

Collecting High Quality Outcome Data, Part 2 Instrument Assessment Checklist

Special Note

This skill building activity can be used to apply the concepts and principles covered in this module to real world situations.

Introduction

This exercise allows learners to use a checklist to assess an instrument for relevance and feasibility, and for the instrument's ability to generate high-quality data.

Key Points – Definitions

Reliability is the ability of a method or instrument to yield consistent results each time. Reliability is strengthened by using well-designed instruments and by providing data collectors and respondents with clear instructions on how to administer and complete instruments.

Validity is the ability of a method or instrument to accurately measure what it intends to or what it is supposed to measure. Measurement is valid when it produces results addressing the specific outcome you wish to measure. Valid measurement collects data on all relevant aspects or dimensions of an outcome. Validity is also supported when the results produced by an instrument are corroborated by information from other sources. For example, the validity of a math test is supported when students who score high (or low) on the test also perform well (or poorly) at solving math problems in class and on homework assignments.

Results are **biased** when they are systematically skewed or distorted. Results can be biased due to the over- or under-representation of particular groups in the dataset, and due to question wording that tends to encourage or discourage particular responses. The timing of data collection can also systematically bias results.

Sticking Points and Common Issues

Below are some issues that may come up as learners consider the material, along with notes on how to respond to these issues.

What do I do if I cannot get data collection in place before my program begins?

It is always best to make key decisions about methods and instruments before starting your program. However, we recognize this may not always happen perfectly. Development and improvement of methods and instruments is an ongoing process. Programs start from wherever they are, but should strive to develop and strengthen data collection systems as quickly as possible. For example, if a program needs to collect pre-and-post data, then, ideally, instruments need to be developed and tested before the program starts. Otherwise, the program will not be able to conduct a true pretest since the intervention will have already begun. In this situation, the program would still need to conduct the pretest as early as possible and note in the progress report that pretest data were collected late after the intervention started.

Under what circumstances may one modify an instrument?

In general, care should be taken when modifying instruments to avoid compromising the rigor, quality, and usefulness of data. Sample instruments provided in support of national performance measures may be modified as long as the instrument can still collect key data elements required by the performance measurement instructions. Instruments that come from other sources can be modified to fit your program context. However, modifying an instrument that has been validated will compromise the integrity of the instrument, so it is not advisable to revise these instruments or the instructions for their administration. When modifying an instrument always remain mindful of the instrument's original purpose and avoid modifications that deviate from this purpose or that will weaken the rigor, quality, or usefulness of the data.

On the one hand, I am advised to pilot test and revise instruments. On the other hand, I am advised not to revise standardized instruments. Does this mean that I should not pilot test standardized instruments, since I cannot revise them?

The purpose of pilot testing is to improve instruments. Piloting includes testing the instrument itself as well as the data collection process. If you plan to use a standardized instrument, pilot testing can help you understand how well (or poorly) the instrument works in your context. This is actionable information even if you are not revising the instrument or the procedures for administering it. Sometimes modest changes to how an instrument is administered can fix problems without compromising quality. If you encounter serious problems using a standardized instrument then you know in advance that it cannot be used and you will have to consider alternatives. Part of the value of pilot testing is simply learning about whether any problems exist – and gaining greater confidence in your instruments if you find that they are free from serious problems.

Exercise

Instructions: Use the Instrument Assessment Checklist to assess an instrument for relevance and feasibility, and for the instrument’s ability to generate high-quality data. This checklist can help you decide should be further assessed for usability, e.g., through pilot testing. The checklist is not intended to be used to design new instruments from scratch.

The checklist is intended primarily to assess instruments that measure outcomes, but can also be used to assess output instruments. Items that can be used to assess either type of instrument are marked with an asterisk (*).

- Items marked “yes” indicate the instrument may be appropriate for your program.
- Items marked “no” indicate the instrument may NOT be appropriate for your program.
- Items marked “not sure” will require further investigation to determine if the instrument is appropriate for your program.

