living in a residence hall should participate. Another item inquired about how students who are living off-campus in an apartment together should participate. As shown in the Pretest Sample column in Table 2, slightly less than half (46%) of the respondents knew that a student living in a residence hall should be counted in the census with the residence hall as their place of residence (Item 5). In contrast, only 18% of students knew the appropriate procedures for students living together in an off-campus apartment to complete the 2020 Census. Results on these items suggest that students need opportunities to develop skills for participating effectively in the census.

Learning Objective 3

The 2020 Census Assessment included three items to help us understand what students know about the kind of information obtained from people and knowledge of the laws pertaining to the use of the personal information collected. As shown in the Pretest Sample column in Table 3, results indicate the majority of students (61%) know personal information cannot be shared with

other governmental agencies or courts (Item 9). However, more than half (56%) of students erroneously believed the 2020 Census collects political party affiliation (Item 8), and a much larger percentage (86%) responded that the 2020 Census would collect status on U.S. citizenship (Item 7). As mentioned above, the Trump administration attempted to include a question on the 2020 Census to collect citizenship status, which led to mis-, dis-, and malinformation about what information was actually collected in the count. Results on these items also demonstrate knowledge development opportunities.

RQ2: To what extent does students' knowledge about the 2020 Census change over time?

The percentages of students in the pretest/posttest sample selecting the correct response to each item at both pretest and posttest are shown in Tables 1–3 and Figure 1. The results suggest that students' mastery of the learning objectives associated with the 2020 Census Education and Engagement Program increased over time. For all items, more students selected the correct response at posttest than at pretest. McNemar's test was used to ascertain if the percentages of students selecting the correct answer at pretest and posttest significantly differed from one another. Differences between posttest and pretest were statistically significant for 12 of the 15 items.

The two items with the largest changes include Items 7 and 6. A correct answer to Item 7 required students to know that U.S. citizenship status is not collected on the 2020 Census. Only 17% of students selected the correct answer to this item at pretest, and a substantially larger percentage, 63%, selected the correct answer at posttest. A correct answer on Item 6 required identification of the appropriate procedures for 2020 Census participation for students living together in an off-campus apartment. Whereas only 22% of students selected the correct response at pretest, over half (51%) selected the correct response at posttest. On some items a sizable percentage of students still did not choose the correct response at posttest. For instance, at posttest about 40% of students still responded that the 2020 Census collects political party affiliation and U.S. citizenship status.

Table 2. Learning Objective 2 Results

Item #	Item (correct answer bolded)	Percentage selecting correct response			McNemar's test (<i>df</i> = 1)		
		Pretest/posttest sample (<i>N</i> = 45)		Difference (posttest–pretest)	X ²	<i>p</i>	
		Pretest sample (<i>N</i> = 887)	Posttest				
5	<p>Wade is from Localtown and started at James Madison University in Harrisonburg, VA in August 2019. He has lived in a residence hall since that time. Does Wade need to be counted in the census and if so, how?</p> <p>a. Since Wade is a college student, he does not need to be counted in the census.</p> <p>b. Since Wade is a college student, he should be included and Wade's guardian(s) in Localtown should include him when filling out the census.</p> <p>c. Since Wade is a college student, he should be included and his place of residence is in Harrisonburg, VA when completing the census.</p>	46	53	69	16	1.96	.162
6	<p>Liz and Heather are James Madison University students who live off campus in an apartment. Do they need to be counted in the census and if so, how?</p> <p>a. Since they are college students, they do not need to be counted in the census.</p> <p>b. Since they are college students, their guardian(s) should include them when filling out the census.</p> <p>c. Only one of them (either Liz or Heather) needs to fill out the census for their residence and include all residents in the apartment.</p> <p>d. Liz and Heather each need to each fill out the census separately.</p>	18	22	51	29	11.27	.001**

