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# Back to Basics: Let's Talk Data Collection

Marva Mount, MA, CCC-SLP

Moderated by:
Amy Hansen, MA, CCC-SLP, Managing Editor, SpeechPathology.com

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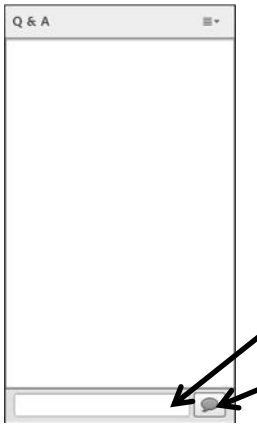
## How to ask a question or comment




- Type question or comment
- Click the send button

## How to earn CEUs

- Must be logged in for full time requirement
- Log in to your account and go to Pending Courses
- Must pass 10-question multiple-choice exam with a score of 80% or higher
  - Within 7 days for live webinar; within 30 days of registration for recorded/text/podcast formats
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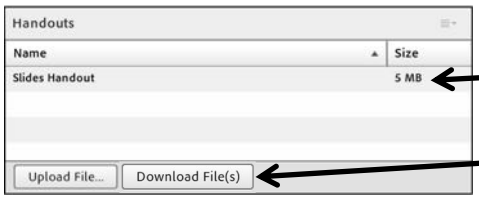


- Click to highlight handout
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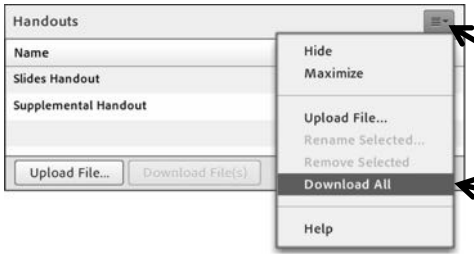


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# Back to Basics: Let's Talk Data Collection

Marva Mount, MA, CCC-SLP

June 11, 2020

- **Presenter Disclosure:** Financial: Marva Mount was paid an honorarium for this course. She is a contributing author to book chapters and SIG 16 publications related to this topic. Non-financial: Marva is the ASHA 2020 Convention topic chair for Leadership and Professional Issues.
- **Content Disclosure:** This learning event does not focus exclusively on any specific product or service.
- **Sponsor Disclosure:** This course is presented by SpeechPathology.com.

# Learning Outcomes

After this course, participants will be able to:

- Explain what makes data collection important.
- Explain several purposes for data collection within a therapy session.
- Describe specific data collection methods for use in progress monitoring.

# Agenda

- 0-5 Introduction
- 5-20 Why do we collect data?
- 20-40 What Data collection models do we want to choose, and why?
- 40-55 Looking at Data Collection Tools
- 55 – 60 min Summary, Q & A

# Data Data Data!

- Data is critical to our work
  - Use to determine if an evaluation is required
  - Use to determine eligibility
  - Use it to shape goals and objectives
  - Use it to evaluate our therapy methods and interventions
  - Use it to demonstrate progress with a student
  - Use it to bill for services
  - Use it to determine when goals are met and it is time to move forward with other targets
  - Use it to determine dismissal from services

Data collection demonstrates that our profession and the work we do is beneficial, effective, and necessary to guide our decision making and treatment delivery from eligibility to dismissal. (Olswang & Bain 1991)

Q1

## What Our Public is Seeking

- Verification of the outcomes of our interventions
- Characterization of behaviors that constitute a learning outcome
- Mechanisms to assess how well our students achieve those outcomes

Blosser and Means

CONTINUED

# Our Data/Evidence Should Be:

- Comprehensive
- Inclusive of multiple sources of data and information
- Data obtained from more than one source
- Assessment of skills in multiple contexts and environments
- Derived from multiple types of formative and summative measures

Blosser and Means 2020

CONTINUED

# Data! What and How?

- From the start, you need good information to present to parents and teachers that is easily understandable
  - Any data that has been collected through the RTI process and the results of the intervention
  - Comprehensive report with understandable vocabulary and examples
  - Speak specifically to how the impairment will interfere with academic and functional performance
  - Provide strategies and methods that speak specifically to the student challenges that can be utilized by parents and teachers to support the student
  - Use visuals whenever possible

