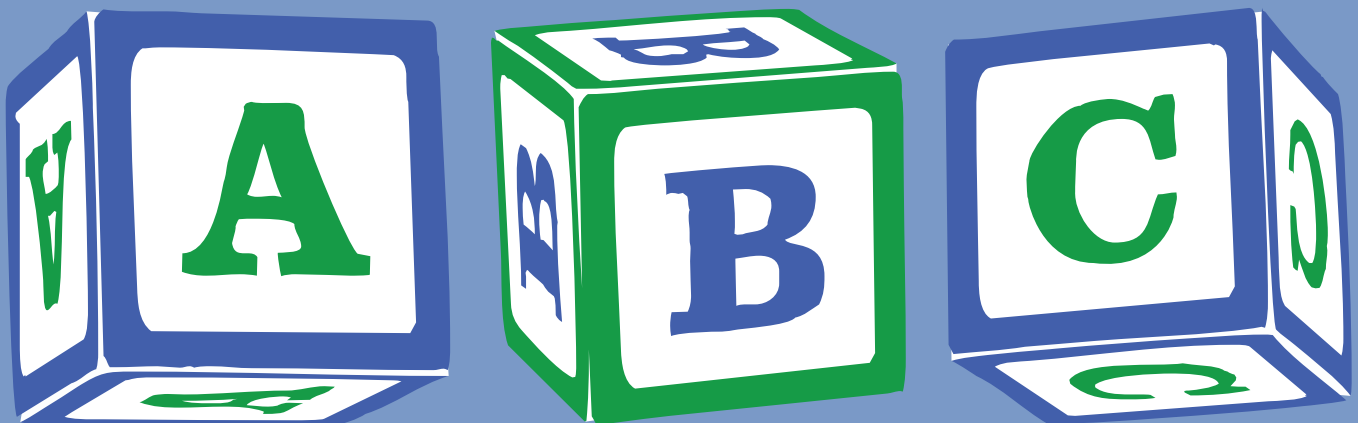# Embedded Instruction for Early Learning

Tools for Teachers - CA

Module 4:
How to Evaluate

Module 4: How to Evaluate
Workbook and Practice Guide
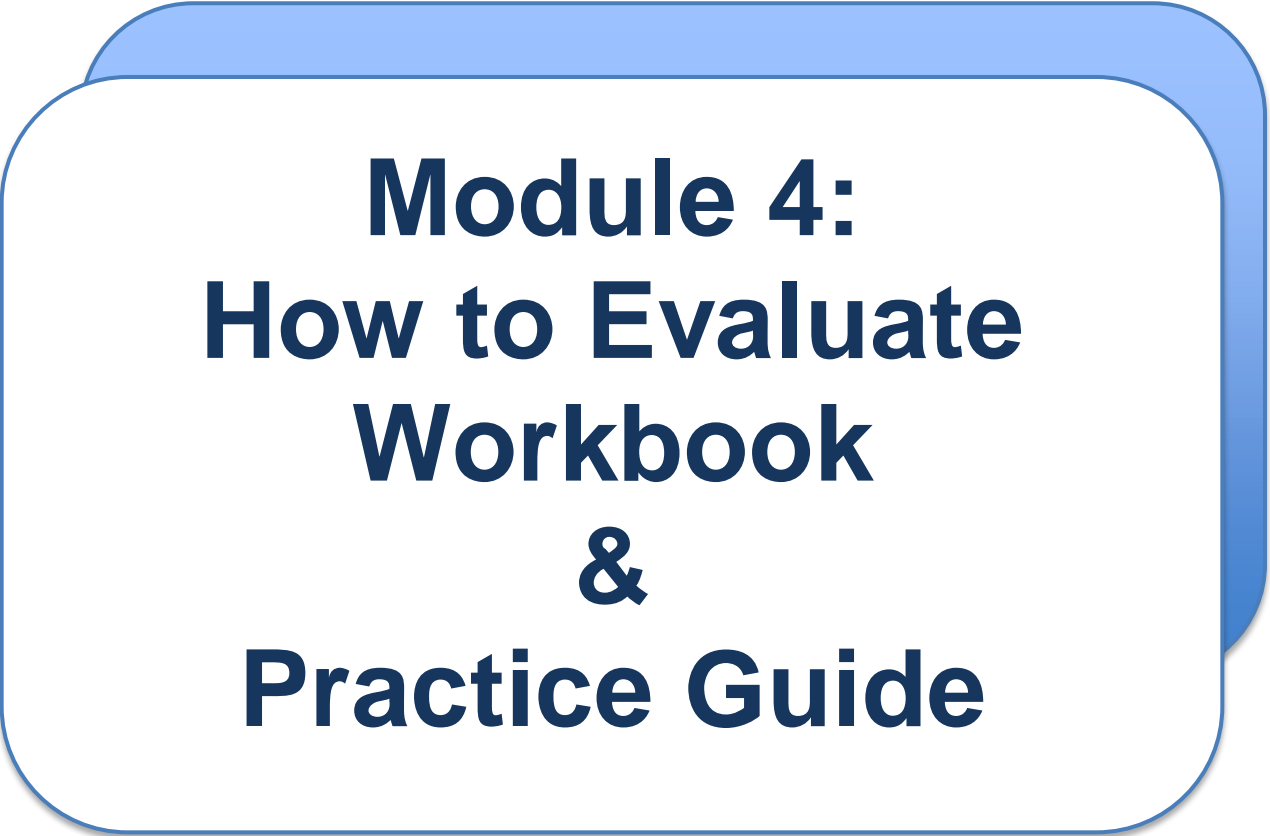# (Fall, 2017)

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Embedded Instruction for Early Learning Project. (Fall 2017). *Tools for Teachers Module 4: How to Evaluate* [Workbook and Practice Guide]. Unpublished professional development series. College of Education, University of Florida, Gainesville, FL.

