

# Progress Monitoring for Behavior: Data Collection Methods & Procedures



# FYI

## Note from MDE

This event is being funded with State and/or Federal funds and is being provided for employees of school districts, employees of the Mississippi Department of Education and Department contractors. Miss. Const. Art. 4, Section 66 prohibits governing authorities from making donations. According to the Mississippi Attorney General, once the Federal funds are turned over to the State, the rules for the expenditure of State funds apply. Based on Mississippi law, this event is not being provided for third party vendors or external providers.

## Vision

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To create a world-class educational system that gives students the knowledge and skills to be successful in college and the workforce, and to flourish as parents and citizens

## Mission

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To provide leadership through the development of policy and accountability systems so that all students are prepared to compete in the global community

# State Board of Education Goals 5-Year Strategies Plan for 2016-2020

- ✓ All Students Proficient and Showing Growth in All Assessed Areas
- ✓ Every Student Graduates High School and is Ready for College and Career
- ✓ Every Child Has Access to a High-Quality Early Childhood Program
- ✓ Every School Has Effective Teachers and Leaders
- ✓ Every Community Effectively Using a World-Class Data System to Improve Student Outcomes

# Alignment of Training to Strategic Plan

This training is designed to provide participants with information regarding methods and procedures for collecting data related to progress monitoring of behavior.

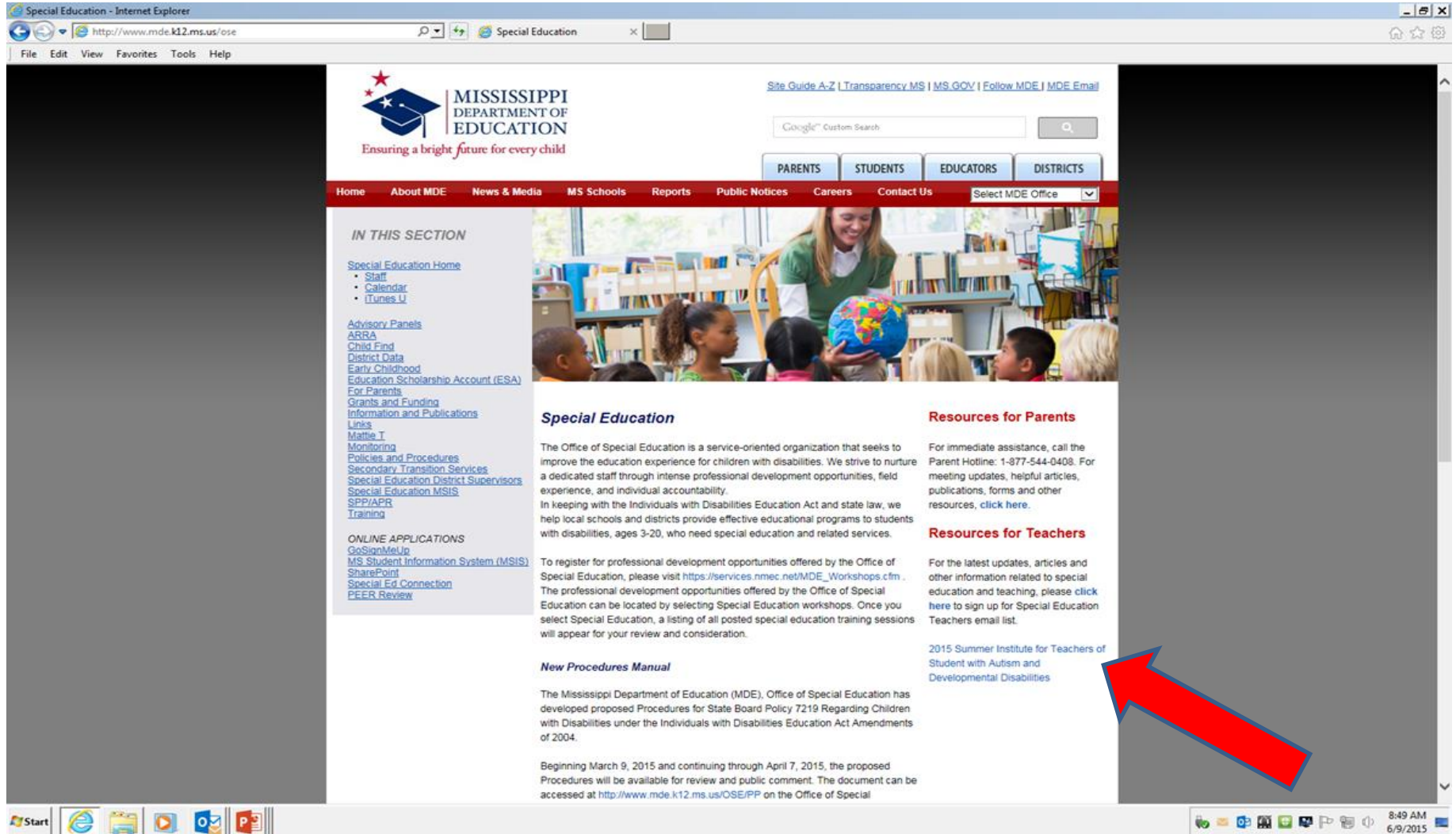
This training provides support to public agencies attempting to address the behavioral needs of students with disabilities in a effort to (a) facilitate academic growth for all students and (b) effectively train teachers and leaders in the areas of discipline and behavior.

