

Redesigning and assessing online survey login screens in English & Spanish

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U.S. Census Bureau

AAPOR - Chicago

May 11, 2022

Welcome to the American Community Survey. You will need the materials we mailed to you to start the survey.

The U.S. Census Bureau is required by law to keep your information confidential. The Census Bureau is not permitted to publicly release your responses in a way that could identify this household. Per the Federal Cybersecurity Enhancement Act of 2015, your data are protected from cybersecurity risks through screening of the systems that transmit your data.

[Para completar en español, oprima aquí.](#)

Please Log In



Enter the 10-digit User ID found below the barcode on the materials we mailed to you.

User ID: -

Login

The Census Bureau estimates that, for the average household, this survey will take 40 minutes to complete, including the time for reviewing the instructions and answers. You may email comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing burden, to: aco.pra@census.gov. Use "Paperwork Project" as the subject. Or you may send comments to: Paperwork Project, U.S. Census Bureau, 4600 Silver Hill Road, ADDC - 4H277, Washington, D.C. 20233.

Respondents are not required to respond to any information collection unless it displays a valid approval number from the Office of Management and Budget. The 8-digit number appears in the left side of the green bar at the bottom of the survey screen.

U.S. Census Bureau Notice and Consent Warning

You are accessing a United States Government computer network. Any information you enter into this system is confidential. It may be used by the Census Bureau for statistical purposes and to improve the website. If you want to know more about the use of this system, and how your privacy is protected, visit our online privacy webpage at <https://www.census.gov/about/policies/privacy/privacy-policy.html>.

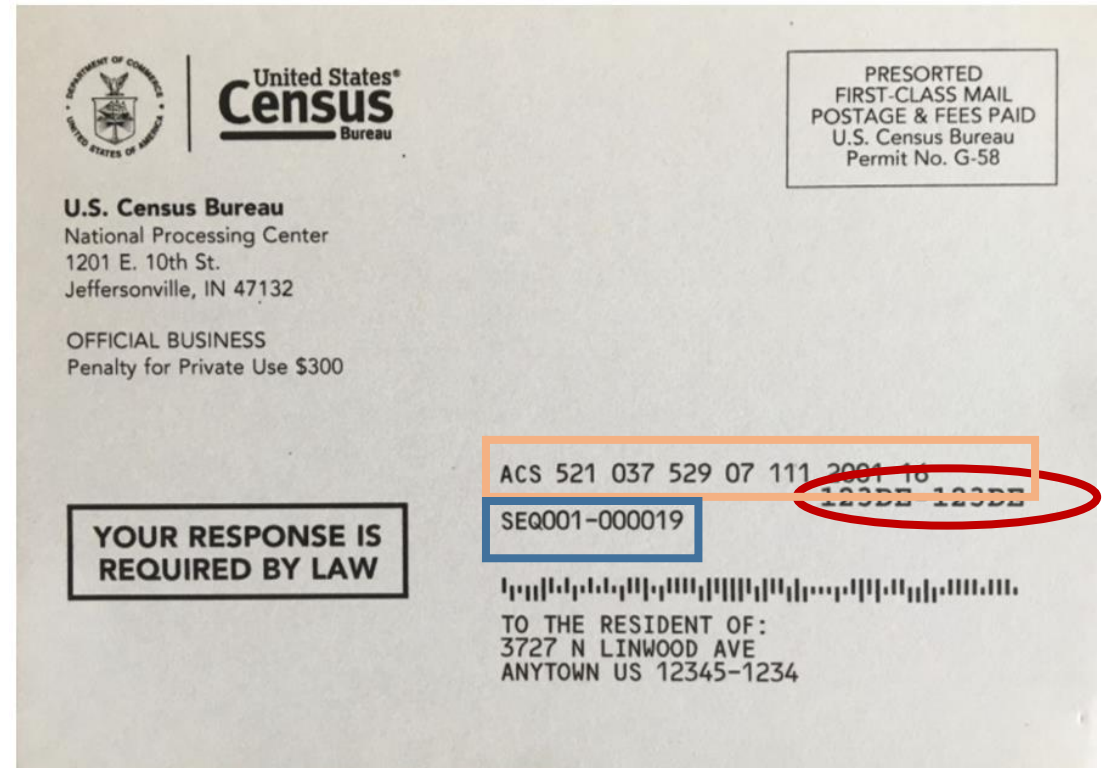
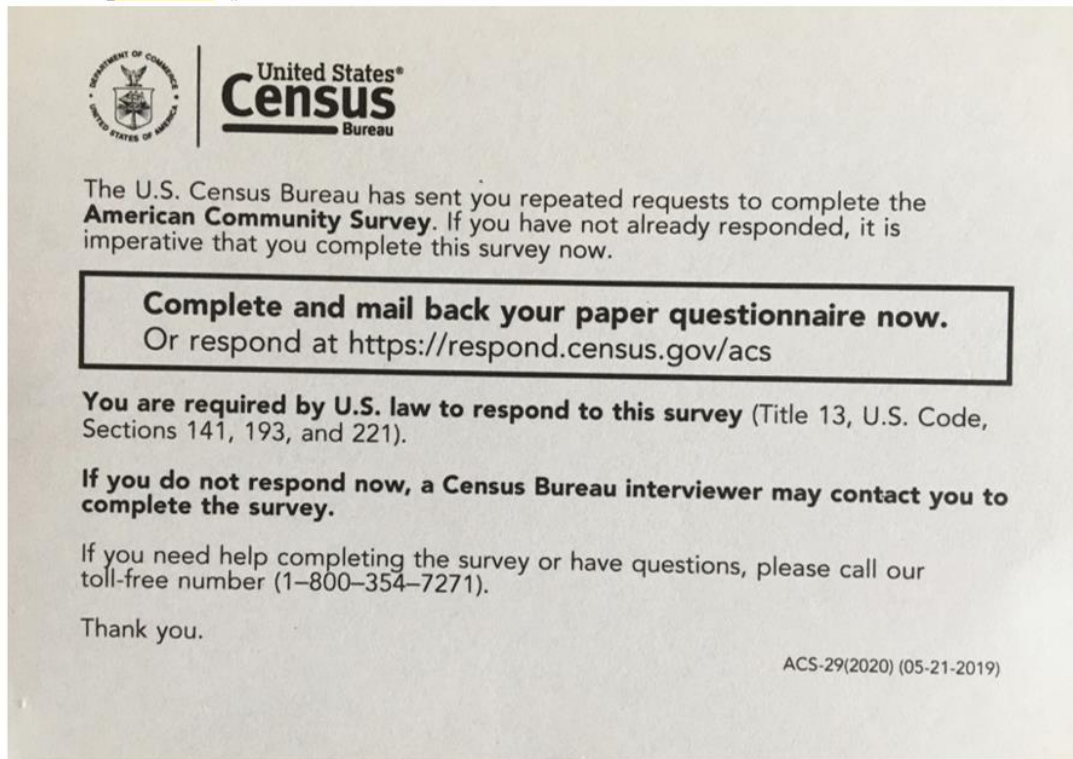
Use of this system indicates your consent to collection, monitoring, recording, and use of the information that you provide for any lawful government purpose. So that our website remains safe and available for its intended use, network traffic is monitored to identify unauthorized attempts to access, upload, change information, or otherwise cause damage to the web service. Use of the government computer network for unauthorized purposes is a violation of Federal law and can be punished with fines or imprisonment (PUBLIC LAW 99-474).