Module 4:
How to Evaluate
Workbook
&
Practice Guide

Welcome to the fourth in a series of four workshops focused on embedded instruction for early learning. The workshops are organized as learning modules. This workshop is the evaluating module. The four learning modules are part of a comprehensive professional development "toolkit" known as *Tools for Teachers*.

The Module 4 Workbook is designed for you to use during the workshop. Follow along with the slides and activities. Write your notes and ideas directly into this booklet. After the workshop, review the material for a refresher on what you have learned. The Module 4 Workbook starts on **page 9** of this booklet.

The Module 4 Practice Guide is designed for you to use back home in your classroom. The guide provides additional information and references related to the content of this workshop. Use the Practice Guide to learn more about embedded instruction, refresh your memory, or use the materials to help your team learn about embedded instruction. The Module 4 Practice Guide starts on **page 63** of this booklet.

Table of Contents

Workbook

Notes:

Notes:

Notes:

Notes:

Key Practices: How to Evaluate

12. Collect and analyze data to determine whether I am implementing instructional learning trials with fidelity (i.e., **Am I doing it?**).

13. Collect and analyze data to determine if children are making progress on their priority learning targets (i.e., **Is it working?**).

14. **Make data-informed decisions about whether changes are needed** to my instruction by considering (a) Am I doing it? and (b) Is it working?

Notes:

Embedded Instruction for Early Learning
Tools for Teachers

Is Embedded Instruction Working for Mia?

Notes:

Is embedded instruction working for Mia?

Cheryl has three children in her classroom that are enrolled in the Embedded Instruction California Pilot Project. Matthew and Leo are making good progress, but Cheryl is concerned about Mia. Cheryl believes Mia is not acquiring the priority learning target (PLT) skills as quickly as other children in her class and she wants to explore more closely why that might be.

The PLTs Cheryl developed are aligned with the California Infant/Toddler and Preschool Learning Foundations, DRDP 2015, and Mia's individualized goals and objectives. Cheryl selected observable and measureable behaviors and used the *Priority Learning Target Quality Checklist* when writing Mia's PLTs. She also made an activity matrix to plan when Mia's PLTs could be taught throughout the day. She considered how she might provide a sufficient number of embedded learning opportunities for Mia, Matthew, and Leo while continuing to provide high-quality activities for all children in the class. Cheryl decided it would be important to work closely with her team to implement embedded instruction and began by sharing the children's PLTs and activity matrix with her co-teacher, teaching assistants, and the therapists who worked with children in her class.

Cheryl, with support from the team, developed instructional plans that specified the A-B-C components of complete learning trials for each of Mia's PLTs. They discussed how they would provide additional help and what type of feedback they would use when Mia did not demonstrate the behavior, two components that have been important for providing complete and correct expressive language learning trials for Mia.

Embedded instruction is a new approach for Cheryl and her team, but they are excited about the progress they are seeing in the classroom. For Mia and the other children enrolled in the pilot project, it has offered a way to be more intentional about what they are teaching and more systematic about how they are providing embedded learning opportunities that increase children's engagement. Despite Mia needing a little bit more support compared to other children in the class, the team feels that embedded instruction has resulted in the children's acquisition of new skills. Ms. Cheryl and her team want to be sure they are implementing this new approach well and that it is working for all of the children in their class. The team decides their next step in using this new approach is to collect data to inform their instruction.

1. What are the important components of embedded instruction the team appears to be implementing?
2. How will Mia's team know if they are implementing embedded instruction with fidelity?
3. How will they know if embedded instruction is working to move Mia forward?
4. What types of data might they need to collect?
5. What if they find out Mia is still not making progress? What might they need to consider?
6. How could they implement this new approach and collect data at the same time?

Initial Ideas About Evaluating Embedded Instruction

1. What are the important components of embedded instruction for helping move Mia forward?

2. How will Mia's team know if they are implementing embedded instruction with fidelity?

3. How will they know if embedded instruction is working to move Mia forward?

4. What types of data might they need to collect?

5. What if they find out Mia is still not making progress? What might they need to consider?

6. How could they implement embedded instruction and collect data at the same time?

Notes:

After completing the evaluation module, you will be able to:

- Describe strategies for evaluating whether embedded instruction is implemented with fidelity → **Am I doing it?**

- Collect, analyze, and interpret child data to evaluate whether embedded instruction is helping the child make progress related to priority learning targets → **Is it working?**

- Identify strategies for making decisions about adjusting instruction based on data you have collected → **Do I need to make changes?**

Notes:

Embedded Instruction for Early Learning
Tools for Teachers

How to Evaluate Key Practice 12:
Am I doing it?

Am I doing it?

9

Three Key Questions for Evaluating Embedded Instruction

Am I doing it?
Implementation of embedded learning opportunities

Is it working?
Monitoring child progress

Do I need to make changes?
Continuing or modifying implementation of embedded instruction
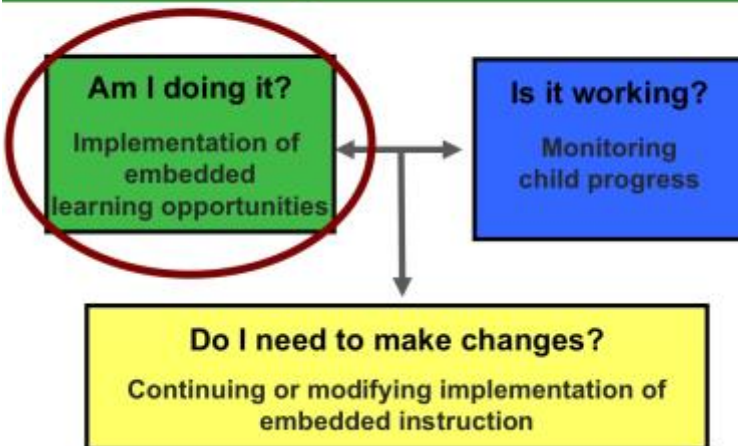
10

Notes:

Priority Learning Target for Mia

Mia will name colors (i.e., red, blue, green, and yellow) when asked during a variety of classroom activities. She will name each color correctly twice a day for three consecutive days.

