Monitoring students’ progress and collecting related data is a vital task of teachers and paraprofessionals. Teachers must make decisions about instruction based on data, including which instructional strategies are effective and the progress that students are making with respect to established goals. Data about student progress also assists the teacher in determining the effectiveness of changes to the classroom environment. Data collection is also essential in providing more immediate feedback to teachers and paraprofessionals about each student’s progress, so they can (1) respond to progress made and progress needed, and (2) communicate with parents and administrators about student progress. Data about student progress is also necessary to support a student’s receipt of special education services and progress toward IEP goals.

The teacher defines the behaviors to be monitored, and determines where, when, and how data collection will take place. Paraprofessionals assist the teacher by collecting data under the direction of the teacher.

**Objectives**

By the end of this module, the paraprofessional will be able to:

1. Identify the ABCs of student behaviors.
2. Analyze student behaviors for antecedents and consequences.
3. State criteria that apply to behavioral strategies.
4. Distinguish among types of positive behavioral support strategies.
5. Identify behavioral strategies for students with autism spectrum disorders.
6. Identify behavioral strategies for students with emotional disturbance.
7. State guidelines for giving praise.
8. Describe behavioral intervention techniques for students with ADHD.
9. Describe criteria for useful data.
10. Identify four common methods of collecting data.
11. Explain the graphing of data.

**The ABCs of Behaviors**

Measuring a student’s behavior is an important responsibility of educators. Before being able to measure behavior, it must be defined. Defining a behavior helps teachers and paraprofessionals to:

- Describe what actions are taking place in exact (and measurable) terms
- Gather data about the behavior
- Communicate expectations to the student and to persons assisting the student
- Choose appropriate strategies/interventions
- Monitor the student’s progress
- Write IEP goals and objectives
- Communicate with parents, administrators and others

Student behaviors do not exist in a vacuum. The context of behaviors includes antecedents and consequences. Antecedents are things that occur before a behavior. For example, an assignment given by the teacher can be the antecedent of the student doing the assignment (the behavior). Other antecedents could include directions provided by the teacher, the end-of-class bell, and verbal or nonverbal communication with another student. A consequence of the behavior may be the grade that the teacher gives to the student. The letters A-B-C provide a way of easily remembering the relationship among antecedents (A), behaviors (B) and consequences (C).

Changes in the antecedents or consequences of student behaviors can influence those behaviors. Consequences that encourage or strengthen a behavior are also known as positive behavioral support. Positive behavioral support strategies are consequences that the student wants to receive. In contrast, restrictive behavioral strategies provide the student with negative consequences to behavior. Examples of these strategies include reprimands, loss of a positive support, and loss of a privilege. Restrictive behavioral strategies can be misused and a school, school district, or state may have regulations that limit or prohibit their use. It is essential for paraprofessionals to know the requirements regarding behavior strategies that apply to their workplace.

Watch the video, “Challenging Behavior in Young Children”: [http://www.youtube.com/watch?v=8eCfnrGu5xo&feature=related](http://www.youtube.com/watch?v=8eCfnrGu5xo&feature=related)
• Preview the activity in advance.

• Discuss the roles of the paraprofessional and the supervising teacher.

• Discuss additional strategies.

### Activity 6.1
A-B-C Analysis

**Directions:** Visit the IRIS Center website below and complete the activity, “Behavior: Conduct an A-B-C Analysis.”


### Positive Behavioral Support Strategies
Paraprofessionals must work with the approval of the classroom teacher in implementing any behavioral strategies. Strategies should also satisfy the following criteria:

- Meet school, district, and state regulations.
- Relate to specific student behaviors.
- Provide positive consequences for desired behaviors.
- Be applied by all educators who work with the student.
- Represent achievable expectations.
- Be effectively communicated to the student.

**Modifying the learning environment.** The learning environment itself can influence students’ behaviors in a positive or a challenging way. For example, environments that are too busy, too noisy, too warm, or too cold may not lead to positive behaviors. However, educators can change some aspects of the learning environment to encourage positive behaviors.

