

ONLINE SURVEY STUDIES

Web-Based (Online) Experiments

If enabled, you may set up experiments that are web-based (online), and these experiments may be set up internally in the system (as a survey) or outside the system. The options will vary depending on how your system is configured.

There are a few things to note about web-based experiments:

- Once you indicate to the system that the experiment is web-based, you may not be able to change it so it is no longer web-based (but you can disable or delete the experiment). So, make this choice carefully
- Web-based experiments are typically setup so there is one timeslot, and that timeslot contains the maximum number of participants you would like to participate, and the *last* date and time when they can participate (often, this is the end of the term). It is not recommended that you set up multiple timeslots for a web-based experiments (it confuses participants), though the system will support it.
- It is generally assumed that participants will participate in an online experiment shortly after they sign up. Because of this, the system will expect you to grant credit to them soon after they sign up. If you are creating an online survey within the system, credit will be granted automatically, immediately after the participant completes the survey.

Throughout the sign-up process, participants are notified that the experiment is web-based. If the experiment is not administered by the system, then participants are not given the URL for the website until they have signed up, to ensure they do complete a sign-up in the system for the experiment. This restriction applies only to participants, and only to web-based experiments administered outside the system.

For web-based experiments administered OUTSIDE the system:

You need to use the following method to link the participant's sign-up in the Research Participation System to your online experiment (survey), so that you know who to grant credit to.

1) On the **initial screen** of your survey state the following:

- You have been directed to this online survey because you signed up for this study on the Research Participation System at Purdue.
- To ensure receipt of your course or extra credit please follow the instructions that appear after you submit the survey. These instructions will direct you to email a confirmation number to XXX@purdue.edu.

2) Have the **last page** (or the final screen) of your survey state the following:

- Thank you for your participation! To receive your credit, place the following confirmation number in the subject line of an email and send it to XXX@purdue.edu.

Confirmation Number: TRA1-RAF07-1432

***The confirmation number is any bogus number that you make up and is the same for all participants (of course, they do not know this).

Online survey experiments (surveys administered by the system) are discussed in great detail in the following sections. Please read it carefully before setting up an online survey experiment.

Introduction

The system includes a rather extensive online survey feature (if enabled on your system). It allows you to set up an online survey as a study, and participants who sign up for the study will be asked to immediately complete the survey. Upon their completion of the survey, they will be granted credit automatically by the system. You may then analyze their survey responses on an individual basis, or download the raw data across all participants who completed the survey, for further analysis. There is a slight chance that you may notice a discrepancy in the number of responses when analyzing a single question compared to downloading the entire set of responses. This can occur if a participant is currently taking the survey, but has not completed it. Their data is included in the single-question analysis (when available) but not in the full download of responses, as there is not a full set of data for an in-progress participant. The system will prevent participants from completing the survey more than once, so there is no risk of duplicate entries for the same participant.

To comply with regulations, the participant is given the opportunity to withdraw from the survey at any time. If they withdraw, they are taken to a form where they can submit any comments (this is optional), and their withdrawal is then noted and all their responses are deleted. The researcher receives an email when this occurs, with some other information, including how much time was spent on the survey, and how many questions were answered. You should then grant credit to the participant as appropriate.

There is a space to provide closing text, which is displayed to participants after they successfully complete the survey (after they have saved all their responses and cannot go back). This is an ideal place to include any relevant debriefing information.

The online survey feature is rather complex due to the many features it contains. In addition, your ability to modify the survey after participants have started to take the survey is quite limited. Because of this, you should plan out your survey well in advance, to make sure it is finalized before you make it available to participants. Do not hesitate to contact the administrator if you have any questions. You may find it helpful to plan out the survey on paper before entering it into the system.

A survey may have an unlimited number of sections and an unlimited number of questions per section, though we recommend limiting surveys to fewer than 300 total questions and 15 sections, to reduce participant fatigue. This can be an issue since they must complete the survey all at once. The system will make participants aware that their session may time out because of inactivity, in cases where the survey contains many sections that have more than 15 questions (since participants are likely to spend a lot of time on those sections and thus risk being logged out for inactivity).

Questions may be free-entry (requiring the participant to type in an answer) or multiple-choice (pick only one or pick many from the list of choices). You may also specify that the system computes a participant's results for an entire section, as either a section sum or average score. This computed sum or average can be computed only for numeric, multiple-choice (pick only one) questions in the section. Such a computation is often useful when a participant's aggregate score is more important, such as with a depression battery.

For free-entry questions where the participant is asked to enter a free-form text answer, the size of the entry field (as it is displayed) cannot be changed or be resized. Participants may enter up to 255 characters in their response.

Sections can be displayed in a specified order or random order, or a combination of both. Every section may contain introductory text introducing the section, and the survey itself may also have introductory text introducing the survey, as well as closing text that is displayed upon completion of the survey. You may specify that questions within a section are displayed in random order. If you do not specify random ordering for questions in a section, then the questions will be displayed (in each section) in the order they were entered and cannot be reordered later. Multiple choice questions can have their choices displayed in the entered order or random order (this is specified on a per-question basis). Multiple choice question choices can be displayed horizontally (across the page) or vertically (down the page).

If you would like to see how the survey will be displayed to participants, that can easily be done while setting up the survey. Next to each section (in the section list), there will be a Preview Section link so you can view the section exactly as participants would see it. You may also view how the introductory and closing text will appear to participants, by choosing the Preview Introductory Text and Preview Closing Text options which appear on the Section List page.

Note that there is a bug in Internet Explorer 5 on the Macintosh platform that may result in a slow response for participants when they are using this specific web browser/computer combination and completing survey sections with many choices. Microsoft has discontinued support for Internet Explorer on the Mac, so this bug will not be fixed. The other browsers on the Mac (Firefox, Safari, and Mozilla) all work perfectly, and there are no problems for Windows users with any browser. The specific problem occurs only rarely, but can occur.

It is important to realize that while the survey feature is quite extensive, there are some things it does not support. It cannot do timings, where the speed of a participant's response (typically in milliseconds) to each question needs to be measured. It also cannot do branching, where the questions being presented to a participant will vary depending on their answer to other questions within that same survey (an example being asking a question like "Do you smoke cigarettes?" and then presenting a different set of questions based on their response). The reason advanced features like this are not currently supported is that our software is primarily a subject pool software product that happens to have an online survey feature within it. We asked our customers which features in an online survey were most important to them, and those features exist within the product. There are numerous products on the market specifically for doing online surveys (with no subject pool component), which contain more advanced features, and can easily be linked to from the Sona Systems product by setting up your study as an online study conducted outside the system.

Within the next few months, we will make available a new integrated online survey product to select customers to get their feedback on if the new online survey feature is worth offering to all our customers. If you are interested in trying this and providing feedback, please contact the administrator of your site who can relay the information to Sona Systems.

Creating or Modifying a Survey

To create a survey, first create an online survey study. After you create it, you will see the option Update Online Survey when you view the study information. You may not create 2-part online survey studies.

It is important to note that while you are making changes to a survey, it is deactivated so participants may not participate in it. When you go to the Finalize Survey option after you have

finished your work with the survey, you will have the opportunity to save your changes and make the survey active (available to participants) or inactive (not available to participants). You should always choose the Finalize Survey option when you finish your work with the survey, as the system saves all changes and computes some other important data when you finalize the survey. If you would like to continue work on the survey at a later date, you should still choose the Finalize Survey option to ensure your changes during the current session are properly saved (most likely you would choose to keep the survey inactive in this situation).

General Survey Information

Choose the General Information option (if creating a new survey, this is the first page you will see) to provide some basic information about the survey. The fields are explained below:

Field	Description
Introductory Text	<p>Optional. Provide a set of text that will be displayed when a participant starts the survey. You may include HTML in this area, but please be sure you know what you are doing. If you would like to add a carriage-return (paragraph break), simply type in “<p>” (without the quotes). When you first create the online survey, the system will automatically insert some basic default text in this area. You may change any of this text as much as you like – the system will not change it back later as long as you save your changes.</p> <p>This is a good place to place any text for informed consent purposes. You may view how this text is displayed to participants by saving it, then going to Preview Introductory Text, which is available from the Section List page.</p>
Closing Text	<p>Optional. Provide a set of text that will be displayed after a participant completes the survey and saves their responses. This is an ideal place for debriefing information. You may include HTML in this area, but please be sure you know what you are doing. If you would like to add a carriage-return (paragraph break), simply type in “<p>” (without the quotes).</p> <p>You may view how this text is displayed to participants by saving it, then going to Preview Closing Text, which is available from the Section List page.</p>
Display sections in random order?	<p>You may specify a specific ordering for sections, have the system randomize the order for all sections, or specify the order of some sections, and a random order for other sections. If you specify the order for only some sections, you may also specify, for each section, whether it should be displayed before or after the random-ordered sections. The system does not keep track of the random ordering for sections for each participant.</p>
Participant response review/change	<p>If set to Yes, then participants may review and change their responses just before they complete the online survey. They are given this opportunity after they complete the last section of the survey, and before any closing text is shown. At this point, they can see all their responses and go back to any section to change their responses. Once they complete the online survey, they cannot go back at a later date and change any responses.</p>

It may be useful to set this option to No (so that they are not allowed to review or change their responses at the end of the survey) if sections are somehow dependent on one another, such that allowing participants to change their responses may affect the integrity of data collection.

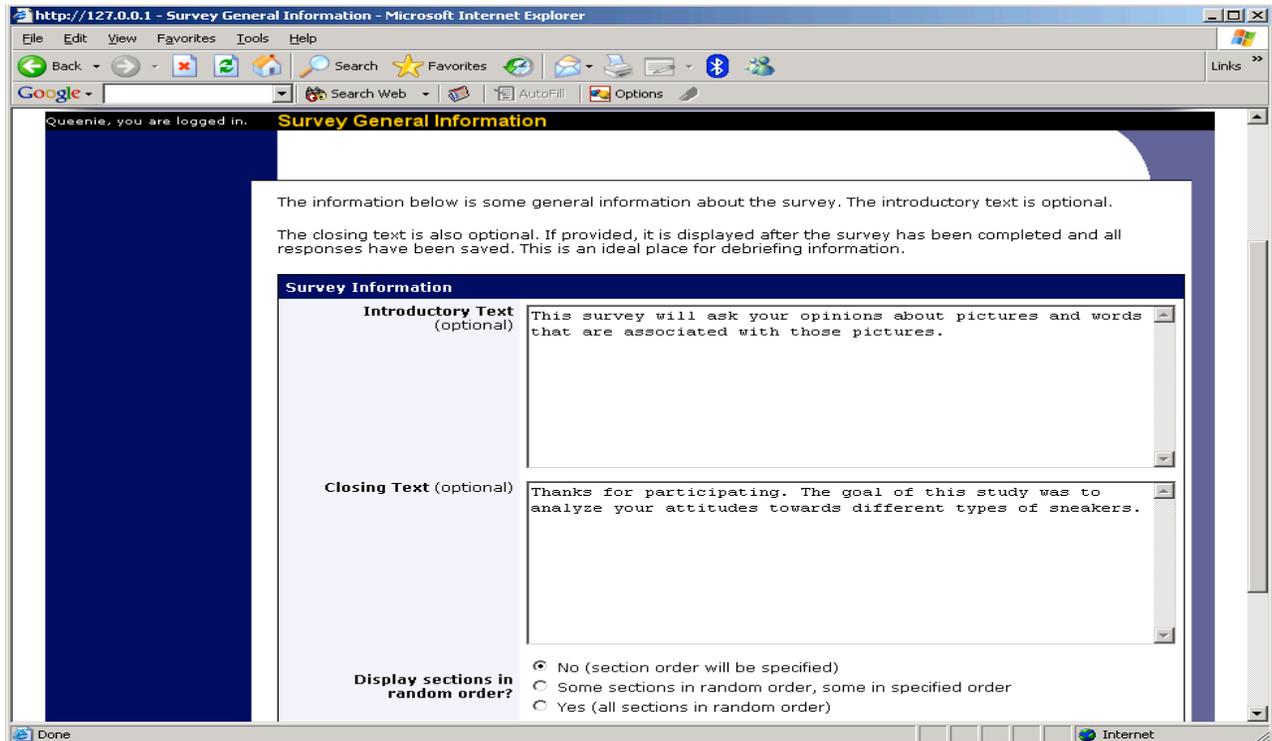


Figure 1 - Survey General Information

Section List

Depending on if you are adding or editing the survey, you will be taken to the list of sections for the survey. Here, you can change the order that sections will be displayed (if you have not enabled full random section ordering for the survey), and see a quick review of each question. From here, you can add a question to any section and edit any question. To add a new section, choose the Add a New Section choice at the bottom of the page.

If you have enabled partial random section ordering, then you can specify a section order for the sections you would like to be displayed in a specified order. For the sections you would like to be displayed in random order, leave the Section Order area blank. When you specify a section order, use each number once, and use the numbers 1-98 if you would like the section to be displayed *before* the random-ordered sections, and the numbers 100-199 if you would like the section to be displayed *after* the random-ordered sections. Be sure to use each number only once, or leave the number blank to make the section part of the random-ordered section. Sometimes it is useful to use partial random ordering if you want to ask basic (e.g. demographic) information in the first few sections, while asking more analytical questions in the random-ordered sections. Likewise, you may want to ask about the previous random-ordered sections after they are completed.

There is also a Preview Section option so you may preview the survey as participants will see it.

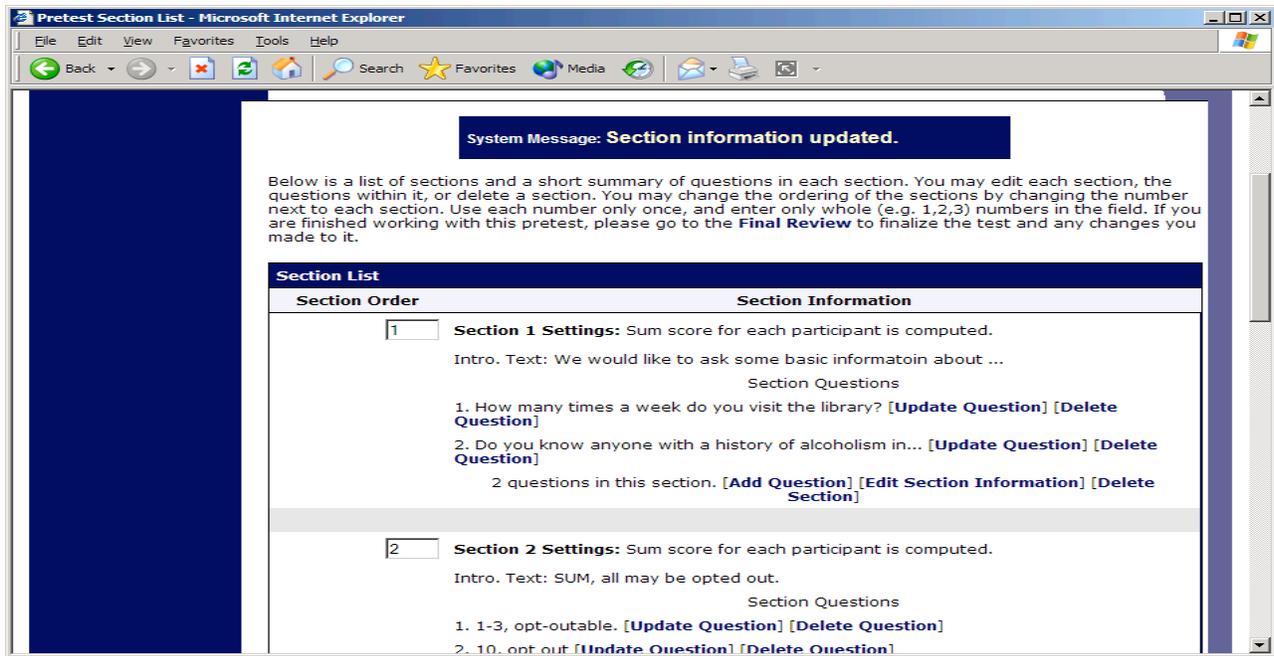


Figure 2 - Survey Section List

Adding or Modifying a Section

To add a new section, choose the Add New Section link at the bottom of the Section List page. To modify an existing section, choose the Edit Section Information link next to the section you would like to modify, from the Section List page.

There are three pieces of information you may provide for each section. First, you may specify some introductory text to be displayed at the beginning of the section. When participants take the survey, they view one section at a time, and all the questions in that section. The introductory text may be helpful in explaining the purpose or topic of the questions in that section. You may include HTML in this area, but please be sure you know what you are doing. If you would like to add a carriage-return (paragraph break), simply type in “<p>” (without the quotes).

You may choose if the questions for that section are displayed in random order or the order in which they are entered.

You may also choose to have the system compute a section sum or average (for each participant) for the section. These scores are computed only for all the multiple-choice, numeric questions in a section. Think carefully about setting this value, because you are very limited in your ability to change it after participants have started to take the survey.

Computed section sums or means are often useful when all the questions are using a unidimensional scale (1-5, for example), but a participant’s average score response to the section is more useful to account for their outlier responses.

Depending on if you are editing or adding a section, after you save your changes, you will be taken to a page to add a new question or to the section list.

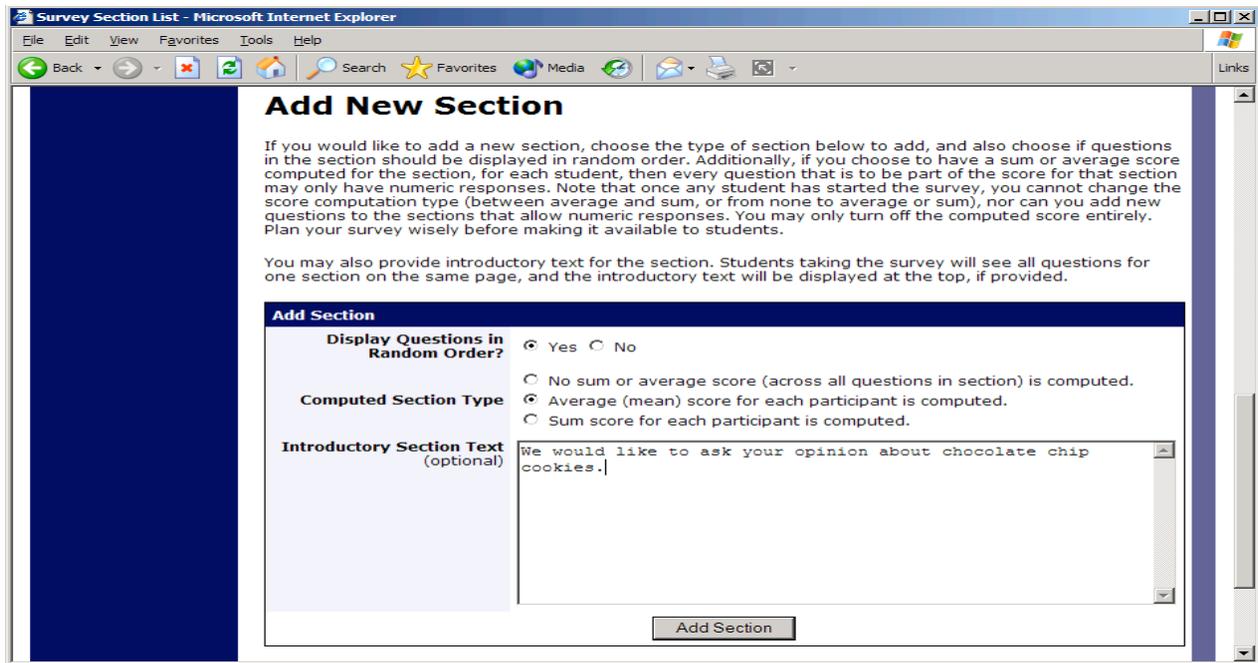


Figure 3 - Add New Section

Adding or Editing a Question

To add or edit a question, choose the appropriate choice from the Section List, next to the desired section. Depending on the state of the section and if participants have taken the pretest, some options will be automatically set for you, and not changeable. All fields must be filled out.

Field	Description
Question Text	The text for the question. This will be displayed above each question's choices.
Abbreviated Question Name	An 8-character label for the question. This is not displayed to participants and is used to name the columns that appear when the data is exported in CSV format. Many statistical analysis programs limit column names to 8 characters.
Question Type	Multiple Choice (select one), Multiple Choice (select many) or Free Entry. If the section has a computed average or sum, you may be limited in your ability to add Multiple Choice (select one) non-numeric questions. Free entry choices may contain a response up to 255 characters in length.
Display choices in random order?	If set to Yes, the choices for this question will be displayed to participants in a random order. This option only applies to multiple choice questions.
How should the choices be displayed?	Horizontal (across the page) or vertical (down the page) are the two options for how the choices for a multiple-choice question should be displayed. Often, the horizontal display is effective when the question involves a scale. This setting applies only to multiple-choice questions.
Can participants decline to provide an answer for this question?	If set to Yes, participants will see a choice below this question that allows them to opt out of answering the question. If set to No, they must answer the question.
Are all choices numeric?	If set to Yes, all choices must be numeric whole numbers (e.g. 1,

	-2, 10). This only applies to multiple choice questions. Sections with a computed section sum or average may not contain non-numeric multiple choice (select many) questions.
Display numeric value?	If set to No, the numeric value of the choice is not displayed to participants. This only applies to numeric, multiple-choice questions where each choice includes both a numeric value and associated text (e.g. “5 Strongly Agree”). This is useful when running a reverse scale.

