CHAPTER 3

Linking Assessment to Intervention

The goal of assessment is intervention. To meet this goal, the assessment process is designed to gather behavioral information relevant to intervention. It is not enough, however, to be able to describe the behaviors of concern to design an effective intervention. We must also have some understanding of why the behavior occurs. For example, a student might have difficulty completing independent classwork because he or she is distracted by a peer talking or because he or she doesn't know how to do the task (or both). Thus, throughout the assessment process we employ a hypothesis-testing approach. At each step, as information is gathered we formulate hypotheses about the environment and the child's skills that can help explain the behavior observed. By soliciting information from others and by observing the child in the natural environment and in the test environment, we refine our hypotheses and try to confirm or refute them.

This same hypothesis-testing approach can simultaneously lead to potential intervention strategies. For instance, in the above example, if the teacher has observed increased work completion when he or she is close by or when peers are not talking, the attention–distractibility hypothesis gains credibility. This information then also sets the direction for intervention. If, on the other hand, the "why" of this student's behavior is not clear, as part of our hypothesis testing we might ask the teacher to stand close by or relocate the student. The outcome will help to clarify the "why" and the intervention strategy.

Once we have gathered our data and generated our hypotheses, the next stage in the assessment–intervention link is to create an intervention plan. The process is outlined in Form 3.1 in the Appendix, pp. 284–285. The steps are as follows:

- *Step 1.* Identify the problem situation in which the executive skill challenge presents itself. Describe what the behavior looks like and identify what task, situation, or directive is most likely to elicit the problem behavior. Examples might be failing to complete seatwork on time, gets in arguments with peers, hands in homework late or not at all, has meltdowns when the schedule changes without warning.

- *Step 2.* Identify the executive skill or skills that might be contributing to the problem. For example, if a child gets in arguments with peers, the executive skills challenges may be emotional control or response inhibition, or both.

- *Step 3.* Determine the setting in which the behavior is most likely to occur. In other words, where, when, or under what circumstances does the behavior usually occur? To continue the example of the child who gets in arguments, they may occur in the halls between classes, in gym class, and in the cafeteria, but they're most likely to occur on the playground.

- *Step 4.* Decide what to address first. In other words, if you could change one small part of the student's behavior that would lead you to say, "This is better," what would that behavior be? For example, you may decide to address arguments on the playground, since these pose a greater risk of escalating to fights.

- *Step 5.* Determine how the situation or task may be modified so the student has a greater likelihood of success. The planning form includes prompts to think about three kinds of environmental modifications that can increase the student's likelihood of success in the problem situation. These are discussed in greater detail in Chapter 5.

- *Step 6.* Identify a possible motivator that will make it easier for the child to work on changing the problem behavior. For instance, if the child in the argument example is able to go for five recesses in a row without arguing in a raised voice, the class might earn an extra 15 minutes of recess on the fifth day. Other examples might include the chance to engage in a preferred activity, a daily report card home specifying accomplishments (with the possibility of earning a reward at home), or having the privilege of being a class leader for an activity.

- *Step 7.* Determine the goal behavior. There are two parts to this. When we are trying to help students improve executive skills we're not only interested in achieving an outcome that resolves the problem but we're also interested in having students learn new ways of approaching the problem situation. In other words, we want to make sure that students are actively using a strategy to reach the goal behavior. Thus, we are looking to identify both a *process* goal and an *outcome* goal. With the arguing child example, the process goal might be that the student and teammates will use a dispute settlement procedure when disagreements arise during playground play. The outcome goal might be that the student will resolve disagreements on the playground without raising his or her voice.

- *Step 8.* Here, you describe the step-by-step procedure that will be followed to implement the intervention. For instance, to solve the problem of the child arguing on the playground, the steps a teacher might follow are (1) have a class discussion about how to resolve disputes on the playground (e.g., trying to resolve it amicably among themselves and if this is not possible, bringing in the playground aide to arbitrate), (2) role-play settling a dispute to practice the procedure, (3) check in with the child and his or her playmates just before they go out to recess to review how the game will be played and how disputes will be handled, (4) debrief with the child right after recess to evaluate how it went, (5) have the child place a + on a desk calendar on successful days and a – on unsuccessful days, and (6) review on Friday how the week went and have the child create a bar graph indicating the number of successful recess days.

• *Step 9.* Create a "visual" to show progress. This by itself can be a powerful motivator, but even when it's paired with some other kind of tangible reward, we believe that visuals—a chart, a graph, behavior counts, daily behavior ratings (e.g., 5-point scales)—are indispensable. Behavior change is hard work and often feels amorphous or intangible to the child. Visuals make progress concrete. For the child who argues on the playground, putting a + on the calendar each day he or she has a successful recess may be all the child needs, but you could also turn the pluses into a bar graph at the end of each week.

