

# Use of incentives in online surveys: dealing with multiple responses

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## Introduction

The use of online surveys by researchers is becoming increasingly popular. There are many advantages of using the Internet for conducting research, including reduced cost, increased speed (Siah, 2005), and greater geographic reach (Sills & Song, 2002). Unfortunately, the use of online surveys also has many unintended consequences, namely the potential for multiple submissions from the same participants and falsified responses—both of which are serious issues for researchers. Online surveys that offer incentives are particularly problematic because they may encourage participants to make multiple submissions in return for a reward.

## Objective

This study has two objectives. First, it will make researchers aware of the potential pitfalls when conducting online surveys. Second, it will provide guidelines to address these issues while reducing multiple submissions and falsified responses. These guidelines are based on effective methods for conducting online surveys covered in the literature.

## Method

Articles from varying disciplines were found using databases such as *Proquest* and *Scholars Portal*. Articles were reviewed until no new information was found. Sources that were deemed relevant to the issue of multiple responses as well as incentives were included. The best practices are presented in table format.

Table 1. Preventative Measures

Recommendation	Potential Drawbacks
Allow only one submission per IP address (Gosling, Vazire, Srivastava, & John, 2004).	This could prevent people in rural areas or those who use a shared server from participating (Bowen, Daniel, Williams, & Baird, 2008). Some Internet providers reuse the same IP address (Siah, 2005), which could result in the oversight of valid data submitted by participants who completed the survey on the same computer (e.g., roommates sharing a computer) (Siah, 2005).
Request personal information (e.g., telephone number, e-mail address) to identify each participant (Bowen et al., 2008).	This could lead to issues of anonymity/confidentiality.
Give each participant access to the questionnaire via a password that is e-mailed directly to him or her (Granello & Wheaton, 2004).	This makes the process much more complicated and could reduce the number of participants (Doerfling, Kopec, Liang, & Esdaile, 2010).
Use CAPTCHAs to prevent bots from sending multiple entries (Prince, Litovsky, & Friedman-Wheeler, 2012).	This increases confusion as participants could easily mistake the letter O for a zero or a lower case I for the number one (Doerfling et al., 2010).
Do not advertise on websites like Craigslist, as people who go on these websites often do so to make money (Prince et al., 2012).	This limits the size of your sample.

Table 2. Post-survey Measures

Recommendation	Potential Drawbacks
Look for similarities and patterns in passwords, usernames, e-mail addresses, etc. Check for e-mail addresses that use the same name and a number that increases incrementally with each submission (e.g., internetsurfer13@yahoo.ca and internetsurfer14@yahoo.ca) (Bowen et al., 2008).	This could lead to the deletion of a legitimate survey.
Check for duplicate payment information and duplicate e-payment receipts (Konstan, Simon Rosser, Ross, Stanton, & Edwards, 2005).	This could lead to issues of confidentiality/anonymity.
Check the quality of open-ended questions and see if they follow certain patterns (Prince et al., 2012).	It can be hard to differentiate between legitimate entries, made by participants, and those made by bots (Prince et al., 2012).
Directly ask participants if they have completed the same questionnaire before (Gosling et al., 2004).	This method relies only on the honesty of the participants (Bowen et al., 2008).

## Results

The results are presented in two tables. Table 1 summarizes the steps that researchers can take *before* surveys are administered in order to prevent multiple submissions by the same participants. Table 2 presents potential measures that researchers can take *after* the data has been collected in order to filter out multiple submissions.

## Conclusions

While the recommendations are not foolproof and will not completely eliminate the issue of multiple submissions, they will help to reduce the frequency and impact of multiple submissions and falsified responses. Furthermore, the research shows that methods for identifying multiple submissions cannot be fully automated. It is up to researchers to evaluate the pros and cons of each method and to decide for themselves which practices will work.

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