Guidance for Developing Surveys

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Over the course of EDC's time working with the TPS Consortium, we have been asked by several partners to provide feedback on surveys they have developed. Surveys are the primary data collection method used by TPS Consortium members, principally because compared to other methods—interviews, focus groups, prototype testing, pre/post-tests, or observations—surveys are relatively efficient to use. That ease can be deceptive though. Without the ability to probe or ask clarifying questions, it can be hard to discern respondents' perspectives. Therefore, it is important that questions be well-written and tested. In this article, we reflect on common challenges we've seen in our work with the Consortium, and we present general guidelines for planning and developing quality surveys members can use to gather data to improve their programs.

Planning your survey

It's important to spend time planning and clarifying your goals before you start to write a survey. Respondents' time and attention are limited, and therefore the presence of each question on your survey should be justified by its centrality in helping you answer larger questions about your program or materials. (See this article for an interesting discussion of how much time respondents are willing to spend on a survey).

1. **Develop a list of topics or research questions.** It can be helpful to start by listing out the types of information you would like to know, and then to use that list to create a few categories. From there, you can start brainstorming questions that might get at each topic, and then revise to focus on the most important questions. (This article has a useful discussion of how to brainstorm questions).

2. **Prioritize areas of potential change.** As you develop a list of topics and research questions, it's important to prioritize your goals for improvement. It can be helpful to focus on the overlap between what most needs change and where you're realistically able to make change. For example, a broad open-ended question such as "How might we improve this program?" might give you a range of responses that aren't feasible for your team to implement. If you already know there are only one or two elements of your program you could likely improve, you might want to instead focus questions on drawing out participants' experiences with those elements. One final note when planning to gather formative feedback: ask respondents to provide feedback on ideas you've already generated, rather than asking them to suggest ideas for how you might improve your program. Your participants aren't necessarily PD or curriculum designers, and you want to avoid "unfairly [pushing] the responsibility of improving your program" onto your participants.

3. **Consult lists of best practices to help set improvement priorities.** Programs can often use research-supported best practices to identify areas for improvement. This is often called a heuristic evaluation. We developed the Opportunities to Learn Checklist as a way of helping partners think about important components of primary source learning tasks, and to help consortium members reflect on their offerings and where they might have room for improvement. This checklist should be relevant to the content of all consortium partners, but PD providers might also consult the list of practices for effective teacher professional development developed by Linda Darling-Hammond and her team. When trying to prioritize formative questions, you can use lists or heuristics like these to conduct self-assessments and to reflect on which practices you have in place and where you might improve.

Writing items

Once you've developed a plan and focus for your survey, you need to start developing your questions. You'll need to decide to what extent you're using open- vs. closed-ended questions, and carefully construct both your questions and the responses options to ensure that participants understand what you mean, and that their responses reflect their experiences and perspectives. Here are a few tips for writing clear, meaningful, and actionable questions.

1. **Ask clear and specific questions.** Your goal is to write survey items that respondents can easily understand, where the goal of the question is clear, and which diminish the variability in how terms could be interpreted. Whenever possible, write shorter questions with fewer clauses, use simple language, and give respondents criteria to assess what you're asking of them.

    a. Example: The question, "Please rate the workshop's learning goals" does not provide any criteria respondents might use to rate the learning goals. That means that it might be challenging for respondents to answer, since they may not be sure what you're trying to learn, and it makes it more difficult to use the results, since you don't know what criteria the respondents used. If respondents rate your learning goals lower than other items you've asked them about, will you know why? A better option might be to be more specific and offer criteria by rewriting the item as "To what extent were the learning goals relevant to your teaching?"

2. **Ask closed-ended questions whenever possible.** While open-ended questions can be a valuable option when you want to capture a broad range of responses, participants' own language, or participants' descriptions of an experience, these questions require more effort for both the respondent and the analyst. Unless you're doing very exploratory data collection, open-ended questions should be used sparingly and purposefully. Well-constructed closed-ended questions can often capture similar information, while reducing

the cognitive burden on your respondents and allowing you to more easily compare responses between participants and across questions.

    a. Example: One survey asked, "What goals do you have for attending this workshop?" As a formative question designed to gather the range of possible goals participants might have, or to learn about the language participants use to talk about their goals, this can be a great open-ended question. If you know that your workshop realistically only covers three or four goals though, and you want to think about grouping participants, it might be more useful to limit the range of options by rewriting this as a multiple-choice question and asking respondents to select the goal they find most relevant. You can always include an "other" option as a steam valve for those respondents who feel strongly about a goal not listed.

