FVAP RESEARCH NOTE

Assessing State *UOCAVA* Web Pages

Executive Summary

Background: This research note explores the *Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA)*-specific web pages of U.S. states and territories. These web pages are targeted to *UOCAVA* voters and assist them in learning how to properly cast ballots in a federal general election. Because states and territories design and maintain their own web pages, states vary widely with respect to the findability, completeness of procedural information, and user friendliness of their *UOCAVA* web pages.

Methodology: The Federal Voting Assistance Program (FVAP) evaluated the *UOCAVA*-specific web pages for each state and territory using a content coding methodology. Each web page was examined by two trained content coders and rated on Likert scales according to the ease of finding the web page (both through a web search engine and from the state election home page), the procedural information on the web page and the overall ease of understanding the information, and the user friendliness of the web page. Likert scales were averaged between the two coders and a subject matter expert (SME) resolved differences in ratings for procedural information.

Results: The average state *UOCAVA* web page could be located by coders in less than a minute of searching and only a few clicks; however, it took coders longer than 1.5 minutes to locate a few web pages, and these web pages tended to receive low ratings from coders on findability. The average state *UOCAVA* web page had nine of the 11 key pieces of procedural information that coders searched for, with the most common missing pieces of procedural information being a link to FVAP's online assistant for completing the Federal Post Card Application (FPCA), a link to the Federal Write-In Absentee Ballot (FWAB), and a free-access registration tracking tool. However, approximately one-fifth of the information on state *UOCAVA* web pages was marked by coders as being confusing, indicating that it lacked clarity or context or was located several clicks away from the state's primary *UOCAVA* web page. Coders found the registration tracking tools, information on returning voted ballots, the state's voter registration form, and ballot tracking tools the most confusing. Assessments of web pages' user friendliness found significant issues with the readability of the text used on the web pages, with the average state *UOCAVA* web page requiring a college degree to understand and all but one state's page scoring below readability benchmarks.

Conclusion: To make *UOCAVA* voting information easier for voters to find and understand, FVAP recommends that states and territories use search engine optimization (SEO) practices that include incorporating key words into site metadata, reviewing web rankings and traffic, and keeping content up to date. FVAP recommends including key procedural information directly on the state's web page so that voters have easy access to reliable, accurate information in one location. To make web pages more user friendly, FVAP recommends designing web pages according to best practices in the user experience (UX) field, including designing for how people scan, organizing information by how a voter would go through the *UOCAVA* voting process, putting all *UOCAVA* information on one page, including links to supplemental information, and providing clear guideposts to *UOCAVA* information.

Introduction

FVAP is charged, pursuant to *UOCAVA*, with facilitating absentee voting by members of the active duty military (ADM), their families, and U.S. citizens living abroad.

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ADM, their families, and U.S. citizens living abroad face unique challenges in casting their ballots in elections. Previous research notes from FVAP have shown that U.S. citizens attempting to vote from overseas face challenges in using the international mail system. One FVAP research note from 2016 notes, "An overseas citizen must first send registration and ballot request forms to the LEO [local election office]. The LEO then sends the voter a blank ballot, which must be completed and returned to the LEO by the statutory deadline for *UOCAVA* ballot receipt in order to be counted."[1] Overseas voters also face higher procedural hurdles than domestic voters in registering to vote and requesting ballots. ADM, in particular, have higher mobility than domestic voters.[2] All of these factors point to a greater need for clear, concise, and user-friendly information about the voting process. In a 2010 report, the Pew Center on the States notes that "easy access to essential voting information is not a privilege, but a right that belongs to overseas voters and members of the armed forces and their families stationed overseas. However, the complicated process of registering and receiving ballots for these individuals continues to suppress turnout."[3]

Although FVAP offers a centralized "one-stop shop" source of information about *UOCAVA* voting, state and local election websites are also key sources of information for voters. The 2018 Post-Election Voting Survey of Active Duty Military Members (PEVS-ADM) reveals that state and local election websites are a common source of absentee voting information.[4] Sixty-one percent of surveyed ADM were aware that state and local election websites could be used as a resource, and 32% used these state and local websites to find information about the absentee voting process. This finding far outpaced the awareness and usage of other potential resources, including FVAP itself (47% awareness, 19% usage), Unit Voting Assistance Officers (UVAOs; 42% awareness, 9% usage), and Installation Voting Assistance Offices (IVAOs; 43% awareness, 9% usage).

The high reported usage of state and local websites among *UOCAVA* voters makes it important to understand what information these websites offer and how accurate, complete, and usable that information is. FVAP undertook a systematic assessment of the *UOCAVA*-specific web pages of the 50 states, the District of Columbia, and the territories of American Samoa, Guam, Puerto Rico, and the U.S Virgin Islands. Previous research completed by FVAP has found that when overseas ADM have access to an informative website that provides them with crucial information they need to know about the overseas voting process, they are more likely to request absentee ballots and to vote.[5]

FVAP's assessment of these web pages focused on three areas—how easy the pages were to find, how much procedural information they contained on the absentee voting process, and their user friendliness. The methods used were a combination of quantitative measures (to assess findability and user friendliness) and content analysis (to code and then quantify the presence of procedural information). Results were used to identify common areas for improvement to assist states and territories in providing better resources and guidance to the *UOCAVA* population. Although the

[1] "International Mailing Systems and Voting by Overseas Citizens." Available at https://www.fvap.gov/uploads/FVAP/Reports/ResearchNoteInternationalMail_20161128_final.pdf
[2] "Registration and Voting Participation Differences Between the Active Duty Military and Citizen Voting Age Populations in the 2014 Election." Available at https://www.fvap.gov/uploads/FVAP/Reports/2015_FVAP_ResearchNote6_Final_1027.pdf
[3] "Being Online is Still Not Enough: Reviews and Recommendations for Stat Election Websites 2010." Available at https://www.pewtrusts.org/-/media/legacy/uploadedfiles/pcs_assets/2011/beingonlineisstillnotenoughmethodologypdf.pdf
[4] Federal Voting Assistance Program – 2019 Report to Congress
[5] "The Effects of the 2010 FVAP Website Redesign on Voting in the Active Duty Military Population." Available at https://www.fvap.gov/info/news/2016/3/14/fvap-releases-research-on-effects-of-website-redesign

assessment focused on state web pages, the recommendations in this research note are applicable to local web pages as well.

