

Step-by-step Instructions

1. Collecting Data: Reasons and Rationale

Data is necessary for making instructional decisions. Before changes are made to a student's Individualized Education Plan (IEP) or Behavior Intervention Plan (BIP), the behavior of concern needs to be described. In the description of the behavior, the following information needs to be included:

- Description of the behavior
- The behavior manifestation
- Impact of the behavior on the student and others (e.g., peers, teachers, paraprofessionals)
- Impact of the behavior on the student's academic performance.

The purpose of collecting data is to gather information (evidence) that will be used to identify appropriate interventions and supports for the student.

2. Review Data Collection Tips **handout.**

3. Review the four collection forms and when to use each. Put the example of each data collection form up for all to see during discussion of the method. Use a SmartBoard or document camera if available.

Event Data Form

Event data is collected to record the number of occurrences of a behavior (or the frequency of a behavior) in a given time period. This method is best used when the behavior is quick, has a distinct beginning and end, and there is a distinction between behavior occurrences. Examples include students blurting out an answer without raising their hands or calling peers inappropriate names. Event recording can also be used to monitor behavior you want to increase (e.g., the number of math problems students complete during independent work time).

Steps:

- Record the time of day the observation begins
- Write a tally mark for each occurrence of the behavior
- Record the time of day the observation ends
- Count the number of tally marks (occurrences)
- Calculate the length of observation
- Record the number of times the behavior occurred during the time period

Interval Data Form

Interval data is used to identify if a behavior occurs during a specific time period. Interval data is not as precise as Event Recording where the exact number of occurrences is collected; however Interval data provides information regarding when in a time frame a behavior occurs. An example

behavior to use during Interval data collection is verbal aggression. Identify observable behaviors of verbal aggression. For instance, the student may refuse to work on an assigned task and yell out, “This is stupid!” Interval data will help identify if the behavior occurs at the onset of a task or when the student reaches frustration while working on the task. Interval data can also be used to monitor positive behaviors, such as appropriate use of supplies and resources.

Steps:

- Identify the times the behavior is most likely to occur
- Set a time period of the observation (e.g., 10 min, 15 min)
- Divide the observation period into even intervals (e.g., 1 min, 30 sec).
- Mark if the behavior occurs at each interval time (e.g., student is shouting at each 1 min interval you check for the behavior) Mark the interval time with a “O” or “+” if the behavior is occurring at that interval. Mark the interval time with an “x” or “-“ if the behavior is not occurring.
- Calculate the percent of occurrences during the observation (e.g., total number of occurrences / total number of intervals; 5 occurrences / 15 intervals = 33%).

IMPORTANT – Interval data collection does not report the number of observable behavior occurrences only that the observable behaviors occurred at least once during a set time period.

Duration Data Form

Duration data is collected to show the amount of time a student spends on a behavior. An example is collecting the amount of time a student spends out of his seat and “roaming” around the classroom. The first step to collecting Duration data is to define the behavior of concern (e.g., observable behaviors). Second, identify how the behavior impacts the student’s behavioral and academic performance and the behavioral and academic performance of other students in the class (e.g., student interacts with students resulting in more students with off-task behaviors). Focus on how the time off-task is relational to opportunities to learn for the student and other students in the class. Third, identify when the behavior occurs (e.g., during teacher-lead instruction, independent seatwork). Fourth, identify how long the behavior occurs (e.g., how long is the student off-task, how long is the student roaming around the classroom).

Duration data collection can also be used to increase positive behaviors, such as time on-task, writing, or sustained silent reading. Identify the behavior and the time frame. Record the amount of time a student is engaged in the task (e.g. reading a book).

Steps:

- Select a target behavior; the behavior must be observable.
- Identify tools to keep track of time (e.g., clock, stopwatch, timer).
- Select a time period to observe the target behavior (e.g., 1:00 – 1:15, after recess).
- Begin the observation. Note the time the observation begins (e.g., 9:30).
- Start timer (or note the time on the clock or start the stopwatch) when the behavior is observed.
- Record when the behavior ends based on the minutes or seconds on the timer (or clock or stopwatch).

- Continue timing the duration of the behavior at each occurrence during the observation period and recording the length of time the behavior occurs.
- Note the time the observation ends (e.g., 9:45).
- Record the length of time of the observation (e.g., 15 min or 900 sec).
- Add the total time of the duration of the behavior (e.g., 35 s + 40 s + 30 s + 33 s + 42 s = 180 s)
- Calculate the average (e.g., 35 s + 40 s + 30 s + 33s + 42 s = 180 total number of seconds off task; divide the number of seconds off task by the number of occurrences – 180 seconds off task /5 occurrences = 36 seconds, the average number of second the student was off task
- Summarize the duration data (e.g., The student was off task 5 times during silent reading with an average of 36 seconds for each occurrence.).
- Identify and calculate the amount of time the student was off task for the length of the observation (e.g., the student was off task for 180 seconds during a 900 second activity; $180 \text{ s} / 900 \text{ s} = .20 \times 100$ – The student was off task for 20% of the time.).

