Department of Education

Continuous Learning

Tool: Data-Collection Planner

Overview

Making decisions based on appropriate data for the questions at hand can make the difference between a teacher team that generates insight and student success and one that does little more than spin its collective wheels. However, the potential benefits that data bring are balanced by the time and effort required to collect, process, and interpret the data. Collecting the wrong data or burning out your team with onerous amounts of data work is counterproductive. Thinking about the costs and benefits of your data collection plans in advance is critical for ensuring that the data collection and use become sustainable parts of your work. This planner will help you make informed decisions about what data you need and how to collect it.

Objective

Settle on a plan for collecting measures to guide your improvement team through this work. The plan will include details on the measures that are needed, the collection process, and the analysis and interpretation of the results.

Participants

- Improvement team leader
- (Optional) Improvement team members

Prerequisites

The team should have created a list (or "system") of potential measures that could be used to track the improvement process. See the *Choosing Measures for Improvement* activity in this chapter for more information on how to create your measurement system.

Guiding Questions

- What data would be the most valuable to have on hand?
- When will we need to collect data in order to inform key decisions?
- How can we most easily collect these data?
- Who should take which role to make the data-collection process as seamless as possible?
- For our team and improvement work, what is the appropriate balance between the benefits of having useful data and the teacher time that is required to collect it?

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Step 1: Draft A Timeline For Your Work

Starting with your current change idea(s), project a realistic timeline for how you expect the work to develop. Rather than starting with fixed dates, think instead about three stages of this work and the questions you should be asking during each one. Using the guiding questions and examples provided, write the critical questions you will have at each stage in the space below (or on chart paper or a white board). Aim for two to four questions for each stage. You can prioritize them later.

Early stage	Middle stage	Late stage
How **is our change working?**	***For whom and under what conditions*** **is our change working?**	**Is our change successfully *moving us toward our aim (or driver)*?**
Early on we ask questions that are open-ended and exploratory to truly understand our change, such as: • What happens in the classroom when we structure a lesson this way? • How do our students experience this new approach to discipline? • Can teachers manage this small-group work and the rest of the class at the same time?	Later we pay attention to the variation and outcomes to try and understand how to make the change work better and more consistently, such as: • Will this approach work equally for bilingual speakers of Chinese and Spanish? • Will adding modeling and paired practice help the students who have been struggling to engage?	As we grow more confident with our change, we start asking questions about whether the improvement is occurring as we predicted in our theory, such as: • Will the structured opportunities to use their home language in class increase our ELLs' sense of belonging? • Will the structured opportunities to use their home language in class lead ELLs to greater understanding of grammar of both languages?
Write your questions below:		

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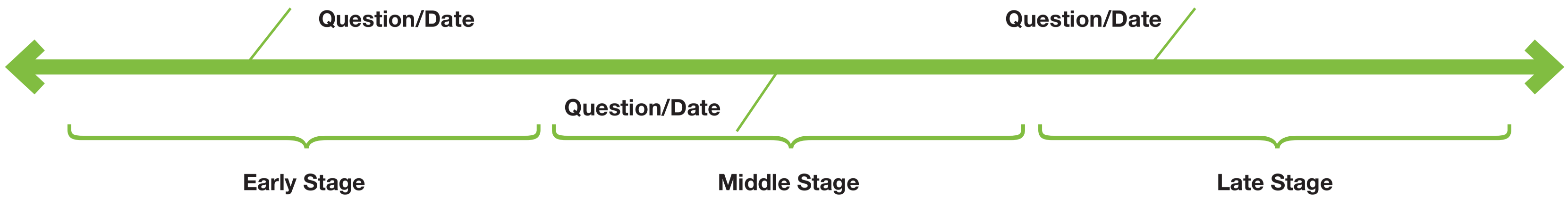
Step 2: Set Loose Dates

Using the questions from Step 1, come up with a loose date for when you would like to have data on hand to answer each question. Consider when you will be meeting with your team or school leadership. Consider when you anticipate moving from one phase of the work to another. Consider whether you will want a midyear check-in or end-of-year review of the work. If it is helpful, jot these questions and dates on a rough timeline of the school year (or beyond). Don't worry about which data you will need just yet; focus only on the questions you need to answer.



