The Savvy Survey #13: Online Surveys[1]

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As part of the Savvy Survey Series, this publication provides Extension faculty with an overview of the process that uses email to invite participants to complete an online survey. Currently, the University of Florida has a license for Qualtrics survey software that allows each Extension faculty member to have an account for creating and conducting online surveys. Online surveys are an effective way to collect data for needs assessments in program planning (see, for example, Lamm, Israel, & Diehl, 2013) or for follow-up surveys evaluating outcomes or customer satisfaction with Extension programs (see, for example, Israel, 2013). Survey research shows that online surveys are sometimes able to obtain as high a response rate as that for mail surveys, but often they do not (Manfreda et al., 2008; Israel, 2013). There are times that an online survey is a practical, appropriate option. This fact sheet provides guidance for constructing an online questionnaire, addressing visual design and formatting considerations, and implementing an online survey. Extension faculty who incorporate best practices of questionnaire design and online survey procedures will be able to collect more useful data than those who do not use these best practices.

Considerations Specific to Constructing an Online Questionnaire

One of the major factors affecting the construction of an online questionnaire is the skill level and experience of the people to be surveyed, as well as the technology and/or software used by the survey designer. People who have limited access to computers, limited experience with computers, low literacy, or limited English skills are not well suited for completing online surveys. On the other hand, people who are well educated and regular users of email and the web would be a good population for an online survey.

The capabilities of survey software also influence the construction of online questionnaires. For example, Qualtrics software offers a suite of tools for developing a questionnaire, and the designer can include many types of questions and response formats (see The Savvy Survey Series #6: Writing Questions). A word of caution: using some of the fancier or more complex question formats may be burdensome for some Extension clients who are less sophisticated users of computers and the web. For general audiences, simple question formats should be used.

One of the great advantages of online questionnaires is the ability to automatically route respondents to the proper question through the use of "skip logic." Skip logic is a feature that helps to prevent the navigation errors that

can occur with paper questionnaires because the survey software skips irrelevant questions and takes the respondent to the next pertinent question—a "respondent-friendly" feature. Because of the powerful navigation tools in online surveys, designers are often tempted to include more questions than would be possible in a paper questionnaire. As discussed in The Savvy Survey Series #5: The Process of Developing Survey Questions, a logic model can be used to help identify and select the best questions to include in the questionnaire.

Visual Design and Formatting

After choosing the best online format for the survey, next consider the visual design. One difference between online and paper surveys is that computer screens typically display a page in a landscape orientation while paper questionnaires display information in a portrait orientation. One important implication is that displaying multiple questions on a screen will often cause the respondent to have to scroll down the page in order to view all of the questions and response options. Scrolling can increase item nonresponse, so a best practice is to construct the online questionnaire using one question per screen (Figure 1) or a gridded set of items on a single screen (Figure 2). Given the increasing use of smartphones to answer surveys, grid questions can be difficult to see and answer on these devices. When many in a target audiences have a smartphone, a single question per screen is recommended.
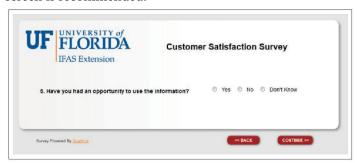

Figure 1. Example of visual design principle: Single question per screen construction.

The appearance of individual questions, as well as the entire questionnaire, can impact whether and how people answer the survey (Dillman, Smyth, & Christian, 2014). A good design provides cues to a respondent on how to navigate from one question to another and what kind of information the survey designer is looking for. For example, the size of the answer space for the question, "What could we do to improve our services to you and others in the county?" tells a respondent how much to write (a larger space encourages people to write more than a smaller space; see Israel, 2010).

Also, a "clean" design that clearly and consistently indicates where the question starts and where the associated answer choices are can help a respondent answer the questions accurately. Figures 1 and 2 show screens that are constructed with a consistent format, including a header at the top with the logo and survey title, and navigation buttons in the lower right area of the screen. There is little extra wording or graphics to distract the respondent.

Figure 2. Example of visual design principle: Gridded set per screen construction.

For more detailed information about writing items or for formatting a questionnaire, see Writing Questions (#6) and Formatting Questionnaires (#7) in the Savvy Survey series. Finally, when constructing the online survey, it is a best practice to *disable* settings requiring a respondent to answer a question before moving to the next one. This is because requiring an answer to a question that does not apply to a particular respondent might cause him or her to quit the survey. In addition, participation in any survey approved by a university Institutional Review Board (IRB) is voluntary, so all questions must allow a respondent to skip to the next without answering.