- Welcome message
- Required by law to keep your information confidential
- Link to Spanish language

- Image of area on postcard that shows the barcode highlighting location of User ID

- Instruction and User ID Login fields with button to Login

American Community Survey Postcard



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Please Log In



Example
User ID

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Login

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- All text is centered on screen

- Instruction and User ID Login fields with button to Login

- Official statement about consent, more about monitoring of site, that CB will not allow unauthorized attempts

- Welcome message
- Required by law to keep your information confidential
- Link to Spanish language

- Image of area on postcard that shows the barcode highlighting location of User ID

- How long it will take to complete the survey (paperwork reduction act)
- Mention about OMB number and how that needs to be displayed

Original login screens

United States[®] Census Bureau **American Community Survey**

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Please Log In

Example User ID

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OMB Numbers: 0607-0810, 0607-0936 Approvals Expire: 06/30/2022, 08/31/2021 Accessibility Privacy

United States[®] Census Bureau **Encuesta sobre la Comunidad Estadounidense**

Bienvenido a la Encuesta sobre la Comunidad Estadounidense. Usted va a necesitar los materiales que le enviamos por correo para comenzar la encuesta.

La Oficina del Censo de los EE. UU. está obligada por ley a mantener confidencial su información. A la Oficina del Censo no se le permite divulgar sus respuestas de manera que este hogar pudiera ser identificado. En conformidad con la Ley para el Fortalecimiento de la Seguridad Cibernética Federal del 2015, sus datos están protegidos contra los riesgos de seguridad cibernética mediante los controles aplicados a los sistemas que los transmiten.

[To complete this in English, click here](#)

Haga el favor de iniciar la sesión

Ejemplo Identificación del Usuario

Entre su Identificación del Usuario de 10 dígitos, que se encuentra debajo del código de barra en los materiales que le enviamos por correo.

Identificación del Usuario: -

Inicio de la sesión

La Oficina del Censo calcula que, para el hogar típico, tomará 40 minutos completar esta encuesta, incluido el tiempo para leer las instrucciones y revisar las respuestas. Puede enviar por correo electrónico sus comentarios relacionados con el tiempo que tomará la encuesta o cualquier otro aspecto de esta recopilación de información, incluidas sus sugerencias para reducir el tiempo: aco.pra@census.gov. Use "Paperwork Project" como tema. También puede enviar sus comentarios por correo a Paperwork Project, U.S. Census Bureau, 4800 Silver Hill Road, ADDC - 4H277, Washington, D.C. 20233.

Las personas no están obligadas a responder a ninguna recopilación de información, a menos que ésta muestra un número de aprobación válida de la Oficina de Administración y Presupuesto. El número de 8 dígitos aparece a la izquierda de la barra verde, en la parte inferior de la pantalla de la encuesta.

Aviso de la Oficina del Censo de los EE. UU. y Advertencia sobre el consentimiento

Usted está accediendo a una red de computación del gobierno de los Estados Unidos. Toda la información que escriba en este sistema es confidencial. La Oficina del Censo puede usar dicha información para propósitos estadísticos y para mejorar el sitio web. Si desea conocer más acerca del uso de este sistema y cómo se protege su privacidad, visite nuestra página web <https://www.census.gov/about/policies/privacy/privacy-policy.html>.

El uso de este sistema indica su consentimiento a que recopilamos, monitoreamos, registramos y usamos la información que usted proporcione para cualquier propósito legal del gobierno. Con el fin de que nuestro sitio web siga siendo seguro y que siga disponible para el uso al que está destinado, monitoreamos el tráfico en la red para identificar los intentos no autorizados de acceder, subir o cambiar información, o de dañar de alguna otra manera el servicio del sitio web. El uso de la red de computación del gobierno para fines no autorizados se trata de una violación de las leyes federales y puede ser penalizado con multas o encarcelamiento (LEY PÚBLICA 99-474).

