

Helping Teachers to Structure Their Classroom (Tier 1) Data Collection

Academic and behavioral interventions under RTI are incomplete without data being collected to document whether those interventions are actually benefiting students. Indeed, an RTI intervention can be viewed as ‘fatally flawed’ (Witt, VanDerHeyden & Gilbertson, 2004) if it lacks any one of these data elements: (1) calculation of the student’s starting point, or baseline performance, in the identified area of concern; (2) setting of a specific goal for student improvement; or (3) selection of a method to monitor the student’s progress formatively during the intervention to judge whether the intervention is successful in helping the student to attain the goal. Clearly data collection is essential to implementing any school-based intervention.

As general-education teachers are often the ‘first responders’ who provide classroom interventions under RTI, they need to know how to set up a data collection plan that includes baseline, goal, and progress-monitoring. Instructors, however, can find the task of data collection to be daunting—unless they are provided with a step-by-step tutorial in how to do so. Here are the essential six steps that teachers should follow to ensure that their data collection is adequate to the task of measuring the impact of their classroom interventions:

1. *Decide on a data collection method.* The teacher chooses a method for collecting data that can be managed in the classroom setting and that will provide useful information about the student problem. Examples of data collection methods are curriculum-based measurement (e.g., oral reading fluency; correct writing sequences), behavior-frequency counts, and direct behavior report cards. When selecting a data collection method, the teacher also decides how frequently that data will be collected during intervention progress-monitoring. In some cases, the method of data collection being used will dictate monitoring frequency. For example, if homework completion and accuracy is being tracked, the frequency of data collection will be equal to the frequency of homework assignments. In other cases, the level of severity of the student problem will dictate monitoring frequency. Students on Tier 2 (standard-protocol) interventions should be monitored 1-2 times per month, for example, while students on Tier 3

(intensive problem-solving protocol) interventions should be monitored at least weekly (Burns & Gibbons, 2008).

2. *Collect data to calculate baseline.* The teacher should collect 3-5 data-points prior to starting the intervention to calculate the student's baseline, or starting point, in the skill or behavior that is being targeted for intervention. The student's baseline performance serves as an initial marker against which to compare his or her outcome performance at the end of the intervention. (Also,--because baseline data points are collected prior to the start of the intervention--they collectively can serve as an indication of the trend, or rate of improvement, if the student's program remains unchanged and no additional interventions are attempted.) In calculating baseline, the teacher has the option of selecting the median, or middle, data-point, or calculating the mean baseline performance.
3. *Determine the timespan of the intervention.* The length of time reserved for the intervention should be sufficient to allow enough data to be collected to clearly demonstrate whether that intervention was successful. For example, it is recommended that a high-stakes intervention last at least 8 instructional weeks (e.g., Burns & Gibbons, 2008)
4. *Set an intervention goal.* The teacher calculates a goal for the student that, if attained by the end of the intervention period, will indicate that the intervention was successful.
5. *Decide how student progress is to be summarized.* A decision that the teacher must make prior to the end of the intervention period is how he or she will summarize the actual progress-monitoring data. Because of the variability present in most data, the instructor will probably not elect simply to use the final data point as the best estimate of student progress. Better choices are to select several (e.g. 3) of the final data points and either select the median value or calculate a mean value. For charted data with trendline, the teacher may calculate the student's final performance level as the value of the trendline at the point at which it intercepts the intervention end-date.
6. *Evaluate the intervention outcome.* At the conclusion of the intervention, the teacher directly compares the actual student progress (summarized in the previous step) with the goal originally set. If

actual student progress meets or exceeds the goal, the intervention is judged to be successful.

7.

As teachers adopt the role of RTI classroom ‘first responder’ interventionist, they are likely to need assistance – at least initially—with the multi-step process of setting up and implementing data collection, as well as interpreting the resulting data. Check out the [*RTI Classroom Progress-Monitoring Worksheet*](#), a form designed to walk teachers through the data-collection process.

References

- Burns, M. K., & Gibbons, K. A. (2008). *Implementing response-to-intervention in elementary and secondary schools*. Routledge: New York.
- Witt, J. C., VanDerHeyden, A. M., & Gilbertson, D. (2004). Troubleshooting behavioral interventions. A systematic process for finding and eliminating problems. *School Psychology Review*, 33, 363-383.