QUICK REFERENCE

Carnegie Foundation
for the Advancement of Teaching

PRACTICAL MEASUREMENT FOR IMPROVEMENT

Practical measures are used to identify improvement goals and to learn continuously whether the changes that are introduced are, in fact, leading to improvement.

WHAT IS PRACTICAL MEASUREMENT?

Practical measurement for improvement is the deliberate gathering, analysis, and interpretation of information that enhances the learning of system actors as they test changes and improve processes that are at the heart of their work. Practical measures are "practical" in that they can be collected, analyzed, and used within the daily work lives of practitioners. They are also "practical" in that they reflect practice.

CHARACTERISTICS OF PRACTICAL MEASURES

When designing a measure to support learning and improvement, there are several features to keep in mind. A practical measure should:

- Be easy to implement
- Fit into your everyday work stream
- Provides timely information you can use
- Measure what you need it to—not just what's available
- Have signaling capacity—changes are meaningful
- Be related to other things you care about
- Lead to improvements in your practice

Examples of Practical Measures

*A teacher provides students an **exit ticket** (two question survey) at the end of class to collect feedback on the lesson and gauge student engagement. The teacher uses this data to inform the next day's lesson.*

For more details, see: https://www.carnegiefoundation.org/pmi-home/blog/student-independent-writing-time-blog/

*A team of elementary teachers is working to increase student achievement in writing and has identified independent writing time as a key lever to support this aim. The team creates an **independent writing time** tracker, an online spreadsheet that teachers use to record the number of minutes students spend in independent writing time each day and the total number of minutes for the writing lesson.*

For more details, see: https://www.carnegiefoundation.org/pmi-home/blog/student-engagement-exit-ticket-blog/

WHAT MAKES A MEASURE "PRACTICAL"?

The key purpose of a practical measure is to send timely signals regarding the way a system is operating in order to accelerate learning and progress toward an improvement aim. These measures are typically research informed and process oriented – tied to specific practices within a system that are the target of an improvement effort.

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To determine if a measure is actually "practical," some key questions to consider include:

- **Is it closely tied to a theory of improvement?** In an improvement effort, an individual measure is part of a system of measures that is used to interrogate a working theory of improvement.
- **Does the measure provide actionable information to drive positive changes in practice?** The data provided by the measure should point to actions that users can take in order to improve targeted practices or processes.
- **How well does it capture variability in performance?** To drive improvement, the measure and resulting data should indicate what is working for whom and under what conditions, disaggregating outcomes based on appropriate subgroups, contexts, or conditions.
- **Does it demonstrate predictive validity?** Practical measures are often connected to a larger theory of improvement, which represents a causal chain or hypothesis about how to reach the desired outcome. To serve a signaling purpose, an individual measure related to one aspect of that hypothesis should predict the next measure down the causal chain. For instance, a process measure should predict a driver measure, and a driver measure should predict leading indicators.
- **Is it minimally burdensome to users?** Since practical measures are intended to be embedded into users' daily work, it's important to minimize any additional effort or time that they might require.
- **Does it report results in a timely manner?** Target users should find the measure and resulting data valuable, which often means that data is reported quickly and is easy to understand.
- **To what extent does it attend to social processes of use in order to support building an improvement culture?** When developing and implementing a practical measure, it is important to attend to social processes including but not limited to establishing trust among users and routines for analyzing data.

Since improvement efforts take place in the real world and in a variety of contexts, it can be challenging to develop a measure that illustrates all of these characteristics. To accomplish this, practical measures are often collaboratively designed, integrating diverse expertise: 1) research knowledge about what works and how to develop and iterate on a measure; 2) professional knowledge that takes into account the local organizational context, structure, and processes; and 3) improvement knowledge related to an understanding of the system and different variations within it.

Additional insights into practical measurement in action, examples, and technical briefs are available at Carnegie's Practical Measurement for Improvement site, https://www.carnegiefoundation.org/pmi-home/.

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