OMB Numbers: 0607-0810, 0607-0936 Approvals Expire: 06/30/2022, 08/31/2021 Accessibility Privacy Security

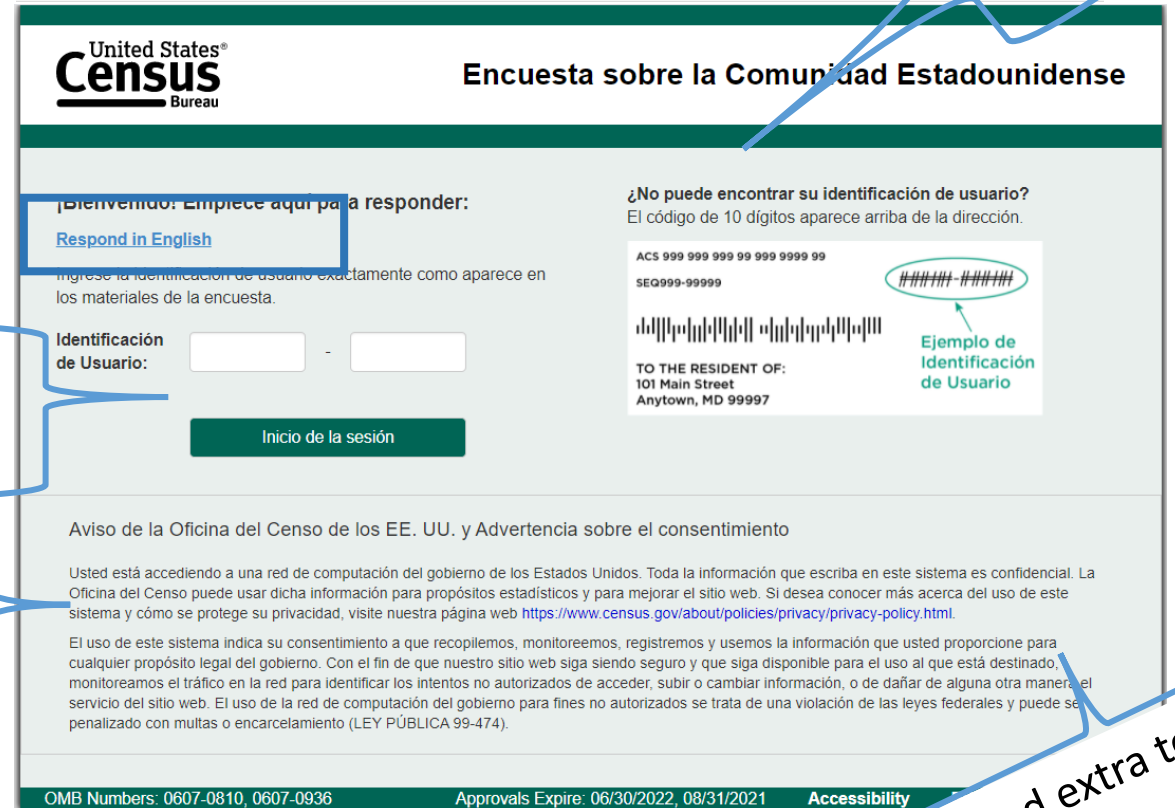
Original and Revised login screen



The original login screen features a green header with the United States Census Bureau logo and the title 'Encuesta sobre la Comunidad Estadounidense'. Below the header, there is a welcome message and a privacy notice. The main section is titled 'Haga el favor de iniciar la sesión' and contains a barcode example, a form for the 10-digit user ID, and a 'Inicio de la sesión' button. The footer includes OMB numbers, approval dates, and links for accessibility, privacy, and security.

Clean design

Switched location of barcode image and login fields



The revised login screen has a clean, white layout with a green header. It features a 'Bienvenido' message, a 'Respond in English' link, and a '¿No puede encontrar su identificación de usuario?' section with a barcode example. The user ID form and 'Inicio de la sesión' button are prominently displayed. The footer contains OMB numbers, approval dates, and accessibility links.

Made log in button longer

Used left aligned text

Reduced extra text on screen

Research questions

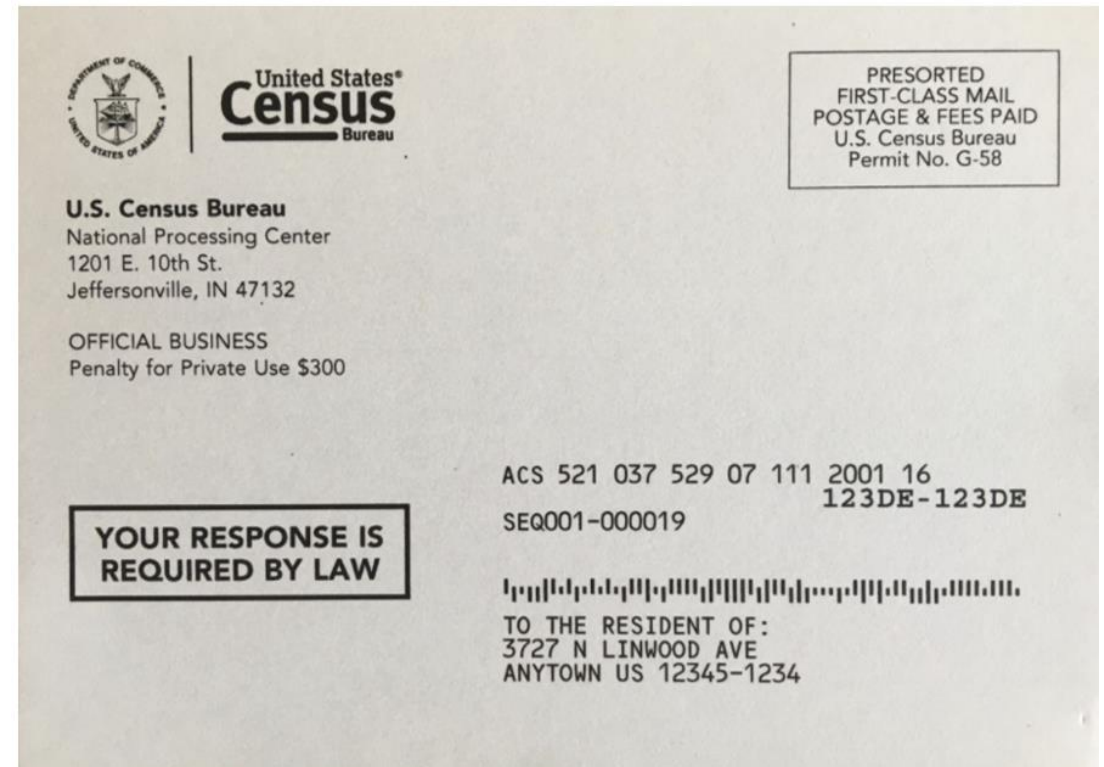
- Are participants able to log in?
 - Can they use the image/instructions on the login screen to find their User ID?
- In which design is the link to toggle the language from English to Spanish more apparent?
- How long does it take participants to log in?
- Which design do participants prefer & does either design lead to more satisfaction?
- What do participants look at/notice when on the login screen?

