

# Special Education Paraeducator Booster Session 2

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# About Us

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# Booster Session #2

In this session, we will discuss the importance of clearly defining behavior in regards to observational methods. We will also cover types of data collection and how recording relates to observing behavior.

# Session Objectives

Participants will:

1. Be able to define an operational definition
2. Be able to discuss different types of data collection
3. Be able to take reliable data in relation to a video

# Objective 1

We will review how to develop an operational definition.

# Let's talk about observations

- Have you been asked to observe a behavior?
- Have you ever been asked to collect data?
- Did you feel confident about the behavior you were supposed to observe?
- Why is it important to have a clearly defined behavior?

Identifies one or more specific, *observable* events or conditions such that any other researcher can independently *measure* and/or test for them.

--Renée Grinnell

# OPERATIONAL DEFINITION

# Operational Definitions Are Required For:

- Effective observation
- Effective data collection
- Effective assessment
- Effective intervention
- Effective measurement
- Effective evaluation of effects
- Effective monitoring and decision making

# Describe

you describe  
the purpose  
of an  
operational

We want you to take 30 seconds and turn to your elbow partner and come up with a description. Go!

## Purpose of an Operational Definition

To ensure the problem behavior is ***clearly and completely*** described so it can 1) be ***accurately assessed, measured, and intervened upon***, 2) the ***effects*** can be ***evaluated and monitored***, and 3) the intervention can be ***modified***, if needed.

# Critical Components of Operational Definitions



# CRITICAL COMPONENTS OF OPERATIONAL DEFINITIONS - *Complete*

## Complete

- provides a complete description
  - *How do we know when the behavior starts and stops?*
  - *How do we ensure that no instances get "lost" and no non-instances get included?*

## CRITICAL COMPONENTS OF OPERATIONAL DEFINITIONS - *Objective*

### Objective

- no interpretation required
- unbiased

## CRITICAL COMPONENTS OF OPERATIONAL DEFINITIONS - *Clear*

**Clear**

- clearly describes observable and measurable behavior

# Evaluating Definitions

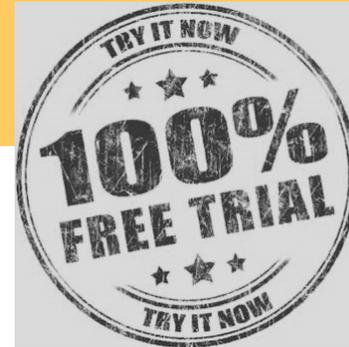
“Average Joe”  
Test



Try it out



Have someone  
else try it out



## Operational Definition Checklist

- ❑ Is it **clear**?
  - ❑ Describes behavior that is observable
  - ❑ Describes behavior that is measurable
- ❑ Is it **complete**?
  - ❑ Ensure that instances of the target behavior will not be missed, does not include behavior that you do not want to capture
  - ❑ Describes when behavior starts and ends
  - ❑ Includes examples/non-examples if appropriate and helpful
- ❑ Is it **objective**?
  - ❑ Language is unbiased
  - ❑ Language does not require any interpretation
- ❑ Can you break the behavior into smaller parts? Do those smaller parts need more explanation in parentheses?
- ❑ Does it pass the “Average Joe” test?

# Examples: thumb up or down

1. Self-injurious behavior: Any instance of hurting self on purpose.
2. Breaking, displacing (by throwing, pushing, or kicking), or damaging (e.g., bending, scratching, crumpling) any item that does not belong to the individual. Exceptions: before throwing away scratch paper, empty food containers or wrappers, engaging with sports equipment or toys that are intended to be displaced (balls, beanbags, paper airplanes).
3. Being disrespectful and defiant with the teacher. (In measurable terms, he wants to be in control and do things his way.)
4. When the student encounters a math problem that prevents writing a solution within 2 minutes, he gives up and moves on to the next one.
5. Student always has something negative to say about the assignments and engages in behaviors to show her dislike for the work, the teacher, the school, and life in general.

# Performance Objective 1

**What you will do:** Write an operational definition for the observed behavior.

**How you will do it:** Watch videos of a case study child exhibiting problem behavior, and complete an operational definition assessment handout

Let's watch a clip!



WDE 

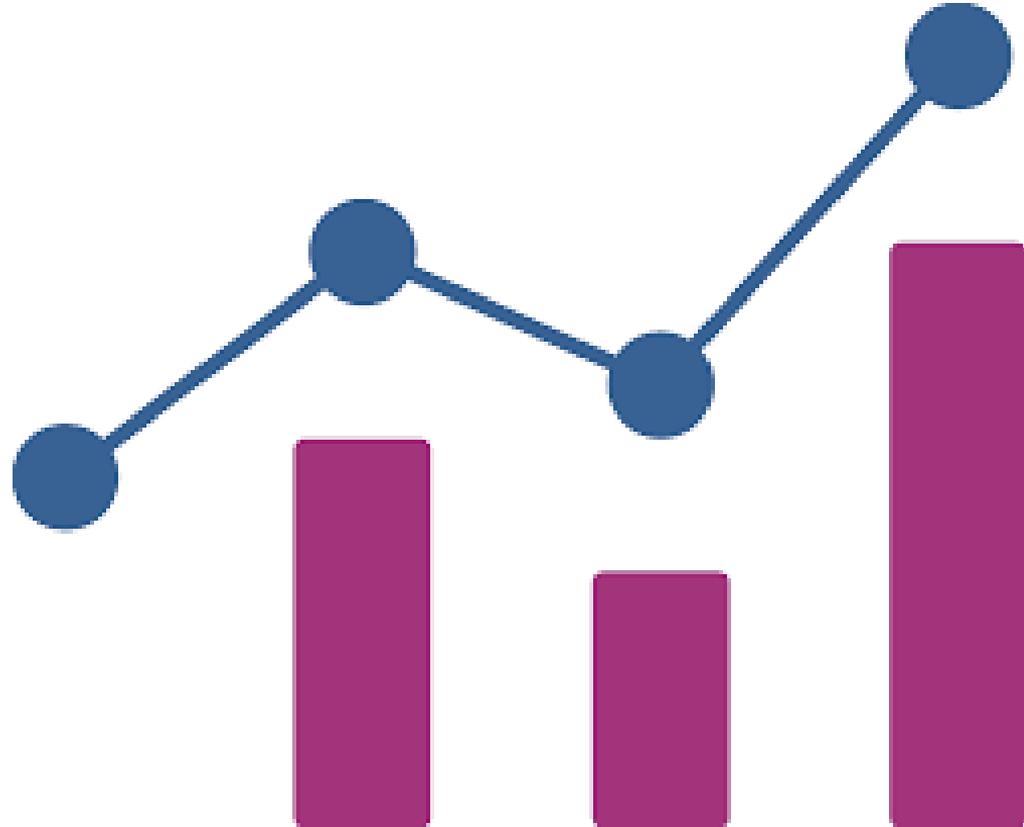
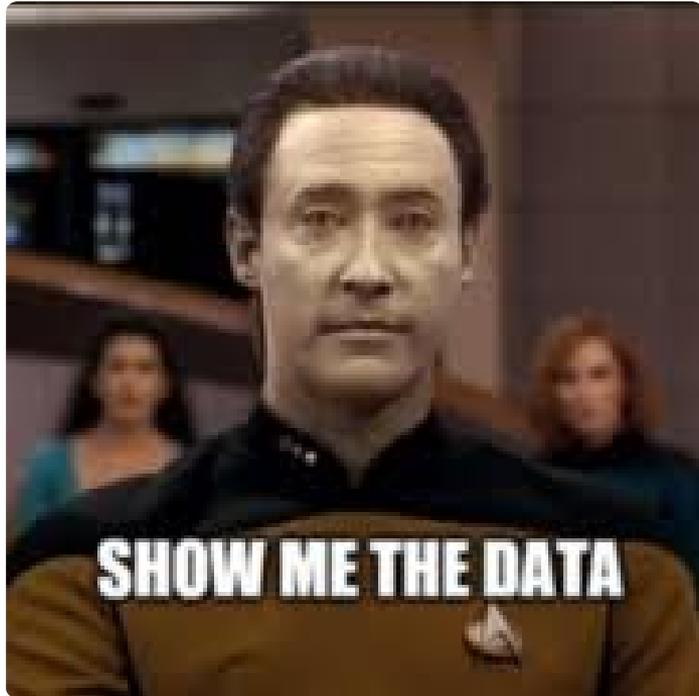
Video



# Five guys

- Any instance of closed fist or open hand contact with head (includes backward or forward motion) that results in a brief contact of less than a half second.
- This excludes contact of hand to mouth.

