

Can the Type and Location of a Survey Link Positively Affect Response Rates?

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Introduction

Web surveys are the most popular mode of surveying individuals in this decade (Dillman, Smyth, and Christian 2014). However, web surveys are characterized by low response rates when compared to other modes of survey distribution (e.g., telephone surveys). To combat low response rates, survey researchers are investing considerable efforts to identify optimal web survey design features. This issue brief examines how the nature of the survey link and its location in an emailed survey invitation can influence response rates.

Learning theories help us understand why hyperlinks are more likely to augment survey response rates in comparison to URLs. Some learning theories postulate that it is easier for individuals to process written content when it is presented in a manner that does not require them to engage in additional processing. For instance, a URL is typically a string of nonsensical characters that imposes cognitive load on participants, thereby impeding cognitive processing (e.g., “Take our survey at https://act.co1.qualtrics.com/jfe/form/SV_37X9SgOZfQNY8iV”). Contrarily, a hyperlink is a series of words that individuals can easily comprehend (e.g., “[Click here to take our survey](#)”). Thus, a hyperlink is less likely to impose a cognitive load (Mayer 2008).

Some research supports these theoretical underpinnings. For example, providing participants with a hyperlink augments participation and response rates (Wright and Schwager 2008). In their study, Wright and Schwager randomly assigned participants to one of two conditions: Participants either responded to a survey using the hyperlink in their email invitation or downloaded the survey instrument, which was provided as an attachment. In this instance, the positive association between receiving a hyperlink and response rates could be attributed to the fact that downloading a survey instrument, responding to it, and then resending it to the researcher as an attachment is more cumbersome than responding to the survey online using the hyperlink. However, in recent years, questionnaires are seldom provided as an attachment, and participants are either provided with a URL or a hyperlink.

To the best of our knowledge, we are not aware of any study that has empirically investigated whether hyperlinks have any advantage over URLs with regard to increasing response rates. We therefore conducted an experimental study that investigated this question.

Additionally, it is important to determine whether the *location* of the link in an email invitation impacts response rates. Logically,

Acknowledgment: The authors would like to thank Jeff Schiel for his suggestions and feedback which greatly helped with the writing of this issue brief.

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placing the link close to the top of the email invitation might produce higher response rates, since doing so allows respondents to avoid scrolling to access the survey (Couper 2008). The research findings, however, are mixed. A study in which researchers tracked the eye movements of readers reading several news websites found that readers' eyes often tend to fixate over the upper left portion of the page (Outing and Ruel 2004). They are more likely to skim over information that is provided in the bottom of the page. In other words, information provided at the top of the page is more likely to attract the attention of readers/participants. However, Kaplowitz, Lupi, Couper, and Thorp (2012) found that participants who received a survey link at the bottom of the email invitation were more likely to respond to the survey than those who received a survey link at the top, even though this ran contrary to their hypothesis. To garner additional empirical evidence for this postulation, we provided some of the participants with a link at the top of the email invitation and others with the same link at the bottom of the email invitation.

Finally, we wanted to examine whether providing participants with both a hyperlink and a URL would enhance survey response rates. Past research on the influence of repetition of valid information/cues on message effectiveness suggests that repetition tends to have the strongest

impact on message effectiveness when the repetition occurs at low or moderate levels (Anand and Sternthal 1990; Petty and Cacioppo 1979). In our experimental study, because we repeated the link only once in a different format (i.e., when participants received a hyperlink at the top of their survey invitation, the repeated survey link would be a URL at the bottom of the invitation and vice versa), the repetition of information would be classified as low. Hence, we expected this repetition to have a strong impact on response rates. In other words, we expected participants who received two links to be more likely to participate in the survey than those who only received one link.

Research Questions

1. Do the type and the location of the link affect response rates?
2. Does the effect of the location of the link depend on the type of link provided?
3. Does providing both types of survey links in a single email invitation increase response rates relative to providing only one link?

Methods

Students who took the ACT test on September 10th, 2016 were invited to participate in a short survey that requested them to provide information on their race/ethnicity (i.e., students who identified as

Asian, Hispanic, African American, Native American or "other" were requested to respond to additional survey items that were related to their country of origin) and the number of languages they spoke at home. A total of 43,920 students received an email invitation requesting their participation. Students were randomly assigned to one of six experimental groups (Table 1). A total of 5,140 students responded to the survey.