DESIGNING STUDENT-CENTERED INTERVENTIONS

In the work we've done with schools and teachers to help them create intervention strategies for students with weak executive skills, we've begun to move from a model in which adults impose strategies on students to one where students become active participants in creating or selecting strategies that they think will work best for them. This approach has several advantages over the more "top-down" approach described earlier in this chapter. First of all, it gives students more ownership over the process. If they have a role to play in designing the intervention, they are more likely to be invested in trying it out. Second, students are able to offer insight into the strategies that they think will work best for them. This narrows the field of options, eliminating ones students don't think will work for them and increasing the likelihood that the strategy selected will be effective. We have found that when we ask students to brainstorm strategies, they come up with ideas we as adults would never have dreamed of! For instance, a sixth grader we talked to told us that the best way he knew to avoid the temptation of using his cell phone while he was trying to do his homework, was to put the phone out of reach in a cupboard in his kitchen—a cupboard that was high enough that he needed to climb up on a chair to reach the cupboard door. And finally, when students are involved in intervention design, they are using their own executive skills—and higher-level executive skills to boot. Skills such as planning, metacognition, time management, and goal-directed persistence are all involved in intervention design and all come into play, and by involving students, they get to exercise the very skills they will need to develop to become truly effective students all the way through secondary school and beyond.

The steps involved in intervention design using this student-centered approach are as follows:

1. Identify a problem situation that involves one or more executive skills.
2. Determine which executive skill will be targeted for intervention first.
3. Gather some baseline data to understand the current nature of the problem. Ideally, these data should be objective or countable, but if this is not possible, create a vivid picture of the behavior in action that can be shared with the student.
4. Share your data or observations with the student. Talk about the negative impact you think it has and what positive effect you think might come from trying to change the behavior.
5. If feasible, have the student observe another student in the class who handles the

problem situation more effectively. You might say to the student, "Maybe no one has taught you this yet. So, let's start by watching Suzy do her work." After the student has observed the model peer, ask what he or she saw and list the observations.

6. Ask for input from the student ("Do you agree this is a problem? Can you think of other situations where this has gotten you in trouble?").
7. Brainstorm some strategies the student might try to improve the behavior, emphasizing how the strategy should benefit the student (rather than the adult).
8. Have the student select a strategy to try and explain when he or she will use the strategy.
9. Together with the student, identify a goal. The goal should be a reasonable "next step" based on the baseline data. As the student achieves success, it can be revised.
10. Just before the target situation, ask the student what the plan is. In the beginning, keep the practice sessions brief and compliment the student often.
11. Prompt during the target situation if the student doesn't remember to use the strategy independently.
12. Debrief afterward. Ask the student how it went before giving your own feedback. Always find something to praise and *be specific*!
13. Continue as long as necessary, but continue to praise progress and improvement.
14. When problems arise, troubleshoot—if one strategy stops working, have the student choose another one to try.

CASE EXAMPLE

Sarah has the hardest time getting her seatwork done. When the teacher assigns a task, she seems to spend a great deal of time getting organized, or she might start it right away, but becomes quickly distracted. She might get up and sharpen her pencil, go to the bathroom, or talk to the other students sitting at her table. Sometimes she might overhear a conversation at the next table and feel like she has to participate in that discussion. The teacher feels like she's spending a lot of time cuing Sarah to get back to work or asking her how far along she is in her assignment. Even when the teacher does cue her, the next thing she knows, Sarah is rummaging in her desk for something or has started talking to the girl who sits behind her.

- *Problem situation:* Sarah has trouble both starting tasks in a timely fashion and finishing them on time. Since she's late finishing primarily because she's slow getting started, then the best problem situation to target might be *slow getting started on seatwork*.
- *Executive skill addressed:* Task initiation.
- *Steps to follow to design and implement the intervention:*
  1. Observe Sarah for a week and collect baseline information.
  2. Share your data with Sarah (e.g., "This week I noticed on average it took you 10 minutes to get started on your math seatwork"). Solicit her reaction to this information.

3. Pick out a child who is good at this skill and ask Sarah to watch him or her during math seatwork to see what happens.
4. Meet with Sarah and have her share what she has observed.
5. Ask Sarah what might help her to get started faster.
6. Brainstorm possible strategies. Some possibilities might be:
   - Study carrel
   - Noise-canceling headphones
   - Sit next to focused student
   - Give her a stand-up desk
   - Reward chart
   - Build in breaks
   - Give her a checklist
   - Use a visual timer
   - Limit distractions (turn desk)
   - Help her find a goal to work toward
7. Ask Sarah to pick one strategy to try.
8. Explain how it will work: Each day for math seatwork, you'll give Sarah a stopwatch and she'll turn it on when she starts working. She'll keep the stopwatch going until she's finished and then turn it off and record how much time it took.
9. Give Sarah a chart she can use to record the time and explain (or practice) how it will work.
10. Just before math seatwork, remind Sarah of the plan, give her the stopwatch, and ask her what strategy she chose.
11. Debrief afterward. Ask Sarah for her feedback and then you give yours—BE POSITIVE!
12. Make a plan for the next day.

This approach can easily be incorporated into a teacher-assistance team or student-support team model. A planning form that can be used for this purpose is included in the Appendix (Form 3.2, pp. 286–287).

The same methodology can be applied at home. A handout that can be shared with parents to illustrate its use in the home setting is also included in the Appendix (Form 3.3, pp. 288–289). It includes step-by-step instructions as well as an example. While some parents may be able to follow the handout by themselves, others will need more support in designing and implementing a home-based intervention.

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