- Accommodate individual students’ needs as much as possible.
  - Examples: clearly-defined learning centers, seating near the front of the class, adequate lighting, isolation of noise sources, etc.
- Rearrange the room (such as to create learning centers).
• Review classroom traffic patterns.
  Example: too little space could lead to bumpings and other disruptions

Decreasing student uncertainty. For most people, uncertainty affects anxiety levels. This is also true of students with disabilities. For them, the classroom schedule or routine offers certainty and stability. Modifying schedules and routines to increase predictability can be a strategy to promote students’ positive behaviors.

• Create a daily schedule or weekly planner. Refer students to their schedule and preview future activities.
  NOTE: Schedules and previewing can also encourage positive behaviors by allowing paraprofessionals to focus students on the criteria for successfully completing future activities and the results expected.

• Create individualized routines for students who might benefit from them.

• Prepare students ahead of changes in their daily schedules, to help reduce students’ anxiety.
  Examples: fire drills, late-arriving therapist, teacher out sick, assemblies

• Provide transitions from one activity to another.
  NOTE: Transitions are signals to students that one activity is ending and another will be starting. These signals can be visual, auditory (sounds), or tactile.

Providing opportunities to make choices. Many students with disabilities may have fewer opportunities to make choices in their everyday lives. As a result, these students may have difficulty communicating their choice. Providing opportunities for making choices teaches decision-making skills. It also increases students’ inclusion, enhances their productivity, and gives them a greater sense of independence. Choice can be built into an activity or task, or can be reflected in providing a variety of tasks from which the student can choose.

Identify positive ways for the student to communicate. Not all students have the skills to communicate what they need or want in a positive way. For example, a student may communicate her frustration in a disruptive or aggressive way. Working with the student to agree on a positive alternative method of communication could reduce the frequency of the challenging behaviors.

Adapting instruction. Strategies that modify curriculum or instruction can assist students in completing tasks and activities successfully. The nature of activities, including their duration and pacing, could have an impact on whether students respond in a positive or challenging way.
• Adjust the difficulty level, pace, or length of an activity.
• “Chunk” instruction into smaller time blocks.
• Vary the method of presentation.
• Mix learned tasks with new tasks.
• Mix easier tasks and more difficult tasks.
• Incorporate students’ interests and preferences, if possible.

Example: Intersperse a student’s preferred activity, such as working on the computer, consistently throughout the student’s daily and weekly schedule.

Recognizing positive behaviors. Ideally, a task completed well is its own reward. However, some students will need greater encouragement or recognition than others.

• Reward appropriate behavior.
• Break complex tasks into manageable steps.
• Teach students self-monitoring skills.
• Determine preferred rewards for each student.

Examples: listening to music; receiving privileges (such as extra free time); earning tokens or points to be exchanged for rewards; earning stickers or badges; words of praise, encouragement, or confidence, etc.

• Reduce the rewards over time as the appropriate behavior becomes learned.

Teaching alternative responses to students. Some behaviors occur simply because the student does not know a more appropriate way to reach a desired result. Teaching alternative approaches to reaching the desired result can help reduce the occurrence of less desired behaviors. It can also build the student’s level of skill.

Read more about positive behavioral supports at the website of the National Association of School Psychologists: http://www.nasponline.org/resources/factsheets/pbs_fs.aspx
Behavioral Strategies for Students with Autism Spectrum Disorders

In addition to academic instruction, special education programs for students with autism spectrum disorders focus on improving communication, social, academic, behavioral, and daily living skills. Behavior and communication problems that interfere with learning often require the assistance of a professional in the autism field to develop and help implement a plan which can be carried out at home and school.

The classroom environment should be structured so that the program is consistent and predictable. Students with an autism spectrum disorder learn better and are less confused when information is presented visually as well as verbally. Interaction with nondisabled peers is also important—these students provide models of appropriate language, social, and behavioral skills. Consistency and continuity are very important; parents should always be involved in the development of the student’s program so that learning activities, experiences, and approaches will be most effective and can be carried over into the home and community.

Learn more about positive reinforcement and autism: http://autism-help.org/behavior-positive-reinforcement-autism.htm

Behavioral Strategies for Students with Emotional Disturbance

Educational programs for students with emotional disturbance need to include attention to providing emotional and behavioral support as well as helping them to master academics, develop social skills, and increase self-awareness, self-control, and self-esteem. Providing students with positive behavioral support in the school environment can help to minimize problem behaviors and foster positive, appropriate behaviors. It is also important to know that, within the school setting:

For a student whose behavior is an obstacle to learning (including the learning of others), the student’s IEP team must consider, if appropriate, strategies to address that behavior, including positive behavioral interventions, strategies, and supports.

