Full length article

The effect of email invitation elements on response rate in a web survey within an online community

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ARTICLE INFO

ABSTRACT

In the research of online communities and web survey methodology little is known about how elements in email invitations to list-based web surveys can be used to obtain higher response rates. In the present work, we investigated whether making authority, plea for help, and sense of community salient in email invitations determines the response of survey participants. Drawing from both survey methodology and recent research on online communities, this study also tested a hypothesis on the relationship between activity in an online community and survey response. Using a full-factorial experiment based on a simple random sample of 2500 members from the largest online health community in Slovenia, the results support only the hypothesis that plea for help is an effective response-inducing element in email invitations. Furthermore, the results support the hypotheses that online community activity, related to the frequency of visits and number of posts to an online community, are positively associated with response in list-based web survey. Since this study also shows that combining more than one element in email invitations does not necessary improve response rates, web survey research and practice may benefit from future research on this topic.

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1. Introduction

Online communities have become an important part of contemporary society, and surveying samples of their members has come to be a very common approach to studying phenomena in these contexts. Nevertheless, very little methodological research is available on this topic, which partly stems from the limited possibilities for approaching potential respondents that researchers of online communities face. Due to the lack of sampling frames, many web surveys in online communities are non-list based (Callegaro, Lozar Manfreda, & Vehovar, 2015) meaning that a list of sample members to approach individually is not available in advance. Therefore, invitations with a URL link to a survey, which is identical to everybody, are published in the discussion threads, or potential respondents are invited by using intercept solicitation techniques, such as pop-up windows, layers or banners (Ip, Barnett, Tenerowicz, & Perry, 2010). As the number of potential respondents who notice the invitation is not known, studying non-response issues is not possible.

The other type of web surveys in online communities are list-based web surveys (Callegaro et al., 2015) where the list of sample members is available, which enables the study of non-response. However, to the best of our knowledge almost no empirical methodological study exists about unit non-response in surveys in online communities, the exception being an early investigation by Walsh, Kiesler, Sproull, and Hesse (1992) and a recent study by Zillmann, Schmitz, Skopek, and Blossfeld (2014). In contrast to web surveys of the general population where different communication modes (mail, telephone, face-to-face and email, depending on the availability of the contact information from the sample frame) can be used to contact respondents (e.g., Callegaro et al., 2015; Couper, 2008; Dillman, Smyth, & Christian, 2014), the recruitment of members of an online community in list-based web surveys is generally limited to email invitations as email addresses are usually the only contact information that the surveyor has for potential participants. When compared to other possible contact channels in online communities such as private messages (a common functionality of online community platforms), they have an advantage in that the survey invitation is directly delivered to the potential participant's email account. This is important when a surveyor wants to reach infrequent users of an online community and/or members who do not use private messages. In addition, web survey

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tools today generally provide support for the management of email invitations, which—to the best of our knowledge—is not true for other communication channels in online communities, such as private messages. Previous attempts at identifying the importance of email invitations in web surveys have dealt with many response-enhancing elements, resulting in mixed findings. For example, studies have considered the personalization of an email invitation (e.g., Cook, Heath, & Thompson, 2000; Heerwegh, 2005; Joinson & Reips, 2007; Sánchez-Fernández, Muñoz-Leiva, & Montoro-Ríos, 2012), the content of an invitation subject line (e.g., Porter & Whitcomb, 2005; Smith & Kiniorski, 2003; Trouteaud, 2004), the position of the survey URL address (e.g., Kaplowitz, Lupi, Couper, & Thorp, 2012), the length of the invitation letter (e.g., Kaplowitz et al., 2012), the status of the sender (e.g., Guéguen, Jacob, & Morineau, 2010; Joinson & Reips, 2007; Keusch, 2012), sponsor prominence (e.g., Boulianne, Klofstad, & Basson, 2011; Porter & Whitcomb, 2003), the survey time/effort estimate (e.g., Kaplowitz et al., 2012), and mention of the survey deadline (e.g., Porter & Whitcomb, 2003) or survey scarcity (Fan & Yan, 2010).