This research note is organized in the following sections:

- Key Research Questions
- Methodology of Web Page Assessment
- Findings of Web Page Assessment
- Conclusions, Recommendations, and Best Practices for State Web Pages for *UOCAVA* Voters

Some of the main findings arising from the *UOCAVA* web page assessment include:

- *UOCAVA*-specific state web pages are generally findable from either a Google search or a search from the state election home page. Most web pages could be found in less than one minute of searching.
- Although the average *UOCAVA* web page had at least nine of the 11 pieces of procedural information FVAP was looking for, indications are that much of the procedural information was presented without clarifying context, making it confusing and difficult to understand.
- Readability of the information on *UOCAVA*-specific state web pages is generally poor.

Key Research Questions

This research note addresses the following research questions:

- How well do the *UOCAVA*-specific web pages of states and territories communicate the important procedural information and resources *UOCAVA* voters need to cast their ballots? How findable and user friendly are they?
- What can states and territories do to make their *UOCAVA*-specific web pages easy for voters to find, easy to understand, and easy for voters to use the information to successfully cast *UOCAVA* absentee ballots?

Methodology of Web Page Assessment

FVAP used a content coding methodology to examine the *UOCAVA*-specific web pages of each of the 55 states and territories. Content coding allows text to be systematically analyzed and rated on a numerical scale. Two trained content coders independently reviewed each web page on the following topics:

Findability of *UOCAVA* Information. Coders searched for the *UOCAVA*-specific web page by either Googling it using search terms similar to those used by actual voters (such as "military and absentee voting [state]" and "*UOCAVA* voting [state]") or by beginning at the state's election home page and searching from there. Coders were randomly assigned to which task they would complete. Findability was measured in terms of the time it took to locate the *UOCAVA*-specific web page and the number of clicks it took to locate the correct web page.

Presence of Procedural Information. Coders searched for 11 key pieces of information associated with the *UOCAVA* voting process. *UOCAVA* voting involves forms and deadlines that are not used by non-*UOCAVA* voters, and it is important that *UOCAVA* voters have this information so they can successfully cast their ballots. The 11 key pieces of information are the following:

1. Information on who is eligible to be a *UOCAVA* voter;
2. Voter registration form for the state or territory;

3. FPCA, a form that Uniformed Service members, their families, and citizens residing outside the United States can use to register to vote and request and absentee ballot;
4. Relevant dates and deadlines for registering as a *UOCAVA* voter and returning a *UOCAVA* absentee ballot;
5. Instructions for returning a *UOCAVA* absentee ballot, such as what methods (postal mail, fax, email, etc.) can be used to return the ballot;
6. FWAB, a backup ballot that can be used by *UOCAVA* voters to cast a ballot when their regular *UOCAVA* ballot does not arrive in time;
7. Contact information for the state or territory election office;
8. Link to FVAP's website;
9. Link to FVAP's online FPCA, an online tool that guides voters through filling out the FPCA;
10. Free access to a tracking system that tells voters whether they are registered to vote; and
11. Free access to a tracking system that tells voters whether their ballot was received by the appropriate state election official (SEO).

User Friendliness. Coders used a combination of 5- and 7-point Likert-type scales developed for this project and the industry-standard UMUX-LITE 7-point scale[6] to rate how well the web pages were organized and how informative they were about the *UOCAVA* voting process.

After the content coding was complete, the URLs of the *UOCAVA*-specific web pages were run through VisibleThread software to assess the pages' **readability** in terms of the Flesch readability score, which uses the total number of words, sentences, and syllables on a web page to calculate the overall ease of reading on a scale of 0 to 100, with higher scores indicating greater ease of reading.

Because two coders examined each web page, the coders' numeric scores were averaged. For the procedural information, a SME adjudicated disagreements between coders on whether procedural information was present on the state web pages. For each of the 11 procedural variables, a corresponding discrepancy variable was created to evaluate whether the two coders agreed or disagreed on the presence or absence of the information; this was used as a proxy for whether the procedural information was not presented in a way that could be clearly understood by an average *UOCAVA* voter seeking information on the voting process.

The study's methodology and the training procedures used to train the web page coders are outlined in more detail in Appendix A.

[6] The UMUX-LITE scale is a modified version of the System Usability Scale (SUS), which is a common research tool in UX research to systematically assess web pages or systems and differentiate between usable and unusable systems. The SUS is a 10-item questionnaire with five response options; the UMUX-LITE is a shortened version of the SUS that is quicker to administer and easier to interpret, without sacrificing the validity of the scale. For more information, see Lewis, Utesch, and Maher (2013), "UMUX-LITE: When There's No Time for the SUS." CHI 2013, April 27–May 2, 2013, Paris, France.

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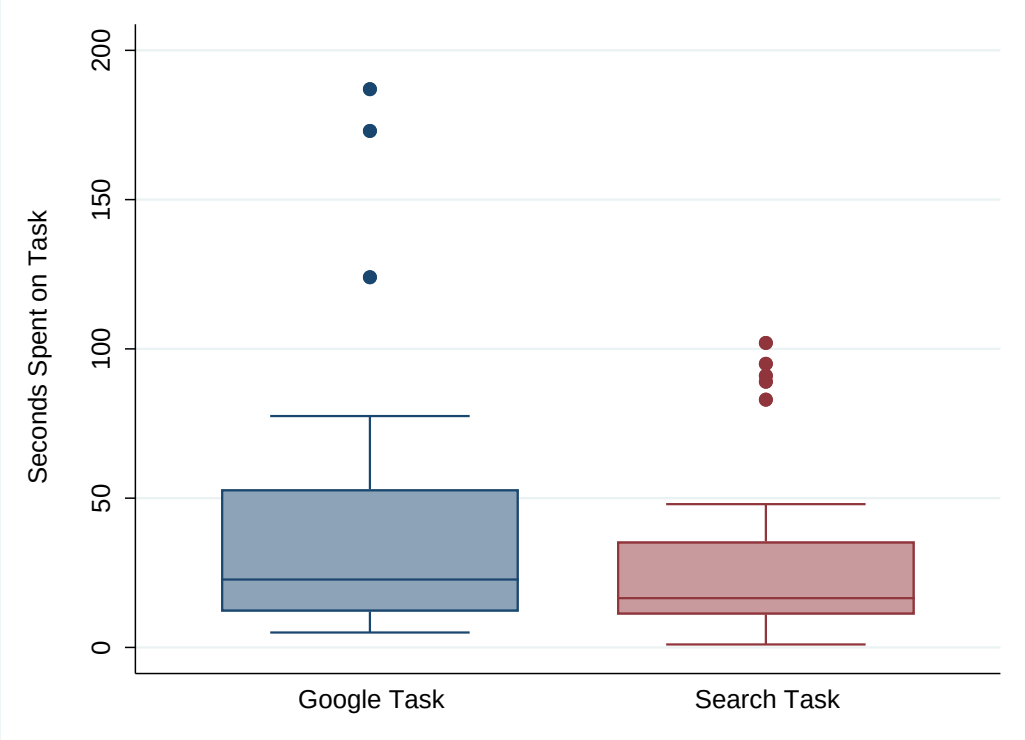
Findings of Web Page Assessment

How Easy are State UOCAVA Web Pages to Find?

