The length and content of clarification features in Web surveys

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The length and content of clarification features in Web surveys

Presented at GOR 2016
Dresden, Germany
March 4th, 2016
Clariﬁcation Features
Background

- Challenge of self-administered surveys
  - lack of interviewer assistance

  Clarification features improve survey responses by conveying additional information

- Particular problem: Open-ended questions in self-administered surveys
  - no predefined response options for orientation

- Basic problem:
  - Effects of clariﬁcation features often suffer from limited attention

  Attention-enhancing efforts
Clarification Features
Previous Findings (1/2)

Design of clarification features:

1. Accessibility:
   - Respondents do not always realize their need for clarification (Conrad et al., 2007)
   - Respondents are not willing to involve a lot of effort obtaining clarification features (Conrad et al., 2006; Conrad, 2007; Galesic et al., 2008; Peytchev et al., 2010)

   **Clarification features should be always visible**
   (Galesic et al., 2008; Peytchev et al., 2010)
Clarification Features
Previous Findings (2/2)

Design of clarification features:

2. Position:
   - Before the question stem
     (Redline, 2013)
   - Clarification feature positions depend on the respective processing stage
     (Kunz & Fuchs, 2012)

   Clarification Features should be positioned after the question stem
   (Christian & Dillman, 2004; Dillman, 2007; Peytchev et al., 2007; Metzler et al. 2015)
Clarification Features
Basic Idea

(1) **Length** of clarification features (CF)

- Respondents are not willing to involve a lot of effort obtaining and reading clarification features.
- The length of clarification features might influence how thoroughly clarification features are read by respondents.

(2) **Content** of clarification features (CF)

- **Extending CF:**
  - Broaden question meaning beyond everyday understanding
  - Ask R to retrieve all relevant information
- **Restricting CF:**
  - Narrow questions meaning compared to everyday understanding
  - Ask Rs to limit retrieval of relevant information ("First thing that comes to mind")
Clarification Features
Research Questions

1. Do clarification features affect survey responses of open-ended questions?

2. Does the effectiveness of clarification features dependent on their length?

3. Does the content of clarification features interact with their length?
# Methods
## Web Survey

### Web Survey 2015

<table>
<thead>
<tr>
<th>Sample:</th>
<th>university applicants (n=4,034)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field phase:</td>
<td>July to August 2015</td>
</tr>
<tr>
<td>Topic:</td>
<td>Qualification and expectation of university applicants</td>
</tr>
<tr>
<td>AAPOR RR6:</td>
<td>24%</td>
</tr>
<tr>
<td>Study design:</td>
<td>Between-subjects design with random assignment</td>
</tr>
<tr>
<td>No. of pages:</td>
<td>36</td>
</tr>
</tbody>
</table>
# Methods

## Experimental Questions

<table>
<thead>
<tr>
<th>Comprehension</th>
<th>Retrieval</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numeric</strong></td>
<td></td>
</tr>
<tr>
<td>extending</td>
<td>School activities in hours (page #21)</td>
</tr>
<tr>
<td>restricting</td>
<td>Computer and Internet usage in hours (page #30)</td>
</tr>
<tr>
<td><strong>Narrative</strong></td>
<td></td>
</tr>
<tr>
<td>extending</td>
<td>Experiences of success (page #24)</td>
</tr>
<tr>
<td>restricting</td>
<td>Study expectations (page #13)</td>
</tr>
<tr>
<td><strong>Experimental conditions</strong></td>
<td>control group and 3x2 experimental design (3 positions and 2 lengths)</td>
</tr>
</tbody>
</table>
Experimental Questions
Example: Comprehension extending

Three positions


Wie viele Stunden haben Sie innerhalb Ihres letzten Schuljahres in einer typischen Schulwoche für schulbezogene Aktivitäten aufgewendet?

   Stunden


Two lengths


Wie viele Stunden haben Sie innerhalb Ihres letzten Schuljahres in einer typischen Schulwoche für schulbezogene Aktivitäten aufgewendet?

   Stunden
Results
CG vs. EGs – Survey Responses

**Numeric open-ended questions**

- Comprehension Extending: CG (a) vs. EGs (b)
- Comprehension Restricting: CG (a) vs. EGs (b)
- Retrieval Extending: CG (a) vs. EGs (a)
- Retrieval Restricting: CG (a) vs. EGs (a)

**Narrative open-ended questions**

- Comprehension Extending: CG (a) vs. EGs (b)
- Comprehension Restricting: CG (a) vs. EGs (a)
- Retrieval Extending: CG (a) vs. EGs (b)
- Retrieval Restricting: CG (a) vs. EGs (b)

Note. a, b significant difference between the control group and the experimental groups (p < .05 or less based on overall F-tests).

◆ Clarification features have the intended effect on survey responses.
Results
CG vs. EGs - Reading Time

Note. Significant difference between the control group and the experimental groups ($p < .05$ or less based on overall F-tests).

Reading time is significantly higher for respondents assigned to clarification features.
Results
Length of CF – Survey Responses

 Numeric open-ended questions

- Comprehension Extending
- Comprehension Restricting
- Retrieval Extending
- Retrieval Restricting

Note. \(a,b,c\) significant difference between any two of the three experimental conditions \((p < .05\) or less based on Bonferroni post-hoc tests).

\[\text{CF containing definitions: Long definitions are as effective as short definitions.}\]

\[\text{CF with motivating statements: Interaction of content and length.}\]
Results
Length of CF - Reading Time

Note. a, b, c significant difference between any two of the three experimental conditions (\(p < .05\) or less based on Bonferroni post-hoc tests).