Students were categorized as responders or non-responders. Students who completed 80% or more of the survey were classified into the first outcome group, and the rest were classified into the latter group. Hence, response rate in this survey refers to completion rate. To answer the three research questions, a series of logistic regression models were estimated. For each analysis, the dependent variable was whether the students responded to the survey. The independent variable was dictated by the research question and included (1) link type (URL vs. hyperlink), (2) link location (top vs. bottom), and/or (3) number of links (one vs. two).

Research Question 1: Do the type and the location of the link affect response rates?

To answer this question, we tested a logistic regression model. Survey response was regressed on link type (URL vs. hyperlink), link location (top vs.

Table 1. Number of Respondents and Non-Respondents, by Experimental Group¹

Experimental Group	No. of links	Link Type	Link Location	Link Order	No. of Respondents	No. of non-respondents	Response rate
1	One	Hyperlink	Top	--	839	6471	11.5%
2	One	Hyperlink	Bottom	--	830	6380	11.5%
3	One	Generic	Top	--	889	6289	12.4%
4	One	Generic	Bottom	--	810	6598	10.9%
5	Two	Both	Both	Hyperlink top/URL bottom	845	6628	11.3%
6	Two	Both	Both	Hyperlink bottom/URL top	927	6415	12.6%

bottom), and the interaction of link type and link location (see Figure 1 for the four email invitations tested).

Results revealed that response rates for participants who received either a hyperlink (i.e. Groups 1 and 2) or a URL (i.e. Groups 3 and 4) were not statistically significantly different (11.5% and 11.6%, respectively). Contrary to the postulations of learning theories (Mayer, 2008), our study found that the type of survey link provided did not affect the response rates.

We did find a statistically significant difference in response rates between those students who received either type of survey link at the top of the email invitation (i.e. Groups 1 and 3; 11.9%) as opposed to at the bottom (i.e. Groups 2 and 4; 11.2%).

Students who received the link at the top of the email invitation were 1.15 times more likely to respond to the survey than those who received the link at the bottom of the invitation. These results provide some evidence for Couper’s (2008) logical postulation and align with the findings of the past eye-tracking studies, but differ from Kaplowitz et al. (2012), who employed a similar research design as ours.

Research Question 2: Does the effect of the location of the link depend on the type of link provided?

We examined how the type and the location of the links interacted with each other to influence survey response rates. The results revealed that if a URL is

located at the top of the email invitation rather than at the bottom, response rates are higher. When the URL was positioned at the top of the invitation (i.e. Group 3), 12.4% of the participants responded to the survey, whereas only 10.9% of the participants responded to the survey when the URL was provided at the bottom of the invitation (i.e. Group 4; see Figure 2). However, when a hyperlink is provided, the location does not matter; the same proportion of participants (11.5%) responded to the survey when the hyperlink was provided at the top or at the bottom (i.e. Group 1 and 2). These interaction effects, however, were not statistically significantly different.