On average, coders spent 38.7 seconds locating a state's *UOCAVA*-specific web page using a Google search; in contrast, it took coders 28.2 seconds to locate the correct web page by searching the state's elections home page. The Google task took an average of 6.3 clicks to complete, and the state home page search task took an average of 5.3 clicks to complete. *T* tests showed no statistically significant differences between these two tasks ($p < 0.05$); this finding indicates that users are able to find the *UOCAVA*-specific web pages in approximately the same amount of time and same number of clicks, regardless of whether they begin their search from a search engine or from a state's election home page.

On average, state *UOCAVA* web pages could be located in less than one minute of searching and only a few clicks, but some states took far longer than average (see Figure 1). Coders took longer than 1.5 minutes to locate three states via the Google search task and longer than 1.5 minutes to locate three other states via the state home page search task.[7] There was no statistically significant correlation between time spent on the Google task and time spent on the state home page search task.

Figure 1: Seconds Spent on Findability Tasks



[7] Not all states were included in the findability tasks. Several states were re-coded because one of more coders did not identify the correct web page during the initial coding. These states were excluded from the findability analysis.

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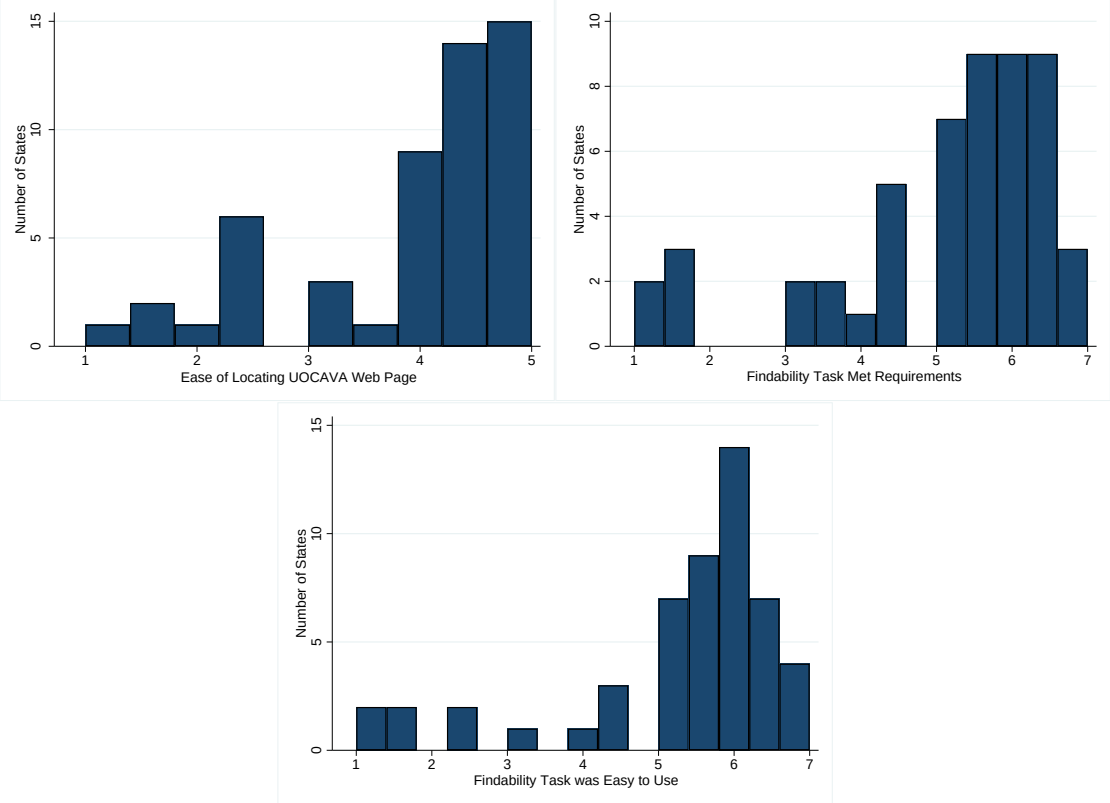
Coders rated state *UOCAVA* web pages highly on their findability in the aggregate. When asked to rate how easy it was to find the web page, with a score of 1 representing that the page was very difficult to find and a score of 5 representing that it was very easy to find, the average across all states was 4.0. When asked how strongly they agreed with the statements "This [findability] feature's capabilities meet my requirements" and "This [findability] feature is easy to use," with a score of 1 representing strong disagreement and a score of 7 representing strong agreement, coders rated state *UOCAVA* web pages as 5.1 and 5.2, respectively. However, these strong average scores again mask the fact that some states received very low scores on these subjective measures, indicating that some state *UOCAVA* web pages are very difficult to find. Between 8% and 10% of states received scores of 2 or lower on each of these three ratings.

Figure 2: Assessment of State *UOCAVA* Web Page Findability



Do State UOCAVA Web Pages Have Adequate Procedural Information?

State *UOCAVA* web pages were next evaluated on whether they had 11 pieces of procedural information that assist voters in knowing how to obtain and successfully cast a *UOCAVA* absentee ballot. These results are shown in Table 1. On average, the percentage of the 11 key pieces of procedural information on a state *UOCAVA* web page was 82.2%. This means that the average *UOCAVA*-specific web page had nine of the 11 pieces of procedural information. Nearly every web page had the state's or territory's voter registration form, and other commonly found pieces of

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information were the state election office's contact information; a link to the main FVAP website or the state or territory's web page within the FVAP website; important dates and deadlines for *UOCAVA* voters to register, request ballots, and return voted ballots; and a tool for *UOCAVA* voters to track the status of their ballots. The least commonly found pieces of procedural information were a link to FVAP's online assistant for completing the FPCA, a link to the FWAB, and a free-access registration tracking tool. Each of the pieces of procedural information that were included were identified on at least half of state *UOCAVA* web pages.[8]