Students eligible for special education services under the category of emotional disturbance may have IEPs that include psychological or counseling services. These are important related services available under IDEA and are to be provided by a qualified social worker, psychologist, guidance counselor, or other qualified personnel.
• Remind learners that it is important for paraprofessionals to avoid putting their hands on students unless they have been appropriately trained.

• Reinforce the point that a successful paraprofessional must keep in motion.

• Ask for suggestions of additional guidelines and discuss each suggestion.

Guidelines for Giving Praise

Praise is an important tool for paraprofessionals to use as a positive behavioral support. Praise is a strategy that can be repeated over and over again with the same students, as long as the specific praise is varied. Praise can be combined with other strategies to encourage positive behaviors, and can be adapted to respond to very specific behaviors and their frequency. Some guidelines for using praise include:

• Move around the classroom to observe all students.
• Give praise as soon as you recognize a positive behavior. This helps to link the student’s behavior and your praise. However, your praise can sound insincere and can lose value to the student if you praise too often.
• Reference the appropriate behavior in your praise. Praise should relate to the positive behavior that the student displays. This can reduce any misunderstanding about what behavior is receiving approval.
• Be sincere. Your praise will become ineffective if students feel it is not genuine. Combine appropriate nonverbal cues with your words. For example, smile as you speak.
• Be consistent. This refers both to the behaviors that you recognize and the frequency of your praise. Consistency in how and how often teachers and paraprofessionals give praise is also important to reinforce students’ appropriate behaviors.
• Relate to each student as an individual. Make sure that words of praise are developmentally- and age-appropriate for each student.
• If a student is not on-task, praise students nearby who are on-task. Return to the student and praise the appropriate behavior when the student is on-task.

I knew you could add two-digit numbers!
Activity 6.2
Using Behavior-Specific Praise

Directions: From the list of words of encouragement and confidence below, choose five—or create your own—and turn them into behavior-specific praise.

Example: Before — "Great job!"
        After — "Great job cleaning up your station before you changed activities!"

1. ________________________________________________
   ________________________________________________

2. ________________________________________________
   ________________________________________________

3. ________________________________________________
   ________________________________________________

4. ________________________________________________
   ________________________________________________

5. ________________________________________________
   ________________________________________________

• Ask for learners to share their answers.
• Preview the website in advance. Find an alternate resource if the link has changed.

Learn more about positive behavioral supports for students with emotional disturbance from the Association for Positive Behavior Support: http://www.apbs.org/new_apbs/pbsinfo.aspx?id=schools
Activity 6.3
Behavioral Support Strategies for Students with ADHD

**Directions:** Use the publication below from the U.S. Department of Education to learn more about positive behavioral supports for students with ADHD. Complete the table of strategies.


<table>
<thead>
<tr>
<th>Behavioral Intervention Techniques: Students with ADHD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Verbal Reinforcement</strong></td>
</tr>
<tr>
<td>1. Define the appropriate behavior while giving praise.</td>
</tr>
<tr>
<td>2. Give praise immediately.</td>
</tr>
<tr>
<td>3. Vary the statements given as praise.</td>
</tr>
<tr>
<td>4. Be consistent and sincere with praise.</td>
</tr>
</tbody>
</table>

- Preview the activity in advance.
- Complete a sample of the table to show the detail you want.
### BEHAVIORAL INTERVENTION TECHNIQUES: STUDENTS WITH ADHD

<table>
<thead>
<tr>
<th>Generalized Behavioral Intervention Techniques</th>
<th>Key Word Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Selectively ignore inappropriate behavior.</td>
<td></td>
</tr>
<tr>
<td>2. Remove nuisance items.</td>
<td></td>
</tr>
<tr>
<td>3. Provide calming manipulatives.</td>
<td></td>
</tr>
<tr>
<td>4. Allow for “escape valve” outlets.</td>
<td></td>
</tr>
<tr>
<td>5. Activity reinforcement</td>
<td></td>
</tr>
<tr>
<td>6. Hurdle helping</td>
<td></td>
</tr>
<tr>
<td>7. Parent conferences</td>
<td></td>
</tr>
<tr>
<td>8. Peer mediation</td>
<td></td>
</tr>
</tbody>
</table>
### Behavioral Intervention Techniques: Students with ADHD

<table>
<thead>
<tr>
<th>Behavioral Prompts</th>
<th>Key Word Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Visual cues</td>
<td></td>
</tr>
<tr>
<td>2. Proximity control</td>
<td></td>
</tr>
<tr>
<td>3. Hand gestures</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Positive Behavioral Interventions</th>
<th>Key Word Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tangible rewards</td>
<td></td>
</tr>
<tr>
<td>2. Token economy systems</td>
<td></td>
</tr>
<tr>
<td>3. Self-management systems</td>
<td></td>
</tr>
</tbody>
</table>
• Review the importance of data and the paraprofessional's role.

Criteria for Useful Data

The data collected about a student's behavior plays a role in decisions made about the student’s education. As a result, it is essential to collect information that is as accurate as possible. Useful data are more likely to result when the following criteria are met:

Accurate—The data collected must be as accurate as possible. Collecting accurate data depends upon following established procedures that reduce the potential for errors. It also involves limiting the opportunity for bias on the part of the person collecting the data.

Consistent—The methods of data collection must provide reliable results each time the data are collected.

Easy to measure—Data that are easier to identify—such as the number of times a behavior occurs or how long a behavior lasts—can increase the opportunity for accurate data collection. Data that requires the person collecting the data to interpret or make judgments—such as the quality of an assignment—can introduce uncertainty about the accuracy of the data. The process of data collection also must not interfere with the student's work itself.

Easy to record—The data recording system, such as the sheets or forms used to write down the data, must be easy for the person collecting the data to use without making mistakes. The form should not get in the way of the data collection process.
Collecting and Graphing Data

Four common methods of collecting data fall into two categories:

- **Number of occurrences**
  - Frequency/Event recording—how many times a behavior occurs within a certain time period; for behavior that has clear starting and ending points
  - Interval recording—whether a behavior occurs within a certain time period; for behavior that is continuous or that has starting and ending points that are difficult to identify

- **Length of occurrences**
  - Duration recording—how long a behavior lasts (the time between the behavior starting point and the behavior ending point)
  - Latency recording—how long it takes before the student begins a behavior (the time delay between an instruction or cue and a response or behavior)

**Example 1: Frequency/Event Recording**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time Start/Stop</th>
<th>Number of Observations</th>
<th>Total Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/7</td>
<td>10:50 11:50</td>
<td>XXXXXXXXXXXXXXXX</td>
<td>12</td>
</tr>
<tr>
<td>10/8</td>
<td>10:50 11:50</td>
<td>XXXXXXXXXXXXXXXX</td>
<td>14</td>
</tr>
</tbody>
</table>
Example 2: Interval Recording

**Interval Recording Form**

**Student:** Jamie  
**Date:** 10/11/XX

**Class/Teacher:** Math/Ms. Fullbright  
**Observer:** Ms. Ramirez

**Time/Length of Observation:** 2:15-2:25 pm  
**Length of Interval:** 10 seconds

**Problem Behavior:** Jamie is talking to friends and writing notes during problem-solving activities.

**Desired Behavior:** Jamie will look at assigned problems, ask questions, if needed, and solve the problems according to the teacher’s directions.

