4-12-2015

Smart Survey Design: Randomization of Response Options

Carla Hillerns  
*University of Massachusetts Medical School*

Pei-Pei Lei  
*University of Massachusetts Medical School*

Follow this and additional works at: [http://escholarship.umassmed.edu/healthpolicy_pp](http://escholarship.umassmed.edu/healthpolicy_pp)

Part of the Health Services Administration Commons, Health Services Research Commons, and the Quantitative, Qualitative, Comparative, and Historical Methodologies Commons

Repository Citation

Hillerns, Carla and Lei, Pei-Pei, "Smart Survey Design: Randomization of Response Options" (2015). Center for Health Policy and Research (CHPR) Publications. 183.  
[http://escholarship.umassmed.edu/healthpolicy_pp/183](http://escholarship.umassmed.edu/healthpolicy_pp/183)

This material is brought to you by eScholarship@UMMS. It has been accepted for inclusion in Center for Health Policy and Research (CHPR) Publications by an authorized administrator of eScholarship@UMMS. For more information, please contact Lisa.Palmer@umassmed.edu.
Hi, we are Pei-Pei Lei and Carla Hillerns from the Office of Survey Research at the University of Massachusetts Medical School. Have you ever selected an answer to a survey question without reading all of the choices? Maybe you paid more attention to the first choice than the rest? Today, we’d like to share a technique that helps to minimize the impact of these types of scenarios – randomized ordering of survey response options.

Randomizing the order of response options may improve data quality by reducing the order effect in your survey. When there is a list of response options, respondents often have a tendency of selecting the most prominent. For example, in a paper survey, the first option may be most apparent. In a phone survey, the last option may be most memorable. If implementing an online survey, there may be a tendency to choose from the middle of a long list – because the center is more prominent.

By randomizing the order, all options have the same possibility of appearing in each response position. In Example A below, “Direct mail” appears in the top spot. However, in Example B, the responses have been randomly reassigned and “Television” now appears at the top.

<table>
<thead>
<tr>
<th>Example A</th>
<th>Example B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Where did you hear or read this information? [Check all that apply]</td>
<td>1. Where did you hear or read this information? [Check all that apply]</td>
</tr>
<tr>
<td>□ Direct mail</td>
<td>□ Television</td>
</tr>
<tr>
<td>□ Internet</td>
<td>□ Radio</td>
</tr>
<tr>
<td>□ Newspaper</td>
<td>□ Internet</td>
</tr>
<tr>
<td>□ Radio</td>
<td>□ Word of mouth</td>
</tr>
<tr>
<td>□ Television</td>
<td>□ Direct mail</td>
</tr>
<tr>
<td>□ Word of mouth</td>
<td>□ Newspaper</td>
</tr>
</tbody>
</table>

Hot Tips:
- Do not randomize the order if the response options are better suited to a pre-determined sequence, such as months of the year or alphabetization, or if using a validated instrument that needs to maintain the full survey as developed.
- If the response list is divided into sub-categories, you can randomize the category order as well as the items within each category.
- If your list includes “Other (Please specify: __________)” or “None of the above”, keep these at the bottom so the question makes sense!
- If using the same set of response options for multiple questions, apply the first randomized ordering to the subsequent questions to avoid confusion.
- Randomization is not a cure for all questionnaire design challenges. For example, respondents probably won’t pay as much attention to each response option if the list is extremely long or the options are excessively wordy. So be reasonable in your design.

Lesson Learned: It’s easy to administer randomization in web and telephone surveys if your survey platform supports this function. A mail survey will require multiple versions of the questionnaire. You’ll also need to account for these multiple versions as part of the data entry process to ensure that responses are coded accurately.
Rad Resources:

- The *Encyclopedia of Survey Research Methods* offers more information on response order effects.
- Check with your survey vendor or survey platform on the functionality that's available to you.