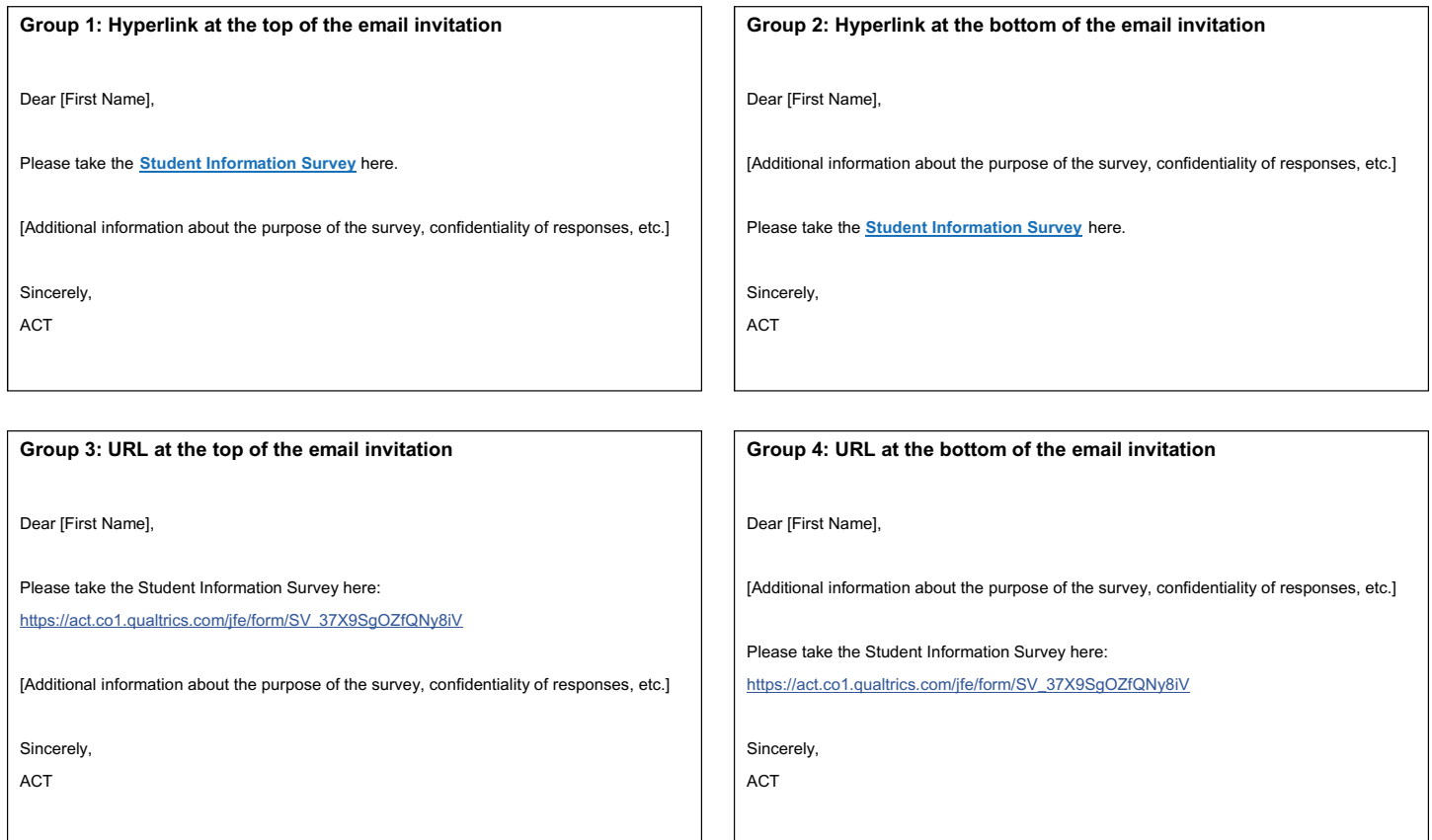


Figure 1. Email invitation messages with a hyperlink or URL at the top or bottom of the message.

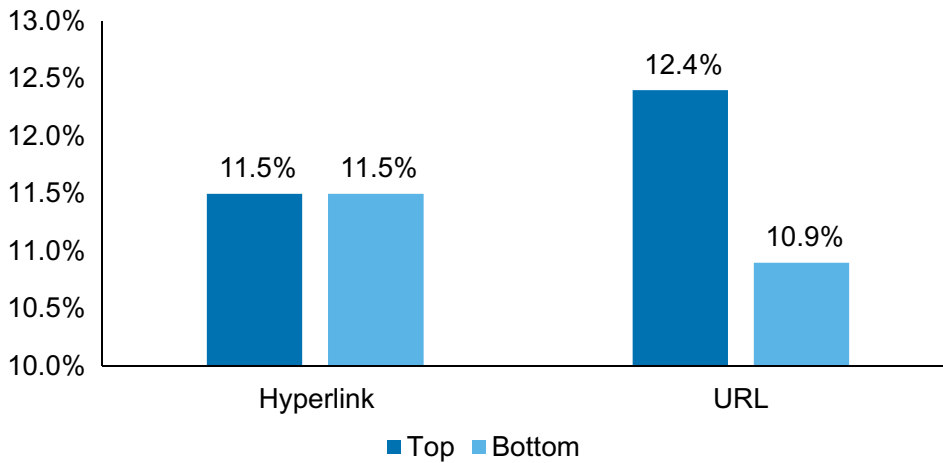


Figure 2. Interactive effects of the link type and link location on survey response rates.

Note: Scale on Y-axis is shown to emphasize statistical significance difference.

Research Question 3: Does providing both types of survey links in a single email invitation increase response rates relative to providing only one link?