11

Notes:

Priority Learning Target for Mia

Mia will independently request objects using 1-2 words (e.g., "want ball," "bowl") during breakfast, snack, and table games on 3 occasions each day for five consecutive days.

12

Notes:

Mia's Priority Learning Targets

- Mia will name colors of objects (i.e., red, blue, green, and yellow) when asked by an adult or peer during a variety of classroom activities. She will name each color correctly twice a day for three consecutive days.

- Mia will independently request objects using a 1-2 words (e.g., "want ball," "bowl") during breakfast, snack, and table games on 3 occasions each day for five consecutive days.

- When asked by an adult, Mia will correctly identify "big" and "little" by pointing to or giving a big/little object from a field of two different-sized objects (e.g., give a little ball when shown a big and little ball, point to a little car when shown a big and little car) during circle and centers. She will do this on 3 occasions each day for five consecutive days.

- When shown a picture and asked by an adult, Mia will correctly name objects in pictures (e.g., spoon, shoe, car) during circle and centers twice a day for four consecutive days.

Planned Trials for Mia

Mia	Name Colors	1-2 word request for an object	Give or point to big/little object	Name object in a picture	How many trials for each activity?
Arrival					
Morning Activity/Free Play	3				3
Breakfast		2			2
Circle			2	2	4
Table Games	2	1			3
Outdoor Play					
Snack		2			2
Centers	2		3	3	8
Departure					
Transitions					
How many trials for each priority learning target?	7	5	5	5	22

13

Notes:

	Mia	Matthew	Leo
Arrival			Navigate stairs and obstacles- 2
Morning Activity/Free Play	Name colors- 3	Follow a 1-step direction- 3	Use a chair or table to stand up from the floor without adult support- 5
Breakfast	1-2 word request for an object- 2	Follow a 1-step direction- 4	Use a chair or table to stand up from the floor without adult support- 5
Circle	Name object in a picture- 2 Give or point to big/little object- 2	Move objects or himself in relation to another object or location- 1	Will express his needs to adults and peers using 2-3 word sentences- 3
Table Games	Name colors- 2 1-2 word request for an object- 1	Move objects or himself in relation to another object or location- 2 Hold marker/paintbrush and make markings on paper- 6	Use a chair or table to stand up from the floor without adult support- 2 Sort objects by color- 1
Outdoor Play		Move objects or himself in relation to another object or location- 3 Use 2-word phrases to request more- 3	Navigate stairs and obstacles- 2
Snack	1-2 word request for an object- 2	Use 2-word phrases to request more- 4	Will express his needs to adults and peers using 2-3 word sentences- 3
Centers	Name colors- 2 Give or point to big/little object- 3 Name object in a picture- 3	Move objects or himself in relation to another object or location- 4 Hold marker/paintbrush and make markings on paper- 6	Sort objects by color- 2
Departure			Navigate stairs and obstacles- 2
Transitions		Follow a 1-step direction- 3	Use a chair or table to stand up from the floor without adult support- 4

Notes:

Activity Matrix for Mia

	Name colors	1-2 word request for an object	Give or point to big/little object	Name object in a picture	How many trials for each activity?
Arrival					
Morning Activity/ Free Play	3				3
Breakfast		2			2
Circle			2	2	4
Table Games	2	1			3
Outdoor Play					
Snack		2			2
Centers	2		3	3	8
Departure					
Transitions					
How many trials for each priority learning target?	7	5	5	5	22
Observed					

During which activities did embedded learning opportunities occur?

15

Notes:

Did learning trials occur in the activities in which they were planned to occur?

16

Notes:

Are the number of planned trials occurring in the activities?

17

Complete Learning Trials (CLTs)

- A-B-Cs specified for a learning trial have been implemented

- Need to observe implementation of the A-B-Cs and determine if each component of a trial occurred

18

Notes:

Instructional Plan

Child's Name: ___Mia___   Date: _____

Antecedent

Instructional context: During which activities will the instruction take place?

Morning Activity/Free Play, Table Games, Centers

What do you do or say to elicit the target behavior?

Show object and say, "Mia, what color is this?"

↓

Child does NOT demonstrate the target behavior

↓

Behavior

Child demonstrates target behavior

Mia says the correct color name (red, blue, green, yellow).

↓

What additional help (prompts) do you provide?

Provide a verbal model of the correct color name (e.g., "This is red.")

↓

Behavior

Child demonstrates the target behavior

↓

Behavior

Child does NOT demonstrate the target behavior

Consequence

How do you respond when the child demonstrates the target behavior?

Provide descriptive feedback, such as, "You're right! That is the color red."

How do you respond when the child demonstrates the target behavior?

Provide descriptive feedback, such as, "You're right! That is the color red."

Feedback

What feedback do you provide to end the trial?

Provide another verbal model (e.g., "This color is red.")

Evaluation

Type of data: Accuracy

Data Collection Format: Record how many opportunities are provided and mark the number of times she names the colors red, blue, green, and yellow correctly during the day. Calculate percentage of correct behavior by dividing number correct by the number of opportunities provided.

Instructional Plan

Child's Name: ___Mia___   Date: _____

Antecedent

Instructional context: During which activities will the instruction take place?

Breakfast, Table Games, Snack

What do you do or say to elicit the target behavior?

Materials or items that Mia wants are visible but out of reach or are given to a peer.

Look at Mia with an expectant look or gesture.

Behavior

Child demonstrates target behavior

Mia asks the adult or peer for an object using 1-2 words (e.g., "want [_____]" or "[_____] please.")

Consequence

How do you respond when the child demonstrates the target behavior?

Mia will get the object she asked for and will occasionally receive verbal praise, "Good job using your words, Mia."

