
Data Analysis Suite of Tools

Part 1: Identifying Indicators of Impact

Purpose of the Tool

WORKING WITH
DATA

This tool, the first in a series of three, is designed to help you to think concretely and specifically about the kinds of changes you'd like to see as a result of your innovation. What would be some indicators or signs that your innovation is making a positive impact?

Suggested Time Commitment



You will need to gather some data before you meet as a study group. You may want to spread this work out over two one-hour sessions.

When & How

This tool involves looking closely at some data to help you come to a deeper and more concrete understanding of the potential or actual impact of your innovation. It can be used at different points of your work—for example, early on to clarify what kinds of impacts you'd like to see, or later on to take stock of what is going on and/or what you've learned so far.

The tool invites you to try out two broadly different approaches towards identifying indicators of impact. The first approach involves articulating the impacts you think or hope you might find before digging into your collected data (known in the research world as an “etic” approach). That is, you will articulate what you hope or expect to see in your data given your Theory of Action and the overall goals of your innovation project, ahead of looking at the data itself.

The second approach involves looking at your data with an open mind and identifying the indicators that emerge for you while you look at it (known in the research world as an “emic” approach). This latter approach can help you notice unexpected or unintended consequences of your innovation and encourages you to look more carefully at what your data is telling you.

As you look ahead to further developing your innovation, you'll want to build the most accurate picture you can of the impact of your innovation to date. Both etic and emic approaches are important.

Note: Throughout this tool, we use the word “data” in a broad sense to mean both quantitative and qualitative information or artifacts—for example, documentation of student work, lesson plans, interviews, survey responses, etc.

Steps

1. Pre-work: Assembling data

Gather a small sample of data that you have collected through your innovation project so far, and make sure they are accessible to group members during your study group session.

2. As a group: Articulating indicators of impact

Revisit your Theory of Action. Consider what you hope to see in your schools and classrooms as a result of your innovation. Write down 2-3 indicators that would suggest your work is having a desired impact at this stage. Each indicator should be something you could see, hear, or otherwise observe from collected data. Your indicators of impact may be overlapping but they should be distinct enough from one another so that you can usefully apply them to your data. Try to avoid categories that are too vague or abstract, or ones that are too narrow or specific.

3. Individually: Learning from data

Now, each member of your study group should select different pieces of data from your innovation project. For example, you could look at a few pieces of student work, some survey responses, or notes from interviews or observations. Putting aside the indicators you have just developed, try to look at the data with fresh eyes. You might want to annotate the data that you're reviewing. You may find it most convenient to make a copy of the data so that you can write directly on it; otherwise, make sure you can annotate it digitally.

Try out one or both of the following two strategies to look at your data. For this step, it is better to look deeply and carefully at a small amount of data rather than to try to look at a lot.

- Use a thinking routine. Use the *See, Think, Wonder* or *Parts, Purposes, Complexities* thinking routines to look at the data. These thinking routines ask you to look carefully at the data without rushing to interpret it or pass judgment and may help you to look at the data in new ways. You can also generally apply the concept of “slow looking.”
- Use “line by line coding.” If you are looking at text, have a go at a version of what is called “line by line coding.” For this technique, force yourself to slowly read the text line by line or maybe sentence by sentence. Note down what is happening in each line or sentence, using active verbs to describe what the person is doing (see the example below).

Example: Articulating Indicators of Impact

If your innovation was to introduce design and maker-centered learning opportunities to help 8th grade students develop a greater sense of empowerment within the context of their everyday lives, you might identify the following indicators (though just 2 or 3 indicators would be fine!):

- **Students** effectively use or adapt the *Parts, People, Interactions* thinking routine—when they are not explicitly asked to do so.
- **Students** teach themselves how to use tools and how to work with new materials.
- **Students** source knowledge and information online to help them solve problems they are working on at school, at home, or in their community.
- **Students** express confidence and/or enthusiasm for redesigning aspects of their environment or systems in their world.
- **Students** generally use “I can” statements when they talk about projects they are working on.

4. As a group: Revisiting indicators of impact

Gather a small sample of data that you have collected through your innovation project so far, and make sure they are accessible to group members during your study group session.

Compare what each of you noticed by looking closely at your different pieces of data. Can you jointly agree on 2-3 additional indicators of impact? Do you want to tweak or clarify the indicators of impact you came up with by looking at your Theory of Action?

Articulating indicators of impact can be useful on its own to help you reflect on where you have come from, take stock of what you have learned so far, and think ahead to where you want to go. This activity also sets the stage for Parts 2 and 3 of the Data Analysis Suite of Tools: Creating a Strategic Data Sample and Applying Indicators of Impact.

Example: Line-by-Line Coding

If you were looking at student work related to design thinking you might notice that the student is doing the following:

- Taking the perspectives of others.
- Expressing a desire to improve the school environment.
- Showing pride that students in this class/school know how to do things that other students don't.
- Demonstrating systems thinking.

These things are similar to the indicators you came up with by looking at your Theory of Action but also a little different. For example, you may not have expected students to take special pride in their new knowledge or way of thinking.