3. **Use response scales.** Response scales allow participants to use a series of ordered options express the intensity of attitudes or frequency of actions. For instance, a question might ask respondents to rate how much they agree or disagree with a statement, or how likely or unlikely they are to do something. These scales are useful because they allow respondents to express a range of opinions without putting undue cognitive burden on them. They can also allow you to easily compare participants' attitudes to different elements of your program or materials. Response scales should generally be written to include a similar number of negative and positive responses, and they should include a neutral middle option in order to allow for participants who genuinely don't have an opinion. For example, a 5-point scale for likeliness might be: extremely likely, somewhat likely, neither likely nor unlikely, somewhat unlikely, extremely unlikely. When using response scales, it is important to understand that respondents often seek to please, meaning that you can get data that skews positive or that has little variation because respondents have all answered positively. Two ways you might address this ceiling affect are to be careful about using scales where respondents are asked to agree, or to expand the number of response options so that respondents can express a broader range of attitudes (See this article for suggestions about how to develop response scales and examples of different types of scales).

    a. Example: One survey asked the open-ended question: "How familiar are you with the Library of Congress's online primary sources?" This question is likely more useful when paired with a not familiar-familiar response scale.

    b. NOTE: When writing response scale items, it can be useful to think how you would interpret variation in responses. For example, for a question that asks respondents how much they agree or disagree with the statement "My family throws things away that could probably be recycled," how would you interpret the difference between someone who answered they strongly agreed as opposed to someone who somewhat agreed? Does the person who strongly agreed mean they throw more recyclables away than the person who somewhat agreed? Do they feel guiltier about

throwing recyclables away? Or, maybe they are prouder of the fact that they throw recyclables away. For this reason, this question might have been better written to allow respondents to share how often they think they throw recyclables in the trash.

4. **Ask one question at a time.** Questions that ask more than one thing are called double-barreled questions and they create noise in your data. As open-ended questions, you're likely to get answers to only one part of the question. As closed-ended questions, it's unclear which part of the question the respondent might be answering. One way you can address these types of questions is by breaking them down into two separate questions.

   a. Example: "What is one goal you have for the workshop and how do you anticipate your attendance at this workshop might achieve that goal?" Respondents might have goals for the workshop, but not know how those goals might be achieved. This question would be better written as two questions.

5. **Ask several questions about one element.** One approach to writing clear and specific questions that ask only one thing is to break your questions down into several specific questions about an element of your program or materials. In this way, you can explore different aspects of that element, and gather data that can better help you not only set priorities for improvement, but also understand ways you might improve your program.

   a. Example: When designing a survey to gather feedback on the Inquiry Kits developed by Maryland Humanities and Maryland Public Television, EDC was interested in knowing more about teacher and student's experiences of the kits' different features, such as the primary sources they used. Rather than asking teachers to provide one holistic rating of the sources though, we asked them to rate how much they agreed with several statements about how engaging the sources were, how easy they were for students to comprehend, how easy they were for students to use as evidence to answer a question, and the extent to which students were able to synthesize information across sources. Asking this series of questions about the sources, provided us with a deeper understanding of the overall value of the sources, as well as more specific perspectives that allowed us to make suggestions for how the kits might improve the way they selected and presented sources.

6. **Attend to flow and order.** It can be useful to treat a survey like a conversation. You want it to flow in a logical manner and you want to group items around topics whenever possible. To the extent that you want respondents to make open-ended holistic evaluations of the program, such as "What did you find most useful during this program?", it can be helpful to place those questions after closed-ended questions focused on the various program elements. That way, respondents have the range of program elements in mind when they provide their answer. That said, if you have a longer survey, you might want to avoid placing

more important items—especially if they're open-ended—at the end of the survey because they often get less attention from the respondent.

7. **Test your survey.** Just like in the planning phase, ideally surveys are tested with the target population. One way you might do this is by conducting a cognitive interview. Here, you might ask a respondent to complete your survey in front of you (or over the phone) and to think aloud as they complete it, explaining their understanding of each question and providing rationales for their answers. Conducting cognitive interviews like this can help you to surface items that are confusing or that are being interpreted differently than you intended. Alternatively, if you're not able to do this type of testing, you should elicit feedback from a colleague. Even a little feedback can help you improve your survey.

Writing a good survey is a mixture of art and science. There are lots of conflicting opinions on how best to develop survey items and responses, but here we've presented some general guidelines that can help you gather better data that can inform program improvements. While surveys can be a valuable method to learn about your participants' experiences, we encourage Consortium partners to explore other methods as well, such as interviews, focus groups, and classroom observations. Regardless of the method, EDC is happy to provide guidance and feedback to consortium members as they seek to improve their work.