Child does NOT demonstrate the target behavior

What additional help (prompts) do you provide?

Tell Mia, "If you want the [_____], you can ask your friend." If needed, tell Mia what to say: "Mia, say 'want [_____].'"

Behavior

Child demonstrates the target behavior

Consequence

How do you respond when the child demonstrates the target behavior?

Mia will get the object she asked for and will occasionally receive verbal praise, "Good job using your words, Mia."

Behavior

Child does NOT demonstrate the target behavior

What feedback do you provide to end the trial?

"Next time, you can ask for the [_____]."

Feedback

Evaluation

Type of data: Frequency, Level of Support

Data Collection Format: Tally the number of times she demonstrated the behavior by using 1-2 words to request. Document whether the behavior occurred independently or with a model.

20

Counting Learning Trials

21

Notes:

Notes:

Let's watch the video again. For each learning trial, describe what happened for the A, B, and C.

Breakfast

Antecedent (Natural Cue/ Natural Cue + Prompt)	Behavior	Additional Help (Prompts)	Behavior	Consequence	Feedback	CLT

Circle

Antecedent (Natural Cue/ Natural Cue + Prompt)	Behavior	Additional Help (Prompts)	Behavior	Consequence	Feedback	CLT

Table Games

Antecedent (Natural Cue/ Natural Cue + Prompt)	Behavior	Additional Help (Prompts)	Behavior	Consequence	Feedback	CLT

Snack

Antecedent (Natural Cue/ Natural Cue + Prompt)	Behavior	Additional Help (Prompts)	Behavior	Consequence	Feedback	CLT

Centers

Antecedent (Natural Cue/ Natural Cue + Prompt)	Behavior	Additional Help (Prompts)	Behavior	Consequence	Feedback	CLT

How many embedded learning trials were complete?

22

Graphing Data

23

Notes:

Graph the Data

Notes:

Review your data and determine the following for each of Mia's priority learning targets:

1. Name colors

→ How many trials did the teacher plan to implement? _____

→ How many trials did the teacher actually implement? _____

→ How many trials were complete? _____

2. 1-2 word request for an object

→ How many trials did the teacher plan to implement? _____

→ How many trials did the teacher actually implement? _____

→ How many trials were complete? _____

Graph Your Data

Use the space below to graph the number of planned, implemented, and complete learning trials for each of Mia's priority learning targets.

Compare Planned, Implemented, and Complete Trials from the Video

Mia's Priority Learning Targets

Legend:
- planned (blue)
- implemented (green)
- complete (red)

Y-axis: Number of Trials (0 to 6)

X-axis categories: Name colors, 1-2 word request for object, Big/little, Name object in a picture

Priority Learning Targets

25
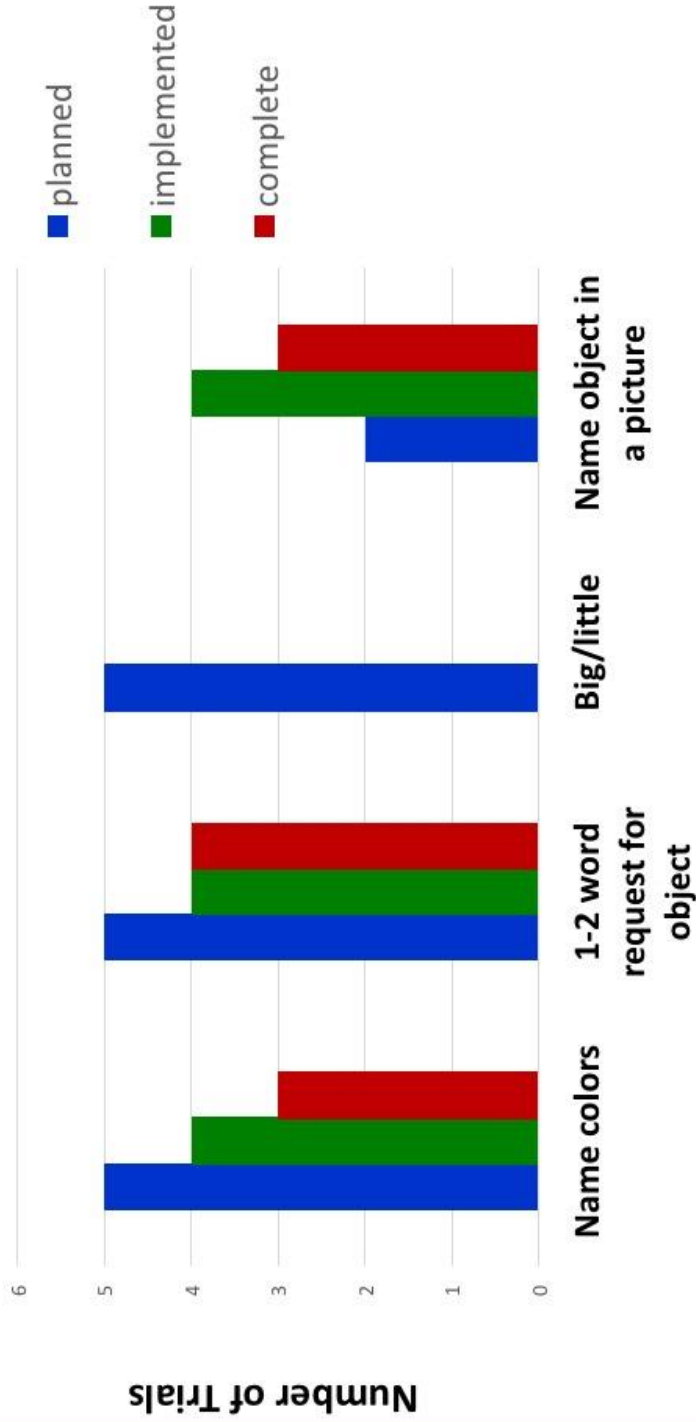
Am I Doing It?
Evaluating Implementation Fidelity

- Are learning trials occurring in the activities in which they were planned to occur?