RELEVANCE: Can the instrument generate data that are relevant to your program intervention and desired outcome?	Assessment Scale			
1. Does the data collection method for this instrument match the one you intend to use for collecting your own data?*	Yes	No	Not Sure	
<i>Example: Instrument is for interviews, but you need to do surveys.</i>				
2. Is it clear who is supposed to complete the instrument AND is this the same as your preferred data source?*	Yes	No	Not Sure	
<i>Example: Collects data from teachers, but you need data from students.</i>				
3. Does the instrument measure the same <u>outcome type</u> (attitude, knowledge, behavior, condition) as the one you want to measure?	Yes	No	Not Sure	
4. What <u>specific outcome</u> does the instrument address AND is it the same as your outcome?	Yes	No	Not Sure	
5. Is the instrument’s intended purpose clear (e.g., measuring outcomes versus assessing needs) AND does this match your purpose?*	Yes	No	Not Sure	
6. Have others successfully used the instrument for the same purpose as you intend to use it for?*	Yes	No	Not Sure	
7. Is it clear who the instrument is intended to be used with AND is this the same as (or similar to) your target population?*	Yes	No	Not Sure	
8. Can the instrument provide information to help you improve your program?*	Yes	No	Not Sure	
Additional comments about RELEVANCE:				
FEASIBILITY: Can the instrument be successfully deployed in your program context and used to report results?	Assessment Scale			
1. Is the instrument well-suited to the circumstances (when, where, etc.) under which data collectors or respondents will complete it?*	Yes	No	Not Sure	
<i>Example: Can you interview clients who are recovering from a disaster?</i>				
2. If you need to collect pre-post data, can the instrument collect this type of data (ability to follow up with same clients, use of identifiers to match pre-and-post responses, etc.)?	Yes	No	Not Sure	Not Applicable

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3. Can you (or someone else) train data collectors to administer the instrument?*	Yes	No	Not Sure
FEASIBILITY (continued): Can the instrument be successfully deployed in your program context and used to report results?	Assessment Scale		
4. Does the instrument include clear instructions on how to <u>collect</u> the data?*	Yes	No	Not Sure
5. Is the instrument's length and level of complexity appropriate for your data collectors or respondents?*	Yes	No	Not Sure
6. How long do you estimate it will take data collectors or respondents to complete the instrument? Is this a reasonable amount of time?*	— mins	Yes	No Not Sure
7. Does the instrument include instructions telling data collectors or respondents how to <u>complete</u> and return it?*	Yes	No	Not Sure
8. Is it clear how you will roll up the data to report results?*	Yes	No	Not Sure
9. Is the instrument appropriate for your respondents' characteristics (e.g., age, education, and language preference)?	Yes	No	Not Sure
10. Can the instrument be used with respondents who have physical and/or cognitive impairments, OR can it be modified for such use?	Yes	No	Not Sure Not Applicable
11. Does the instrument rely on scales and/or checkboxes (instead of open-ended responses) that are easy to complete and analyze?*	Yes	No	Not Sure
12. Does the instrument contain questions that might be difficult to answer?	Yes	No	Not Sure
Additional comments about FEASIBILITY:			
DATA QUALITY: Can the instrument generate high-quality data?	Assessment Scale		
1. Is the instrument from a known and reputable source?*	Yes	No	Not Sure
2. Do questions that address the outcome cover all the relevant dimensions of your outcome?	Yes	No	Not Sure
3. Do the questions appear to follow a logical order?*	Yes	No	Not Sure
4. Does the instrument capture the background information you need, such as age, gender, veteran status, etc.?*	Yes	No	Not Sure
5. Are the questions free from problems such as double-barreled questions, jargon, crowding, and poorly designed scales?	Yes	No	Not Sure
6. Can respondents opt out of questions that don't apply to them or that they don't want to answer (e.g., by marking "not applicable")?	Yes	No	Not Sure
7. Do any questions ask for personal or sensitive information that it would be unnecessary or inappropriate to ask for?	Yes	No	Not Sure
8. Does the instrument reflect the latest research and thinking on the topic?*	Yes	No	Not Sure
9. Has the instrument been tested for reliability and validity AND are the results of these tests known?*	Yes	No	Not Sure
10. Does the instrument provide assurances of confidentiality?	Yes	No	Not Sure

Additional comments about DATA QUALITY:

Answer Key and Points to Consider

This exercise can be done using either the learners' own instruments or an instrument provided by the trainer. If the trainer provides the instrument, then he or she can review it beforehand using the checklist and prepare notes for debriefing learners. Additional questions are provided below that can always be used to debrief this exercise.

Questions for discussion:

- Which checklist items would probably indicate that an instrument is unusable with your program if you marked them "no"? Why would a "no" response to these items render an instrument unusable?
- Which checklist items would probably be fairly easy to address if you marked them "no"? How would you address these issues?
- How would you go about getting more information to address specific checklist items if you marked them as "not sure"?

This question should be discussed with reference to specific checklist items of the facilitator's choosing.

- Was there anything that you found in assessing your own instrument that will cause you to revisit or rethink your use of that instrument? If so, what do you plan to do about it?

Trainers may wish to foster additional discussion by encouraging learners to share ideas on how to deal with instrument issues in the middle of the program year. Advice and options may depend partly on the nature and significant of the issues uncovered by the assessment checklist as well as the measurement approach being taken. If there are only minor concerns about the instrument, then the program may be able to continue using it either without revisions or with minor revisions. If there are major concerns about the instrument, then it may need to be significantly revised or replaced. If the instrument is used for pre-post data to collect, then major making revisions or replacing the instrument may not be a viable option. One alternative would be to switch a post-only method of data collection temporarily until a better pre-post instrument can be implemented the following year.