The use of these strategies are aligned to the Mississippi Department of Education (MDE) Strategic Plan.

# Teacher Listserv

- The OSE now has a teacher listserv available for special education teachers.
- The purpose of the listserv will be to inform special education teachers of upcoming trainings, upcoming webinars, and other resources provided by MDE.

# Teacher Listserv



The screenshot shows the Mississippi Department of Education's Special Education website. The page features a navigation menu with links for Home, About MDE, News & Media, MS Schools, Reports, Public Notices, Careers, and Contact Us. A dropdown menu for 'Select MDE Office' is visible. The main content area is divided into sections: 'IN THIS SECTION' with links to Special Education Home, Staff, Calendar, and iTunes U; 'Special Education' with a detailed description of the office's mission and contact information; 'Resources for Parents' with a parent hotline and meeting updates; and 'Resources for Teachers' with links to professional development opportunities and a 2015 Summer Institute. A red arrow points to the '2015 Summer Institute for Teachers of Student with Autism and Developmental Disabilities' link.

Special Education - Internet Explorer  
http://www.mde.k12.ms.us/ose

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**ONLINE APPLICATIONS**

- [GoSignMeUp](#)
- [MS Student Information System \(MSIS\)](#)
- [SharePoint](#)
- [Special Ed Connection](#)
- [PEER Review](#)

**Special Education**

The Office of Special Education is a service-oriented organization that seeks to improve the education experience for children with disabilities. We strive to nurture a dedicated staff through intense professional development opportunities, field experience, and individual accountability. In keeping with the Individuals with Disabilities Education Act and state law, we help local schools and districts provide effective educational programs to students with disabilities, ages 3-20, who need special education and related services.

To register for professional development opportunities offered by the Office of Special Education, please visit [https://services.nmec.net/MDE\\_Workshops.cfm](https://services.nmec.net/MDE_Workshops.cfm). The professional development opportunities offered by the Office of Special Education can be located by selecting Special Education workshops. Once you select Special Education, a listing of all posted special education training sessions will appear for your review and consideration.

**New Procedures Manual**

The Mississippi Department of Education (MDE), Office of Special Education has developed proposed Procedures for State Board Policy 7219 Regarding Children with Disabilities under the Individuals with Disabilities Education Act Amendments of 2004.

Beginning March 9, 2015 and continuing through April 7, 2015, the proposed Procedures will be available for review and public comment. The document can be accessed at <http://www.mde.k12.ms.us/OSE/PP> on the Office of Special

**Resources for Parents**

For immediate assistance, call the Parent Hotline: 1-877-544-0408. For meeting updates, helpful articles, publications, forms and other resources, [click here](#).

**Resources for Teachers**

For the latest updates, articles and other information related to special education and teaching, please [click here](#) to sign up for Special Education Teachers email list.

[2015 Summer Institute for Teachers of Student with Autism and Developmental Disabilities](#)

- **Getting Started:**

1. Clearly identify and define the **TARGET BEHAVIOR.**

**Target behavior = the behavior that IS NOT wanted.  
It is behavior “targeted” for change or extinction.**

2. Clearly identify and define the **REPLACEMENT BEHAVIOR** or the behavioral expectation that **IS** wanted.



- **Defining Behavior:**

Behavior is defined in terms of:

- **Topography:** the way the behavior is performed,
- **Function:** the reason or purpose the behavior serves,
- **Characteristics:** categories of the behavior which can be measured: (1) duration, (2) latency, (3) frequency, and (4) amplitude or intensity.