Table 1: Presence of Procedural Information on State *UOCAVA* Web Pages

Is procedural information available?	
Procedural information	**Percentage**
Eligibility	79.2%
State registration form	98.1%
FPCA	81.1%
Dates and deadlines	88.7%
Info on returning ballot	79.2%
FWAB	71.7%
State contact info	96.2%
Link to FVAP site	94.3%
Link to online FPCA	58.5%
Registration tracking	73.6%
Ballot status tracking	83.0%

100.0% indicates that all state web pages had the information

Is procedural information confusing?	
Procedural information	**Percentage**
Eligibility	15.1%
State registration form	22.6%
FPCA	17.0%
Dates and deadlines	18.9%
Info on returning ballot	26.4%
FWAB	5.6%
State contact info	7.5%
Link to FVAP site	7.5%
Link to online FPCA	13.2%
Registration tracking	32.1%
Ballot status tracking	20.8%

100.0% indicates that the procedural information was confusing for all web pages that had the information

To further evaluate whether procedural information was presented clearly, FVAP assessed whether the coders found the procedural information to be confusing, presented with insufficient context for *UOCAVA* voters to understand, or located several clicks away from the state's primary *UOCAVA*-specific web page. On average, the trained coders marked the procedural information as being confusing 21.2% of the time. The highest levels of coder confusion were for registration tracking tools, information on returning voted ballots, the state's voter registration form, and ballot tracking tools. The pieces of procedural information with the lowest levels of coder confusion were the FWAB, a link to FVAP's website, and contact information for the state election office.

The high levels of coder confusion for, on average, one-fifth of the information on a state's web page indicate that many state *UOCAVA* web pages lack clarity or context in presenting procedural information and may, therefore, be difficult for *UOCAVA* voters to understand. The *UOCAVA* voting process involves specialized forms and deadlines that do not apply to non-*UOCAVA* voters and clearly communicating this information is essential to *UOCAVA* voters being able to successfully cast their ballots.

[8] Assessing the ballot and registration tracking tools posed some difficulty to coders; many state web pages require readers to enter in their personally identifiable information (PII) to see the full range of tracking information available, and some web pages do not differentiate between tracking tools offered to all voters and tools designed specifically for *UOCAVA* voters.

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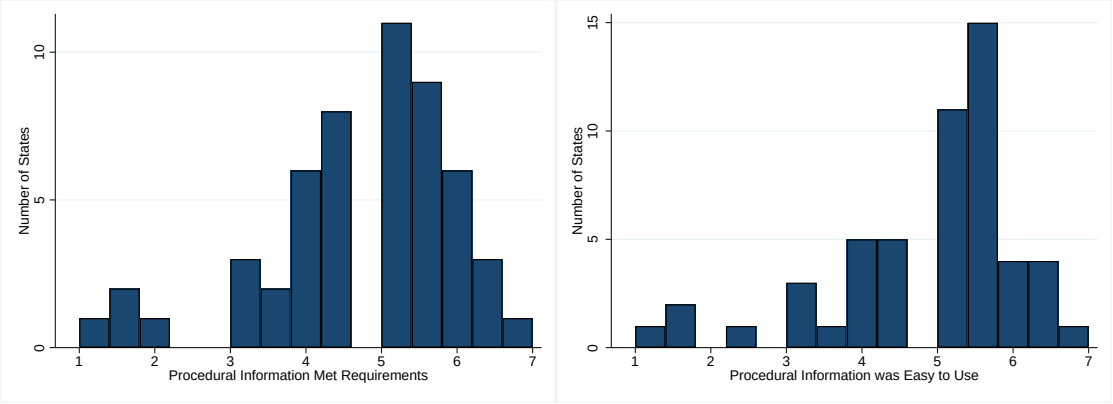
The subjective ratings that coders assigned confirm that procedural information is an area in which many state *UOCAVA* web pages need improvement. At the conclusion of the procedural information task, coders were asked how strongly they agreed with the statements "This [procedural information] feature's capabilities meet my requirements" and "This [procedural information] feature is easy to use," with a score of 1 representing strong disagreement and a score of 7 representing strong agreement. The averages across all states were, respectively, 4.7 and 4.8. In comparing these scores to similar items for the findability and user-friendliness tasks, the procedural information subjective ratings were lower than the findability task on the question of whether the information was easy to use and were lower than the usability task on the question of whether the information met requirements ($p < 0.05$).[9] This finding indicates that coders found the procedural information task to be the most difficult to complete. The distributions of these ratings are shown in Figure 3.

Figure 3: Assessment of *UOCAVA* State Web Page Procedural Information



Are State UOCAVA Web Pages User Friendly?

Finally, FVAP examined the user friendliness of state *UOCAVA* web pages and assessed the readability of the text on the web pages. On a scale of 1 (very disorganized) to 5 (very organized), these web pages received a rating of 3.7 on average. Coders were also asked to disagree or agree (on a 7-point scale, with higher ratings indicating stronger agreement) with the statements "I was able to learn everything I need to know to be able to register as a *UOCAVA* voter, request a *UOCAVA* ballot, and successfully cast that ballot," "This [user-friendliness] feature meets my requirements, and "This [user-friendliness] feature is easy to use." The averages of these ratings across all states were, respectively, 4.6, 4.9, and 4.9.

Although the distributions of these ratings were lower than the ratings for similar items for the findability task, the difference was not statistically significant ($p > 0.05$).

[9] In addition, when comparing the procedural information and findability tasks on whether they met requirements, the difference was nearly statistically significant ($p < 0.06$). Comparing the procedural information and user-friendliness tasks on whether they were easy to use showed no statistically significant differences between the average scores.

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The readability of state *UOCAVA* information also proved problematic. For states with multiple *UOCAVA* pages, only the main page was assessed. Web page readability was assessed using the Flesch readability score, which measures how difficult a passage of English-language text is to understand. This is calculated as a function of average sentence length (total words divided by total sentences) and number of syllables per word (total syllables in the passage divided by total words). Higher Flesch scores are considered to be easier to read. For instance, a passage of text with a score of 100 is considered very easy to read and can be understood by a person with a 5th-grade education level. A passage of text with a score of 30, on the other hand, is very difficult to read and generally requires a college degree to understand. For web copy, a Flesch score of 60–70 is considered optimal for text on a web page.