- Are the number of planned trials occurring in these activities?

- Are the components (the A-B-Cs) implemented so that complete learning trials occur?

26

Notes:

Notes:

Making Data-Informed Decisions for Mia

Am I doing it? Notes about fidelity of implementation for Ms. Cheryl and her team.	Are learning trials occurring in the activities in which they were planned to occur? Are the number of planned trials occurring in these activities? Are the components (the A-B-Cs) implemented so that complete learning trials occur?
Is it working? Notes about Mia's progress on her priority learning targets.	Is Mia making progress? In which areas might she need more or less instruction?
Do I need to make changes? Recommendations for Ms. Cheryl and her team based on the data.	

**Embedded Instruction
for Early Learning
Tools for Teachers**

How to Evaluate
Key Practice 13:
Is it working?

Is it working?

27

Three Key Questions for
Evaluating Embedded Instruction

Am I doing it?
Implementation of embedded
learning opportunities

Is it working?
Monitoring
child progress

Do I need to make changes?
Continuing or modifying implementation
of embedded instruction

28
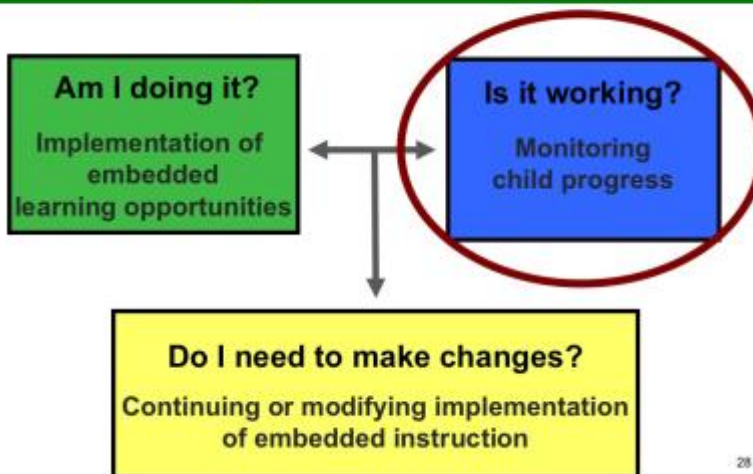
Notes:

Considerations for Monitoring Child Progress In Your Classroom

- **Identifying what data are needed:**
  - What behaviors are targeted?
  - What type of data do I need?
- **Planning for and collecting the data:**
  - How often? When? Where? Who?
  - How do I collect data?
- **Analyzing the data:**
  - How should I display, summarize, and analyze the data?

29

Notes:

Identifying the "Is it working?" data needed

Notes:

Types of Data

Count	Frequency	How often a behavior occurs in a specified period of time
		Rate = # of behaviors/unit of time
	Accuracy	Extent to which a child's behavior matches the targeted performance specified (% correct)
Notes & Rating Scale	Level of Support	The amount and type of assistance a child needs to complete a task
Time	Duration	Length of time it takes to complete a response
	Latency	Length of time from occurrence of specified antecedent to response (behavior) onset
Other	Intensity	Amount of force with which the behavior occurs
	Fluency	Combination of speed plus accuracy in responding
	Endurance	How long, how far, or how many times a child can emit a target behavior

31

Notes:

Ways to Collect Data
(You can use multiple methods)

Frequency................. **Count it**

Accuracy.................... **Calculate % correct**

Level of Support......... **Take notes or use rating scale**

Duration or Latency.... **Time it**

Fluency...................... **Accuracy plus speed**

Permanent Record...... **Collect work samples**

Describe..................... **Take notes or use rubric**

32

Notes:

Instructional Plan

Child's Name: __Mia__   Date: _____

Antecedent

Instructional context: During which activities will the instruction take place?

Morning Activity/Free Play, Table Games, Centers

What do you do or say to elicit the target behavior?

Show object and say, "Mia, what color is this?"

Behavior

Child demonstrates target behavior

Mia says the correct color name (red, blue, green, yellow).

Consequence

How do you respond when the child demonstrates the target behavior?

Provide descriptive feedback, such as, "You're right! That is the color red."

Child does NOT demonstrate the target behavior

What additional help (prompts) do you provide?

Provide a verbal model of the correct color name (e.g., "This is red.")

Behavior

Child demonstrates the target behavior

How do you respond when the child demonstrates the target behavior?

Provide descriptive feedback, such as, "You're right! That is the color red."

Consequence

Behavior

Child does NOT demonstrate the target behavior

What feedback do you provide to end the trial?

Provide another verbal model (e.g., "This color is red.")

Feedback

Evaluation

Type of data: Accuracy

Data Collection Format: Record how many opportunities are provided and mark the number of times she names the colors red, blue, green, and yellow correctly during the day. Calculate percentage of correct behavior by dividing number correct by the number of opportunities provided.

Instructional Plan   Child's Name: ___Mia___   Date:_____

Antecedent

Instructional context: During which activities will the instruction take place?

Breakfast, Table Games, Snack

What do you do or say to elicit the target behavior?

Materials or items that Mia wants are visible but out of reach or are given to a peer.

Look at Mia with an expectant look or gesture.

Behavior

Child demonstrates target behavior

Mia asks the adult or peer for an object using 1-2 words (e.g., "want [   ]" or "[   ] please.

Consequence

How do you respond when the child demonstrates the target behavior?

Mia will get the object she asked for and will occasionally receive verbal praise, "Good job using your words, Mia."

Evaluation

Type of data: Frequency, Level of Support

Data Collection Format: Tally the number of times she demonstrated the behavior by using 1-2 words to request. Document whether the behavior occurred independently or with a model.

Child does NOT demonstrate the target behavior

What additional help (prompts) do you provide?

Tell Mia, "If you want the [   ], you can ask your friend." If needed, tell Mia what to say: "Mia, say 'want [   ]'.