## • Characteristics of Behavior

1. **Duration** – the length of time a behavior lasts (measured from the onset until the end).
2. **Latency** – the length of time between a signal (prompt) to begin a specific behavior and the time it takes for the student to actually begin the behavior after being prompted (e.g. “Get your books out and begin reading.”).

***In order for these characteristics to be measured, the target behavior must have a clearly observable (discrete) beginning. For duration, it must also have a discrete ending.***

# • Characteristics of Behavior (continued)

## 3. **Frequency** – how often the behaviors occur (sometimes called “rate”).

- Frequency should NOT be used when the behavior occurs at such a high rate that it cannot be accurately counted (i.e. a behavior that is virtually constant) or if the behavior occurs over a prolonged period of time (e.g. how well a student uses social skills during cooperative play sessions).

# • Characteristics of Behavior (continued)

## 4. **Amplitude** – the intensity of the behavior.

- Can be more difficult to measure.
- Often subjectively defined based on the environment in which behavior occurs and/or the needs related to the impact.
- Usually measured with less precision in the classroom.
- Most often measured using an estimate and rating scales.
- Considers “impact” of the behavior (internal and external) as paramount to describing intensity.

# • Characteristic Consideration

Consider WHAT characteristic you want to measure:

- How much or how often the target behavior occurs? (frequency)
- Length of time it takes to start a task? (latency)
- Length of time between the beginning and end of a target behavior? (duration)
- How strong or intense the target behavior is when it occurs? (intensity or amplitude)

- **Generally speaking:**

**For most behaviors,  
frequency and duration  
are the characteristics  
measured.**

# • Methods for Estimating Behavior

1. Rating scales (more approximate)
  - Can be used to estimate all 4 characteristics of behavior (duration, latency, frequency, and amplitude).
2. Systematic observation (more precise)
  - Duration and frequency are systematically measured during prolonged observation intervals.

## • Recording Procedures

- Tally marks – continuously counting of relatively infrequent behaviors or of a few students at once (simple procedure)
- Time sampling – observations recorded during time intervals / recording form of some type is required (can be simple or more complicated procedures)



- Recording Procedures

Complex observational systems tend to be less accurate than simple ones.

**KISS Principle – Keep It Short & Simple!**

# • Causes of Incorrect Recording

1. Lack of familiarity with the recording system.
2. Insufficient time to record.
3. Lack of attention / concentration to observation.

- **Systematic Errors**

1. Unintended changes in the observation process.
2. Desensitization of students.
3. Influence of observer expectancies.
4. Lack of motivation on part of the observer.

# • Selecting Data Collection Method

## What do you want to measure?

Frequency or Amplitude of Target Behavior	Duration or Latency of Target Behavior
Frequency	Behavior Rating Scale
Rate	
Opportunity	
Interval or Time Sample	
Behavior Rating Scale	

## • Frequency & Rate

- Involves counting number of times a behavior occurs in a specific time period.
- Use these methods if the behavior can be easily counted and has a clear beginning and end.
- Do not use these methods if the behavior is occurring at such a high rate that accurately counting is nearly impossible (pencil tapping, rocking back and forth).
- Do not use these methods if the behavior occurs for extended periods of time (tantrums that last or falling asleep in class).
- Frequency measure should be used only when the length of observation time is consistent from day to day.
- Rate measure should be used if the length of observation time varies from day to day.

# • Frequency & Rate

- Use tally marks or some sort of “counter”

How to summarize data:

- Frequency – count total # of occurrences within the observation period. “Sally was out of seat 5 times during 50 min. block of English class.”
- Rate – count total # of times the behavior occurred within the time observed, divide that time by the length of time (interval) the behavior was observed. “John threw paper 20 times in a 10 minute observation.”

$$20 \div 10 = 2 \quad \text{John threw paper 2 times per minute.}$$

## • Duration

- Documenting the length of a target behavior by recording the time the behavior begins and ends.
- Use this method if primary concern is length of time the student engages in the behavior and the behavior has a clear beginning and end.
- Do not use this method if the behavior occurs with high frequency.
- Do not use this method if the behavior starts and stops rapidly.

## • Duration

- Use the start and stop time on data sheet.
- Use a stop watch.