# Data collection



# Data collection is important!



- We are not reliable reporters
- We need to know current levels of behavior
- Allows us to determine if the intervention we implement is successful
- Allows us to determine if the intervention requires changes or modifications.

# Data, data, data

What is good data?

- Taken in real time
- Objective
- Clear and concise
- Correct tools
- Behavior goals
- Academic goals
- Social goals
- Executive Function goals
- Specially Designed Instruction
- Accommodations

# Data Types

1. ABC Data
2. Frequency Data: How OFTEN a behavior occurs
3. Duration Data: How LONG a behavior occurs
4. Percentage per Opportunity: How many times a behavior occurs compared to how many it could have.



# ABC data collection

## Antecedent-Behavior-Consequence

- Recording all Antecedents, what is happening prior to the behavior
- Recording all Consequences, what occurs immediately after the behavior
- This is crucial to understanding why the behavior may be occurring

# Antecedents

- Who is around when the behavior occurs?
- What is the setting? What is occurring in the environment?
- What is the demand or activity?
- Where does the behavior occur or not occur
- How often is it occurring?
- When does the behavior occur?

# Common antecedents

- Difficult tasks- academic and/or social
- Transitions
- Unstructured or less structured time
- Demands/requests- too difficult or easy
- Poor quality instruction and/or classroom management
- Little or no attention
- Negative peer interactions

# Consequences

- What occurs right after the behavior that is caused by the behavior?
- What do the adults and/or students do or say?
- How does the environment change?
- Use action words- what did you see happening?

# Narrative ABC log

ABC Log

Target Behaviors: | 1

5

Student Name: 2

6

Period/Hour: 3

7

Teacher: 4

8

Date	Time	Activity	Antecedents	Exact Behavior(s)	Consequences	Student's Reaction

# Structured ABC log

## A-B-C Checklist / D

Student Name: \_\_\_\_\_

Class: \_\_\_\_\_

Date:		Time:	Location / Setting:
<b>Antecedent</b> What was happening before the behavior occurred?		<b>Behavior</b>	<b>Consequence</b> What happened after?
<input type="checkbox"/> Given direction/task/activity <input type="checkbox"/> Asked to wait <input type="checkbox"/> New task/activity <input type="checkbox"/> Difficult task/activity <input type="checkbox"/> Preferred activity interrupted <input type="checkbox"/> Activity/Item denied (told "no") <input type="checkbox"/> Loud, noisy environment <input type="checkbox"/> Given assistance/correction <input type="checkbox"/> Transition between locations/activities <input type="checkbox"/> Attention given to others <input type="checkbox"/> Presence of specific person <input type="checkbox"/> Nothing ("out of the blue") <input type="checkbox"/> Attention not given when wanted <input type="checkbox"/> Left alone (no indiv. attention) <input type="checkbox"/> Left alone (no approp. Activity) <input type="checkbox"/> Other: _____		<input type="checkbox"/> Refusing to follow directions <input type="checkbox"/> Making verbal threats <input type="checkbox"/> Disrupting class (describe) <input type="checkbox"/> Crying/whining <input type="checkbox"/> Screaming/yelling <input type="checkbox"/> Scratching <input type="checkbox"/> Biting <input type="checkbox"/> Spitting <input type="checkbox"/> Kicking <input type="checkbox"/> Flopping <input type="checkbox"/> Running away/bolting <input type="checkbox"/> Destroying property <input type="checkbox"/> Flipping furniture <input type="checkbox"/> Hitting Self <input type="checkbox"/> Hitting Others <input type="checkbox"/> Verbal Refusal <input type="checkbox"/> Other _____	<input type="checkbox"/> Verbal redirection <input type="checkbox"/> Physical assist/prompt <input type="checkbox"/> Ignored problem behavior <input type="checkbox"/> Kept demand on <input type="checkbox"/> Used proximity control <input type="checkbox"/> Verbal reprimand <input type="checkbox"/> Removed from activity/location <input type="checkbox"/> Given another task/activity <input type="checkbox"/> Interrupted/blocked and redirected <input type="checkbox"/> Left alone <input type="checkbox"/> Isolated within class <input type="checkbox"/> Loss of privilege <input type="checkbox"/> Calming/soothing: verbal/physical/both <input type="checkbox"/> Physically restrained <input type="checkbox"/> Peer remarks/laughter <input type="checkbox"/> Time-out (duration) _____ <input type="checkbox"/> Other _____
<b>Duration:</b>		<b>Intensity:</b>	<b>Staff Initials / Observer:</b>
_____ <1 minute _____ 1-5 minutes _____ 5-10 minutes _____ 15-30 minutes	_____ 1/2 –1 hour _____ 1-2 hours _____ 2-3 hours _____ 3+ hours	1 LOW 2 MEDIUM 3 HIGH	

