Effect of Design Elements on Response and Breakoff Rates in Web Surveys

Introduction

- Compared to mail survey mode which has more opportunities to affect response rates (e.g., quality of stationery, real signatures), e-mail invitations provide rather limited visual features to encourage respondents to complete Web survey.
- Such design elements as length of the invitation text, estimated survey duration, and subject line can have an effect on response and breakoff rates in Web surveys.

Method

- Full-factorial complete block design Web experiment among students, faculty, and administrative staff at National Research University Higher School of Economics, Russia.
- Questionnaire: students – 72 questions, faculty – 109, staff – 87 questions.
- Median time: students – 11.5 min., faculty – 22.9 min., staff – 23.4 min.
- Number of invitations: students – 5 938 , faculty – 2 898 , staff – 1 006.

Experimental Design*

<table>
<thead>
<tr>
<th>Factors</th>
<th>Altern.</th>
<th>Students</th>
<th>Faculty</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject line</td>
<td>Formal</td>
<td>Monitoring student life</td>
<td>Monitoring faculty life</td>
<td>Monitoring administrative staff</td>
</tr>
<tr>
<td></td>
<td>Informal</td>
<td>Share your opinion – Help to make HSE better</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated length</td>
<td>Short</td>
<td>About 10 minutes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Long</td>
<td>About 20 minutes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Invitation length</td>
<td>Short</td>
<td>108 words</td>
<td>116 words</td>
<td>94 words</td>
</tr>
<tr>
<td></td>
<td>Long</td>
<td>155 words</td>
<td>173 words</td>
<td>205 words</td>
</tr>
</tbody>
</table>

*2x2x2 factorial complete block design experiment

Hypotheses

Main effects:

H1. A “help” request: ↑ response rates (RR) and ↓ breakoff rates (BR).
H2. Short estimated survey duration (10 min.): ↑ start rate and ↑ RR.
H3. Longer invitation text: ↑ RR and ↓ BR.

Interactions:

H2.2. A “help” request: ↑ RR and ↓ BR in the longer estimated survey duration. No effect in the short estimated survey duration.
H3.3. Longer invitation text: ↑ RR and ↓ BR in the longer estimated survey duration. No effect in the short estimated survey duration.
H3.3. A “help” request: ↑ RR and ↓ BR in the short invitation condition. No effect in the long invitation condition.

Results

Overall RR and BR by groups

Chi-square tests: ***p<0.001, *p<0.05, + p<0.06

Summary

1. Contrary to H1: a “help” request ↑ BR among staff and faculty and ↓ RR among students.
2. Limited support for H2.1.: in the longer estimated survey duration ↓ BR among students.
3. Support for H3.1.: longer invitation ↓ BR among students and faculty, and ↑ RR among students.
5. Contrary to H3.2.: long invitation to the longer estimated survey ↓ RR and ↑ BR among staff. Long invitation to the short estimated survey ↑ RR among staff.
6. No support for H3.3.

Added Value

Previous research focused on analysis of main effects (see Crawford et al., 2001; Kaplowitz et al., 2012). Our experiment shows that the interaction effects between design elements might significantly influence RR and BR. The findings could help to understand what interactions might improve RR in Web surveys.

References: