BRAD Lab Guidelines to Best Practices in Online Research
by Selin Kesebir

1. Give clear instructions

Clear instructions improve the quality of data and reduce construct-irrelevant variance. Ensuring clarity is particularly important in online studies because participants don't have the opportunity to interact with experimenters. Here are some ways to achieve clarity:

- <u>Pilot test to identify problems with the questions</u>. BRAD Lab RAs might be a good first audience for your pilot studies. Depending on the study, you might want to observe them take your study, talk to them after they have taken it, or have them let you know in writing any issues with the study.

- <u>Clarify expectations</u>. With free-response questions, it's important to give participants a sense of how much they are expected to write (e.g., "Please explain in 4-6 sentences why you would choose this product")

- <u>Give examples of what you want</u>. In some cases, it is a good idea to give participants examples of desired responses or response formats (e.g., "*Your birthday: MM/DD/YYYY*"). Providing examples however is a bad idea if it might lead participants to anchor on certain responses.

2. Make desired behavior explicit

You can make participants act more cooperatively by making explicit how you are expecting them to behave:

- "Before you start the study, please make sure that you are in a quiet space where you can spend 15 uninterrupted minutes on this study"
- "Please take your time and answer the questions carefully"
- "The answers you will provide are very important and valuable for our research. We thus ask you to give your full attention to the survey"
- "These questions don't have right or wrong answers. We are only interested in your honest opinions"

3. Give participants psychological incentives to cooperate

In addition to tangible incentives such as gift cards or performance feedback, you can give participants psychological incentives to take the study seriously.

- Reduce participants' sense of anonymity. Online studies may impart a sense of anonymity in participants and it's well known that people act more anti-socially under anonymity. To deal with this problem, ask participants personalizing information at the beginning of the study. If your IRB allows collection of identifying information, you can ask them for their name or e-mail. If not, you can ask participants to provide non-identifying personal information such as initials, zip code, or demographic characteristics. Research has indeed shown that placing demographic questions at the beginning of a study rather than at the end results in lower drop-out rates (Frick, Bächtiger, & Reips, 2001).

- Tell participants they are being watched. Research shows that people act more cooperatively when they think they are being watched.
     - "We check every line of data"
     - "We have some mechanisms built into the study to check whether participants are following instructions carefully" (see below for how to create those mechanisms)

- Use institutional cues to establish credibility. Using institutional cues will improve perceived legitimacy of your research in the eyes of participants and increase compliance.

4. Build into your study mechanisms to ensure high data quality

There are techniques you might use to ensure that you get high quality data. This way, you will reduce the amount of unwanted variance in your data and thereby increase your statistical power. Here are some of those mechanisms:

- Encourage early drop-out. For multiple reasons, it's better to have non-motivated participants drop-out early rather than late. First, this will save participants' time. Second, by having these participants drop out early, you might be preventing them from giving you junk data. Third, in experimental studies, if participants drop-out before the experimental manipulation, you will not have to worry about differential drop-out across conditions which could interfere with random assignment. To encourage early drop-out, give participants the chance to exit the survey by asking whether they have answered all questions on a page or a certain question ("On the previous page, have you written about an incident in which you judged someone negatively?"). If they answer yes, allow them to continue with the study, if they answer no, give them the options of going back to answer the question or exiting the study.

- Require answers for critical questions. Each study has some critical questions that need to be answered by all participants. A participant's data will be worthless if she fails to answer questions measuring the independent and dependent variables. Similarly, in experimental studies all participants need to undergo the experimental manipulation procedure; otherwise their data is useless. Program your study to require an answer for critical questions before participants can proceed. Commercial study design tools (such as SurveyMonkey , Qualtrics or Zoomerang) all have this feature. Participants who don't want to answer these questions can exit the study (as stated on the consent form).

- Hide Next button for a set duration. You can hide the Next button for a set duration to ensure a minimum amount of time participants will spend on a page. Qualtrics has scripts available online to allow you to do that.

- Use data validation. You might program your study to validate participant responses. Commercial sites such as SurveyMonkey have a feature allowing response validation. For example, if you are asking participants to enter a price between $1 and $100, you can limit data to be a number between 1 and 100, thus precluding invalid responses which you would otherwise have to deal with at the data cleaning stage.

- Make it harder on cheaters. In some cases, you might be looking for a certain quality in your participants (such as working in an organization, being a parent of an infant, or being an undergraduate). To ensure that you have the right kind of participant, you can include questions that will be hard to answer by cheaters (e.g., "Please enter the name of your organization, your job title, and major responsibilities at work", "Please write down the name of the diaper brand you prefer", or "Please write down the names of all classes you are taking this semester")

5. Build into your study mechanisms to detect low-quality data

Despite your best efforts, some participants will not go through your study as carefully as you would like them to. There are techniques to detect those people. Building these mechanisms into your study will help you identify which data to legitimately discard.
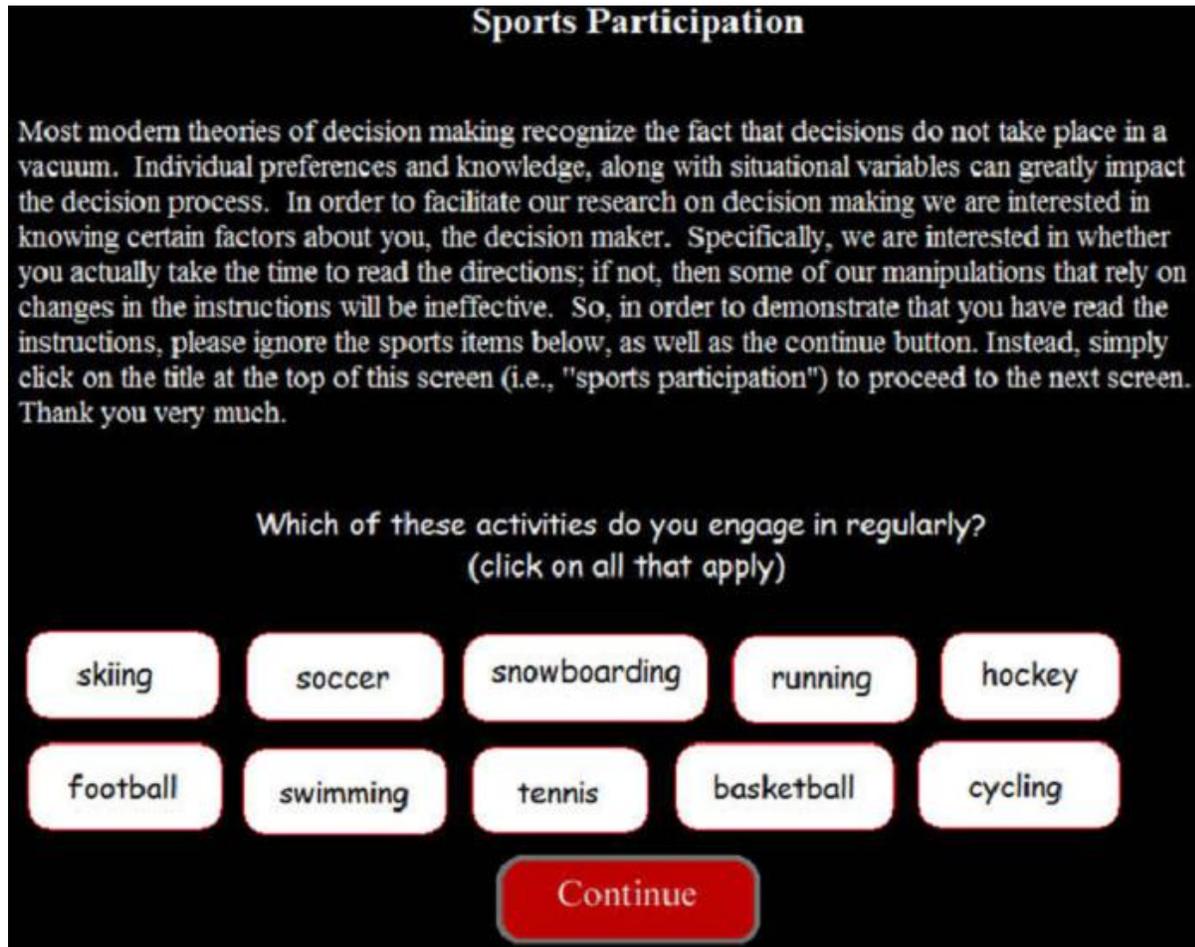
- Measure how much time is spent on a page. This is particularly useful if you have long passages of text such as complex instructions or vignettes. Qualtrics has a question type called Timing which allows you to measure how much time a participant spent on a page. You can use timing data to eliminate participants who didn't spend sufficient time on a page.