# ABC practice

<https://www.youtube.com/watch?v=UfFaKg5kVHs>

Antecedent

Behavior

Consequence

# Frequency

- Count or tally every instance of behavior that meets your operational definition
- Very simple type of data collection
- This is a good measurement strategy for when observations are equal in length
- For use when the objective is to increase or decrease the number of times a behavior occurs



# Examples



### Event Recording Form

Student's Name: \_\_\_\_\_ Teacher: \_\_\_\_\_

Subject/Period: \_\_\_\_\_ Date(s): \_\_\_\_\_

Behavior Definition (in specific, observable, measurable terms):

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Time Period of Observation: \_\_\_\_\_

Date	Tally every time that the behavior occurs	Total number of times behavior occurred

## Collecting data

- So easy!!!
- Wrist counter, tally marks on a piece of paper, masking tape, or whiteboard, paperclips, pennies, or buttons in one pocket and move them to a different pocket, clicker

## Event Data

Calling out without raising hand

Day 1	IIIII -5	10:30 11:00
Day 2	III -3	10:30 11:00
Day 3	II -2	10:30 11:00
Day 4	IIIII IIIII -10	10:30 11:00
Day 5	III -3	10:30 11:00
Day 6	IIII - 4	10:30 11:00
Day 7	IIIIII - 6	10:30 11:00
Day 8	IIIIIII - 7	10:30 11:00

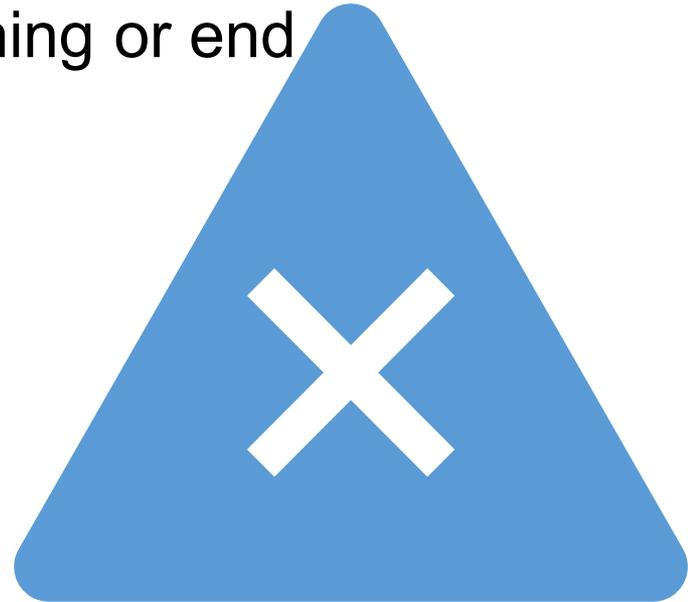
## Considerations

- Relatively easy to do or train others to do
- Requires constant observation
- Does not significantly interrupt daily activities

## When is frequency NOT appropriate?

- Behavior occurs too quickly or too slowly
- Observations are unequal lengths\*\*\*
- Behaviors do not have a clear beginning or end

\*\*\*Rate can be used



# Rate

Data may look like behavior is happening more or less frequently depending on the length of the observation. Calculating a rate will alleviate this. Frequency data can be converted into frequency per minute, per hour, per week, per month, etc.