** *p* < .01.

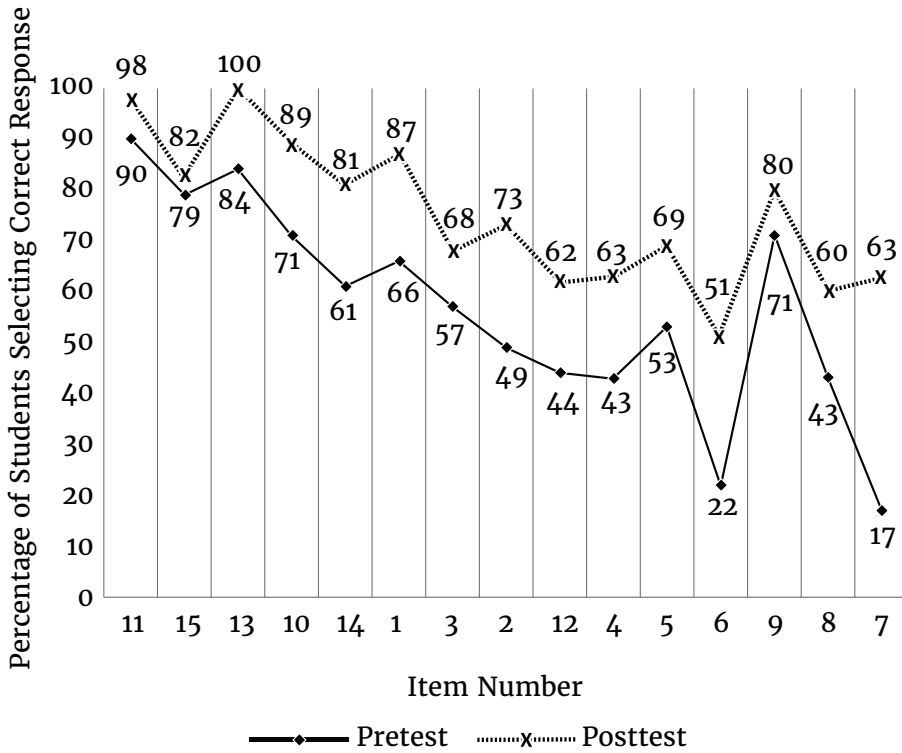
Table 3. Learning Objective 3 Results

Item #	Item (correct answer bolded)	Percentage selecting correct response			Difference (posttest–pretest)	X ²	p	McNemar's test (df = 1)
		Pretest/posttest sample		Pretest				
		Pretest sample	Posttest					
9	Personal information collected via the federal census can be shared at any time with other governmental agencies or courts. (True/ False)	61	80	71	80	9	1.14	.285
8	The 2020 Census collects information from individuals about: Political party affiliation. (True/ False)	44	60	43	60	17	8.00	.005**
7	The 2020 Census collects information from individuals about: U.S. Citizenship status. (True/ False)	14	63	17	63	46	54.07	<.001**

Note. For the pretest sample, N = 1,947 for items 7 and 8 and N = 887 for item 9. For the pretest/posttest sample, N = 122 for items 7 and 8 and N = 45 for item 9. Sample size depended on which version of the 2020 Census Assessment was completed.

**p ≤ .01.

Figure 1. Percentage of Students in the Pretest/Posttest Sample Selecting the Correct Response by Item



RQ3: To what extent are students participating in activities developed for and promoted by the 2020 Census Education and Engagement Program?

The percentage of students reporting participation in each 2020 Census Education and Engagement Program activity and activities promoted by the program (e.g., discussing the program with others, completing the census) is provided in Table 4, recognizing that some activities could have come from outside the program (e.g., seeing a post on social media about the 2020 Census). Although operating during a chaotic information environment, many students reported receiving communications that were part of the 2020 Census Education and Engagement Program. For instance, 79% reported receiving a university-wide email about the 2020 Census, 69% saw a social media post (which may or may not have been from the university), 64% saw an alert on the university’s primary learning management platform, and 56% noticed an alert on the administrative platform for students, where they can register for classes, manage financial aid, apply for graduation, and so on. A little less than half (46%) received information from their professors, and about

one third received a university text message (35%). Students also reported discussing the 2020 Census with others. More students reported discussing the census with their families (68%) or roommates/friends (44%) than with students in their classes (20%). However, it should be noted that class meetings moved to virtual-only format during this time.