Implementing an Online Survey
Preparation

Getting ready to conduct an online survey involves several steps. One is preparing the correspondence that will be used in the survey process. Because email messages are easily discarded and quickly buried in a person's inbox, an email pre-letter is not recommended. Note: pre-letters are often used for mail surveys to alert people to the upcoming survey. Instead, many surveys begin with an email message that includes the link to the website hosting the survey

so that the person can respond immediately. In some situations, an email pre-letter might be appropriate when a sponsoring organization or leader is willing to send a message endorsing the survey and encouraging members to participate.

Each email message should be carefully worded using the principles of social exchange theory (Dillman et al., 2014) to encourage people to complete the survey. Briefly, social exchange theory asserts that people will be more likely to respond when the benefits (e.g., importance, salience, prestige, usefulness) outweigh the costs (e.g., time, effort, difficulty) and they trust those sending the survey to deliver the benefits. In practice, the email message should discuss how the respondent will benefit, why his or her response is important, and steps taken to reduce costs (e.g., limiting the time to complete the survey to a few minutes).

Appendix A provides a set of figures illustrating a series of messages, with each one tailored to play a specific role in the survey process. The initial invitation provides a complete explanation of the purpose of the survey, as well as the respondents' rights and how to respond. The second message starts by referring to the initial invitation and asking for a response now. The third takes a new approach with nonrespondents by acknowledging how busy people can be while the fourth contact uses a more assertive tone to "push" nonrespondents to complete the questionnaire. The final contact makes the "last call" plea to encourage procrastinators to respond before it is too late.

Note that each letter in the series includes a unique link for the person, which is used to manage access to the survey, as well as keeping records for sending follow-up messages to nonrespondents. Finally, the correspondence should provide all of the information needed for a person to make an informed decision to participate in the survey. (It is a best practice—and may be required—to have the questionnaire and letters reviewed and approved by the Institutional Review Board (IRB) to ensure compliance with regulations for conducting research on human subjects. See *The Savvy Survey Series #9: The IRB Process* for more information on this topic.)

When preparing the correspondence, consider how to personalize it. Research shows that personalization has a small but significant effect on increasing response rates (Dillman et al., 2014). Personalization helps to connect the respondent to the survey. This can be done by using individual names of clients in contact messages (e.g., Dear Joe Client) or by a group name with which clients identify (e.g., Dear Jackson County Cattlemen). Although including

logos or images might help to personalize emails to a group, some people continue to use email applications without html formatting (which is required to display the graphics). Consequently, email messages should limit the use of logos and images.

A second step is preparing an email list with names, email addresses, and other relevant information. Spreadsheet programs, such as Microsoft Excel, are useful for organizing the information and keeping track of which people respond and which do not. Table 1 illustrates a spreadsheet list, which includes a column listing the response status and one recording the date on which a completed questionnaire is received. In addition, data in a spreadsheet can be used in a mail merge to personalize email messages by inserting names and other information.

Sending Survey Invitations

The survey invitation procedures should be tailored to the situation, as recommended by Dillman et al.'s *Tailored Design Survey Method* (2014). Table 2 shows the contact procedures for two online surveys. The FCES Customer Satisfaction Survey used up to five contacts with clients, while the Extension Evaluation Behaviors survey of Extension faculty in eight states used a series of six contacts. A best practice is to use multiple contacts to obtain a high response rate and minimize the risk of nonresponse bias.

Although the sequence of contacts listed for the two examples in Table 2 may appear repetitive, each email message is somewhat different from the others. This difference is because each message (as illustrated by the messages in Appendix A) is designed to make a unique appeal in order to motivate people to respond. Note that both examples in Table 2 use multiple reminders in order to maximize the number of completed surveys. Research shows that the number of people who will respond after the 5th or 6th message is rather small, so additional invitations beyond the 4th or 5th might not yield much additional data and they can irritate people who do not want to complete the questionnaire.

With email invitations, the timing of follow-up reminders can be more closely spaced than with mail surveys. When the daily number of responses drops to zero for a given email message, then it is appropriate to send out the next email invitation to those who have not yet responded.

Qualtrics software provides several options for sending email invitations and accessing the online questionnaire. The options are outlined in Table 3. (There are a number of

other software applications for conducting online surveys, and these include many of the same options. It is important to become familiar with the features of the chosen software, especially default settings, in order to avoid unintended problems that adversely affect the usefulness and credibility of the data.)