If the question is a multiple choice question, you must also fill out the choices section that is part of the same form. A minimum of 1 choice must be provided for the question. Each choice may be up to 255 characters in length. If the question is specified as numeric, you must provide a numeric choice, and that choice must be a whole number (e.g. -5, 1, 0, 349). If you would like to provide descriptive text to accompany each numeric choice, you may do so by typing in the numeric choice and leaving one blank space after it, then typing in the descriptive text, for example: “5 Strongly Agree”. If you provide descriptive text along with the numeric choice, then you have the option of hiding the numeric value from participants, by choosing No to the “Display numeric value?” setting for the question. This is useful in reverse scale or other situations where the numeric value for the choices is not important.

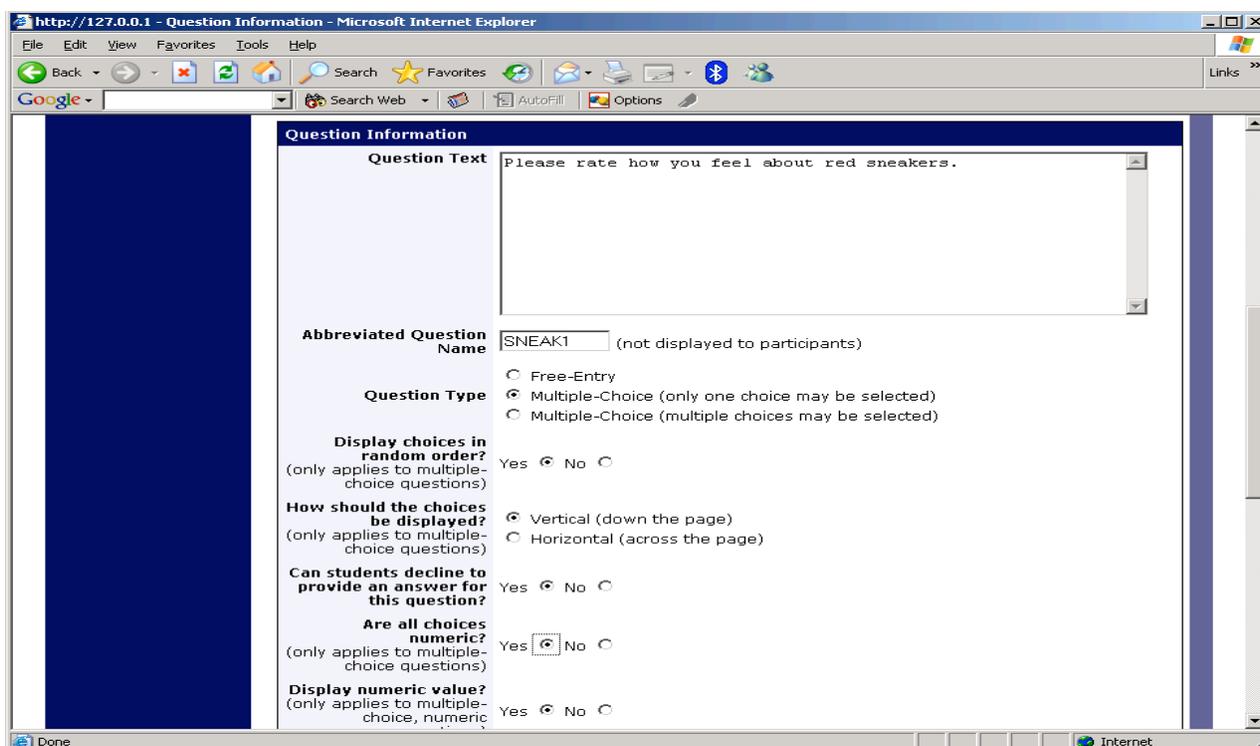


Figure 4 - Edit a Question

Copying a Section

You may copy a section from any of your own surveys into your current survey, by choosing Copy From an Existing Section in the Section List. You will see a list of eligible surveys to copy from. After you choose which survey to copy from, you will see a list of eligible sections in that survey. Once you choose a section, it will be copied into the survey you are currently editing.