CONTINUED

# RTI Data

| Date | Performance (Record using tally marks; 0 indicates prompt required) | Correct Responses % | Benchmark Performance % | Type of Prompt (See page 3) | Level of Prompt (See page 3) | Notes |
|---|---|---|---|---|---|---|
| 8/15 | 10110<br>Given 5 trials, student correctly asked 3 when/where questions independently | 60 | 70 | Modeling | Moderate | When and where questions |
| 8/15 | 10111<br>Given 5 trials, student correctly answered 4 who/what questions independently | 80 | 70 | Completion | Minimal | Who and what questions |

CONTINUED

# RTI Data

| No Prompt | Minimal | Moderate | Maximum |
|---|---|---|---|
| Independent or only needed wait time | Prompts provided in less than 40% of performance trials | Prompts provided between 40-80% of performance trials | Prompts provided in over 80% of performance trials |

Types of Prompts:

| Verbal | Visual |
|---|---|
| Modeling<br>Provide a demonstration of student expectations | Written Directions<br>Use printed words to define student expectations |
| Forced-Choice/Multiple Choice<br>Provide two or more possible answers in question format from which student chooses one | Visual Directions<br>Use pictures to define student expectations |
| Examples and Nonexamples<br>Provide examples and nonexamples that do or do not represent skill | Facial Expression<br>Use varying facial expressions to cue students |

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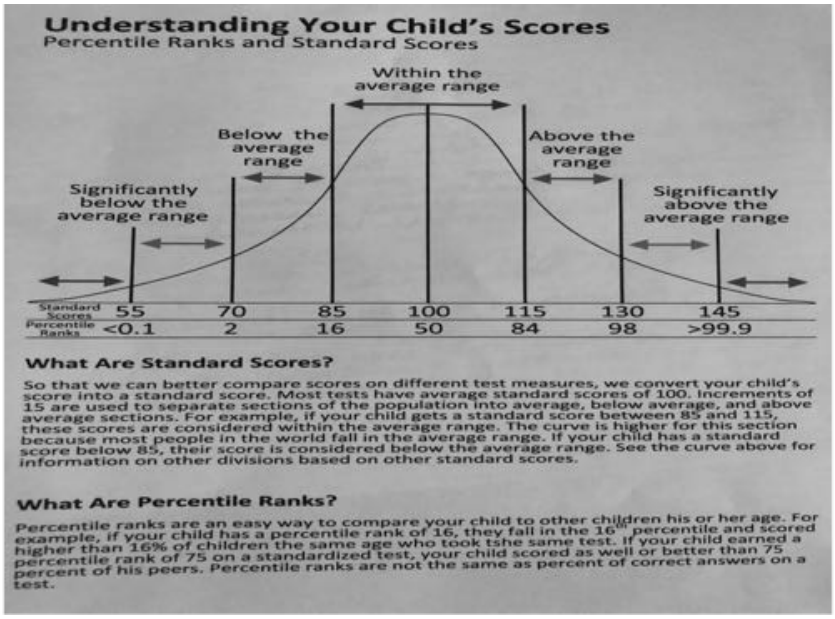
# Evaluation Data



**Understanding Your Child's Scores**
Percentile Ranks and Standard Scores



**What Are Standard Scores?**

So that we can better compare scores on different test measures, we convert your child's score into a standard score. Most tests have average standard scores of 100. Increments of 15 are used to separate sections of the population into average, below average, and above average sections. For example, if your child gets a standard score between 85 and 115, these scores are considered within the average range. The curve is higher for this section because most people in the world fall in the average range. If your child has a standard score below 85, their score is considered below the average range. See the curve above for information on other divisions based on other standard scores.

**What Are Percentile Ranks?**

Percentile ranks are an easy way to compare your child to other children his or her age. For example, if your child has a percentile rank of 16, they fall in the 16th percentile and scored higher than 16% of children the same age who took tshe same test. If your child earned a percentile rank of 75 on a standardized test, your child scored as well or better than 75 percent of his peers. Percentile ranks are not the same as percent of correct answers on a test.

