Optimal Placement of Instructions and Definitions in Survey Questionnaires

Heather Ridolfo
National Agricultural Statistics Service

David Biagas, Jr.
Bureau of Labor Statistics
The findings and conclusions in this preliminary presentation have not been formally disseminated by the U.S. Department of Agriculture and should not be construed to represent any agency determination or policy.
Background

- Establishment survey forms are complex
- Respondents don’t attend to instructions
- NASS cognitive testing found respondents assert they have read instructions but they do not adhere to them
- Lack of consistent formatting of instructions and definitions
Instruction Formatting

Single Banked:

2. Fill in the columns below for all aquaculture raised on this operation in 2017. Report aquatic plants in SECTION 11.
- Include the value of your landlord’s share, marketing charges, taxes, hauling, etc.
- Include all sizes for each type.
- Include fish size, fingerlings, fry, and eggs.
- Exclude wild-caught products.

<table>
<thead>
<tr>
<th>Enter Aquaculture Type</th>
<th>Enter Code</th>
<th>Total pounds sold or moved in 2017</th>
<th>OR</th>
<th>Total number sold or moved in 2017</th>
<th>Gross Value of Sales (Dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Double Banked:

1. Did you or someone else have any cattle or calves, including dairy cattle, on this operation in 2017?

INCLUDE
- cattle on this operation
- cattle on public or industrial property under a grazing permit
- cattle on land used rent free by this operation
- cattle grown or fed on this operation for others on a custom or contract basis

EXCLUDE
- cattle grown or fed by someone else on a custom or contract basis

1201 1 □ Yes - Complete this section 3 □ No - Go to SECTION 15
Definition Placement

Before Survey Question:

21. An **online marketplace** is a web-based platform designed for the selling of goods.

   Was any of the food that this operation produced and sold directly to consumers in 2015 sold through an online marketplace?

   - [ ] Yes – Continue
   - [x] No – Go to Item 24

22. In 2015, approximately what percent of online sales of food sold directly to consumers were from buyers living either within the same state as this operation or a 400-mile radius of this operation? . . . .

After Survey Question:

**SECTION 22 PRODUCTION CONTRACTS AND CUSTOM FEEDING**

1. During 2017, were you a production contract grower for a processor or contractor for whom you grew a crop, raised livestock or poultry, or custom fed any livestock that you did not own? A production contract is an agreement setting terms, conditions, and fees to be paid by the contractor to this operation for the production of crops, livestock, or poultry. Exclude commodities grown or raised for marketing contracts.

   1301

   - [ ] Yes - Complete this section
   - [ ] No - Go to SECTION 23
Research Questions

• Are respondents more likely to fully attend to the include and exclude statements when they are presented single or double banked?

• Are respondents more likely to attend to definitions when they precede the survey question or when they follow the survey question?
Methods

• Tracking was conducted with Tobii software
• 40 participants took part in the study
• 20 were identified as tracking well (<.80)
• Median Fixation Duration
• Median Fixation Count
• Gaze plots and heat maps
Results: Include/Exclude Statements

<table>
<thead>
<tr>
<th></th>
<th>Median Fixation Duration (seconds)</th>
<th>Mediation Fixation Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Banked (n=7)</td>
<td>0.73</td>
<td>5.00</td>
</tr>
<tr>
<td>Double-Banked (n=7)</td>
<td>0.50</td>
<td>2.00</td>
</tr>
</tbody>
</table>
Single Banked Include/Exclude Statements
Double Banked Include/Exclude Statements
Include & Exclude Statements

Single-Banked

Double-Banked

*Heat maps limited to 10 seconds.
## Definition Before/After Question

<table>
<thead>
<tr>
<th></th>
<th>Median Fixation Duration (seconds)</th>
<th>Mediation Fixation Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition Before</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n=10)</td>
<td>4.68</td>
<td>24.5</td>
</tr>
<tr>
<td>Definition After</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n=5)</td>
<td>1.8</td>
<td>14</td>
</tr>
</tbody>
</table>
Definition Before Survey Question
Definition After Survey Question

4. Have you received a tetanus shot in the past 10 years?
- Yes
- No
- Don't Know

5. Have you ever received the hepatitis A vaccine?
- Yes
- No
- Don't Know

The hepatitis A vaccine is given as a two-dose series routinely to some children starting at 1 year of age, and to some adults and people who travel outside the United States. Although it can be given as a combination vaccine with hepatitis B, it is different from the hepatitis B shot, and has only been available since 1996.
Conclusions

• Include and exclude statements are more attended to when they are single-banked.

• Definitions are more attended to when they precede the survey question.
Limitations

• Problems with tracking
• Problems with precision
• Problems with design
Thank you!

Heather Ridolfo
Heather.Ridolfo@nass.usda.gov

David Biagas, Jr.
Biagas.David@bls.gov