Behavior

Child demonstrates the target behavior

How do you respond when the child demonstrates the target behavior?

Mia will get the object she asked for and will occasionally receive verbal praise, "Good job using your words, Mia."

Consequence

Behavior

Child does NOT demonstrate the target behavior

What feedback do you provide to end the trial?

"Next time, you can ask for the [   ]."

Feedback

34

Notes:

How Often Should I Collect Data?

- Data collection schedules relate to the nature of the behavior and the performance criteria

- For schedules, consider:
  - Existing resources and staffing
  - Embedded instruction occurs daily across activities even if data are collected less frequently
  - Data collection is likely to occur using probes

- Possible schedules include:

Bi-monthly probes → Weekly probes → Bi-weekly probes → Daily probes

Notes:

When? Where? And Who will collect data?

Schedule	Mia	Matthew	Leo
Arrival			
Morning Activity/ Free Play	Name colors **Assistant-M, T, W**		Use a chair or table to stand up from the floor indep. **Teacher - M, W**
Breakfast	1-2 word request for object **Team Rotate Each Day**		
Circle		Move objects or himself in relation to another object or location **Assistant-Daily**	
Table Games	1-2 word request for object **Activity Facilitator-Daily**	Hold marker/paintbrush and make markings on paper **Activity Facilitator-Daily**	Use a chair or table to stand up from the floor indep. **Teacher - M, W**
Outdoor Play		Move objects or himself in relation to another object or location **Team Rotate Each Day**	
Snack			
Centers	Name colors **Teacher-M, T, W**	Hold marker/paintbrush and make markings on paper **Teacher-Daily**	Sort objects by color **Teacher-M, W**
Departure			
Transitions			

37

Consider Ways to Help Your Team Help You

Notes:

"Live" Data Collection

BE CREATIVE...

Notes:

Video Data Collection

- Using a video camera
- Deciding what and when to record
- Counting the implementation of trials using a data collection form
- Useful for examining the quality of embedded learning trials by examining implementation of A-B-C components

40

Notes:

Recall Data Collection

- At end of activity, routine, or transition
- At end of day
- Accuracy of recall data?

41

Notes:

Analyzing
"Is it working?"
data

What Might the Data Tell Us?

- **How often** the child performs the behavior
- **How accurately** the child performs the behavior
- Which behaviors the child does **independently**
- What **types of supports**, adaptations, or assistance the child needs to perform the behavior
- What environmental or personal factors **influence child performance**
- Whether the child is **making sufficient progress**

Notes:

Three Possibilities

If the child…	Then…
Has reached the criterion	Move on to the next step or a new PLT
Is making progress	Continue with what you have been doing
Is not making progress	Change how or what you are teaching

44

Notes:

Putting it All Together:
What Do the Data Tell Us About Mia's Progress

45

Notes:

Accuracy Across 2 Data Probe Days

Mia will name colors (i.e., red, blue, green, and yellow) when asked during a variety of classroom activities. She will name each color correctly twice a day for three consecutive days.

Opportunities

+ = Behavior Correct   - = Behavior Incorrect

	Day 1 (Mon.)	Day 2 (Tues.)	Day 3 (Fri.)	%
Red	+ +	+ - +		80%
Blue	+ + + +	+ + + +		100%
Green	-	+		50%
Yellow	- - +	+ + + + + -		66%

Level of Support Across 2 Days

Mia will independently request objects using 1-2 words (e.g., "want ball," "bowl") during breakfast, snack, and table games on 3 occasions each day for five consecutive days.

	Independent	Gestural or Pictoral Prompt	Verbal Prompt	Partial Physical Assistance	Full Physical Assistance
Trial 1					
Trial 2	1		1		
Trial 3			1		
Trial 4			1		
Trial 5			1		
Trial 6			1		
Trial 7	1				
Trial 8			1		
Trial 9					
Trial 10					
Total	2	0	6	0	0

Data Summary

Independent	2
Gestural or Pictoral Prompt	0
Verbal Prompt	6
Partial Physical Assistance	0
Full Physical Assistance	0

Level of Support Across Trials

- Independent
- Gestural or Pictoral Prompt
- Verbal Prompt
- Partial Physical Assistance
- Full Physical Assistance

47

DATE OF DATA PROBE	11/2	11/3
Indep.	I	—
Verbal Prompt	III	III
Model		III
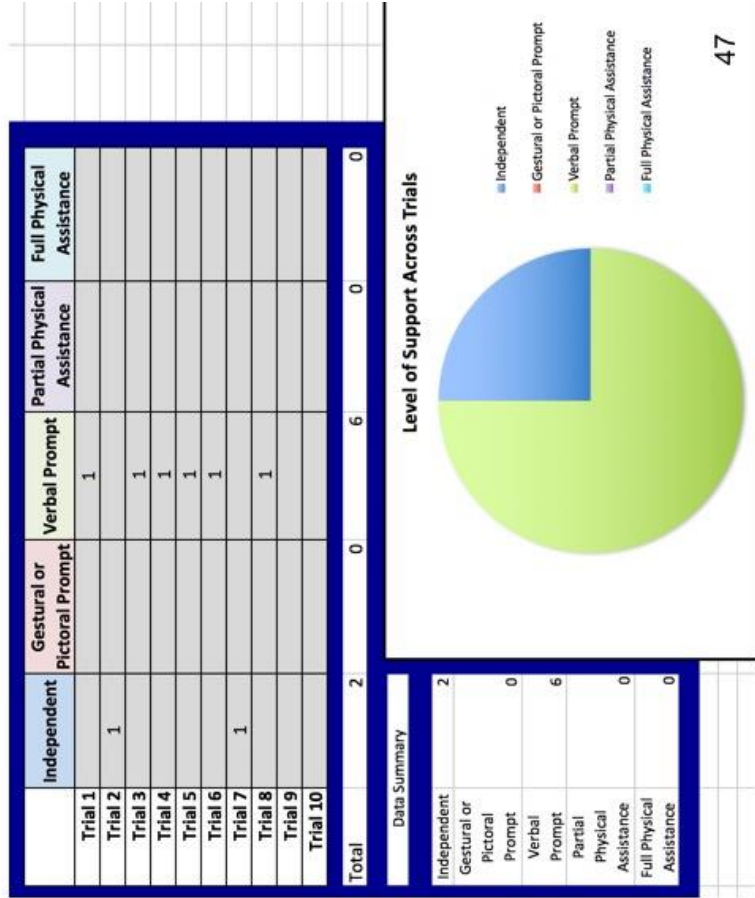
An Example: Alignment Universal to Individualized