Study design

- Virtual one-on-one usability sessions using approved screensharing software
 - Conducted in June 2021
- Participants used their own personal devices
- Assigned to
 - Original or Revised design
 - Mobile or Laptop/desktop

Procedure for usability sessions

- Mailed everyone a postcard with a User ID
- Task — Login to the ACS
 - Satisfaction – ease of use
- Debriefing feedback—asked for any additional comments on login screen



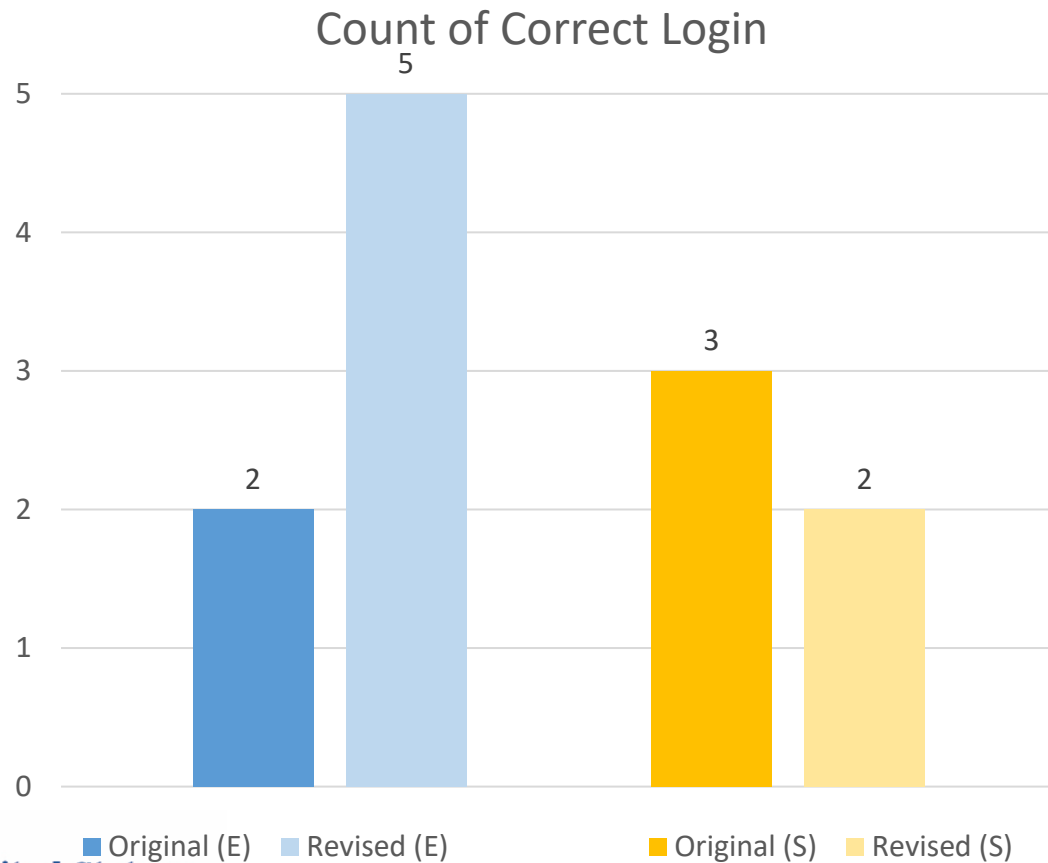
Participant demographics

	10 English-language speakers	10 Spanish-language speakers
Mean age (range)	43 years old (27-67)	45 (25-57)
Gender	4 female, 6 male	2 female, 8 male
Race	8 White; 2 Black;	5 White, 4 American Indian or Alaska Native, 1 some other race
Hispanic Origin	0	10
Education		
Less than high school	0	1
High school	1	4
Some college (AA)	2	2
BA	6	3
Post graduate degree	1	0

Outcomes

- Accuracy
 - Successful log in to survey
 - Successful toggle to Spanish from English language screen
- Efficiency (burden)
 - Amount of time to log in to survey
- Satisfaction
 - Ease of use – asked how easy or difficult was it to know what to do on the screen, 5-point scale from very difficult to very easy