# Why do we collect data?

- In order to make sound, ongoing clinical decisions concerning student progress in therapy
  - Is student responding to treatment?
    - Is our treatment reasonable?
    - Is there efficacy in our treatment?
  - Is significant improvement and behavior change occurring?
    - Rate?
    - Magnitude?
    - Extent?
    - Broad enough to encompass various demonstrations of progress?
  - Is treatment responsible for that change?
    - "Threats to Validity"?
  - How long should the treatment targets be addressed in treatment?
    - Did it trigger/induce or facilitate emergence of the target behavior?
    - Did it master the behavior?
    - Or did it maintain a behavior at its most sophisticated, complex level?

Q2

## Guidelines for Collecting Therapy Data

- Only most relevant data collected
  - Most necessary
- Determine frequency of data collection
  - How often do you need to take data given intervals needed to observe change in behavior?
- Consider different ways of collecting data
  - Natural environment
  - Structured environment
  - Rubric versus correct/incorrect

## Implementing Data Collection

- What to measure?
  - Quantitative
  - Qualitative
- How to measure?
  - Naturalistic
  - Structured
  - Different settings
  - Combination
- When to measure?
  - Frequency
  - How often needed to determine change
  - Multiple measures (you, student, teacher, family)
  - Manner

## Qualitative vs. Quantitative

- Qualitative: data that provides insights and understanding about a particular problem
  - Conclusions are tentative and reviewed on an ongoing basis
- Quantitative: deals with quantity or numbers
  - Conclusions and generalizations are formulated at the conclusion

## What type data do we collect?

- Quantitative:
  - Predetermined targets
  - Objective data
  - Behavior can be operationally defined for observation and measurement
  - More than one person can collect and interpret data on targets in same manner with same results
  - Targets are predetermined and followed
- Qualitative:
  - Subjective data
  - Observation
  - Interview
  - Obtained from a variety of sources
  - Preserves what the observer sees
  - Open mind about targets

Q5

## How to Measure

- Naturalistic – occurring in a natural setting where there is limited/no control to flow or what happens
- Structured – as in a therapy setting where you control all the moving parts
- Variety – school, home, therapy setting, playground, lunch room
- Combination – best way to collect data so you truly see/understand if generalization is taking place and students are seeking more ownership

## When to Measure

- Establish specific check points
  - Spend more time on your therapy
  - Less time on data collection

# Data Collection Factors:

- Internal Factors:
  - Measure Progress
  - Drive Therapy
  - Determine Goals
- External Factors:
  - Student benefit
  - Benefit of teachers and families
  - Progress Monitoring/Progress Reports
  - Legal Protection
  - Funding Sources

Q3, Q4

# Data Collection Outside "Our" Boxes

- Let your students take their data – research indicates this establishes ownership, they know their goals, they self monitor more effectively, they function more independently, they show more motivation
- Make it explicit – your feedback to your students should be direct and easily understood – it should not be a secret from the student
- Take GOOD data less often – when it has a definite purpose and when it will yield evidence of change in target behavior
- Talk and Share – make your student a PART of the process
- Think ahead – use your data to drive your PLAAFP and goal writing
- Make a system – organize therapy in such a way that you actually KNOW what data you are taking and on WHAT

Q9

## Therapy Data

- Know what you are measuring and with what types of cues, etc.
- Understand ways that you can measure information in a variety of ways
- Various types of therapy data
- Student taken data
- Teacher data/grades/portfolios/work samples

## Collection is not one size fits all!

# TYPES of DATA COLLECTION

- Different ways to obtain data:
  - Tally counts
  - Rubrics
  - Graphs

Q8

# Tally (counters, number charts)

- Most traditional
- Taught this method in college
- Quick math
- Easy to find percentage of accuracy
- Effective
- Efficient (yes and no)
- Best for goals that have concrete targets to measure

