

SiMR Tracking Sample: What Are the Advantages of Tracking a Sample Over Time?

Background—Challenges of Assessing a Fluid Population

In July 2015, the National Center for Systemic Improvement (NCSI) convened a Thought Leader Forum of national measurement experts to discuss how states can demonstrate progress toward their State-identified Measurable Results (SiMRs). One topic of discussion was the advantages of a longitudinal evaluation, in which you repeatedly collect data on the same group of students in order to track progress (i.e., growth) over time. A longitudinal evaluation addresses some of the limitations of relying solely on a cross-sectional evaluation, in which you compare the point-in-time performance of different groups (e.g., the 2017 and 2018 cohorts of fourth graders). Longitudinal analysis, however, presents its own challenges, including the fluidity of your evaluation sample.

The Challenge: How do you take into account the progress made by students who enter or leave your target population during your period of measurement?

In a longitudinal evaluation, which quantifies the progress of the same students over time, students must be in the “evaluation sample” at the start and end of evaluation. You will have “complete data” only for students who qualified as belonging in the evaluation sample at both the beginning and end of the evaluation.

This is problematic because the SiMR target *population* is students with disabilities, who are “targeted” for intervention services (i.e., your State Systemic Improvement Plan [SSIP] strategies). The population of students with disabilities, however, changes over time. Students can qualify for or exit special education in any grade. Using disability status as the “sample” for your state’s SiMR evaluation will exclude (a) students who qualify with a disability at the start of the evaluation but no longer qualify at the end and (b) students who qualify after your evaluation begins. This makes it hard for you to demonstrate the positive effects of the services your state provides.

New Students Qualify With a Disability After Your Evaluation Starts

States assessing performance across multiple grades can expect to see new students qualify for special education in each grade. This effect will likely be pronounced in early grades. For example, states targeting kindergarten through third grade will likely have many more students identified with a disability in third grade than in kindergarten. This phenomenon is not, however, limited to the early grades. As the curriculum increases in difficulty with advancing grade level, new students continue to qualify. The group of fifth-grade students with disabilities in 2017 will not be the exact same group of students who comprised fourth graders with disabilities in 2016. Students who qualify with a disability after your evaluation

starts will not be included in your evaluation. If these students participate in SSIP strategies before qualifying, your evaluation will not capture the effects of those efforts.

Students Exit Your Target Population

Some students who initially qualify with a disability will not remain. They may exit special education or leave a subgroup targeted by your SiMR (e.g., a student with limited English proficiency may attain proficiency, or a student may qualify under a different disability category). If these students are dropped from your evaluation, you will not be able to capture their progress. Given that higher performing students are more likely to exit, this may weaken your evaluation outcomes. Perversely, more effective improvement efforts may exacerbate this effect if improved performance leads to more students exiting special education. If you use a cross-sectional analysis or drop these students from a longitudinal analysis, it may appear that your efforts have been unsuccessful.¹

Potential Solution: Track a Broader Group of Students Over Time

We need a strategy to maximize the sensitivity of your evaluation while maintaining a feasible sample size. (You likely have insufficient resources to include all students in your evaluation.) We therefore recommend the following: Broaden your evaluation sample to include students who are likely to receive your state's SSIP services at any point in the evaluation. This is the group of students who, at the start of the evaluation, are at risk for poor learning—the group of students *with or at risk for disability*. This strategy will permit you to track a larger group of students for as long as possible, tracking some students before they are designated as having a disability and following some students after they exit special education. This strategy may be especially important for states with a SiMR targeting kindergarten through third grade, since many students who are “at-risk” in early grades may be identified as students with disabilities by the third grade. These “at-risk” students, very likely, will be among the students who are targeted for your state's improvement activities.

How can you identify at-risk students to include in a broader evaluation sample?

For later grades, you might use previous performance on the state test. For example, if your SiMR target population begins at fourth grade, you may use end-of-year, third-grade state test data, along with current eligibility status, to designate the group of students *with or at risk for disability*. For earlier grades, however, you will likely need a different assessment. For example, if your SiMR starts at kindergarten, you might use the common screening procedures incorporated within schools' tiered support systems to identify students at risk for

¹ For more information see Ysseldyke, J. E. & Bielinski, J. (2002). Effects of different methods of reporting and reclassification on trends in the performance of students with disabilities. *Exceptional Children*, 68 (2), 189-200.

poor learning. In this way, you include the same group of students with or at risk for disabilities at every testing occasion within your longitudinal evaluation.

A longitudinal evaluation plan that incorporates a constant sample of all students deemed at risk at the start of the evaluation increases the sensitivity of your evaluation to capture the impact of your SSIP. This approach will:

- Increase the size of your evaluation sample.
- Allow you to include students who benefit from the prevention services you provide (and therefore may never be identified as having a disability).
- Help you capture the progress of higher performing students who respond to your SSIP strategies but exit those services before your evaluation ends.