Ed Tech Rapid Cycle Evaluation Coach

Guide: Using Surveys

When you're evaluating educational technology, surveys can be a useful way to collect quantitative data on a variety of non-academic outcomes. These outcomes can range from teachers' technology literacy to students' stress levels.

This guide provides you with important questions you'll need to answer when choosing or developing your survey, along with some things to keep in mind as you implement your survey.

STEP 1. DETERMINING WHOM YOU WILL SURVEY

The first step is to decide who is eligible to respond to your survey. Respondents could be students, parents, teachers, principals, or other district officials. Different groups can provide different information. Exhibit 1 gives an overview of why you might include specific types of survey participants.

Exhibit 1. Types of information provided by respondents

Type of respondent	Information they can provide
Students	Students will give you the most intimate perspective on those you are ultimately trying to serve. Surveys of students can shed light on their social-emotional development and their attitudes toward specific subjects, technologies, activities, or school in general.
Parents	Parents often offer the best information about what is happening at home. They can also provide direct responses about items like parent engagement and their perception of technologies or communications.
Teachers	Teachers are best able to provide information on anything that is happening in the classroom. They can speak to topics such as technology implementation, student behavior, and their own teaching practices and attitudes (such as how they spend their time).
Principals	Principals provide a school-level perspective on topics such as implementation, school climate, and communication. Principal surveys will likely be most useful for evaluations that take place in large districts or that cover several districts.
Other district officials	Other district officials can provide a broad district-level perspective or speak to what's happening behind the scenes. Generally, they will not be the target population for rapid cycle evaluations of educational technologies, but they are important to keep in mind as you think about other changes in your district.

STEP 2. DECIDING HOW MANY PEOPLE YOU WILL SURVEY

You will need to survey people from both your treatment group and control group. You can decide to survey only part of the study group—and assume that the segment you chose represents the full group—or you can survey all individuals.

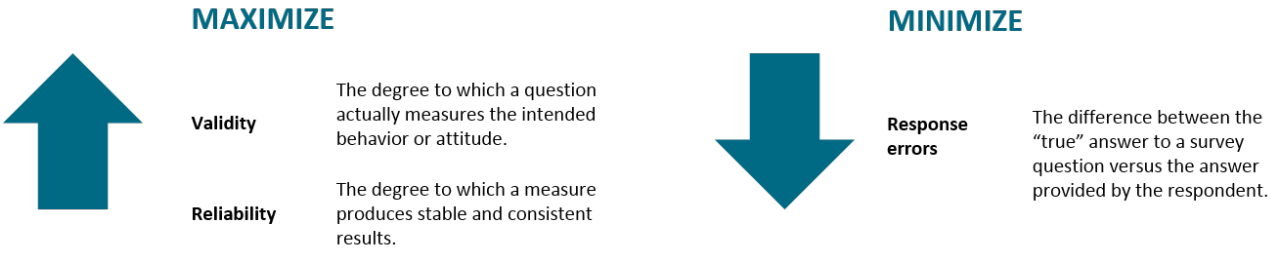
If you have a small population or an easy way to aggregate results (for example, if you are using an online survey), it's probably worth surveying the full group. If you decide to survey only part of the group, random assignment is the best way to ensure that the group being surveyed is representative of the full group.

STEP 3. CREATING A GOOD SURVEY

Having a clear sense of your outcome of interest is key to administering a successful and high quality survey. Each survey question should map to some aspect of your outcome to ensure that the data collected can provide the answers you need to evaluate the technology.

The quality of the data is also a major consideration during this step of the process. There are three key determinants of quality to keep in mind: (1) validity, (2) reliability, and (3) response accuracy (Exhibit 2).

Exhibit 2. Determinants of data quality



Response errors can occur in a number of ways, such as when survey questions are not clear and are misunderstood by the respondent or when respondents do not answer questions honestly.

STEP 4. PLANNING YOUR DATA COLLECTION

Surveys are conducted in a variety of ways (Exhibit 3). The appropriate method often depends on whom you wish to survey and what the survey topic is. To maximize the response rate for your survey, select the method that is most convenient for your respondents.

Exhibit 3. Survey methods

If you are surveying teachers, an online survey will likely be best because teachers will probably have online access and feel comfortable completing surveys this way. But if you are surveying students, a paper survey might be best so that all students can complete it during a class period; also, not all students may have online access.

It's also worth thinking about the resources it will take to collect the results and enter them into a spreadsheet for analysis. For example, it may be feasible to pull together pen-and-paper results from a survey of a single classroom—but not from a district-wide survey. Remember that you will need an identifier if you want to match the survey data to other data (such as student background characteristics).

STEP 5. GETTING RESPONSES

Survey respondents are often asked to answer questions about their past experiences. The quality of the survey data decreases as respondents are asked to recall experiences further in the past. For surveys on educational technology, you will want to collect the data soon after the respondents have been exposed to the technology, as longer delays may affect their ability to recall the information you plan to collect. Collecting the data when users' experiences are still current also increases the likelihood that they will respond.

To collect the data quickly and increase the response rate, you may need to send follow-up reminders about completing the survey. The most appropriate mix of reminders will depend on the people you are surveying and the survey method you're using. For example, for an online survey of teachers, an email reminder may work best because users will be more likely to complete a survey online when they receive a reminder via the same medium. Other reminder methods include mail (letters or postcards) or telephone (reminder calls or text messages).

TIPS FOR DEVELOPING YOUR SURVEY:

- **Don't re-invent the wheel.** The most important step in developing a survey is to identify relevant questions from previous surveys. Using questions from other surveys (especially items that have been vetted) will save you resources and make your survey more likely to yield high quality data. Reusing questions from prior surveys may also enable you to compare data between your survey and other surveys that use the same questions.
- **Keep it simple.** In some cases, what you want to know cannot be captured by questions from previous surveys, and you will have to write new questions. When doing so, remember that each question should only cover a single issue or aspect of your outcome. The key to writing effective questions and responses is to use clear language and terms that respondents will understand.
- **Keep it brief.** Your respondents will be taking time to give you valuable feedback, so be sure to include only the most important measures so the survey isn't too long. Longer surveys often lead to lower data quality; respondents are more likely to provide the same answer to each question without thinking them through (such as selecting C for all answers) or to choose the first response they recognize instead of considering all response categories. Most online survey experts try to limit surveys to 15 to 20 minutes.
- **Use appropriate types of questions.** Surveys contain various types of questions. For attitudinal questions, such as those used to measure satisfaction, a ratings scale (or Likert scale) is often used. For example, if you're asking respondents about their experiences using an online application, you could present a set of statements and ask respondents to rate how much they agree or disagree with each one. A Likert scale has a definition for each point on the scale, so a common five-point scale would be:

    1. Strongly disagree
    2. Disagree
    3. Neither agree nor disagree
    4. Agree
    5. Strongly agree

- **Create a composite score.** Outcomes are multidimensional, and most cannot be measured through only one statement (see the "Keep it simple" bullet above). Creating a "composite" score may therefore make the most sense. A composite score pools or averages responses from several items on the same topic. This is most straightforward if all questions take the same form (such as a Likert scale). It can become complicated and require expertise if you are trying to combine different types of questions (for example, some Likert scale questions and

some yes/no questions). If you are unsure about how to create a composite score or analyze survey results, we recommend contacting a researcher.