## Rate

If we take frequency of behaviors and divide by time, we get rate per minute (or unit of time).

Why is rate important?

Monday- 15 instances of hitting

Tuesday- 15 instances of hitting

Monday's observation was 5-minutes in length ( $15/5 = 3$ )

Tuesday's observation was 20-minutes length ( $15/20 = .75$ )

# Practice Rate

<https://www.youtube.com/watch?v=8Vv8zpT96SM>

Begin at 1:40

<https://www.youtube.com/watch?v=boXRSE6Jb8M>

End at 1:40

## Duration

- How long a behavior lasted
- Requires a stopwatch/timer
- Start the timer when the behavior begins and stop the timer when the behavior no longer occurs.
- Benefits:
  - Good for behaviors that are task oriented or continuous
  - Good for discrete behaviors that occur at high rates



## Examples of duration

Tantrums, interactions with a peer, sleeping, working independently, screaming

What would happen if you counted frequency instead of duration?

Johnnie had 8 instances of screaming on Tuesday and 8 on Wednesday.

On Tuesday, his average length of screaming was 15 seconds each.

On Wednesday, his average length of screaming was 8 minutes 4 seconds each.



## Two popular types of duration

- Duration per occurrence
- The duration of each occurrence of the target behavior (hybrid frequency/duration)
- Total duration – the total duration in which the behavior occurred throughout the observation interval

# Duration

## Considerations:

- Easy to train others to do or do yourself
- Does require a timing device
- Causes minimal interference with other activities
- Requires constant observation

# Duration Practice

<https://www.youtube.com/watch?v=HgFVSp0I-Hc>

## Per opportunity or percent occurrence

- Per opportunity recording is when you record the frequency of a certain behavior within a certain set of conditions.
- For example, If you want to measure appropriate talk-outs, you will only count the frequency of talk-outs after being called on by a teacher.

## Per opportunity

- Percent occurrence and per opportunity = Target responses/opportunities (5/20)
- Percent occurrence is then converted to a percentage (%)
  - Percent occurrence of 5/20 = .25
- Per opportunity remains as is
  - Percent opportunity is 5/20

Example:

Robert complies 9 times with teacher requests...

What are we missing?

# We're missing a lot!

Opportunities to reply:

The teacher delivered 90 instructions

$9/90=10\%$  or Robert complied with 10% of teacher instructions today



## Question

Why would it be important to use per opportunity or percent occurrence instead of frequency?

## Think it over

A student gets up to sharpen his pencil. He walks around the room and looks at pictures on the wall and looks at items on other student's desks before going back to his seat. What type of measurement might you use?

- A. Frequency
- B. Duration
- C. ABC
- D. Percent occurrence

# Think it over

A student bangs his fist on the desk repeatedly during math instruction. We want to find out how many times he is banging the desk. What tool should we use?

- A. Frequency
- B. Duration
- C. ABC
- D. Percent occurrence

# Think it over

A kindergarten student comes to school each morning crying. We want to collect data on this behavior. What data collection tool(s) might we use?

- A. Frequency
- B. Duration
- C. ABC
- D. Percent occurrence

# Think it over

A student plays with their peers without hitting three times in a row. There were several instances of free play throughout the day. What tool could be used to get the most accurate data?

- A. Frequency
- B. Duration
- C. ABC
- D. Percent occurrence

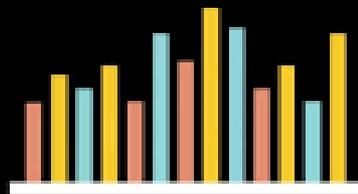
# Data collection

- Refer to and analyze data often
- Data-based decisions
- Are interventions working?
- What do we need to change?



# Collaboration

- Work with your supervising teacher
- Collaborate with other staff who work with the student
- Share ideas
- Be proactive



Talk Data To Me

# Data is not a four-letter word

Well, actually it is BUT....

- We need it to drive our decisions
- We use it to show growth
- It helps us ensure interventions are working
- Ultimately, it is the pathway to student success
- We love it!