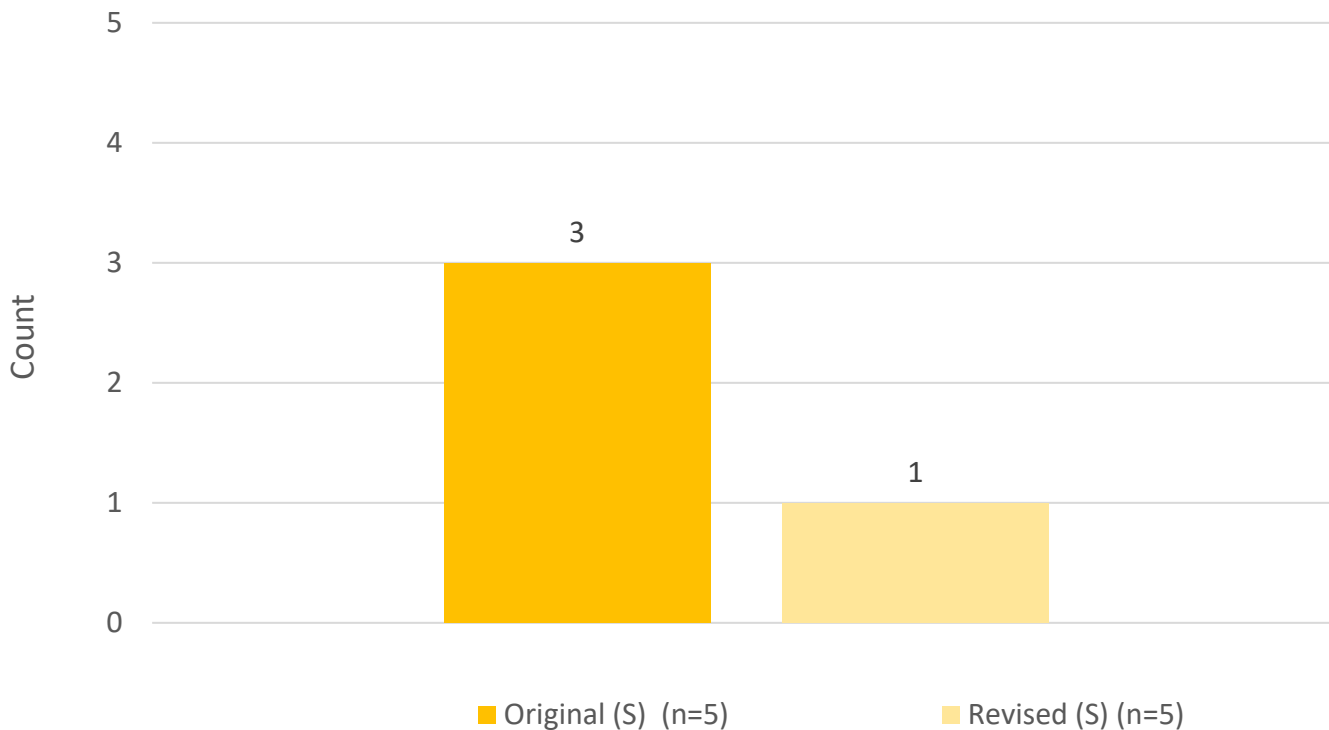
Accuracy: Success at Logging Into Survey



- English language users were more successful at logging in on revised design than on original design
- Spanish language users had fewer successful log ins without assistance than English language users.
 - Some issues linked to postcard being in English.

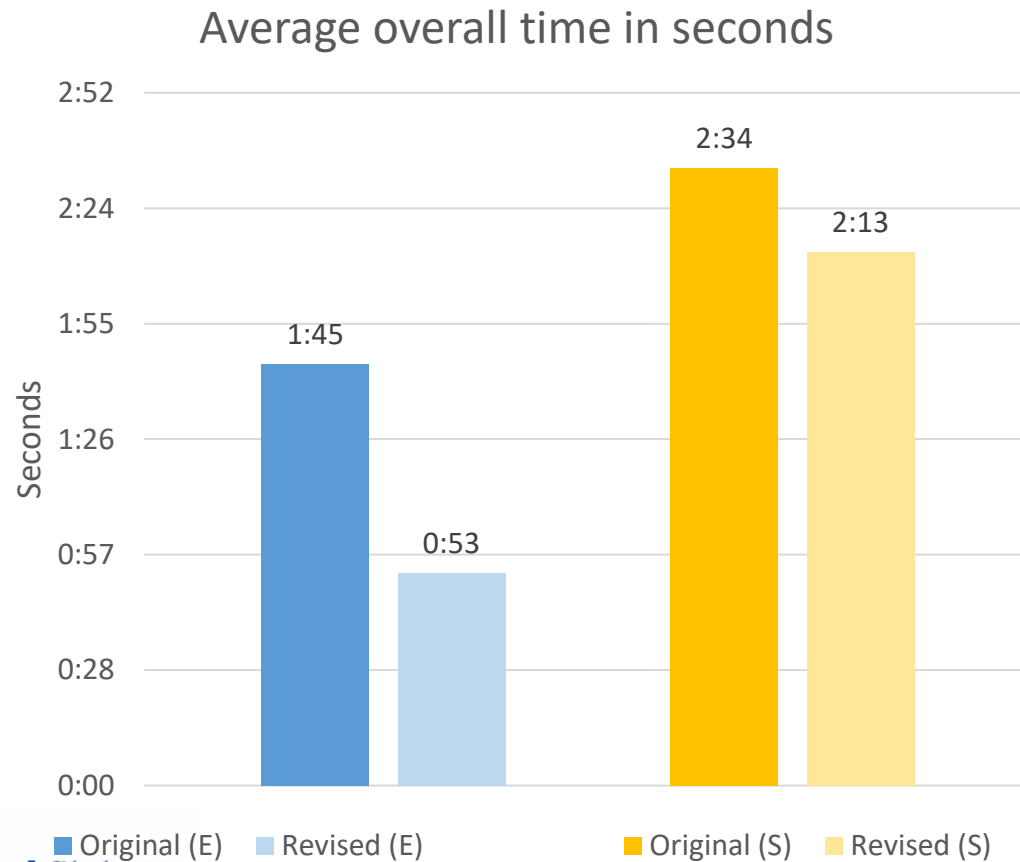
Language Toggle: Spanish language users

Number of participants that found language toggle



- **Caveat:** on revised design, 2 of the participants had their browsers automatically translate the webpage into Spanish
 - Browser translations are notoriously not as good as human translations