Alternatively, the present study sought to explore how the elements of authority, plea for help, and sense of community in email invitations can be used to maximize response rates to web surveys in the context of online communities. Notably, drawing on previous research on response-enhancing elements used in invitations we hypothesize that the presence of authority (Boulianne et al., 2011; Guéguen & Jacob, 2002; Joinson & Reips, 2007; Kaplowitz et al., 2012), a plea for help (Guéguen & Jacob, 2002; Porter & Whitcomb, 2005; Trouteaud, 2004), and sense of community (e.g., Dillman et al., 2007; Groves, Singer, & Corning, 2000; Kropf & Blair, 2005; Porter & Whitcomb, 2005) can positively affect response rate in a list-based web survey. The decision to focus on the above-mentioned elements stems from their close relation to distinct but existential components of online communities—norms, supportive communication and sense of community. Various forms of normative structures – including the informal and formal norms of authority (Birchmeier, Joinson, & Dietz-Uhler, 2005), which are personified in the role of online community managers (Kiesler, Kraut, Resnick, & Kittur, 2012; Wright, 2009); the exchange of social support based on help provision (Coulson & Malik, 2012); and feelings of belonging, which lead to a sense of community (Blanchard, 2008), are all associated with participation in an online community and represent the building blocks of a successful long-running development of an online community (Kraut & Resnick, 2012).

In order to empirically test the three hypotheses a full-factorial experiment was implemented within a web survey of the registered members of the largest Slovenian online health-related support community.

2. Theoretical background and hypotheses

2.1. Authority

The presence of authority in survey invitations has often been associated with response rates and has been cited as one of compliance principles that guide people when deciding whether to participate in a survey (Dillman et al., 2014; Groves, Cialdini, & Couper, 1992). A legitimate authority may increase the trust of potential respondents that the survey sponsor is benevolent, honest, and is competent in protecting information disclosed by respondents, thus positively influencing their decision to participate (Fang, Shao, & Lan, 2009).

The literature dealing with authority in web-based surveys is not abundant. Existing empirical evidence on *willingness to participate* in web surveys shows that the reputation of and trust in the

web survey sponsor actually affect the intention to participate in a web survey (Fang et al., 2009; Fang & Wen, 2012) and that the willingness to participate in scientific email and web surveys is higher than with business surveys (Batanic, Reips, & Bosnjak, 2002). There is also some empirical evidence from experimental studies on the effect of legitimate authority—as communicated through the type of the sponsoring organization and the status of individual signing the request—on *actual response rates* in web surveys. In one of the earliest experimental studies, Guéguen and Jacob (2002) compared two versions of survey invitations to an email survey with different exposure of the authority. The invitations with a signature of the person with a higher perceived authority received a higher response rate. Likewise, Joinson and colleagues (Joinson & Reips, 2007; Joinson, Woodley, & Reips, 2007) carried out two experimental studies on the personalization and use of an authoritative reference source in email survey invitations. In both cases, the invitations with the signature of the authoritative source resulted in a higher response rate when compared with the invitations signed by a neutral source. Walston, Lisstiz, and Rudner (2006) compared the response rates for a web survey when a government and non-government sponsor were used. A higher response rate was obtained in the government condition; however, the effect appeared only with a graphical questionnaire background where a government affiliation was more pronounced (and not with a plain questionnaire background). Further, in a more recent cross design study, Kaplowitz et al. (2012) tested the presence of a high authority figure in the subject line of an email survey invitation. They concluded that when an authority was mentioned in the subject line, the web survey response rate increased significantly.

Conversely, Porter and Whitcomb (2003) did not find significant differences in response rates between email invitations where the authority of the signatory was high or low. They explained this non-effect with the fact that the sample, consisting of students, might not have distinguished between the two conditions. The results of this study were partly confirmed by Boulianne et al. (2011) who explored how authority and survey sponsorship prominence relate to response rates and break-offs. They found that the authority of the survey sponsor was not associated with the response rate. However, respondents who received the email invitation from the survey sponsor, which could be perceived as a moral authority (i.e., government agency), were significantly more likely to fully complete the survey in comparison with respondents who were contacted by a survey company.

In addition, Boulianne et al. (2011) found that all sample strata in their experiment were not equally responsive to the sponsorship treatment in terms of survey completion. This finding puts forward the question of legitimate authority, which has often been addressed in survey methodology research (cf. Boulianne et al., 2011) and seems to be equally relevant for web surveys in online communities.

We might expect that in web surveys, in comparison with offline survey modes, the importance of perceived legitimacy and trust may be greater as the context of the online environment increases uncertainty due to geographical distance and other impersonal factors (Fang et al., 2009). In addition, potential respondents are more in a position of initiative and suffer from less social stress (Bosnjak, Tuten, & Wittmann, 2005), they might have doubts in the authenticity of the survey, as well there is the issue of over-surveying. A meta-analysis comparing response rates in web and other survey modes however did not show that the type of sponsorship (which communicates legitimate authority) would have different effects in web than in other survey modes (Lozar Manfreda, Bosnjak, Berzelak, Haas, & Vehovar, 2008).

In online communities, which are of interest in our study, the different levels of authoritative status—to the best of our