Figure 4: Assessment of *UOCAVA* State Web Page User Friendliness

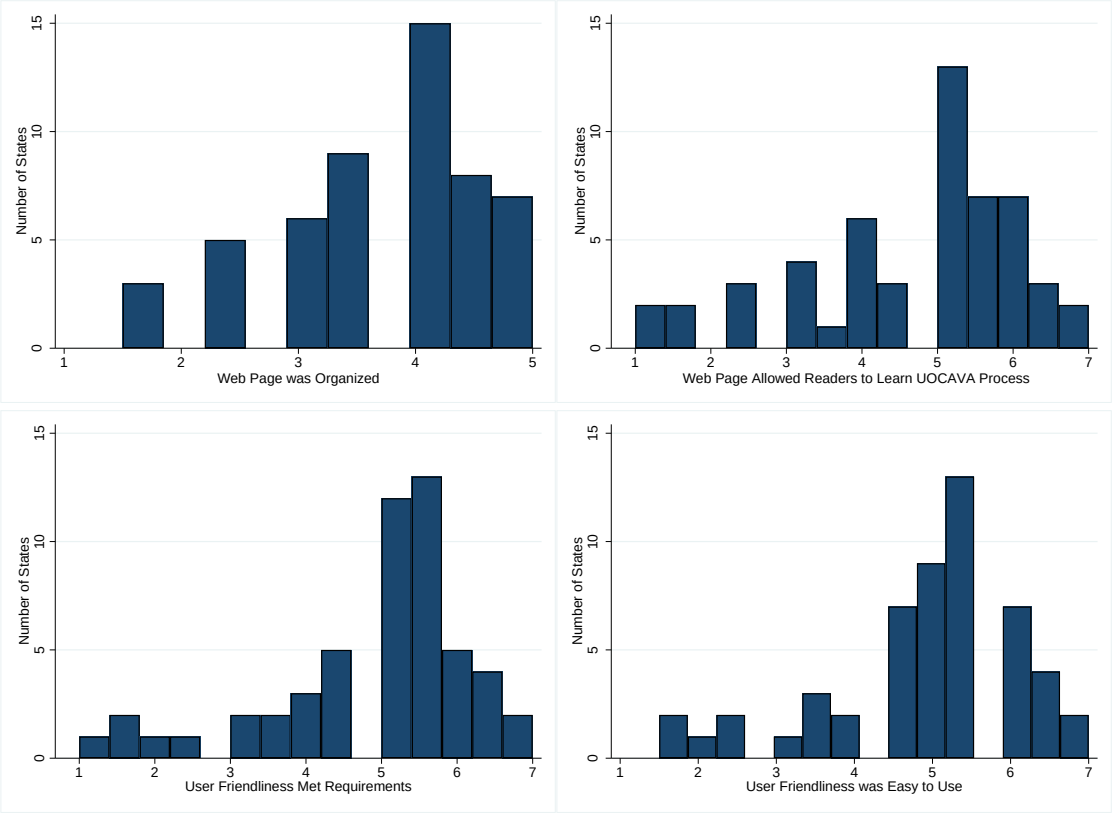
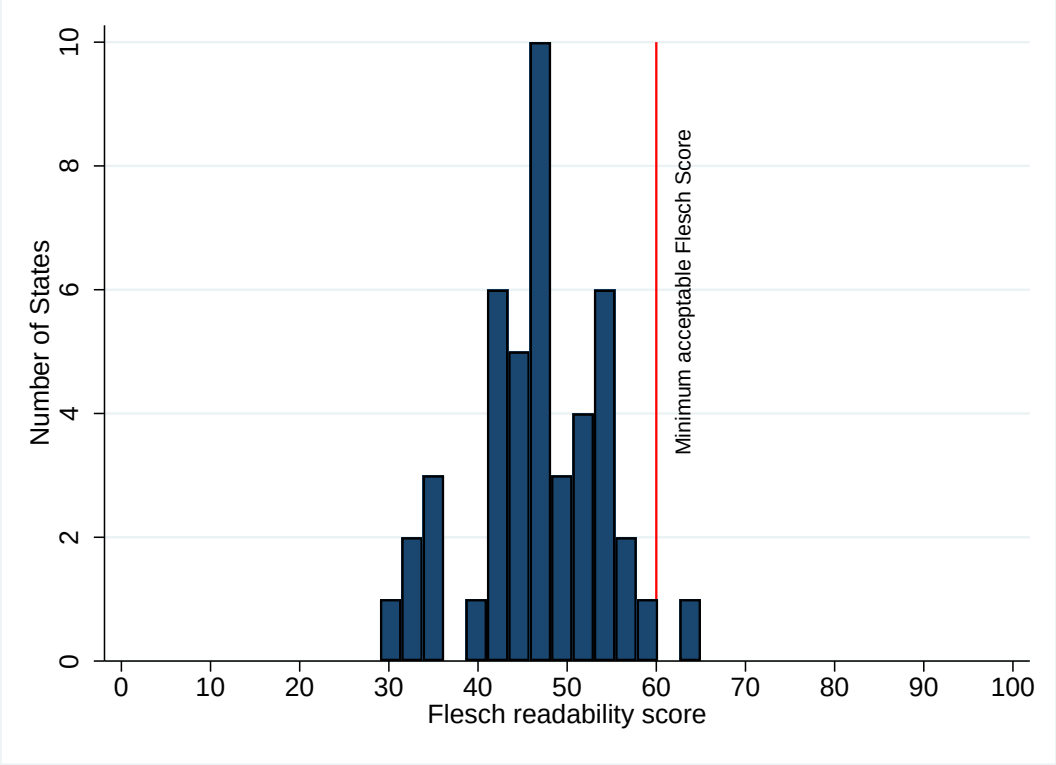


Figure 5 shows that only one state fell within this ideal range for text readability, with three other states scoring close to 60.[10] The lowest Flesch score among the state web pages was 29 and the average was 47.1. This indicates that most *UOCAVA* web pages are best understood by a person with a college degree and that the text is fairly difficult to read. Part of this is due to the nature of conveying complex information—*UOCAVA* web pages often cite legal language text and must convey

[10] The state of Indiana was excluded from the readability analysis because its state *UOCAVA* web page was a series of links and did not have text.

nuanced information about eligibility requirements, ballot return methods, and special dates and deadlines involved in *UOCAVA* voting. However, the resulting content is challenging for voters who are seeking to use state web pages to understand how they can cast *UOCAVA* ballots.

Figure 5: State *UOCAVA* Web Page Readability



Conclusions, Recommendations, and Best Practices for State Web Pages for *UOCAVA* Voters

Based on the findings outlined in this research note, FVAP is recommending specific improvements for state web pages to enable them to better serve *UOCAVA* voters. These recommendations reflect findings from FVAP's original data collection efforts and best practices surrounding SEO, UX, and website design. The recommendations serve as guidance to provide *UOCAVA* voters with relevant and accessible information about the often complex *UOCAVA* voting process.