These options vary in complexity and the amount of faculty control, with the first having the least and the last having the most complexity and control. When using the second option, Qualtrics' internal mailing tool, the current version of the software reports the number of email invitations sent, as well as the number of emails that "bounce" or fail to be delivered. One advantage of the third option, using your own email software, is that bounced and delayed email messages can be identified, and obvious error in the email address can be more easily corrected.

In Summary

This publication in the Savvy Survey Series has focused on procedures for constructing an online questionnaire and implementing the survey. It noted that a population's access and experience, as well as software capabilities, are important considerations in the construction of the questionnaire. In addition, attending to the visual design and formatting of the questionnaire was emphasized as a critical step in making a respondent-friendly questionnaire. Finally, steps for getting prepared and for sending email invitations to complete the survey were reviewed. Using multiple contacts also was emphasized as a best practice for online surveys.

References

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Table 1. Example of a spreadsheet file with contact information for mailing and record keeping.

ID	Status	Date	Name	Email	Link
001	Eligible		Joe Client	JClient@email.com	https://ufl.qualtrics.com/SE?Q_DL=459zJ8QXH
002	Returned	6/1/13	Jane Client	Jsbees@email.com	https://ufl.qualtrics.com/SE?Q_DL=3a7tx4ORb

Table 2. Example of contact procedures for an online survey.

Contact	FCES Customer Satisfaction Survey 2016	Extension Evaluation Behaviors 2011
1st	Email message with URL link to the survey (Day 1)	Pre-letter by State Extension Director (Day 1)
2nd	Email message with URL link to the survey (Day 7)	Email message with URL link to the survey (Day 15)
3rd	Email message with URL link to the survey (Day 15)	Email message with URL link to the survey (Day 22)
4th	Email message with URL link to the survey (Day 29)	Email message with URL link to the survey (Day 29)
5th	Email message with URL link to the survey (Day 43)	Email message with URL link to the survey (Day 36)
6th		Email message with URL link to the survey (Day 43)

Table 3. Methods for implementing an online survey using Qualtrics.

Contact	Advantages	Disadvantages
1. Using an anonymous link that is included in the email invitation to each person.	Simple to use; the same link is sent to each person.	Respondents cannot be identified and omitted from follow-up email messages.
2. Creating a unique link to the questionnaire and sending the emails using the Qualtrics mailing utility.	Simple to use; allows tracking of respondents and non-respondents for targeting follow up contacts.	Qualtrics mailing utility does not notify when an email cannot be delivered. Requires an opt-out link in every email, which can encourage nonresponse.
3. Creating a unique link for each person, which is then exported to Excel and used by the faculty member's email program.	Allows tracking of all outcomes of email messages (delivery and bounced messages); most user control.	Complex; requires skills with Qualtrics, Word, Excel, Outlook or a similar suite of applications for mail merge procedures.

Appendix A

From:	Israel,Glenn D
Sent:	Wednesday, June 1, 2016 9:23 AM
To:	Israel,Glenn D
Subject:	Florida Cooperative Extension Service survey.

Dear Glenn Israel,

The University of Florida's Cooperative Extension Service is conducting a survey of people who have contacted the Union County Extension office for information or attended one of its programs. We want to find out how people feel about the information that they received. Your responses will help us find out what we are doing well and where we need to improve. The survey will take about 5 minutes to complete.

We are hoping that you will be able to complete the survey on the Internet so that we can summarize the results more quickly and accurately. Doing that is easy: just click on the link below or enter this web page address in your Internet browser's address field to begin the survey.

https://ufl.qualtrics.com/SE?Q_DL=8AFerTEmXfAtBQh_5bCORRk59EGYvmB_MLRP_9EtZlINKJMI6JAV&Q_CHL=gl

You are one of a small number of Extension clients randomly chosen to participate in this study. Since your responses will also represent others who were not selected, we hope that you will complete the survey as soon as possible. Your participation is voluntary. You do not have to answer any question that you do not wish to answer. We believe that there are no risks to you from participating in this study. There are also no direct benefits or compensation to you for participating in the study. If you have questions about your rights, please contact the UFIRB office, Box 112250, University of Florida, Gainesville, FL 32611-2250.

We will keep your answers confidential to the extent provided by law. Your name will not be used in any report. We will only use your answers after they have been combined with the other respondents' answers.

If you have any questions, please call 352-273-2586, or send an email to gdisrael@ufl.edu. Thank you for your help.

Sincerely,

Glenn Israel
Survey Director

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Figure 3. Example of the first invitation email.