- Instructional Manipulation Checks. The instructional manipulation check (IMC) is a recently developed method to check whether participants are reading the instructions (Oppenheimer, Meyvis, & Davidenko, 2009). The participant is given a question along with some instructions. The instructions tell participants to ignore the question and do something unusual, for example: "In order to show us that you are following the instructions, please ignore the Continue button below and hit the title" (see page 4 for a sample IMC).

- Trick questions. To detect random responding, you can include one or two questions with an obvious answer, such as "While watching the television, have you ever had a fatal heart attack?" (1 = Never, 6 = Often), or "How often do you have contact with extraterrestrial beings?"? (1 = Never, 6 = Often). To deflect participant shock at such questions, you can tell participants at the beginning of the study that they will be asked some questions to make sure all participants are going through the study carefully.

6. Test for technical problems

If you used [SurveyMonkey](#) , [Qualtrics](#) or [Zoomerang](#) to design your study, you won't have to worry too much about technical problems comprimising your study. But if you designed your own study or had someone program it for you, make sure to test for potential technical problems:

- Does the study function correctly both on PCs and Macs?
- Does the study appear correctly regardless of browser type (e.g., Chrome, Firefox, Explorer)
- Is data stored accurately and completely?

Sample instructional manipulation check screenshot (Oppenheimer, Meyvis, & Davidenko, 2009):

Sports Participation

Most modern theories of decision making recognize the fact that decisions do not take place in a vacuum. Individual preferences and knowledge, along with situational variables can greatly impact the decision process. In order to facilitate our research on decision making we are interested in knowing certain factors about you, the decision maker. Specifically, we are interested in whether you actually take the time to read the directions; if not, then some of our manipulations that rely on changes in the instructions will be ineffective. So, in order to demonstrate that you have read the instructions, please ignore the sports items below, as well as the continue button. Instead, simply click on the title at the top of this screen (i.e., "sports participation") to proceed to the next screen. Thank you very much.

Which of these activities do you engage in regularly?
(click on all that apply)

skiing	soccer	snowboarding	running	hockey
football	swimming	tennis	basketball	cycling

Continue

RESOURCES

- Gosling, S. D., & Vazire, S., Srivastava, S., & John, O. P. (2004). Should we trust Web-based studies? A comparative analysis of six preconceptions about Internet questionnaires. *American Psychologist*, 59, 93-104.
- Oppenheimer, D. M., Meyvis, T., & Davidenko, N. (2009). Instructional manipulation checks: Detecting satisficing to increase statistical power. *Journal of Experimental Social Psychology*, *45*, 867–872.
- Frick, A., Bächtiger, M. T., & Reips, U.-D. (2001). Financial incentives, personal information and drop-out in online studies. In U.–D. Reips & M. Bosnjak (Eds.), *Dimensions of Internet Science* (pp. 209-220). Lengerich: Pabst.
- Gosling, S. D. & Johnson, J. A. (Eds.) (2010). Advanced Methods for Conducting Online Behavioral Research. Washington, DC: American Psychological Association.