⇒ Reading time is significantly higher for long CF than for short CF.
# Results

## Multilevel Analyses

<table>
<thead>
<tr>
<th>SURVEY RESPONSES</th>
<th>Extending Clarification Features</th>
<th>Restricting Clarification Features</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ModelA1</td>
<td>ModelB1</td>
</tr>
<tr>
<td><strong>Length:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long CF (CG)</td>
<td>.52***</td>
<td>.52***</td>
</tr>
<tr>
<td>Short CF (CG)</td>
<td>.47***</td>
<td>.47***</td>
</tr>
<tr>
<td><strong>Length:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short CF (long CF)</td>
<td>13.16**</td>
<td>13.19***</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>44605.93</td>
<td>24889.97</td>
</tr>
<tr>
<td>Variance (question)</td>
<td>4.70</td>
<td>4.69</td>
</tr>
<tr>
<td>Residual variance</td>
<td>3.49</td>
<td>3.28</td>
</tr>
<tr>
<td>ICC</td>
<td>57.39%</td>
<td>58.85%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>READING TIME</th>
<th>Extending Clarification Features</th>
<th>Restricting Clarification Features</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ModelA1</td>
<td>ModelB1</td>
</tr>
<tr>
<td><strong>Length:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long CF (CG)</td>
<td>13.16**</td>
<td>13.19***</td>
</tr>
<tr>
<td>Short CF (CG)</td>
<td>-7.50***</td>
<td></td>
</tr>
<tr>
<td><strong>Length:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short CF (long CF)</td>
<td>112332.48</td>
<td>66336.51</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>75.07</td>
<td>101.68</td>
</tr>
<tr>
<td>Variance (question)</td>
<td>4736.61</td>
<td>7291.21</td>
</tr>
<tr>
<td>Residual variance</td>
<td>1.56%</td>
<td>1.38%</td>
</tr>
</tbody>
</table>

**Note.** Hierarchical linear models were computed for all clarification feature contents. The table shows standardized coefficients with ***p < .001, **p < .01, *p < .05, reference category in parentheses. The variable “experimental question” was used as level-2 identifier.
Extending clarification features:

- Long and short CFs significantly increased the reported number of hours or reported incidences.
- Long CFs are as effective on survey responses as short CFs.
- The reading time of Rs assigned to CFs is significantly higher compared to the control group.
- The reading time of long CFs is significantly higher compared to short CFs.

**Short CFs are similarly effective, however, required shorter reading times.**
Summary
Results: Multilevel Analyses (2/2)

Restricting clarification features:

- Short CFs decreased the reported number of hours or incidences, whereas long CFs did not show any significant effect compared to the control group.
- Short CFs yielded a lower number of hours or incidences compared to long CFs.
- The reading time of short CFs is higher compared to the reading time of respondents of the control group.
- The reading time of long CFs is higher compared to short CFs.

Respondents seem to read long restrictive CFs, but they do not consider them.
Conclusion

- Short CFs are as effective or even significantly more effective on survey responses and yield significantly lower reading times than long CFs.

  **Clarification features should be kept short.**

- Rs seem to read long CFs, but they only consider long extending CFs.

- Rs seem to read long CFs after they have already passed the first stages of the question-answer process and already formatted their answers.

  **Rs are willing to extend their already formatted answer, but they are not willing to restrict it.**
Thank you.

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Numeric – extending:
**During the last school year of 2011/2012, how many hours did you spent on school-related activities in a typically school week?**
By school-related activities we mean presence in class, doing homework, preparing classwork and tests, project work, preparing presentations and talks, written papers and assignments as well as the specific exchange of information with classmates.

By school-related activities we mean presence in class, doing homework, preparing tests as well as the specific exchange of information with classmates.

Numeric – restricting:
**How many hours do you currently spend on a computer and on Internet usage in a week?**
By computer and Internet usage we refer to the usage due to school or vocational education-related purposes and private purposes such as creating and editing texts, tables and presentations, writing emails, searching for information, watching videos or movies, listening to music or downloading music, reading news or getting information about current events and shopping. Do not include the time exposure spent on communication with friends via social networks.

By computer and Internet usage we do not refer to the time exposure spent on communication with friends via social networks such as Facebook.
Clarification Features
Retrieval - Examples

Narrative – extending:
In which situations did you feel heavily burdened or even overchallenged during your choice of studies and the application process?
Please try to remember the moment when you first started to collect information about possible subjects of studies and of situation in which you felt heavily burdened or even overchallenged. Please try to remember each situation and the approximate duration of each respective situation.

Please try to remember each situation and the approximate duration of each respective situation.

Narrative – restricting:
A new stage of life begins when you start your studies at a university. This new stage of life often bears new challenges. What are the main challenges for you in the very near future?
Please think of the new stage of life which started with your studies and all the challenges associated with this new stage of life. It is not important that you try to remember all challenges. It is sufficient if you just report the challenge that first comes to your mind.

Please report the challenge that first comes to your mind.