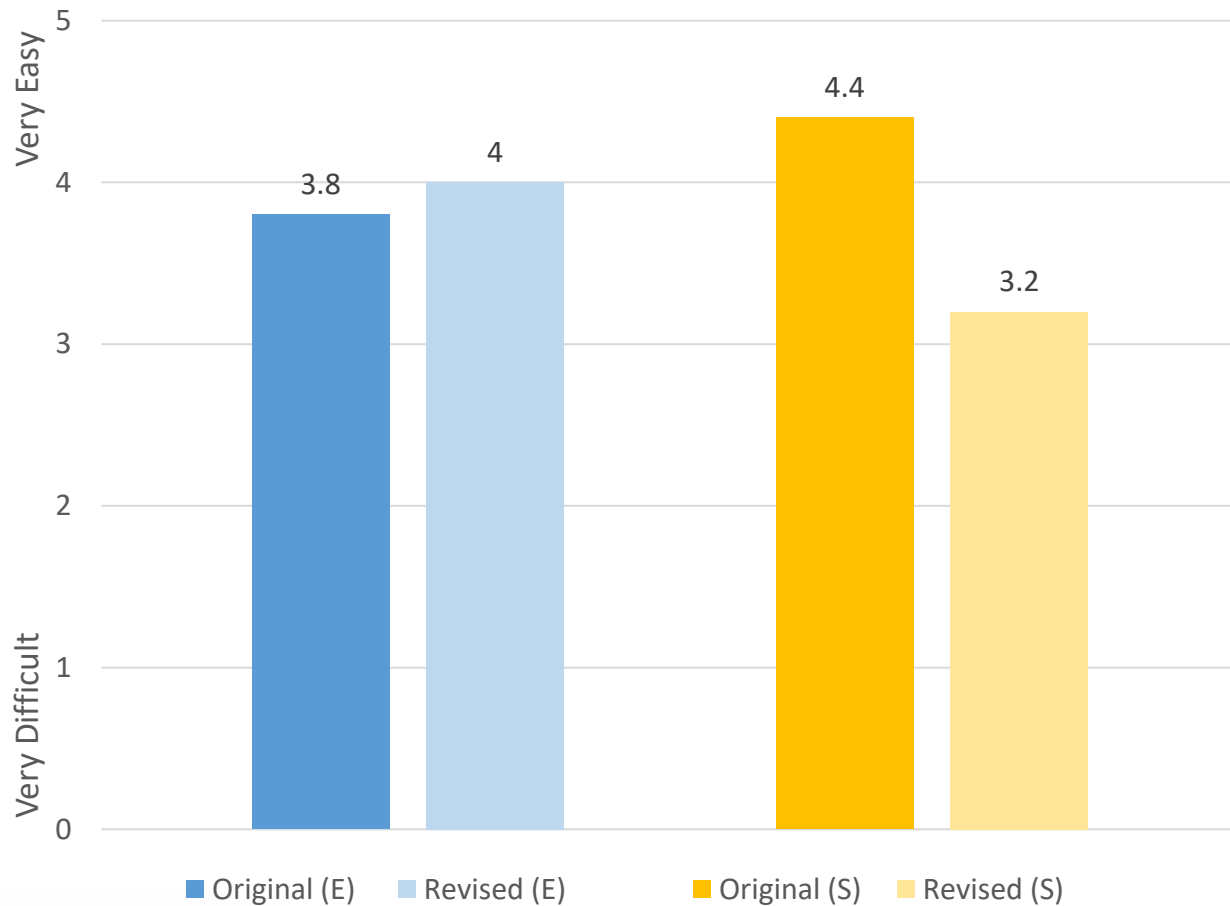
Efficiency: Time from page load to clicking Login button



- Across both languages, logging into ACS was faster on revised design

Satisfaction – ease of use

Satisfaction by design



- No real difference between two designs for satisfaction measure for English-speaking participants.
- Spanish-speaking participants had higher satisfaction for original design.

Summary

- The revised design appears to work better for English and Spanish speakers with respect to efficiency
- Accuracy results were mixed across the two languages
 - For English-language speakers, the revised design was more accurate
 - For Spanish-language speakers, there was more success with original design
 - Language toggle link location did not perform better in either design
- Satisfaction results were also mixed across languages
 - English-language speaker's satisfaction did not differ across two designs
 - Spanish-language speakers were more satisfied with original design; mentioned appreciating confidentiality language on screen

Where do participants look when first on a login screen?

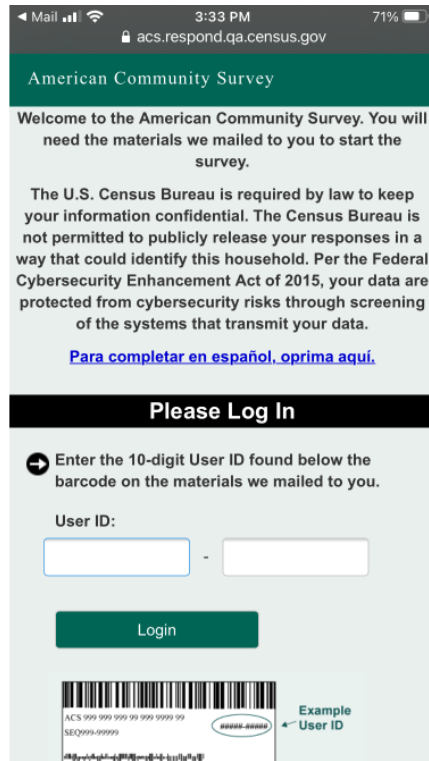
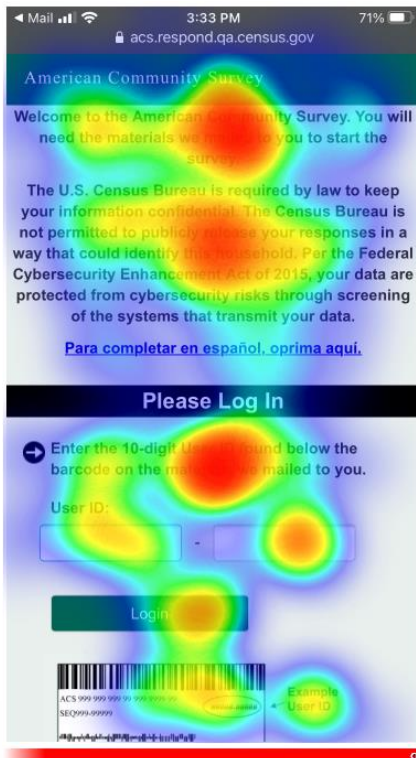
- Optimally we would do eye tracking on these screens during usability testing
- But COVID...
- SO – we share our results of how we used proxy of click data (touch data) in a follow-up study with an online panel....