As noted in Table 4, discussions with families/roommates/friends were heavily promoted by the 2020 Census Education and Engagement Program. Such discussions with others were positively correlated with the messaging students received as part of the program, indicating that student exposure to aspects of the program stuck with them and benefited their networks. For example, discussions with roommates/friends were significantly correlated with receiving text messages ($r(120) = .24, p = .008$) and seeing a video about the 2020 Census ($r(120) = .31, p < .001$). Discussions with families were also significantly correlated with seeing social media posts ($r(120) = .30, p < .001$). In addition, discussions with roommates/friends were significantly correlated with discussions with families ($r(120) =$

.33, $p < .001$), and both kinds of discussions were correlated with classroom discussions ($r(120) = .41$, $p < .001$ and $r(120) = .26$, $p = .003$, respectively).

Perhaps not surprisingly, especially given the onset of the COVID-19 pandemic, activities that required more effort were less common. For instance, only 27% of students took action to learn about the 2020 Census by visiting the 2020 Census Education and Engagement Program's website, and far fewer (5% or less) asked questions via social media, email, or tables on campus.

RQ4: Is change in knowledge about the 2020 Census related to participation in 2020 Census Education and Engagement Program activities?

To ascertain the relationship between change over time in knowledge and participation in program activities, we used only those students in the pretest/posttest sample who had been administered all 15 2020 Census Assessment items on Assessment Day. Items were summed to create a total score at each time point and then a difference score was computed from the pretest and posttest totals. The difference score was then corre-

Table 4. Percentage of Students Reporting Participating in Each 2020 Census Education and Engagement Program Activity or Activities Promoted by Program ($N = 122$)

Item	%
Complete the 2020 Census Assessment during February 2020 Assessment Day	100
Receive an email from campus administrators with information about the 2020 Census ^a	79
See a post on social media about the 2020 Census ^b	69
Discuss the 2020 Census with your families ^a	68
See a Canvas alert about the 2020 Census ^a (learning management platform)	64
See a MyMadison alert about the 2020 Census ^a (administrative platform)	56
Receive an email or receive other communications from a professor with information about the 2020 Census ^a	46
Discuss the 2020 Census with roommates or friends ^a	44
Receive a text message from James Madison University about the 2020 Census ^a	35
Coordinate 2020 Census completion with roommates ^a	30
See a video about the 2020 Census ^b	30
Review information about the 2020 Census on the James Madison University website ^a	27
Discuss the 2020 Census with other students in your classes ^a	20
Ask questions about the 2020 Census on social media or by email ^b	5
Ask questions about the 2020 Census at a table on campus ^a	3
Attend a virtual discussion about the 2020 Census ^b	2
Update your social media profile picture to include a frame indicating you had completed the 2020 Census ^a	2
Participate in the Student Government Association/James Madison University 2020 Census art/video/photo contest ^a	2

Note. Considering that many of these items inquired about information that was sent to all students regarding implemented program activities, results are indicative of whether students noticed the implemented activity.

^a Activity specifically promoted by the 2020 Census Education and Engagement Program.

^b Activity may have been experienced through program or outside program or both.

lated with the total number of activities the student indicated they had participated in on the 2020 Census Education and Engagement Program Participation Survey. The correlation was small but positive, indicating greater participation was related to greater increases in knowledge. The relationship, however, was not statistically significant ($r(43) = .15, p = .341$).

RQ5: Did students complete the 2020 Census and is completion related to participation in 2020 Census Education and Engagement Program activities?

Completion of the 2020 Census was the most critical activity promoted by the 2020 Census Education and Engagement program. Of the 122 students, 69 (57%) reported completing the 2020 Census at the time of posttest, and 30% reported coordinating with their roommates to do so. Each of the program activities in Table 4 was correlated with 2020 Census completion, and four correlations were statistically significant. Specifically, 2020 Census completion was positively and significantly correlated with asking questions on social media or by email ($r(120) = .18, p = .05$), seeing an alert on the university's administrative platform ($r(120) = .19, p = .03$), and discussing the 2020 Census with roommates/friends ($r(120) = .49, p < .0001$) or family members ($r(120) = .19, p = .04$).

