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The impact of the field time on response, retention, and response completeness in list-based Web surveys

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Abstract

A short field time is an often-cited benefit of Web-based surveys that rely on pre-recruited people. However, it has never been examined how different field times as implemented through different deadlines for participation influence response behavior. Four experiments were conducted in which the deadline for taking part in the study was varied across several days, and there was a control group who was not told any deadline. We examined the impact of both stating a deadline versus not stating a deadline and the length of the deadline on the response rate, the retention rate, and response completeness.

It was found that response rises with the number of days a study is in the field. There is tentative evidence that the more generous the deadline, the smaller the retention rate and clear evidence that response completeness is lower. Moreover, in a quasi-experimental fashion it was explored whether responding late to a study request is associated with being retained until the end of the study and with the completeness of filling out the questionnaire. There is no straightforward association between responding late to a study request on the one hand and retention and response completeness on the other hand.

Keywords: Field time; Deadline; Response; Retention; Completeness

1. Introduction

It is a hearsay advantage of WWW studies that one can collect data in a short time (Fricker and Schonlau, 2002). When inviting pre-recruited people to take part in a study, 70–90% of expectable responses usually occur within 3 days (Batinic and Bošnjak, 2000; Gräf, 2001; Göritz, 2007). As a consequence, researchers working with pre-recruited samples gleaned from online access panels or other respondent lists have been tempted to set tight deadlines for study participation to keep the field phase as short as possible. However, setting more or less tight deadlines might have an impact on the quantity and quality of the collected data and on the composition of the final sample. For example, the response rate, the retention rate, and the completeness of participants' responses might prove vulnerable to the number of days a study is in the field. This possible impact of deadlines has never been experimentally studied. We need empirical evidence to prevent us from exclusively considering speed while perhaps compromising response quantity and quality. Based on these data we can derive recommendations as to appropriate field times.

Several studies have examined the effect of field times on response behavior and sample composition in an indirect fashion, namely by looking at particularities among so-called *late responders*. The term *late responder* has been used in various shades, either referring to people who respond only after having been sent a reminder (e.g., Stumpf and Bedrosian, 1980; Guadagnoli and Cunningham, 1989; Green, 1991; Bernick and Pratto, 1994; Ullman and Newcomb, 1998; Woodruff et al., 1998, 2000), to students in college studies who take part in a

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study late in the term (e.g., Bernard, 2000; Aviv et al., 2002; Bernard and Walsh, 2002) or to people who take part only after a certain interval has elapsed (e.g., Biggar and Melbye, 1992; Leopold, 2004; Stieger and Voracek, 2005).

Independent of the exact meaning of the term late responders, as regards sex differences, women have been found to respond early rather than late (Stumpf and Bedrosian, 1980; Green, 1991; Bernard, 2000; Bernard and Walsh, 2002). Biggar and Melbye (1992) found the opposite, but this might be peculiar to the topic of the study, which was sexual behavior. With regard to age, older participants were more likely to respond early (Green, 1991). By contrast, in Bernard (2000) as well as in Bernard and Walsh (2002) a higher percentage of first-year than senior-year students participated early. However, there are studies that did not find any sex or age differences between early and late responders (Guadagnoli and Cunningham, 1989; Woodruff et al., 1998, 2000).

Apart from demographic differences, are there indications that early and late responders differ in response behavior? With regard to item-nonresponse, while Green (1991) found no difference, early responders omitted fewer questions in Biggar and Melbye (1992), Donald (1960), and Newman (1962). In Stieger and Voracek (2005), early responders were more likely to be retained until the end of the questionnaire and were more likely to correctly report their sex. These differences in response behavior, at least in part, might derive from differences in Web literacy: Leopold (2004, p. 91) found that early responders use the Internet more frequently than late responders. In El-Menouar and Blasius (2005), experienced Internet users were more likely to be retained until the end of a questionnaire than inexperienced Internet users. In a similar vein, Gräf (2001) reported five online panel studies where the final response rate was higher among panelists who at their sign-up had indicated to use the Internet daily (77% mean response rate across the five studies) than among panelists who had indicated to use the Internet on 2–5 days a week (65% mean response rate).

To sum up previous results, early responders tend to be female, omit fewer questions, and are more likely to be retained until the end of a study. Moreover, those who respond early tend to be more frequent Internet users, and people who use the Internet frequently are more likely to respond and to be retained until the end of a questionnaire.

However, none of these studies has *experimentally* examined the impact of the field time. Therefore, results pertaining to field time derived from the reported studies need to be taken with caution. To help filling this knowledge gap for online studies, we conducted four experiments. In each experiment, the announced deadline for taking part in the study was varied across several levels, and there was a control group who was not told any deadline. We examined the impact of stating a deadline versus not stating a deadline as well as the impact of the length of the deadline on the response rate (i.e., number of invited people who call up the first page of a study divided by the number of all invitees), the retention rate (i.e., number of responding people who stay until the last page of a study divided by the number of all respondents), and response completeness (i.e., percentage of answered items).

It is difficult to predict whether stating or not stating a deadline influences response, retention, and response completeness. On the one hand, announcing a deadline might convey a sense of the study's importance. As a consequence of the thus increased saliency of the study a higher proportion of invitees might respond to the study request, stay until the end of the study, or participants might skip fewer questions. On the other hand, stating a deadline curtails respondents' freedom of deciding when to participate. Reactance theory (Brehm and Brehm, 1981) states that if a behavioral freedom is threatened, individuals will try to restore their freedom—perhaps by not taking part in the study, abandoning the study prematurely, or omitting items.

As regards the length of the deadline, it can be expected that the more generous the deadline the higher the response rate because the chances of people of learning about the study and of finding the time to respond are larger. Unlike with the response rate, however, with a longer deadline both the retention rate and response completeness are expected to be lower. First, the longer a study is open the bigger the chance that people who use the Internet infrequently learn about the study from the invitation e-mail before the deadline has elapsed. Thus, the longer a study is open the higher the rate of respondents who use the Internet infrequently in the final sample. However, as infrequent users are less experienced with online questionnaires they are more likely to both drop out of a study and omit questions than experienced users, for reasons of skill.

Second, with longer deadlines not only skill-induced but motivational dropout and item-nonresponse might be larger. If a person assigns high priority to a study he or she is likely to participate soon—whereby field time hardly matters. Conversely, if a person assigns low priority to a study he or she is likely to participate only when nothing more interesting is on their agenda—which is a function of field time. It can be assumed that people for whom a study has low priority participate in a less conscientious manner than people for whom a study has high priority. Consequently, the longer a study is open the more likely that less motivated people access the study, resulting in lower retention and completeness.

The present work tries to find out whether the evidence supports this reasoning. If so, researchers would face a dilemma when setting a tight deadline for participation: on the one hand, the response rate would be lower because fewer people would have the chance to participate. On the other hand, the percentage of retained respondents as well as the percentage of completed items would be higher because the share of Web-literate as well as more motivated people would be higher.