Priority Learning Target for Embedded Instruction

Mia will independently request objects using 1-2 words (e.g., "want ball," "bowl") during breakfast, snack, and table games on 3 occasions each day for five consecutive days.

IEP Goal

Mia will independently use 3 word phrases to communicate her wants and needs to adults and peers throughout the day. She will do this on 3 occasions, during 2 or more activities, on 4 out of 5 opportunities.

OSEP/ECO Outcome: Positive social-emotional skills and relationships

Targeted Social-Emotional Curricula: Peer-to-peer interaction skills from *Pyramid Model*

LLD3: Communication and use of Language
ELD2: Self-Expression in English
SED 3 and 4: Relationships and Social Interactions with Familiar Adults and Peers

DRDP 2015

Foundations in Social Emotional Development Social Interaction 2.1

Interacts easily with peers in shared activities that occasionally become cooperative efforts.

Individualized

Targeted

Universal

48

Embedded Instruction for Early Learning
Tools for Teachers

How to Evaluate Key Practice 14: Do I need to make changes?

Do I need to make changes?

49

Three Key Questions for Evaluating Embedded Instruction

Am I doing it?
Implementation of embedded learning opportunities

Is it working?
Monitoring child progress

Do I need to make changes?
Continuing or modifying implementation of embedded instruction

50
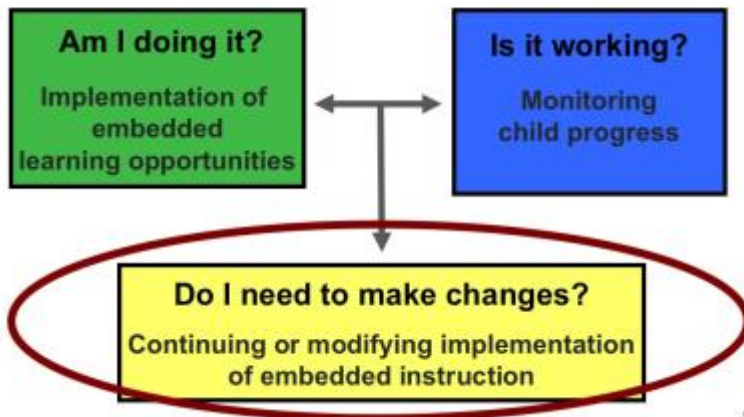
Notes:

Data-Informed Decision Making

Data to Consider:

Is it working?

- The child reached the criterion
- The child is making progress
- The child is NOT making progress

Am I doing it?

- Did learning trials occur in the activities in which they were planned to occur?
- Are a sufficient number of trials occurring in the activities?
- Are the learning trials complete?

Potential Data-Informed Decisions

Is it working?   **Am I doing it?**   **Next steps?**

Child has reached the criterion

Implementing when planned? → Identify new activities in which to embed based on new PLT

Implementing sufficient number of ELO? → Use activity matrix to plan ELO for new PLT

Implementing CLTs? → Develop a new instructional plan for new PLT

Potential Data-Informed Decisions

Is it working?	Am I doing it?	Next steps?
	Implementing when planned?	Continue with your activity matrix and consider possible changes
Child is making progress	Implementing sufficient number of ELO?	Continue to implement a sufficient number of trials
	Implementing CLTs?	Continue to review and implement your instructional plan

Potential Data-Informed Decisions

Is it working?	Am I doing it?	Changes I might make?
	Implementing when planned?	Consider when you are teaching and if a "good fit" for the PLT
Child is **NOT** making progress	Implementing sufficient number of ELO?	Consider how many ELOs (Review activity matrix)
	Implementing CLTs?	Consider antecedents, additional help, or consequences (Review instructional plan)