Methodology on click/touch data of login screens

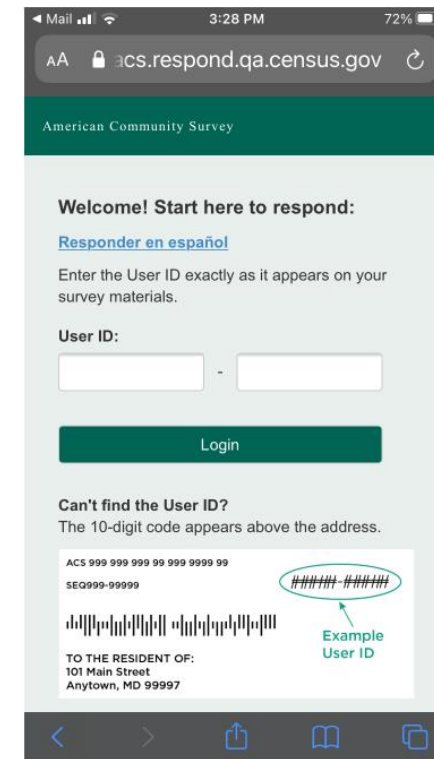
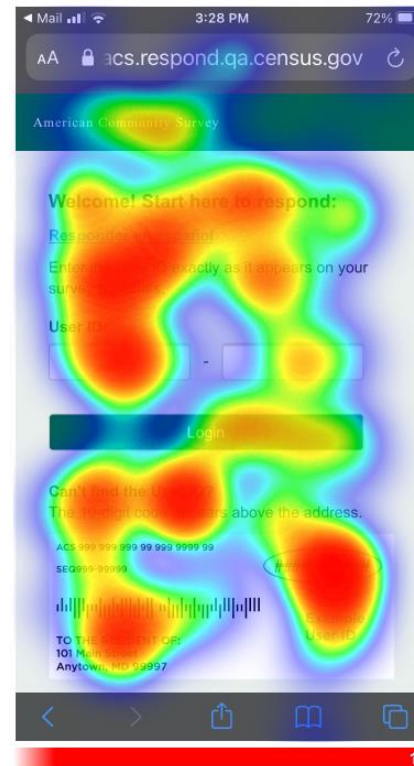
- Split panel survey with two conditions, between-subject design
 - Original or revised design
- Study in Qualtrics, all English-speaking sessions
- Non-probability panel of people in U.S. in December 2-11, 2021
 - 795 respondents with 240 answered on mobile phone
 - Results focus on **mobile phone** respondents only
- Measured time to first touch, heatmaps that highlight areas on screen where more/less touches occurred
- Preference –
 - Qualitative follow up probe on **Why** users preferred the design they did