**Codes:**  
+ problem behavior did occur during some portion of interval  
- problem behavior did not occur

<table>
<thead>
<tr>
<th>Interval</th>
<th>Behavior</th>
<th>Interval</th>
<th>Behavior</th>
<th>Interval</th>
<th>Behavior</th>
<th>Interval</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>+</td>
<td>16</td>
<td>+</td>
<td>31</td>
<td>-</td>
<td>46</td>
<td>+</td>
</tr>
<tr>
<td>2</td>
<td>+</td>
<td>17</td>
<td>+</td>
<td>32</td>
<td>-</td>
<td>46</td>
<td>+</td>
</tr>
<tr>
<td>3</td>
<td>+</td>
<td>18</td>
<td>+</td>
<td>33</td>
<td>-</td>
<td>48</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>+</td>
<td>19</td>
<td>-</td>
<td>34</td>
<td>-</td>
<td>49</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>+</td>
<td>20</td>
<td>+</td>
<td>35</td>
<td>-</td>
<td>50</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>-</td>
<td>21</td>
<td>+</td>
<td>36</td>
<td>-</td>
<td>51</td>
<td>+</td>
</tr>
<tr>
<td>7</td>
<td>+</td>
<td>22</td>
<td>+</td>
<td>37</td>
<td>-</td>
<td>52</td>
<td>+</td>
</tr>
<tr>
<td>8</td>
<td>+</td>
<td>23</td>
<td>-</td>
<td>38</td>
<td>+</td>
<td>53</td>
<td>+</td>
</tr>
<tr>
<td>9</td>
<td>+</td>
<td>24</td>
<td>-</td>
<td>39</td>
<td>-</td>
<td>54</td>
<td>+</td>
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<tr>
<td>10</td>
<td>-</td>
<td>25</td>
<td>-</td>
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<td>+</td>
<td>55</td>
<td>+</td>
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<td>11</td>
<td>-</td>
<td>26</td>
<td>-</td>
<td>41</td>
<td>-</td>
<td>56</td>
<td>+</td>
</tr>
<tr>
<td>12</td>
<td>-</td>
<td>27</td>
<td>+</td>
<td>42</td>
<td>+</td>
<td>57</td>
<td>+</td>
</tr>
<tr>
<td>13</td>
<td>+</td>
<td>28</td>
<td>+</td>
<td>43</td>
<td>+</td>
<td>58</td>
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<td>14</td>
<td>+</td>
<td>29</td>
<td>+</td>
<td>44</td>
<td>+</td>
<td>59</td>
<td>+</td>
</tr>
<tr>
<td>15</td>
<td>+</td>
<td>30</td>
<td>+</td>
<td>45</td>
<td>+</td>
<td>60</td>
<td>+</td>
</tr>
</tbody>
</table>

**Total / % occurrences**  
**Total / % nonoccurrences**
Example 3: Duration Recording

Duration of Behavior
Tally Sheet

**Student:** Jamie

**Date of Observation:** October 17

**Behavior:** Jamie talked with other students at her table during problem-solving activity.

**Starting Time:** 10:58 am

**Ending Time:** 11:07 am

**Total Observation:** 9 minutes

Example 4: Latency Recording

Latency Recording Form

**Student:** Jamie

**Date:** 10/1/XX - 10/5/XX

**Class/Teacher:** Math/Ms. Fullbright

**Observer:** Ms. Ramirez

**Target Behavior:** After the class is told to begin solving the math problems, Jamie delays beginning her assignment for 60 seconds or longer.

**Replacement Behavior:** After the class is told to begin solving the math problems, Jamie will start her assignment within 60 seconds.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time Jamie was instructed to begin work</th>
<th>Time behavior was initiated</th>
<th>Latency</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/1/XX</td>
<td>8:36:00 am</td>
<td>8:36:33 am</td>
<td>33 sec.</td>
</tr>
<tr>
<td>10/2/XX</td>
<td>8:36:09 am</td>
<td>8:37:14 am</td>
<td>2 min. 5 sec.</td>
</tr>
<tr>
<td>10/3/XX</td>
<td>8:36:01 am</td>
<td>8:36:29 am</td>
<td>28 sec.</td>
</tr>
<tr>
<td>10/4/XX</td>
<td>8:36:02 am</td>
<td>8:36:25 am</td>
<td>31 sec.</td>
</tr>
</tbody>
</table>

**Average**
Behavior data is often displayed in the form of a graph. This makes it easier to see the data quickly and detect any changes in a student's performance. Graphs can summarize the results of multiple data collection observations in an efficient way. Paraprofessionals may assist teachers in updating the graphs or charts in a student's file.

Graphs have a horizontal axis and a vertical axis. The horizontal axis represents the data collection time period, such as days or weeks. The vertical axis represents the data itself, such as frequency (the number of times a behavior occurred), percentage, duration of the behavior, latency, etc. Data points are plotted individually on the graph and then connected with a line.

Example 1: Frequency/Event Graph

- Provide sample data for learners to practice plotting on a graph.
• Preview the activity in advance.

• Ask learners to complete the module review questions. Discuss the responses as a group.