Making UOCAVA Information Easy to Find: Search Engine Optimization

Many *UOCAVA* voters begin looking for information on absentee voting by using Google or another search engine. Since people are most likely to click on the first few listings on the search engine results page (more than two-thirds of clicks go to the first five listings),[11] SEO is a critical part of website design and maintenance.

[11] "Google Organic CTR History" Available at https://www.advancedwebranking.com/ctrstudy/

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FVAP recommends the following steps to optimize SEO for state *UOCAVA* web pages:

(1) Develop a priority list of keywords that will attract *UOCAVA* voters (usually no more than 12 keywords). Through interviews conducted with *UOCAVA*-eligible citizens, FVAP has identified a short list of keywords that *UOCAVA* voters are likely to use when searching for absentee voting information and resources. These keywords are often used in conjunction with the state name:

- "how to vote absentee"
- "absentee ballot process"
- "voting process overseas"
- "how to vote while deployed"
- "military absentee voting"

Another way to identify important keywords is to examine *ranking keywords* (in which a site would appear on the search results page using that keyword) that are currently leading traffic (by topic, volume, quality, relevance, etc.) to the website. Look at ranking and high-volume keywords for similar sites (such as other states' election sites) to determine where the target website could perform better. For example, in December 2019, FVAP.gov's top-ranking keywords were "FVAP," "FPCA," "*UOCAVA*," "military voting," "voting ballots," "federal voting assistance program," and "can you vote in a state you don't live in."[12] States can use Google Search Console to track organic search performance of the target website, as well as SEO monitoring tools such as SEMrush or Moz, which are paid applications, or Screaming Frog for a free version.[13]

(2) Build priority keywords into web content. Putting relevant content in the right places helps search engines understand and relay to users what the website offers. One way to do this is by using hidden fields such as meta tags, which are text that describe the content of the web page but are only included in the page's source code.

A website's metadata (the way search engines view text in a website's HTML), including the title tag (an HTML element that specifies the web page's title) and meta description (a tag in HTML that summarizes the web page's content), make up the preview of the website that users see on a search engine results page. Incorporating a primary keyword into both the title tag and meta description of the website can help a site rank higher for relevant search queries. The Center for Civic Design recommends including the following keywords in an election website's metadata:[14]

- election
- vote
- ballot
- register
- absentee
- military and overseas voters

When building priority keywords into web content, set up all title tags and descriptions using character length best practices. Best practices include using keywords and synonyms in a meta tag

[12] "FVAP.gov Top Ranking Keywords." Available at https://moz.com/domain-analysis?site=fvap.gov.
[13] SEMrush (https://www.semrush.com/), Moz (https://moz.com/), Google Search Console (https://search.google.com/search-console/about), Screaming Frog (https://www.screamingfrog.co.uk/seo-spider/).
[14] https://civicdesign.org/fieldguides/designing-election-department-websites/

title that are between 30 and 65 characters as well as descriptions that are between 70 and 165 characters.

FVAP also recommends ongoing SEO monitoring, strategy, and upkeep that include the following:

(1) Keep an eye on how the website ranks. Regularly review analytics to measure performance on search engine results pages and traffic from organic acquisition sources. Use SEO monitoring tools such as SEMrush, Moz, or Google Search Console in addition to Google's defined best practices to ensure the site performs well on all major search engines.

(2) Keep content fresh. Frequency of publishing and quality of content added to a website helps search engines rank sites higher. In addition, procedural information on a web page needs to be periodically reviewed for accuracy and timeliness.

Making UOCAVA Information Complete: Procedural Information to Include

A wide breadth of information is available online for *UOCAVA* voters. However, voting information may be scattered across multiple websites or provided by unreliable sources, making it harder for potential voters to receive the information they need to complete the voting process successfully. FVAP recommends including the following pieces of procedural information on states' *UOCAVA* web pages to ensure that voters have easy access to reliable, accurate information in one location.

(1) Voting Eligibility Information. *UOCAVA* voters, particularly those in the U.S. Military, often have questions about determining their voting residence, and this information can be difficult to convey in plain language. States are welcome to adapt FVAP's language, which has tested well with overseas citizens, ADM, and military spouses. Language for overseas voters can be found at https://www.fvap.gov/citizen-voter/additional-info, and language for Service members and their families can be found at https://www.fvap.gov/military-voter/additional-info.

(2) Dates and Deadlines. These items are some of the most frequently sought pieces of information by *UOCAVA* voters. Because they are so commonly searched for, FVAP recommends placing dates and deadlines near the top of the *UOCAVA* web page. Including "register by" or "vote by" dates in addition to ballot request/submittal deadlines can help voters act early enough to ensure their registration and ballot is received on time.

(3) FPCA. According to FVAP's Post-Election Voting Survey of State Election Officials (PEVS-SEO), the FPCA is the only standard bearer across the country that provides *UOCAVA* protections to eligible citizens. The FPCA both registers a voter and requests an absentee ballot for them, removing an additional step from the *UOCAVA* voting process and ensuring that voters are registered to vote and receive an eligible ballot. Because the FPCA affords *UOCAVA* protections to all eligible citizens, FVAP recommends both prominently featuring the FPCA on the state's *UOCAVA* web page and providing a link to the FPCA on FVAP.gov. The FPCA can be found at https://www.fvap.gov/fpca-privacy-notice. Web pages should explain the advantages of using the FPCA over other forms of registering and requesting *UOCAVA* absentee ballots.

(4) State Registration Form. Although FVAP recommends that eligible *UOCAVA* voters register with an FPCA, the state registration form may be a more familiar way for a voter to ensure that they are

registered to vote before requesting an absentee ballot. If the state registration form can be used to designate a voter as *UOCAVA*-eligible, then the state registration form should be linked directly to the *UOCAVA* web page.

(5) Registration Tracking. Web pages should include information on how *UOCAVA* voters can look up their registration information to ensure that it is correct and up to date—and, if applicable, the format and timing of communication that they can expect from the election office.

(6) Information on Ballot Return Process. Providing an explanation on the way(s) voters can return their ballots (and dates by which they should do so) will help voters act on time. For instance, voters will want to know what modes they can use to return their ballot (mail, email, fax, etc.), what physical or electronic address to send their ballot to, and what date they should send their ballot by to ensure that it arrives in time to be counted. FVAP recommends prominently featuring this information on the *UOCAVA* web page so that voters can easily access this necessary information.

(7) FWAB. Many *UOCAVA* voters are unaware that they can use the FWAB if their state ballot does not arrive in a timely manner. State web pages should include clear instructions about its use within the state; for example, only for federal offices or also for state or local offices. The web page should also provide a link to FVAP's online version of the FWAB, which can be found at https://www.fvap.gov/fwab-privacy-notice, and a reiteration of the state's deadline for when completed ballots must be returned by.