Conclusion

To provide information about the purposes of the 2020 Census and logistics for participation, a campus center for civic engagement and students in a political science class developed and implemented the campuswide 2020 Census Education and Engagement Program. To inform the learning objectives of the program, the 2020 Census Assessment was developed and administered to almost 2,000 students. Results were incredibly useful for understanding gaps in students' knowledge about the importance of the 2020 Census and what they needed to know to participate. Findings indicate many students are aware of the purpose of the census, but also reveal a troubling number of students who don't know what information is being collected and how that information is used. The results also indicated most students are unclear about the logistics for participation. That students fared much better on questions about the purpose of the census

could be a reflection of the emphasis placed on knowledge acquisition in modern civic education. As other scholars have also found, our results indicate young people need more education and opportunities to develop important civic skills and to participate in critical democratic practices and institutions rather than solely focusing on knowledge (Hart & Youniss, 2018; Holbein & Hillygus, 2020).

A subset of students voluntarily completed the 2020 Census Assessment again later in the Spring 2020 semester. This allowed us to explore change over time in 2020 Census knowledge. More students selected the correct answer at posttest on almost all items, with statistically significant gains on the majority of them. Even though it is encouraging to see increases in knowledge, it is disappointing that on some items, a sizable percentage of students still did not perform well at posttest. For instance, at posttest about 40% of students still believed the 2020 Census collects political party affiliation and citizenship status. However, such misconceptions are not necessarily surprising given the politicization of whether the census would include a citizenship question and significant mis-, dis-, and misinformation in the news ecosystem and emanating from President Trump and his administration.

The pretest/posttest design permitted exploration into whether students can accrue knowledge about the census, and results strongly indicate that they can. Of course, why knowledge changed is a relevant question. Many 2020 Census Education and Engagement Program activities (e.g., emails, social media alerts) were designed to raise awareness and share resources, but did not require students to carefully digest or study the information provided in the resources. Although it is possible program activities designed to facilitate more meaningful engagement with informational materials increased knowledge, the study design did not permit quality assessment of such activities.

Although knowledge acquisition is important, the ultimate goal of the program was to promote completion of the 2020 Census. In April 2020, 57% of students in the pretest/posttest sample reported completion. This rate is encouraging, given that it was based on data collected soon after the 2020 Census participation window opened and as students were inundated with messages

about the global pandemic and needing to make alternative living arrangements. However, we also recognize it is based only on a subset of students at the university and also on self-reported participation, which, much as in voting studies, is likely exaggerated relative to actual participation (Górecki, 2011). It's also worth noting that the Census Bureau reported large overcounts for the 18–24 age group, but undercounts for the 25–29 age group in the 2020 Census (Jensen & Kennel, 2022).

Unlike gains in knowledge, participation in particular activities was associated with 2020 Census completion. Some activities associated with census completion were part of the 2020 Census Education and Engagement Program (e.g., alerts on the university's administrative platform). Other activities associated with completion may or may not have been part of the program (e.g., social media alerts). Still other activities were heavily promoted by the program, but may or may not have occurred as a result of program participation (e.g., discussing census with others).

Limitations and Future Directions

There are several limitations to the study and opportunities for future research and improvements to the program. First, the generalizability of the findings is limited by the collection of data at a single university and further limited to students with 45–70 credit hours at pretest and those voluntarily responding at posttest. Second, program participation, implementation, and data collection were impacted by COVID-19. Pretest data collection occurred before national shutdowns, but posttest data collection occurred in April 2020, and many of the program activities were implemented during the chaotic months of March through September 2020. The rates of participation in the program, posttest data collection, and 2020 Census itself are impressive, given this chaotic context, and encouraging for future program implementation under stressful circumstances. Third, other objectives associated with the 2020 Census Education and Engagement Program require further consideration. For instance, this study did not address the extent to which students value the completion of the census. Thus, future research should consider how program activities affect not only knowledge and behavior, but also attitudes toward the census. It also did not measure political ideology as a potential intervening variable.

Especially given the politicization of the census, future research should explore how information ecosystems affect attitudes and understanding of the census, why it matters, what information is collected, and how the information collected is used.

Fourth, many of the program elements that were easy to implement and able to reach a large number of students (e.g., emails, social media posts) were designed to increase awareness about the census, but *may* have limited utility in fostering meaningful changes in knowledge about the 2020 Census and logistics for participation. We suspect these program elements affected knowledge and 2020 Census completion and regret not collecting data immediately before and after such activities to capture their relative effectiveness. Program elements with the potential to alter such outcomes (e.g., participating in virtual classroom discussion, watching a video about the 2020 Census) were not as widespread and often relied on voluntary participation because of the COVID-19 pandemic. Showcasing the effectiveness of such activities would provide a solid argument for their future implementation, ideally required of all students.