How to summarize data:

- Percentage of observation with behavior: sum the total number of minutes that the behavior occurred by the total number of minutes for the observation period, then multiply by 100.
- Average duration of behavior: sum the total durations and divide by the total occurrences.



- **Duration Example:**

During a 60 minute observation, David had 3 tantrums that lasted 3 minutes, 7 minutes, and 5 minutes = 15 minutes total.

- percentage of observation with behavior:

$$15 \div 60 = .25 \times 100 = 25\% \text{ of observation period}$$

- average duration:

$$15 \div 3 = 5 \text{ minutes on average per tantrum}$$

## • Intervals

- Divide the observation period into a number of smaller time periods (intervals).
- Observe the student throughout each interval.
- Record whether or not the behavior occurred during each interval.
- Partial interval method is most effective for understanding how behaviors are distributed across time.
- Use this method if behaviors occur at high frequency or if the behaviors occur continuously.
- Do not use this method if low frequency behavior.

## • Intervals (continued)

- Examples: tantrums / crying / talking or calling out / noise making / off task.
- Behavior is only recorded once during the interval period, regardless of how many times it occurs within the interval.
- Shorter intervals provide a better (more precise) estimate of how often the behavior occurs (e.g. use 10 minute instead of 1 hour intervals).
- To record observations: break the observation period (i.e. class period or school day) into shorter intervals (e.g. 10 or 15 minute), if the behavior occurs during that interval, mark yes on the recording sheet. If it happens more than once within an interval, still only mark it once for that interval.
- To summarize data: use percentage calculations.

# • Opportunities

- Use to determine how often a behavior occurs when given the opportunity (e.g. noncompliance – monitor how often a student refuses to follow a given request or directive or procedure).
- Use this method if the opportunity to engage in the behavior is easily observed and the opportunities are not high in frequency.
- Do not use this method if the opportunity to engage is continuous or if the opportunity is not easy to observe.
- Must clearly define and all parties have explicit understanding of what an “opportunity” means and what the behavior that is being observed should or should not look like.
- Can be difficult because the observer has to remain aware and record each time an opportunity is given, which could be randomly spread out across the observation period.

- Opportunities (continued)

- To collect data: use simple form with + or – to indicate if the behavior did or did not occur when given the opportunity.
- To summarize data: calculate percentage of opportunities by dividing total number of +’s by total number of opportunities (+ and -) then multiply by 100.

$$(+ ) \div (+ \text{ and } -) = \underline{\quad} \times 100 + \underline{\quad} \%$$

- **Latency**

Use this when you want to record how long it takes a student to begin performing a particular behavior once the opportunity has been presented.

- The opportunity and the behavior must have a clear beginning and end.
- Do NOT use if the opportunities are continuous or if they start and stop rapidly.

- **Latency (continued)**

- **Examples of when to use latency recording methods:**
  - When you want compliance with a request and the student has a habit of refusal or delay in following directives
  - When a student is slow to begin an assignment
  - Student takes too long to get in line or do other procedures throughout the day

- **Latency (continued)**

- The difference between latency and duration. Both measure time, but:
  - Latency measures the time it takes to get started with a specific behavior.
  - Duration measures how long a specific behavior lasts.



## • Latency (continued)

- Latency can also be difficult to measure accurately.
- Measuring latency is important if the goal is to work on reducing the time it takes for a student to get started on a task or to perform a specific behavior.
- Can also be used to increase the amount of time between an environmental trigger and an inappropriate response from the student.
- To record data, use a stop watch and record time between the teacher request and when the student complies with the request.

- **Latency (continued)**

- Summarizing data:

Calculate the average time it takes for the behavior to start.

Sum all the latencies and divide by total number of opportunities.

The teacher gave 4 assignments during class. Joe took 90 seconds, 45 seconds, 120 seconds, and 60 seconds to begin work.

$$90 + 45 + 120 + 60 = 315 \text{ seconds}$$

$$315 \div 4 = 78.75$$

Joe took an average of 79 seconds (rounded) to get started on assignments.

## • Resources

- Data Collection Guide, Addressing Student Behavior: A Positive Approach.  
[www.escambia.k12.fl.us/pbis](http://www.escambia.k12.fl.us/pbis)
- Salvia, J., Ysseldyke, J., & Bolt, S. (2007). Assessment in Special and Inclusive Education, 10<sup>th</sup> edition. Houghton Mifflin Company. Chapter 11, pg 188-206.

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