We also carried out an exploratory analysis to determine whether receiving both types of links influenced survey response rates. Those students who were randomly assigned to the first four experimental groups were aggregated, as were the students who were randomly assigned to groups 5 and 6. The

aggregation of students into these two groups allowed us to compare response rates of students who received one link (Groups 1-4) to those of students who received two links (Groups 5 and 6). A logistic regression was conducted where the number of links (one vs. two) was the independent variable and response rate was the dependent variable.

Our analysis revealed that students who received both types of links were somewhat more likely to respond to the survey than were students who received

only one link. We found that 12% of students who received both links (Groups 5 and 6) responded to the survey, whereas only 11.6 % of those who received one link (Groups 1-4) responded to the survey. This difference was not statistically significant. Contrary to past research findings (Anand and Sternthal 1990), in our study, the provision of two links was no more effective than the provision of one link in convincing participants that they should complete our survey. Our findings are not completely surprising, as other research has also failed to replicate the influence of repetition of information on message effectiveness (Rethans, Swasy, and Marks 1986).

Among those who received both links, we examined whether the ordering of the two links (e.g., a hyperlink provided at the top and a URL provided at the bottom vs. a URL at the top and a hyperlink at the bottom) affected response rates. Figure 3 presents the email invitations tested.

Among the participants who received the hyperlink at the bottom and the URL at the top of the email invitation (i.e. Group 6), 12.6% of them responded to the survey.

<p>Group 5: Two links with hyperlink at the top and URL at the bottom</p> <p>Dear [First Name],</p> <p>Please take the Student Information Survey here.</p> <p>[Additional information about the purpose of the survey, confidentiality of responses, etc.]</p> <p>Or take the Student Information Survey here: https://act.co1.qualtrics.com/jfe/form/SV_37X9SgOZfQNY8iV</p> <p>Sincerely, ACT</p>	<p>Group 6: Two links with URL at the top and hyperlink at the bottom</p> <p>Dear [First Name],</p> <p>Please take the Student Information Survey here. https://act.co1.qualtrics.com/jfe/form/SV_37X9SgOZfQNY8iV</p> <p>[Additional information about the purpose of the survey, confidentiality of responses, etc.]</p> <p>Or take the Student Information Survey here:</p> <p>Sincerely, ACT</p>
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Figure 3. Email invitation messages with two links provided.

On the other hand, only 11.30% of the participants who received the links in the reverse order (i.e. Group 5) responded to the survey. These differences in response rates were statistically significant.

Conclusions

Current research findings suggest that the design of email invitations for web surveys affects response rates. The results of this study show that there is variation in student survey response rates based on the survey link's location in the email invitation. The results also suggest that when two links in different formats are provided, the order in which they are presented affects response rates. As per our findings, it is best to place the URL at the top of the invitation and the hyperlink at the bottom, as opposed to the other way around. If only one link is provided, a higher response rate is garnered when the link is at the top of the email invitation, rather than the bottom. These statistically significant results translate to an increase in response rates of between 0.5% and 1.3%. While on the surface this might not seem like a lot, if all students in the study had been sent an email invitation with characteristics that we found to improve response rates, it would have resulted in a noticeable increase of respondents (approximately 216 to 560 additional respondents). Hence, we believe that the relative ease in making these email invitation changes is worthwhile.

While our study shows that placing the survey link at the top of the email invitation produces higher response rates than placing it at the bottom, work by Kaplowitz and colleagues (2012) found the opposite to be true for a college population of

students, staff, and faculty. Perhaps the contrary results are due to the different populations under investigation, as we studied high school students and Kaplowitz et al. focused on three populations in a college setting. Regardless of the reason, the fact that our research contradicts that of past research warrants a need for future replication work on whether and, if so, for whom, link placement in an email invitation improves response rates. Response rates were unaffected by the type of link included in the email invitation when only one link was provided; whether a URL or a hyperlink was used did not impact completion rates.

We conclude with some practical implications of this study:

- If two links are provided in an email invitation, place the URL at the top of the invitation and the hyperlink at the bottom.
- If only one link is permissible, place the link closer to the top of the email invitation, so that the survey participant does not have to scroll to the bottom to access the survey.
- If only one link is permissible, it does not matter whether a hyperlink or a URL is provided.

Notes

1. The response rates displayed in this table are weighted, whereas the Ns are unweighted. This study was part of a larger project that required the use of sampling weights and disproportionate stratified random sampling across racial/ethnic subgroups. The inferential analyses are based on the weighted dataset.

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