Step 3: Attach Possible Data Sources to Your Questions

Steps 3 and 4 involve prioritizing potential sources of data to answer the most critical questions that you will have over the next several months. These decisions should be made based on two sometimes-conflicting criteria: first, the ability of the data to answer your critical questions; and second, the real-world practicality of collecting that data. Because of the balancing that has to be done, it is best to do this one data source at a time. Focus on the middle and late stages, since data sources in the early stages often change quickly, and it is rarely necessary to plan for them in advance. Use the system of measures you have created (in the *Choosing Measures for Improvement* activity) and the examples of common data sources below to **choose one data source** that is well suited to answer one of your critical questions. It may be helpful to think about where the data sources fall on the timeline, but don't add them just yet!

Early stage	Middle stage	Late stage
How **is our change working?**	***For whom and under what conditions*** **is our change working?**	**Is our change successfully** ***moving us toward our aim (or driver)*****?**
Data sources at this stage are often: • Qualitative, such as anecdotes, observations, or interviews. • Student work that is easily collected, such as Exit Tickets. • Added, refined, and/or discarded to suit your immediate needs in PDSA testing.	Data sources at this stage are often: • Numeric or rubric based, to facilitate comparisons across groups of students. • Related to the objectives of the change idea or a driver. • Collected in a routine and scalable way.	Data sources at this stage are often: • Designed to measure many students over time. • Rigorous, using benchmarks and possibly using control groups. • Related to primary drivers or the aim statement.

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Step 4: Consider and Plan for Data Collection

The next step deals with the reality that data collection can be time consuming and require multiple tasks and handoffs between team members. It helps to be clear about and plan for all the tasks involved before you start. To do so, take the one data source you chose in Step 3 and use the prompts below to help decide what tasks are involved in designing, collecting, preparing, and sharing each data source. Record these by jotting down a quick list of all the necessary steps for your data source.

When you finish, repeat Steps 3 and 4 until you are satisfied that you have enough data sources to prioritize among your options and start planning next steps and roles.

Design	Collect	Prepare	Share
Will you need to… • …find existing data tools to copy or adapt? • …write an initial draft? • …do a practice run with a colleague or student? (helpful for testing survey and interview questions) • …share with colleagues for feedback? • …refine based on feedback?	Will you need to… • …discuss plans to fit data collection within existing routines of your team? • …collect baseline data? • …determine when, how, and to whom your team will submit the data? • …allow for additional feedback and refinement of the data tool?	Will you need to… • …make time for the handoff of data between team members or admin? • …input the data into a spreadsheet? • …do a preliminary analysis before sharing? • …prepare comparisons over time, or across student groups? • …create graphs, charts, or visuals for sharing with your team?	Will you need to… • …schedule a separate meeting, or use time in an existing meeting? • …pre-think possible implications and next steps? • …decide who will present the data and/or lead the discussion? • …liaise with school leadership about your results, learning, and progress so far?

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Step 5: Prioritize and Add to Timeline

This penultimate step is where you pull together all of your thinking into a rough plan. Seeing all of the steps laid out on a calendar is a good way to think through the practical implications of your choices and make decisions about what data you are going to prioritize. (See the attached example timeline on the next page for an idea of what this may look like.) During this step you should:

- Add each task to your timeline, working backwards from the dates you chose for sharing with your team or school leadership. Add other important dates such as holidays or state testing. Feel free to adjust dates that no longer feel realistic. Consider using different colored pens or sticky notes to distinguish the data sources. You may also add names of people who may do each.
- Look at the timeline and all of the tasks and think about the value of each of the data sources for your team's decision making over the course of the next several months. Compare that value with the time spent and the burden of completing all the steps you have laid out on the timeline. Decide on 1–2 data sources that are relatively important and relatively manageable.
- If there are additional data sources that you may need but pose a burden to collect, you may want to rethink some of the steps, the calendar, or who is involved. Consider asking other members of staff for support or calling in outside expertise to guide you. Don't forget to involve school leadership in these decisions.
- Remove any data sources from your plan if they seem overwhelmingly burdensome. You can always return to them later when they are a higher priority or if you find a more practical way to collect them. Make sure you save your notes so you can return to your thinking later.

Step 6: Next Steps

- Decide on next steps that need to occur to get the ball rolling on the 1–2 data sources you have selected.
- You may want to call a meeting to discuss the decisions you have made, think through roles, create a shared calendar of steps, and generate buy-in among your team members. Be clear and transparent about the decisions you have made at each step, because the more involved team members are on the thinking behind these tasks, the easier it will be for them to make good use of the data.

Example Data-Collection Timeline

*This example timeline is built to reflect the example measurement system used throughout Chapter 4 of the *Improvement Science Handbook*. See the diagram on page 114 of the chapter for additional context on the measurement system attached to this timeline.