The administrator also has the ability to copy to or from the pretest, so ask the administrator to do this for you, if you need it done.

Copying a Question

For multiple-choice questions, it is often the case that many questions have the same measures (choices). To make entry of similar questions easier, you may use the Copy Question feature to copy a question. Such an option is only available for multiple choice questions. To copy a question, select the question you would like to copy (when viewing the Section List). You will then be taken to a list of sections where you may copy this question to. After you decide which section you would like to copy the question to, you will be taken to a page where you can make any final changes to the copy of the question before saving it.

Saving Your Changes

When you are done, you should go to the Final Review and save your changes. Even if you plan to do further editing of the survey later, it is **imperative** that you go to the Final Review step, as the system needs to save certain special changes and make some computations. If you do not want participants to participate in the survey yet, you can save changes but keep the survey inactive. When you save your changes, it may take a moment to save all the changes, as the system is performing a number of computations on the survey. Please be patient, as these computations are done to make performance for participants as fast as possible.

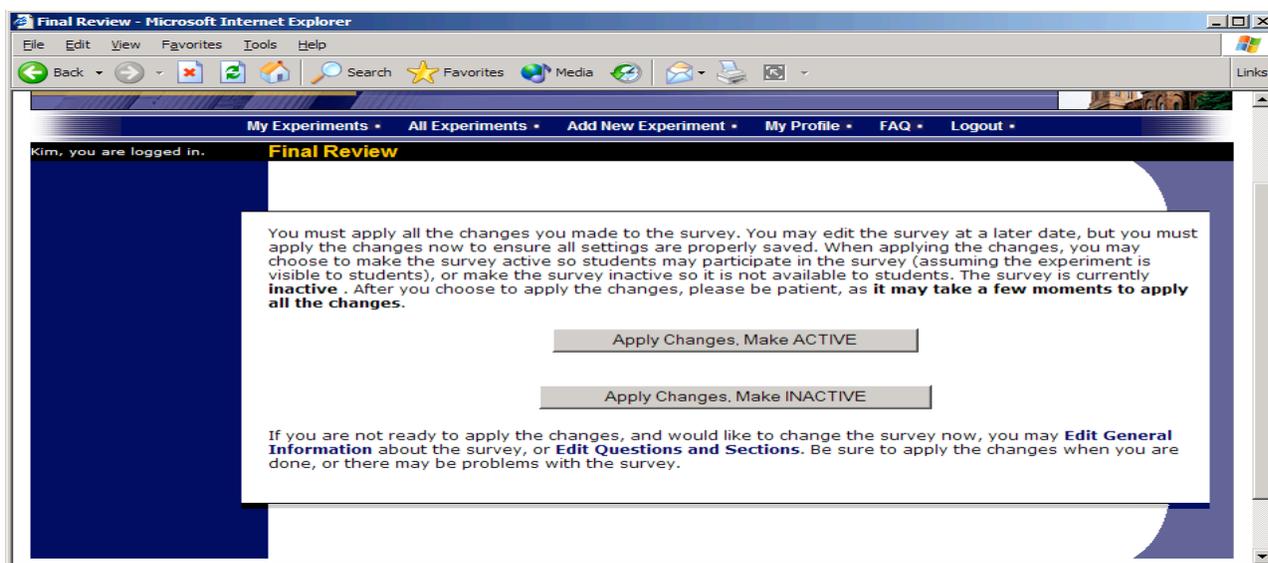


Figure 5 - Saving Survey Changes

Deleting a Participant's Survey Responses

On rare occasions, you may want to delete a participant's survey responses, usually so they can participate again. To do this, cancel their sign-up and that will delete their responses. Note this will also remove any credit they earned. See Manual Cancellation for more information.

Analyzing Survey Responses

You may analyze a specific survey question on-screen by selecting the survey and choosing the Analyze Survey Responses option. From there, you may choose a specific question and view or download the response data.

More likely, you will want to analyze the survey data across all questions. In this case, you should choose the Download Survey Responses option.