Perhaps the most meaningful knowledge gains were for students in the political science course who had the opportunity to spend an entire semester learning about the census and developing and applying civic skills through creating and implementing the 2020 Census Education and Engagement Program. A future project will discuss the extent to which these students experienced changes in knowledge and skill development. Students also reported that the course showed them the value of civic engagement and expressed the importance of learning how to identify issues and work on them in the community for the greater good.

Implications

On the whole, results from the pretest administration strongly suggest the need for census education and engagement programming targeted to college students. Results also suggest that such knowledge is malleable, providing further support for program development and implementation. In addition, our findings suggest that higher education can impact census completion and take a range of actions to support the census. Our study provides objectives for such a program, program activities, and assess-

ment tools other colleges and universities may want to consider for the next decennial census, along with suggested improvements to the existing program, its assessment, and our research design.

We also provide an example of how students can be involved in program creation. Although our focus in this study was on the students for whom the program was intended, we learned from course evaluations and interviews that students involved in program creation were affected in even more positive ways. This outcome suggests that experiential learning opportunities through coursework can contribute to knowledge and skill development. Recent scholarship has emphasized that practicing democratic engagement in academic settings is superior to rote memorization as a means to develop knowledge and encourage future participation (Hart & Youniss, 2018; Holbein & Hillygus, 2020). Of course, more evidence is needed, though understanding what activities promote knowledge, skills, and actual democratic engagement can better position scholars, practitioners, administrators, funders, and policymakers to prepare students for meaningful participation in civic life.

Students and communities benefit when institutions of higher education invest in efforts to educate people on the census and encourage participation. This work fits within a larger movement for campuses to serve as anchor institutions in their localities, connect student learning to community-based issues, and reengage the public mission of higher education. The momentum is promising. More than 350 colleges and universities currently hold Carnegie's Elective Classification for Community Engagement, which formally recognizes institutions of higher education for fostering mutually beneficial collaboration between campuses and broader communities (Carnegie Foundation & ACE, n.d.). Further, outlets such as the *Journal of Higher Education Outreach and Engagement* and *International Journal of Research on Service-Learning and Community Engagement* have provided countless scholarly and reflective articles to promote good practices for community-engaged learning. Organizations such as Campus Compact and the Students Learn Students Vote Coalition have built impor-

tant networks for scholars and practitioners engaged in these efforts. Developing and implementing a campuswide census program checks all of the right boxes. It simultaneously addresses an important community need while better preparing all students for participation in civic life and merits the attention more typically placed on service-learning and voter education.

Unfortunately, however, these efforts are undermined by exploitive and extractive institutional practices that are often (though not exclusively) initiated outside academic and student affairs units. Davarian L. Baldwin (2021) prominently chronicled ways that institutions of higher education exacerbate the same problems community-engaged scholars and practitioners are trying to solve. Such interference often comes in the form of expanding campus footprints, real estate development, elevated housing costs, expanded campus policing without public oversight, service worker exploitation, and psychological and physical wedges between campuses and the communities many of us hope to serve. Scholars and practitioners in the field should pay close attention to threats to community engagement and outreach that come from within our institutions. We fear that community engagement is justifiably perceived as window-dressing for larger business practices that shape relationships with partner organizations and the people we hope to serve.

Colleges and universities should assume an important position in efforts to strengthen democracy while promoting desirable civic behaviors and educating students on how to engage in democratic practices, institutions, and processes (National Task Force on Civic Learning and Democratic Engagement, 2012). Our findings provide evidence that student participation in democracy need not to be left to chance, and institutions can successfully embed civic learning into campus programs and discourse. Doing so aligns the interests of students, campuses, and the communities in which they reside. Colleges and universities aiming to contribute to strengthening democracy and the communities in which they are embedded can develop census education and engagement courses and programs as an element of broader efforts to prepare students to be active and informed participants in civic life.



About the Authors

Carah Ong Whaley is the director of election protection at Issue One and a lecturer in the Department of Politics at the University of Virginia. She is also a cochair of the American Political Science Association's Civic Engagement section. She previously served as the associate director of the James Madison Center for Civic Engagement at James Madison University. Her research focuses on political learning, civic engagement, public participation, and the scholarship of teaching and learning. She received a PhD in government from the University of Virginia.