## Swivel Scheduler

- Enter data digitally as it is being collected
- Does the math for you
- Gives an overall average
- First session (baseline)
- Generates a graph of progress for the student

www.swivelscheduler.com

## Rubrics

- Work for any area of need
- Very informative for hard to quantify data
- Allow for more data collection flexibility
- Allow you to quantify your responses (easy to gather data to incorporate from other sources)
- Set ranges
- Set level of prompts/cues
- Give detailed description of specific behavior
- Great for monitoring carryover
- Great from input from others
- Easy to chart growth visually
- Visual representation for parent understanding
- Great for use with larger groups
- Pair nicely with educational lessons

## Scaffolding a Rubric

- Define what you are expecting the student to do
- When the skill is fully developed, that is the highest rank on the rubric
- Keep your language objective
- Target description for skill set up – then work backward to set up the lowest ranking number
- Lowest ranking number will actually be the baseline for the student
- Determine pieces of the puzzle the student cannot do
- Include levels of support needed from start to finish

Q6, Q7

## Scaffolding "CHEAT SHEET"

- Student baseline – lowest level of performance
- Skill is emerging, however, student requires supports. List all supports required for success.
- Skill is developing, however supports may still be needed. List supports still required.
- End result – your target – skill you want the student to be able to do independently.

TOPIC AREA DESCRIPTION

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| Student is successfully able to: | Student is successfully able to: | Student is successfully able to: | Student is successfully able to: |
| with constant prompting & cues<br>0 - 25%<br>Independence | with moderate prompting & cues<br>25% - 50%<br>Independence | with minimal prompting & cues<br>50% - 75%<br>Independence | with no more prompting or cues<br>than a typical peer<br>75% - 100%<br>Independence |

Progress Graph

Therapy Notes

Date

Marva Mount ©

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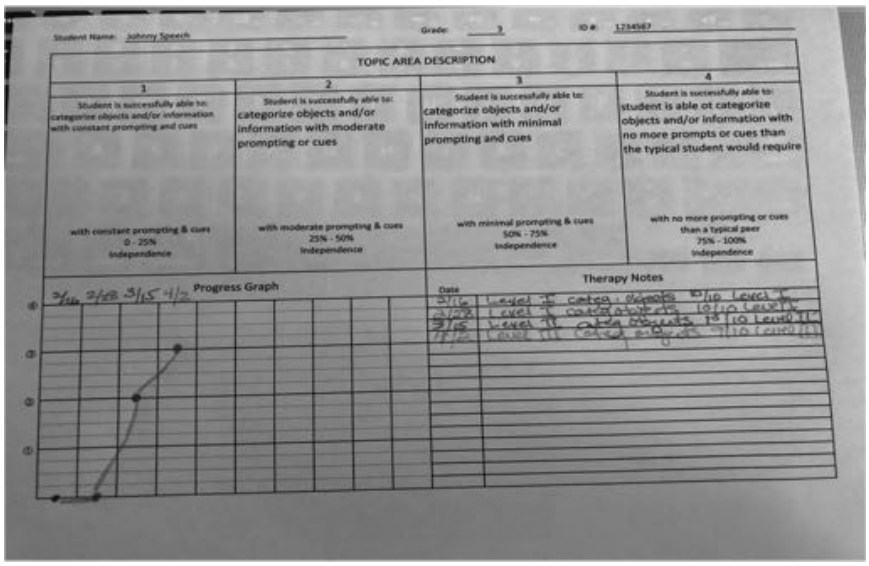
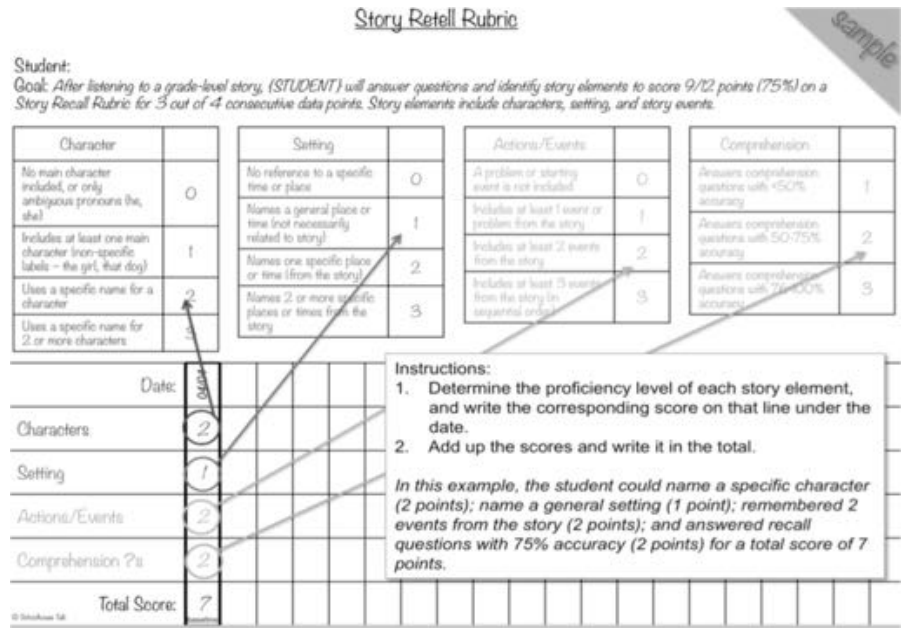