Touch area on screen you would read

Original design

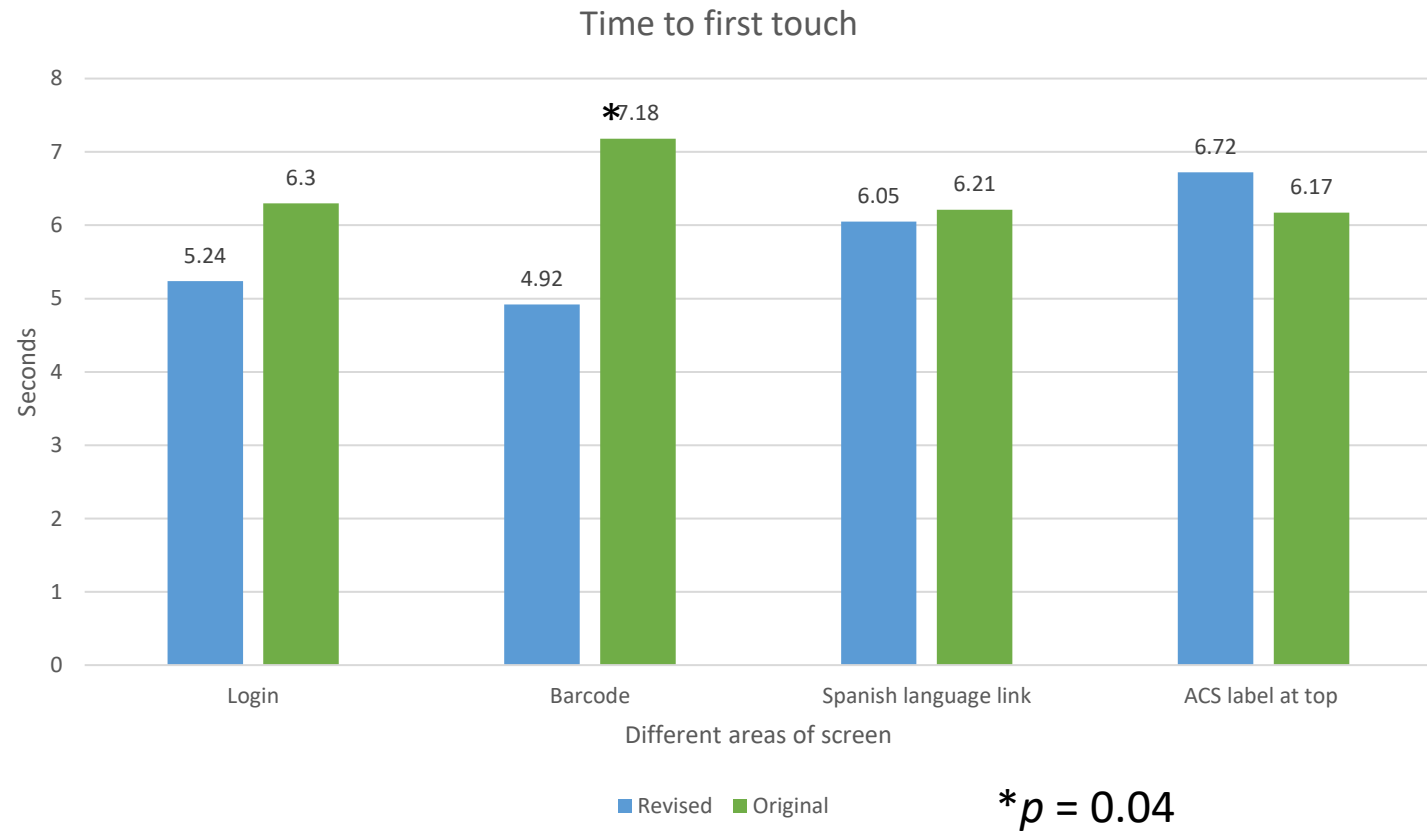


Revised design



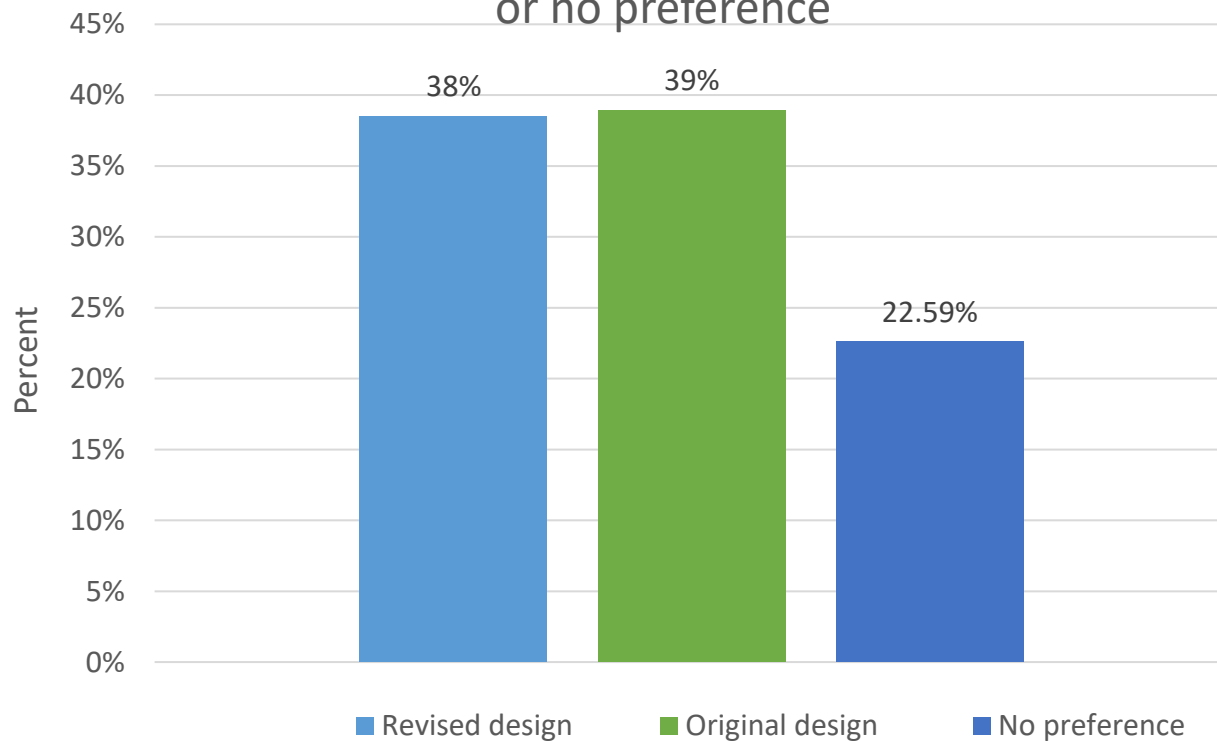
Time to first touch area on screen

- Mostly no differences in design with respect to time to first touch on certain areas of the screen.
- However, users noticed barcode faster on average in the revised design than on original design



Preference

Percent preference for original design, revised design, or no preference



- Preference pretty evenly split

Preference for revised design

Example comments:

Easier to navigate

Simpler

Easier

It's not as confusing

gets straight to the point

Easier to understand

It's less cluttered and confusing.

This has less words

More clear

More to the point

Seems simpler with less to read.



Recommendations

- Keep clean look of revised design
 - In usability testing study where they had to do an actual task of logging in – we saw time savings with the revised design
 - Addresses feedback Census received from advisory committee
 - In non-probability panel test not many differences across the two designs
 - Appears that users would be able to log in to start the survey with either design
 - Barcode was noticed quicker in revised design on mobile screens
- Changes to make to the revised design based on user feedback...

Final Version

The screenshot shows the login page for the American Community Survey. At the top left is the United States Census Bureau logo. The title 'American Community Survey' is centered at the top. The main content area is divided into two columns. The left column contains a 'Welcome! Start here to respond:' section with a link for 'Responder en español' (highlighted as a change), instructions to enter the User ID, a form with two input boxes for the User ID, and a 'Login' button. The right column contains a 'Can't find the User ID?' section with instructions and an example of a User ID from a survey document. The example shows a 10-digit code '#####-####' circled and labeled 'Example User ID'. Below the main content is a 'U.S. Census Bureau Notice and Consent Warning' section with three paragraphs of text. At the bottom is a footer with OMB Numbers, approval expiration dates, and links for Accessibility, Privacy, and Security.

Made Spanish toggle link darker

Refined instruction on how to find User ID

Added confidentiality language from original login screen



Thanks

Contact: erica.l.olmsted.hawala@census.gov