To successfully analyze the data, you will need to download 2 sets of data. The first is the question key, which lists a unique numeric identifier for each question, along with the question text and abbreviated question name. It also includes the section number each question was in. Note the section number listed is merely a unique identifier for each section, and has no correspondence to the order in which sections were presented. Also note that section mean and sum values, if calculated, will normally be at the end of the list of questions. This data is in CSV format, and is available by clicking the Download Question Key link on the Download Survey Responses Page.

After you download the question key, you can download the survey data. The system may require that you download the data in sections if there is too much data to be downloaded as one file.

The data is in CSV format, and is presented as one row per respondent, with each of their responses in a different column. The first row includes the column headings, and the column heading maps to the abbreviated question name. Since there is no facility to specify an abbreviated question name for the computed section sum/mean item, the system automatically assigns a unique name to those columns. The naming convention is SECXXX where XXX maps to the system's internal section identifier for that section (`section_id`). You can use the question key to determine which question maps to which column. The data also includes the exact time the participant started and completed the online survey. You can use any common data analysis tool to compute how long it took the participant to complete the survey, using this information.

There will be an option to include only the numeric response portion of questions that are multiple-choice with numeric choices. This is useful if the numeric question was set up with associated text, but that text should not be included in the analysis file. One example would be where the response selected was "5 Strongly Agree" but only the number 5 (and not the associated text) is useful during analysis.

If your survey has a lot of questions (and thus columns in the output file), you may have trouble loading the data with some spreadsheet programs, which are not equipped to handle such large datasets. Your best option is to use a full-feature statistical analysis packages, like SPSS or SAS. Those packages handle large CSV-format data imports with ease.

Frequently Asked Questions About Online Surveys

Is it possible to have multiple versions of an online survey,, with participants being randomly assigned to one version of the survey at the start of the survey?

The best way to do this is to create multiple online surveys (you can easily copy questions between them with the Copy Section Feature, to save time), and use a pretest participation restriction that is unrelated to your research. For example if there is a pretest question asking for the last digit of the participant's university ID number (assuming this is randomly distributed), then you can use that to easily break up the pool into random tenths by using that as a pretest participation restriction for each version of the study.

Is there a way to post images, graphics, or videos in the online survey, so that participants can respond to questions referring to the image or video?

Yes. You will need to have the ability to post images on a webserver (most likely at your school), and know a small bit of HTML. Let's say your graphic is located at <http://www.yourschool.edu/myimage.gif>

Put this in the place where you want the image to be displayed:

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<IMG SRC="http://www.yourschool.edu/myimage.gif">
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If you're unfamiliar with HTML, you may want to ask someone for assistance with this.

You can use a similar process to post videos, but you'll need to ask the person in charge of the webserver where you post the video for the best method (in HTML) for linking to it, as there are a few different methods to link to videos.

Can certain sections be presented for a specified period of time (e.g. 60 seconds)?

No. There are technical limitations and inaccuracies in how web browsers interact with web servers, as well as internet latency, that make this difficult to do, so this feature is not offered.

Can I make an online study a two-part study?

Online studies cannot be two-part studies, and the reason has to do with what two-part studies are intended for. They are used when the researcher needs to ensure a fairly strict separation between each part. For example, in memory research, a researcher may want to set up the two parts exactly 14 days apart.

The issue with online studies is they are not scheduled to take place at a certain date and time, so it's impossible to enforce any kind of strict separation between each part.

If the goal is just a follow-up to a study, then the time separation probably isn't very important. In that case, the solution is to set up two studies, and set the first study as a pre-requisite for participation in the second study.

Is there a method to upload a survey into the system (from Word, Excel, etc.)?

For online survey studies, there is no method to upload the data. We considered this, but there is no standard format for survey data representation, so there was no format we could really support for uploading.

In the online survey feature, there is the ability to copy questions and sections, which may make it easier to set up the survey if many questions have the same sets of choices, for example.

When a participant is taking an online survey study, when is their sign-up actually recorded in the system?

The system will not record completion (or even sign-up) of an online survey study until it is actually completed (or if the participant chooses to withdraw early). Participants are shown the

closing text as the last step of the online survey study -- just after their responses have been saved and their sign-up is recorded.

When they start the online survey study, it is noted to participants that their responses are not fully saved until they complete the study, and only then will they be properly recorded. This is for both technical and IRB reasons.