

Overview of Step 3: Collecting Baseline Data

The functional assessment-based intervention model employs a systematic approach to designing, implementing, and evaluating functional assessment based procedures developed by Umbreit, Ferro, Liaupsin, and Lane (2007). In previous videos we introduced you to this five-step process by beginning in **Step 1: Identifying students who need a FABI**, and **Step 2: Conducting the Functional Assessment**, where we discussed how to discover the function of the behavior, that is the reasons why the behaviors occurs. This video introduces you to **Step 3: Collecting Baseline Data**.

In Step 3, teams collect baseline data. In single-case design baseline serves as a control condition to compare against other conditions in which a specific instruction or treatment of interest is introduced. For this, it is important to measure **present levels of responding**. We call this baseline.

This step begins with identifying the behavior of interest. Remember, in functional assessment-based interventions there are at least two behaviors of interest: the target and replacement behavior, which were operationally defined during **Step 2: Conducting the Functional Assessment**. Behaviors measured during baseline and subsequent steps of the FABI process are often the replacement behavior, as they examine and monitor a desired change, which allows conversations regarding the students' progress to be focused on the positive behavior.

There are many different **dimensions** of behavior that can be measured, such as frequency or duration. As such, there are also different **measurement systems** that should be aligned to the

behavior dimension. For example, let's say I was interested in the amount of time a child spent wandering around the room. Frequency recording, where I measure how often this occurs would not be ideal as it would not tell me how long the behavior lasted, only how many times.

Imagine, one day the child is out of his chair 1 time for 60 min, and another day the child is out of his chair ten times but for under thirty seconds each time. Duration per occurrence would be a good measurement system here, as would interval recording such as partial interval recording or momentary time sampling. To learn more about these and other measurement systems, see our video on *Behavior Dimension and Measurement Systems*.

When a measurement system has been identified and is aligned to the behavior of interest, teams formalize their **data collection procedures**. This includes gathering or making materials needed, such as **data collection sheets** or timing forms, and **scheduling observation times**. In single-case designs, which we will employ in the FAB process, it is important we follow the logic of time-series analysis. That is, we need to record the behavior around the **same time and same setting**. It is often important to decide who will be the data collectors and to assign at least two roles: **primary and secondary data collector**.

Primary and secondary data collectors are then trained to reliability and practice to criterion to ensure confidence in the data collected and clarity of the behavior measured. For example, prior to baseline data collection two observers might go into the classroom during a different time and observe the same behavior during 10-15 minute observations, until they achieve 90% agreement over three consecutive trials as calculated by interobserver agreement. This promotes confidence in the accuracy of the data collected and clarity of the behavior measured, which is why operational definitions of behavior are important.

Once the individuals collecting data are trained to criteria (reliable), baseline data collection can begin. We recommend the primary observer collect baseline data for approximately five observations (with a minimum of 3 observations). The secondary observer independently observes and collects data at the same time as the primary observer for 25% of observations during each phase for each student and/or each target behavior. From there, interobserver agreement is calculated. Interobserver agreement for frequency recording for example, can be calculated by dividing the lesser total by the greater total and multiplying by 100.

In this example, we see two observers record frequency of peer initiations in a 30 min observation window. The primary observer recorded 10 instances, which equates to a peer initiation rate of .33 times per minute, whereas the secondary observer recorded 8 instances of this behavior, and a rate of .27 per minute. If we divided the lesser total 8 by the greater total 10 and multiply by 100 we have an 80% interobserver agreement.

If baseline data indicate current levels of behavior support the need of the intervention, and data are somewhat predicable in their pattern then it may be time to introduce the intervention. In **Step 4: Designing the Intervention** we will learn about designing the intervention and **Step 5: Testing the Intervention** we will learn about testing the intervention.

To learn more about this process, you may watch our video on Behavioral Data Collection. You may also review *Applied Behavior Analysis (2nd edition)* by Cooper, Heron and Heward (2007) and *Functional Behavior Assessment and Function-Based Intervention: An Effective, Practical Approach* by Umbreit, Ferro, Liaupsin, and Lane (2007).