Dena Pastor is the associate director of assessment operations in the Center for Assessment and Research Studies at James Madison University. She oversees the biannual Assessment Days, which are used to collect longitudinal data on student learning and developmental outcomes. In addition, Dena guides the university's civic engagement assessment endeavors as the assessment liaison to the Madison Center for Civic Engagement. She received a PhD in educational psychology from the University of Texas at Austin.

Abraham (Abe) Goldberg is an associate professor of political science at James Madison University, with teaching and research interests in civic learning and engagement, American democracy, community placemaking, and higher education. He previously served as director of the James Madison Center for Civic Engagement at JMU and as director of the Office of Service-Learning and Community Engagement at the University of South Carolina Upstate. He received a PhD in political science from West Virginia University.

References

- Baldwin, D. L. (2021). *In the shadow of the ivory tower: How universities are plundering our cities*. Bold Type Books.
- Bennion, E. A., & Nickerson, D. W. (2016). I will register and vote, if you teach me how: A field experiment testing voter registration in college classrooms. *PS: Political Science & Politics*, 49(4), 867–871. <https://doi.org/10.1017/S1049096516001360>
- Carnegie Foundation for the Advancement of Teaching & American Council on Education. (n.d.). *The Elective Classification for Community Engagement*. Retrieved March 16, 2023, from <https://carnegieclassifications.acenet.edu/elective-classifications/community-engagement/>
- Cohn, D., Brown, A., & Keeter, S. (2020, February 20). *Most adults aware of 2020 Census and ready to respond, but don't know key details*. Pew Research Center. <https://www.pewresearch.org/social-trends/2020/02/20/most-adults-aware-of-2020-census-and-ready-to-respond-but-dont-know-key-details/>
- Górecki, M. A. (2011). Electoral salience and vote overreporting: Another look at the problem of validity in voter turnout studies. *International Journal of Public Opinion Research*, 23(4), 544–557. <https://doi.org/10.1093/ijpor/edro23>
- Hart, D., & Youniss, J. (2018). *Renewing democracy in young America*. Oxford University Press.
- Holbein, J. B., & Hillygus, D. S. (2020). *Making young voters: Converting civic attitudes into civic action*. Cambridge University Press.
- Jensen, E., & Kennel, T. (2022, March 10). *Detailed coverage estimates for the 2020 Census released today*. U.S. Census Bureau. <https://www.census.gov/library/stories/2022/03/who-was-undercounted-overcounted-in-2020-census.html>
- National Task Force on Civic Learning and Democratic Engagement. (2012). *A crucible moment: College learning and democracy's future*. American Association of Colleges and Universities. https://www.aacu.org/sites/default/files/files/crucible/Crucible__508F.pdf
- Pew Research Center. (2010, January 20). *Most view census positively, but some have doubts: Age, education, ethnic and partisan gaps*. <https://www.pewresearch.org/politics/2010/01/20/most-view-census-positively-but-some-have-doubts/>
- Reamer, Andrew. (2020, April 29). *Counting for dollars 2020: The role of the decennial census in the geographic distribution of federal funds*. George Washington Institute for Public Politics. <https://gwipp.gwu.edu/sites/g/files/zaxdzs6111/files/downloads/Counting%20for%20Dollars%202020%20Brief%207A%20-%20Comprehensive%20Accounting.pdf>
- Teresi, H., & Michelson, M. R. (2015). Wired to mobilize: The effect of social networking messages on voter turnout. *The Social Science Journal*, 52(2), 195–204. <https://doi.org/10.1016/j.soscij.2014.09.004>
- Thomas, N., & Brower, M. (2017). Politics 365: Fostering campus climates for student political learning and engagement. In E. C. Matto, A. R. M. McCartney, E. A. Bennion, & D. Simpson (Eds.), *Teaching civic engagement across the disciplines* (pp. 361–374). American Political Science Association. <https://doi.org/10.1017/S1049096517001706>
- U.S. Census Bureau. (2019). *2020 Census Complete Count Committee guide*. <https://www.census.gov/content/dam/Census/newsroom/press-kits/2018/ccc-guide-d-1280.pdf>