(8) Ballot Tracking. Include information on how *UOCAVA* voters can determine if their ballot was received, either by contacting an election official or using an online lookup tool—and, if applicable, the format and timing of communication that they can expect from the election office.

(9) State Contact Information. Because the *UOCAVA* voting process is more complicated than traditional in-person or absentee voting, FVAP recommends providing contact information to the state's election office. *UOCAVA* voters can use this contact information to ask specific questions or receive assistance throughout the voting process.

(10) Link to FVAP.gov. FVAP is the authoritative source for information on *UOCAVA* voting. The website provides step-by-step voting instructions, the FPCA, the FWAB, and other useful information for *UOCAVA* voters. Featuring FVAP.gov will allow voters a place to go to receive additional information. FVAP also maintains web pages tailored to each state's laws and deadlines.

Making UOCAVA Information Easy to Use: User-Friendly Design and Plain Layout and Language

About 80% of people scan web pages rather than reading every word on the page; in fact, most people only read about 18% of the total text on a page.[15] Additionally, one in five U.S. adults—approximately 43 million people—have low literacy skills.[16] Thus, the design of a web page, the amount of content it contains, and the simplicity of that content greatly influence comprehension. Recommendations for web page design are listed below.

[15] "Follow Web Standards." Available at https://www.plainlanguage.gov/guidelines/web/
[16] "Adult Literacy in the United States." Available at https://nces.ed.gov/pubs2019/2019179.pdf

Recommendations for Web Page Design

(1) Design for how people scan. Most people scan a web page in an F-shaped pattern (first reading left to right near the top of the page, then dropping down and reading horizontally again, but not going as far across the page, and then scanning the remainder of the left side vertically).[17]

- Put the most important information in the main menu or the center section of the page so that it is easy to find.[18]
- Use clear, simple, headings in upper and lowercase (not all uppercase) and make them bold.
- Use bulleted lists rather than long paragraphs.

Figure 6. Standard Instructions for UOCAVA Voters

Are you living away from your voting residence as a Military Service member on active duty or a family member, or are you a U.S. citizen living overseas? Here's how to vote:

1. Register to vote and request your ballot in one easy step.

Go to FVAP.gov to fill out the *Federal Post Card Application* (FPCA) and send it to your election office by August 1. (Voter registration/ballot requests must be received by DATE in STATE.)

Using the FPCA guarantees that your ballot is sent at least 45 days before the election — a protection not guaranteed when using other forms.

2. Fill out and send in your ballot when it arrives.

For the November General Election, you should receive your ballot by early October.

Send it back by October 13, 2020 (for voters outside the United States) –OR– October 27, 2020 (for voters stateside).

If you requested your ballot but haven't received it, contact your election office [INCLUDE LINK TO CONTACT INFORMATION] to ask about the status of your ballot request.

If there isn't enough time to receive and send back your ballot before the election, use the *Federal Write-In Absentee Ballot* (FWAB) at FVAP.gov.

After you send in your ballot, you can check if it was received by your election office at [INSERT APPROPRIATE STATE WEBSITE].

(2) Organize information by how a voter would go through the absentee voting process. For example, Figure 6 shows FVAP's standard instructions, which *UOCAVA* voters, through cognitive testing, have said are easy to understand. These instructions can be tailored to include state-specific deadlines and contact information.

The state of Texas received high marks from coders on its presentation of *UOCAVA* information in which it used the mnemonic of a process being as easy as ABC, with A representing Application

[17] "F-Shaped Pattern of Reading on the Web." Available at https://www.nngroup.com/articles/f-shaped-pattern-reading-web-content/

[18] "Designing Election Department Websites." Available at https://civicdesign.org/fieldguides/designing-election-department-websites/.

(filling out and submitting the FPCA), B representing Ballot (receiving the ballot or using the FWAB), and C representing Casting and Counting (returning the marked ballot). This presents the information in the order that the voter needs to follow it and presents the information in a memorable and easy-to-understand way.

(3) Put all *UOCAVA* information on one page. By putting all the necessary *UOCAVA* information on one page, citizens will avoid having to hunt through multiple pages for the information that they need to complete the absentee voting process.

(4) Include links to supplemental information. Examples of other information that voters are likely to want are the names of who will be on the ballot and who is in office at the time of the election. The Center for Civic Design found that voters most often want election websites to answer these questions:[19]

- What is on the ballot?
- How do I get an absentee ballot and when is it due?
- Where do I vote?
- Who is in office now?
- How do I register to vote?

(5) Provide clear guideposts to *UOCAVA* information. Ensure that website visitors are able to easily find the *UOCAVA* page from the home page navigation and menu choices.

Recommendations for Content Readability

This study found that only one state election website fell within the ideal range for text readability. Although communicating *UOCAVA* information can be complex, the following plain language principles can guide developing and revising content to improve readability: [20, 21]

- Use short words, short sentences, and short paragraphs
- Use straightforward, familiar terms, not election jargon
- Use inverted pyramid style and place the most important information at the top of the page and less important information at the bottom of the page
- Use active voice
- Chunk information and use lists or tables to make information easier to understand
- Write directly to the reader
- Remove redundant or unnecessary content

Conclusions

UOCAVA voting, from a voter's perspective, can be a complicated and confusing process, and it is difficult to find accurate and authoritative information. States and territories should strive to present all relevant *UOCAVA* voting information in a single location that is easy to find and easy for voters to understand. FVAP's content coding of state and territory *UOCAVA* web pages shows that there are

[19] "Designing Election Department Websites." Available at https://civicdesign.org/fieldguides/designing-election-department-websites/
[20] "Follow Web Standards" Available at https://www.plainlanguage.gov/guidelines/web/
[21] "Election Website Template." Available at https://electiontools.org/tool/election-website-template/#getting-started

improvements to be made in the findability, procedural information, and user friendliness of these web pages. By incorporating a few recommendations and best practices, states and territories will be able to improve their web pages and make them easier for voters to use. Simple changes such as monitoring web rankings and SEO, including comprehensive information on a single web page, using layouts that match what voters expect, and stating instructions in plain, easy-to-understand language can better assist *UOCAVA* voters as they seek to exercise their voting rights.