Duration data should be collected for a minimum of three observations to obtain an accurate picture of the student's off-task or on-task behavior. The time across the three or more observations should be averaged.

Latency Data Form

Latency data is used to identify the amount of time it takes a student to comply with a request or prompt. An example of when to collect Latency data is when a student may “stall” between the time a teacher hands out an assignment and the time the student sits down to start and/or complete the task. Prior to collecting Latency data, it is necessary to consider the student’s understanding of the request (e.g., does the student know what to do). Ask the student to confirm he has heard the task and to demonstrate performing the task. Once the student states the requirements of the task and that he can independently complete the task, record the amount of time from the teacher request or prompt to the time it takes for the student to begin the task. Record the start time (e.g., time of the request or prompt) and the end time (e.g., the time the student initiates the task).

Latency data collection can also be used to record “processing time.” An example of processing time is the amount of time it takes between showing a student a flash card (e.g., high frequency word flash card, math fact flash card) and the amount of time it takes for the student to respond (e.g., pronounce the high frequency word, state the math fact).

Steps:

- Select a target behavior, the class, and the task the student needs to complete (e.g., this could be a routine task the student is familiar with but does not immediately complete); the behavior must be observable.
- Identify tools to keep track of time (e.g., clock, stopwatch, timer).
- Record the time when the request or prompt is given to the student and start the timer.
- Record the time when the desired behavior begins (e.g., student begins writing) and stop the timer.

- Record the amount of time elapsed between the prompt and the start of the behavior.

Review Data Collection Methods

Answer the following questions.

- What is event data? Why would you collect event data? When would you collect event data?
- What is interval data? Why would you collect interval data? When would you collect interval data?
- What is duration data? Why would you collect duration data? When would you collect duration data?
- What is latency data? Why would you collect latency data? When would you collect latency data?

The IRIS Center - Online Module

1. State the agenda and the process for instructing students using case studies from The IRIS Center. Tell students they will work on case studies as a whole group, in small groups or partners, and independently.

2. Use case studies from The IRIS Center website to review examples of data collection methods. The IRIS Center provides 6 case studies. Select 1 or 2 case studies to complete with the class. Answer questions students have about data collection and the case studies.

- Read aloud the first case study (Level A – Case 1) and discuss the case study as an entire class.
- Ask students the following questions to begin the discussion:
 - What is the behavior of concern? Describe the behavior.
 - What are your thoughts and impressions of the behavior?
 - How is Mark's behavior impacting Mark's performance in class?
 - How is Mark's behavior impacting Mark?
 - What additional information do you need to know?
 - It is the twelfth time Mark has been sent to the office. Does this mean this is the twelfth time Mark has acted out in an inappropriate way?
 - How are we going to collect data? Is there only one method?
 - What will event data tell us? Interval data? Duration data? Latency data?
 - What will be the best data collection procedures to use?
- What are the pros and cons of using event, interval, duration, or latency data? Answer any other questions students have about the case study or respond to student comments about the case study.

3. Divide the class into partners or small groups. Tell students to complete 2 or 3 case studies. Encourage the students to discuss their decisions for data collection procedures in relation to the case studies.

- Direct students to follow the questions used during the whole class discussion to guide their small group discussion of the other case studies.

4. Tell students to complete the remaining case studies independently.

5. Tell students to ask themselves the same questions used with the first case study during whole group instruction.

6. Once students independently complete the remaining case studies, direct students to work with different partners and complete a “think-pair-share” or jigsaw activity.

- ***“Think-Pair-Share”***

- As the student complete a case study, tell students to turn to a partner for a “think-pair-share.” Tell students to “think” about the behavior in the case study. Tell students to then “pair” up with a partner, and “share” their thoughts and decisions about the behaviors and data collection methods

- ***Jigsaw Activity***

- Tell students they will complete a jigsaw activity. Hand out color cards that are numbered (e.g., if there are 12 students have four red, four blue, and four green cards; place numbers 1, 2, 3, 4 on the four cards). Using these cards, students can be grouped by color and number.

- Ask the “reds” to meet in the front left corner of the room; the “blues” to meet in the back left corner of the room; and the “greens” to meet in the back right corner of the room.

- Handout the remaining case studies. Tell students to go through their cases, read it, ask themselves the same questions used with the first case study during whole group instruction, and share their thoughts.

- Tell the groups to identify one student to record the group discussion. This written discussion will be handed in with the case study at the end of the activity.

- Tell students to regroup by number, if time allows. There may be some overlap; however, everyone will have the opportunity to work with different groups and different cases.

- Tell the second groups (number groups) to identify one student to record the group discussion. This written discussion will be handed in with the case study at the end of the class.

7. Call the groups back together. Ask students to summarize their case studies and share their thoughts. Discuss the differences between groups who reviewed the same case studies.

8. Leave time for discussion and questions to allow students to fully understand the procedures and reasoning for each data collection method.