From:	Israel,Glenn D
Sent:	Tuesday, June 7, 2016 12:11 PM
To:	Israel,Glenn D
Subject:	Florida Cooperative Extension Service survey.

Dear Glenn Israel,

A few days ago, we sent you an e-mail asking you to complete a questionnaire about your experience with contacting the Union County Extension office for information or attending one of our programs. We want to find out how people feel about the information that they got. Your response will help us find out what we are doing well and where we need to improve.

We hope that you will do so as soon as possible. Because of the small number of people being asked to participate in this survey, it important that each person complete the questionnaire. The survey will take about 5 minutes.

Please click on the link below or enter this web page address in your Internet browser's address field to begin the survey.

https://ufl.qualtrics.com/SE?Q_DL=b1406gb0cr2GF5H_9z4V6YsO8ZCxH4p_MLRP_cGuZvKJvd2RgyHP&Q_CHL=gl

Thank you for your help.

Sincerely,

Glenn Israel
Survey Director

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Figure 4. Example of a second email message in the series.

From:	Israel,Glenn D
Sent:	Wednesday, June 15, 2016 4:18 PM
To:	Israel,Glenn D
Subject:	Florida Cooperative Extension Service survey.

Dear Glenn Israel,

This is a busy time of year for many people and we understand how valuable your time is. We are hoping that you can give about 5 minutes of your time to help us collect important information for the Florida Cooperative Extension Service by completing a short survey. We would really like to know about your experience with contacting the Extension office for information or attending one of its programs. Your response will help us find out what we are doing well and where we need to improve.

We urge you to complete the survey as soon as possible. Please click on the link below or enter this web page address in your Internet browser's address field to begin the survey.

https://ufl.qualtrics.com/SE?Q_DL=b1406gb0cr2GF5H_9z4V6YsO8ZCxH4p_MLRP_cGuZvKJvd2RgyHP&Q_CHL=gl

Thank you in advance for completing the survey. Your response is important. Clients, such as yourself, are the best source of information to help shape Extension's services.

Sincerely,

Glenn Israel
Survey Director

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Figure 5. Example of a third email message in the series.

From:	Israel,Glenn D
Sent:	Wednesday, June 29, 2016 11:07 AM
To:	Israel,Glenn D
Subject:	Florida Cooperative Extension Service survey.

Dear Glenn Israel,

Several weeks ago, we sent you an e-mail asking you to complete a questionnaire about your experience with contacting the Union County Extension office for information or attending one of our programs. We understand that you received information concerning palm splitting. As of today, however, we have not received your completed survey.

Many people have already responded. They described their experience, both good and bad, from their contact with Extension. The results will be very useful to us at the University.

We are writing again because your questionnaire is important to helping us to have accurate results. Although we sent our request to people across the state, we need to hear from nearly everyone to be sure that the results are truly representative.

Answering the survey is easy and will take about five minutes.

Please click on the link below or enter this web page address in your Internet browser's address field to begin the survey.

https://ufl.qualtrics.com/SE?Q_DL=8AFerTEmXfAtBQh_5bCORRk59EGYvmB_MLRP_5tMB6v9WirTKb0F&Q_CHL=gl

If you have any questions, please send an email to gdisrael@ufl.edu.   Thank you for your help.

Sincerely,

Glenn Israel
Survey Director

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Figure 6. Example of a fourth email message in the series.

From:	Israel,Glenn D
Sent:	Wednesday, July 13, 2016 11:13 AM
To:	Israel,Glenn D
Subject:	Florida Cooperative Extension Service survey.

Dear Glenn Israel,

This is our last call for your opinion on how we are doing! Please take just five minutes to answer the survey about your experience in getting information from the Union County Extension office or attending one of its programs. We understand that you received information concerning palm splitting.

Many people have already responded, but we need to hear from you too. This is because we need to hear from nearly everyone to get an accurate picture of our clients' experience, both good and bad. The results will help us serve you and your neighbors better.

We urge you to complete the survey as soon as possible. Please click on the link below or enter this web page address in your Internet browser's address field to begin the survey.

https://ufl.qualtrics.com/SE?Q_DL=8AFerTEmXfAtBQh_5bCORRk59EGYvmB_MLRP_5tMB6v9WirTKb0F&Q_CHL=gl

If you have any questions, please call 352-273-2586, or send an email to gdisrael@ufl.edu. Thank you for your help.

Sincerely,

Glenn Israel
Professor and Survey Director

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Figure 7. Example of a fifth and final email message.