Story Retell Rubric

Sample

Student:
Goal: *After listening to a grade-level story, (STUDENT) will answer questions and identify story elements to score 9/12 points (75%) on a Story Recall Rubric for 3 out of 4 consecutive data points. Story elements include characters, setting, and story events.*

| Character | |
|---|---|
| No main character included, or only ambiguous pronouns (he, she) | 0 |
| Includes at least one main character (non-specific labels – the girl, that dog) | 1 |
| Uses a specific name for a character | 2 |
| Uses a specific name for 2 or more characters | 3 |

| Setting | |
|---|---|
| No reference to a specific time or place | 0 |
| Names a general place or time (not necessarily related to story) | 1 |
| Names one specific place or time (from the story) | 2 |
| Names 2 or more specific places or times from the story | 3 |

| Actions/Events | |
|---|---|
| A problem or starting event is not included | 0 |
| Includes at least 1 event or problem from the story | 1 |
| Includes at least 2 events from the story | 2 |
| Includes at least 3 events from the story (in sequential order) | 3 |

| Comprehension | |
|---|---|
| Answers comprehension questions with <50% accuracy | 1 |
| Answers comprehension questions with 50-75% accuracy | 2 |
| Answers comprehension questions with 75-100% accuracy | 3 |

| | Date: | Date: |
|---|---|---|
| Characters | 2 | |
| Setting | 1 | |
| Actions/Events | 2 | |
| Comprehension ?'s | 2 | |
| Total Score: | 7 | |

Instructions:
1. Determine the proficiency level of each story element, and write the corresponding score on that line under the date.
2. Add up the scores and write it in the total.

*In this example, the student could name a specific character (2 points); name a general setting (1 point); remembered 2 events from the story (2 points); and answered recall questions with 75% accuracy (2 points) for a total score of 7 points.*

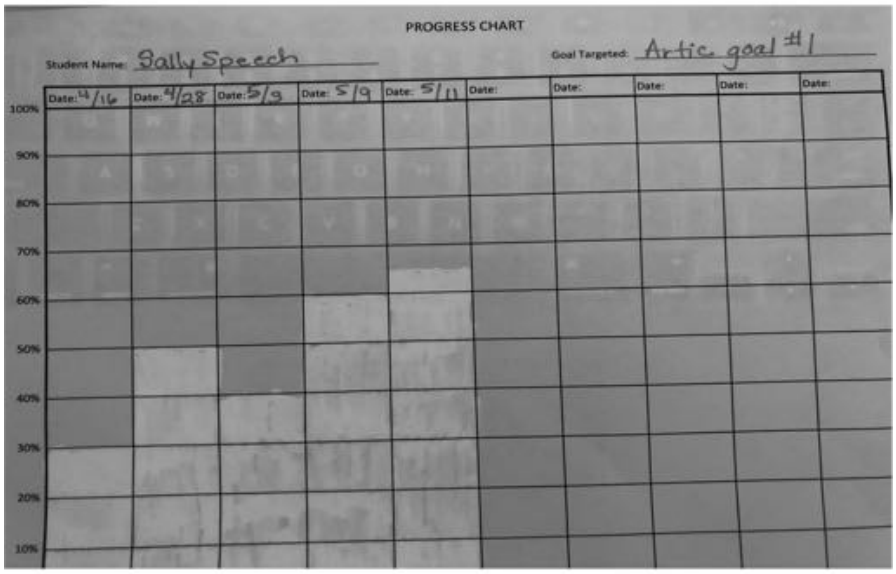
**Used with permission from School House Talk**