Appendix A: Methodology

Content Analysis of UOCAVA Web Pages

Content analysis is a research methodology used to "determine the presence of certain words, themes, or concepts within some given qualitative data."[22] The study described in this research note uses conceptual analysis to assess the existence and frequency of a set of predetermined items; in this case, *UOCAVA* voting terminology. Content coding was chosen to ensure both reliability and validity in the study's results and to align with previous similar studies conducted of election web pages.[23]

In ensuring reliability and validity, two coders evaluated 55 state and territory *UOCAVA* web pages. By using two coders, researchers were able to check for consistency among coders and control for an individual's subjectivity in completing the analysis task.

Coding Training

Three content coders collected the data analyzed in this report. Coders went through a thorough training session led by project researchers to ensure that coders knew the *UOCAVA* voting process and terminology, and understood the conventions and procedures surrounding the coding exercise. Vocabulary taught to voters included the Federal Post Card Application (FPCA), Federal Write-In Absentee Ballot (FWAB), and ballot or registration tracking.

Coders were provided with contextual information on the absentee voting process to provide baseline knowledge for assessing the state *UOCAVA* web pages. It should be noted, however, that the average *UOCAVA* voter or a *UOCAVA* voter going through the absentee voting process for the first time may be unaware of the terminology surrounding *UOCAVA* voting.

During the training session, primary researchers led coders through a practice exercise by using a municipality's *UOCAVA*-specific voting web page. Coders were provided with a preliminary set of guidelines that included prompts such as "go in assigned order," "answer all questions," and "put yourself in the shoes of a person who is looking for information on how to cast a *UOCAVA* ballot."

Coders were walked through a formal set of coding instructions that covered (1) finding the *UOCAVA* web page, (2) coding for procedural information, and (3) coding for user-friendliness. During the training exercise, coders worked to find procedural knowledge and ranked the usability of the web page. Coders were able to ask clarifying questions of the researchers during this practice exercise.

Coding Procedures

Each coder was randomly assigned 36 or 37 states and territories. All states and territories were coded independently by two coders to ensure reliability. Coding procedures for the state *UOCAVA* web page are included below:

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[22] https://www.mailman.columbia.edu/research/population-health-methods/content-analysis
[23] Cyd Harrell, Andrea Fineman, Ethan Newby, Dana Chisnell, and Whitney Quesenbery. "Usability of County Election Websites." Available at https://civicdesign.org/wp-content/uploads/2019/04/Harrell-et-al-county-websites-usability-371a.pdf

Assessing State *UOCAVA* Web Pages

Findability: Coders located the *UOCAVA*-specific web page by using predetermined search terms or election home pages for each state and territory. Coders were randomly assigned either the Google search task or the election home page search task. Predetermined search terms included: "Military and absentee voting [state]," "*UOCAVA* voting [state]," "Military voting [state]," and "overseas voting [state]."

Coders recorded time spent on task and the number of clicks needed to find the *UOCAVA*-specific web page using recording software. Coders rated the ease of locating the *UOCAVA* web page on a scale of 1 to 5, with 1 being "very difficult" and 5 being "very easy." Additionally, coders used a UMUX-LITE scale (widely used for assessing perceptions of the ease of using a system). The UMUX-LITE scale measures whether the "system's capabilities meet requirements" and whether the "system is easy to use." The UMUX-LITE scale ranges from 1 to 7, with 1 being "strongly disagrees" and 7 being "strongly agrees."[24]

Procedural Information: Using the *UOCAVA* web page found during the findability task, coders worked to locate 11 items that would assist *UOCAVA* voters in casting an absentee ballot.

Coders searched for the following items:

(1) *UOCAVA* status eligibility information
(2) State voter registration form
(3) FPCA
(4) Relevant dates and deadlines
(5) Ballot return instructions
(6) FWAB
(7) Contact information for the state election office
(8) Link to FVAP's website
(9) Online FPCA
(10) Voter registration tracking
(11) Ballot tracking

Procedural items were coded using the following schema: "0 = the item is not included anywhere," "1 = the item is included directly on the URL or linked to it," and "2 = it took two or more clicks from the URL to find the information." Coders were also asked to complete open-text assessments of the easiest and hardest information to find, and what they perceived to be confusing about the web pages. Finally, coders completed a UMUX-LITE scale based on the ability to find the procedural information.

User Friendliness: To assess user friendliness, coders rated the web page's organization and how clearly it explained the *UOCAVA* voting process, provided an open-text assessment of the web page, and repeated the UMUX-LITE scale. The web page's organization was coded on a 1–5 scale, in which 1 was "very disorganized" and 5 was "very organized." Ease of learning the *UOCAVA* voting process was rated from 1 to 7, in which 1 was "strongly disagrees" and 7 is "strongly agrees."

[24] https://measuringu.com/umux-lite/

Assessing State *UOCAVA* Web Pages

Researchers ran each main state *UOCAVA* web page through VisibleThread, a software that assesses a web page's complexity and readability. The software evaluates the percentage of long sentences, average sentence length, passive language use, Flesch readability score (indication of how difficult a passage in English is to understand) and reading level.

Accounting for Discrepancies in the Coding Process

For analysis, responses that required a scaled ranking system (i.e., 1 to 5 or 1 to 7) were averaged out between coders to get an average response score to each item. Averaging out responses helps account for the subjective nature of the ratings system.

In the content analysis of procedural information, discrepancies between coders were accounted for by first dichotomizing procedural values. Values of 1 and 2 (procedural information that was found on the *UOCAVA* state-specific web page or within two clicks of it) were re-coded as 1, on the assumption that if one coder found the procedural information, then it exists on the *UOCAVA* web page. Recoding this variable allowed for a dichotomized "yes or no" for analysis when considering whether the procedural information is on the web page.

For each of the 11 procedural variables, a corresponding discrepancy variable was created to evaluate whether the two coders agreed or disagreed on the presence or absence of the information. The created variable used a 0 if the coders agreed on whether the information was present or absent and 1 if coders disagreed (i.e., one coder found the data while the other did not). After the content coding was complete, a SME re-examined the procedural information on the state web pages that had a discrepancy code of 1; the codes for whether the procedural information was on the web page were adjusted accordingly.[25]

[25] In the course of the content coding, there were several deviations from the established protocol. Two territories (American Samoa and Puerto Rico) were found to not have a *UOCAVA*-specific web page; they were subsequently dropped from the analysis. One state's (Utah) *UOCAVA* web page was not found by either coder, another state's (Alaska) web page was found by one coder but not by the other, and five states (Michigan, Pennsylvania, Washington, Wisconsin, Wyoming) had different web pages identified by each of the two assigned coders. For these states, the correct web page was identified by the research team and the coders re-coded for the procedural and user-friendliness tasks. The findability task was not repeated for re-coded states to avoid biasing the results.