Ballot Re-Design Report

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Introduction

The 2000 presidential ballot for Palm Beach County, Florida caused national controversy when the failed design of the ballot caused much confusion with voters. This confusion may have ultimately affected the outcome of the election. There are numerous ballot design problems involving clarity, conciseness, and arrangement. Some problems are related to proximity, order, typography, color, and instruction. Our revised ballot addresses and overcomes these problems.

Florida Design Problems

The Florida ballot fails in terms of proximity between the candidate or party name and the voting hole. It was unclear as to what punch-hole each candidate was associated with. The hole was not spatially juxtaposed in a clear manner next to the appropriate candidate. Arrows were used to point from the candidate to the corresponding hole, but the short length of the arrow made for a weak visual connection line.

There was also no identifiable order with the listing of the candidates, which made for a very confusing arrangement. The election choices were neither listed alphabetically by the presidential candidate's name or the party name, making specific parties or candidates difficult to find. Placing the Republican Party at the top of the list indirectly gave preference to the party as well and may have led some voters who were undecided to vote for the Republican Party due to the prime visual location and emphasis of the candidate.

Problems with typography occur when looking at the Florida ballot. While a bigger font size is used for the candidate's name as opposed to their title, all type is in a condensed, all-caps font. The sans-serif font aids in legibility as it is clear and devoid of the noisy lines of a serif font, however, the all-caps destroys any clarity the font choice provides.

The Florida ballot is lacking in color, as it is a simple black and white design. While this may be the cheaper route in ballot design, it is not very effective as the use of color is a major crutch in developing clarity. Using specific colors for specific candidates and their corresponding voting holes creates cohesion in the voting process and allows one to easily interpret and distinguish between various texts and options. However, while color is a handy tool, it is also more expensive and encounters problems with the color blind. A simple use of gray-scale solves this problem as varying levels of gray provide great contrast and clarity, so long as they are different enough to be distinguishable.

Another major flaw with the Florida ballot is the lack of clear instructions within close proximity of the actual ballot. The instructions are just as vital as the actual holes on the ballot. If a person is uncertain on how to vote then they face the possibility of voting incorrectly.

Methods

Initial literature research was done exploring the identifiable problems with the Florida ballot and general notions of good ballot design. After pinpointing the major problems with the Florida ballot, as noted above, and researching online sources of ballot design, we began to draft an improved ballot. We decided upon creating a paper ballot due to the fact that electronic voting is not secure enough as examined by Tadayoshi Kohno, Adam Stubblefield, Aviel D. Rubin, and Dan S. Wallach in "Analysis of an Electronic Voting System." Additional research was done to discover all of the party symbols for those included on the ballot.

After several revisions, three ballots were created for testing. In all, approximately 40 people took part in our usability tests. Questions were focused on the clarity of the ballot as a whole including the instructions, the order and layout of the candidates, the readability of the ballot in terms of font size, weight, and background grayscale, the use of the party symbols, and the overall ease in which one would be able to correctly follow the instructions and vote appropriately for the candidate or party of his or her choice.

One ballot had a very visually appealing design and appearance but failed under usability testing since we had sacrificed clarity for design. Another ballot was deemed usable, but was also noted as boring and a waste of space by testers. The final ballot garnered the most positive responses in terms of usability and overall design appeal. This final ballot then underwent a few more revisions to fix alignment errors and other simple mistakes, such as spelling.

The only concern with our usability testing involves the very narrow demographical representation of our testers. All testers were college students aged 18-21. They were equally male and female but this small sample is in no way representative of the voting population as there are neither middle-aged nor elderly testers, nor anyone of various socio-economic backgrounds and occupations.

Results/Conclusion

Successes of Revised Ballots

Our ballot succeeds in terms of its clarity, conciseness, and arrangement. In terms of the spatial proximity of the election choice and the corresponding hole, user testing and research shows that the location of the voting hole directly to the left of the candidate makes a clear visual connection. Our testers commented that holes to the right were "harder to follow" and that "the location of the circle directly before the party symbol is easily noticed because [voters] read left to right." The voter is less likely to make a mistake when the corresponding voting hole is located directly beside the candidate. Each voting hole is in line with only one election choice, negating any confusion. Lines also help to clearly separate the candidates, and the holes on the ballot are to be filled in with pencil, a technology which ballots themselves could be counted with some form of scan-tron machine.

The use of gray to differentiate between each row in the ballot increases the clarity of the ballot. The alternating dark gray/light gray background behind each candidate and voting hole allows the voter to easily discern what row they are in and vote the appropriate candidate according to this color scale. Color images of each of the party's symbols adds additional clarity for those who associate the specific party or candidate with the symbol. Testers appreciated the party symbols noting that they were "different, interesting," and "definitely noticeable." Testers also commented that the alternating gray scale is helpful because they can clearly discern what row they are in.

The san-serif font is highly legible, as is the use of lower-case text. The use of bold and varying font sizes helps keep the ballot clear and concise. The name of the party is in bold while the candidate's names appear in a larger font because those are the key words that voters are looking for. The title of the candidate appears in a smaller font size because voters tend to be more concerned with the person and party rather than the specific titles. Testers noted that the party names and names of the candidates were clear and understandable – they knew who they were voting for.

The ballot was arranged alphabetically according to party name, a manner that most Americans are able to understand. This allows a voter to find their election choice and does not provide any bias preference to any specific candidate or party. While our ballot orders the candidates by party from A to Z, other ballots could be created that listed the parties M to L or Z to Y in order to give all parties equal placement at the top of the ballot while still being in an order that is understandable by most Americans.

A final improvement between the original Florida ballot and our revised ballot is the inclusion of clear instructions on the same page as the ballot. User testing shows that the instructions were clear and concise, as all needed information was provided without any filler. Examples are given to the voter as to how a correct or incorrect vote appears, clearing up any possible confusion. The instructions are bolded and

capped to emphasis the instruction by catching the voter's eye. Many testers commented that "you would have to be a complete idiot to not understand the instructions." However, no matter how clear our instructions are, there will always be those "idiots."

Due to our online research of ballot design and the problems with the 2000 Florida ballot, along with usability testing of our drafted ballots, we were able to create a visually appealing ballot with clear instructions, while maintaining usability by potential voters.

Sources

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