available at
https://www.teacherspayteachers.com/store/schoolhouse-Talk

CONTINUED

# Student Directed Data Collection

- Can do graphs that are easy and very visually motivating to students
- Can use a variety of data collection for even the very young
- Data should be shared with students often in order for them to know their own goals and progress – best motivation is success!




## Graphs are great because….

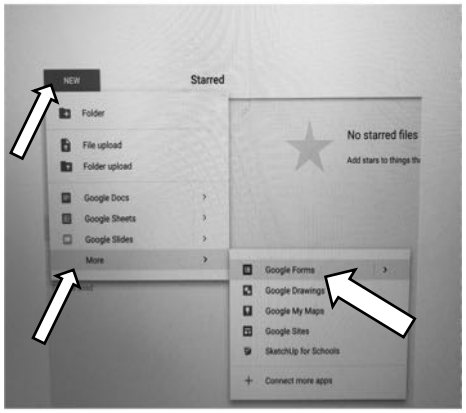
- They allow you to quickly figure a child's percentages at progress monitoring times
- They work well for students – Visual progress!
- Parents love to see this type of data, especially taken by their child
- They keep you in tune with where you are going, and what needs your immediate attention
- You have data at your fingertips if a question is asked, and visual representations are great to share with parents and teachers

## Using Google Forms

- Quick progress updates
- Allows graphs of student progress
- Easily sharable with teachers and parents
- Create ONCE, easy to update

## Creating Google Forms

- From Google drive select “new”
- Select “more”
- Select “Google forms”

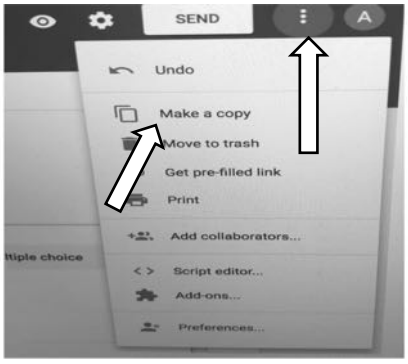


## How to Edit

- Top – include student goals
- Level targeted
- Can include supports/level of cuing
- Progress monitoring area match student goal (percentages vs. trials attempted)
- Place for observations during the session

## Make Copy of Form

- Copy existing form by selecting three vertical dots
- Click on “make copy”
- Easily change student name, goals, etc.



## To View Data Collected

- Click on “responses”
- Allows you to view each session
- To view data in Google sheets – click “sheets” icon

## Sharing Responses

- Click “share” and enter valid email address
- Can share with parents and teachers in “real time”
- Use notes/observation section to share work they can do at home, or areas of identified need

# Conclusion

- Data is affected by:
  - Activity we choose
  - Level of input we provide
  - Level of complexity we are asking of the student

# Data Collection is Difficult

- It is done in real time
- Group therapy vs. individual
- Collaborative vs. pull out
- Variety of goals being worked on simultaneously
- It is difficult to determine exactly what we are taking data on at times (where was I going with that?)
- There are many moving parts in our data collection systems
- Sometimes, our plans do not work as expected

Q10

CONTINUED

# Make Your Data Valid

- Standardize therapy provision to be the same every time, or
- Find a way for your data to accurately represent performance
- "One size does not fit all"

CONTINUED

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# Questions or Comments

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Relax ~ Refresh ~ Reset

THANK YOU FOR COMING TODAY! STAY SAFE AND STAY POSITIVE! WE ARE ALL IN THIS TOGETHER