54
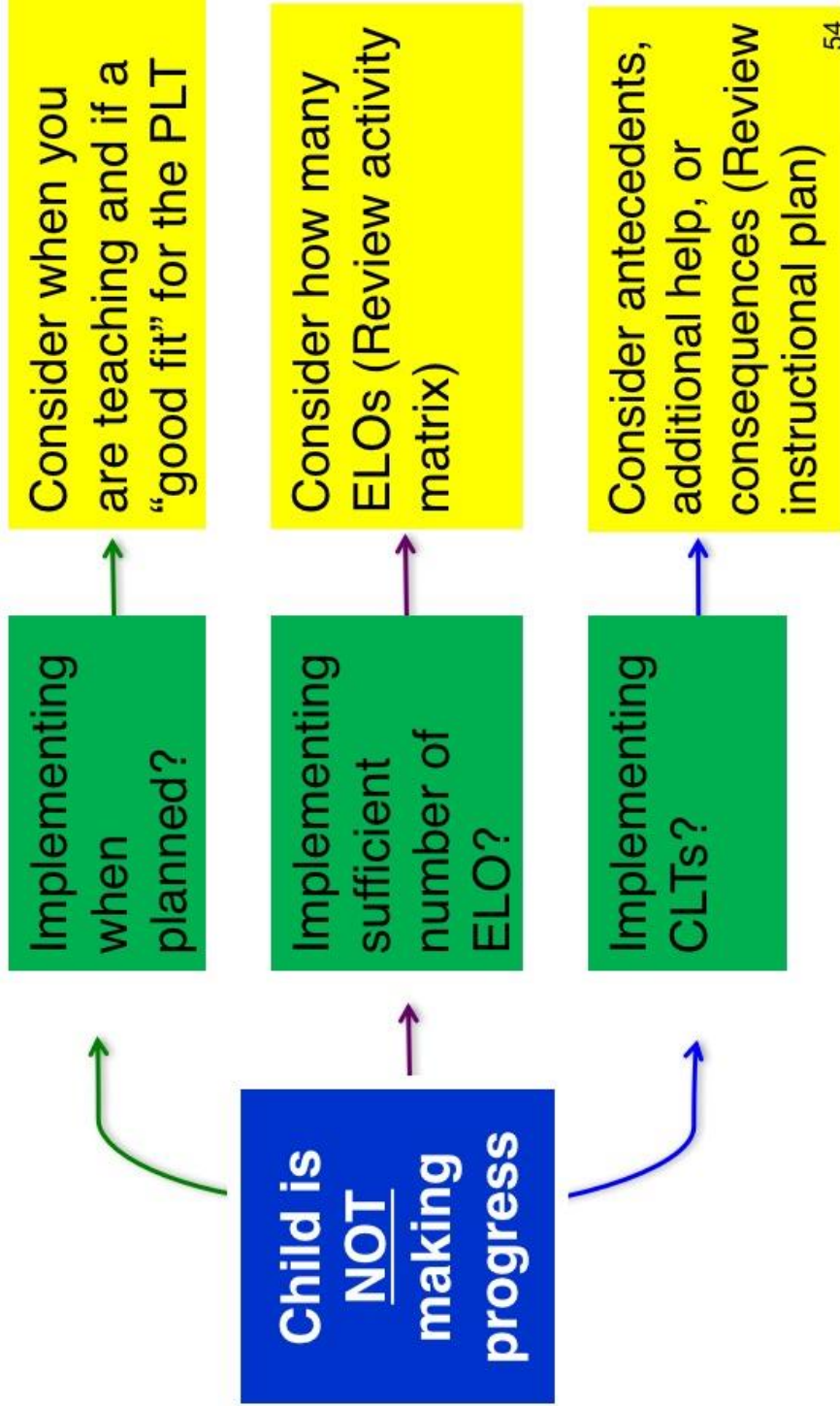
Putting it All Together:
Making a Decision for Ms. Cheryl and Mia

Notes:

55

**Wrapping Up
How to Evaluate**
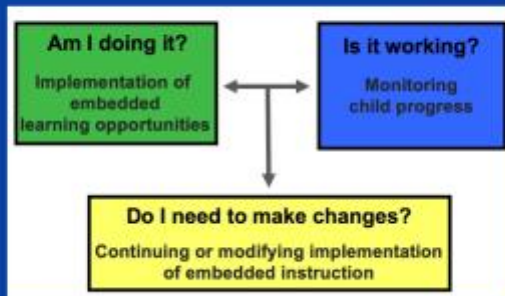
Am I doing it?	Is it working?
Implementation of embedded learning opportunities	Monitoring child progress

Do I need to make changes?
Continuing or modifying implementation of embedded instruction

Notes:

Notes:

Notes:

Planning: Who is on the Team?

- Families
- Teaching Assistants
- Therapists for Speech, Occupational, or Physical Therapy
- Specialists for behavior support or assistive technology
- Administrators

59

Notes:

Planning: What Materials Can I Share?

Materials to share:

- Planning forms
- Share videos of embedded learning opportunities
- Module 1: Overview Webinar
- "Practice Briefs" from the website
- Pages from the modules

Select specific resources to support the team member. DO NOT give all of your materials to team members.

60

Notes:

Notes:

Planning: Gaining Input from the Team

- Ask team members about priority skills they believe would support the child to be more independent, participative, and engaged within and across settings

- Work together to identify natural and logical activities for embedding across school, home, and community

Notes:

Implementing: Embedded Learning Opportunities

- **Role play** delivering embedded instruction using the *Instructional Plan* as a guide with families or the teaching team

- **Model** or **share videos** of your implementation

- **Post an activity matrix** for you and your teaching team to follow throughout the day

- **Encourage families** to practice skills that their child is learning at school while at home or in the community

63

Evaluating: Embedded Learning Opportunities

- Ask your teaching team to
  - collect data as you deliver embedded instruction in large group
  - collect data on children's use of behaviors/skills
  - film an activity

- Discuss progress on priority skills with families formally or informally

64

Notes:

Wrapping Up Teaming

- Planning
  - Identify who is on your team
  - Select resources to teach them about embedded instruction
  - Gain input about priority skills for the child
- Implementation
  - Identify materials and activities you can use to support implementation
- Evaluation
  - Involve the team in collecting "Am I doing It?" and "Is it working?" data

65

Notes:

Notes:

Building a Team Approach to Implementing Embedded Instruction

WHO	WHY	WHAT	HOW & WHEN
Who are the people I should involve?	*Why did I identify this person? What knowledge or skills can they contribute?*	*What knowledge and resources would they need to participate?*	*How and when will I share this information with them?*

Embedded Instruction for Early Learning
Tools for Teachers

Thank you for your participation!

What to Teach: Priority Learning Targets

How to Evaluate: Monitor Implementation and Child Progress

When to Teach: Activities, Routines, and Transitions

How to Teach: Complete Learning Trials

Next Steps

- Complete the Teacher Strengths and Needs Assessment
- Check-in with your coach

Notes:

Practice Guide

Key Components of Embedded Instruction

Embedded instruction is an approach to instruction that promotes child engagement and learning in everyday activities, routines, and transitions. This is accomplished by identifying *times* and *activities* when *instructional procedures* for teaching a child's priority learning targets are *implemented* in *ongoing [naturally occurring] activities, routines, and transitions*.

Embedded Instruction focuses on:
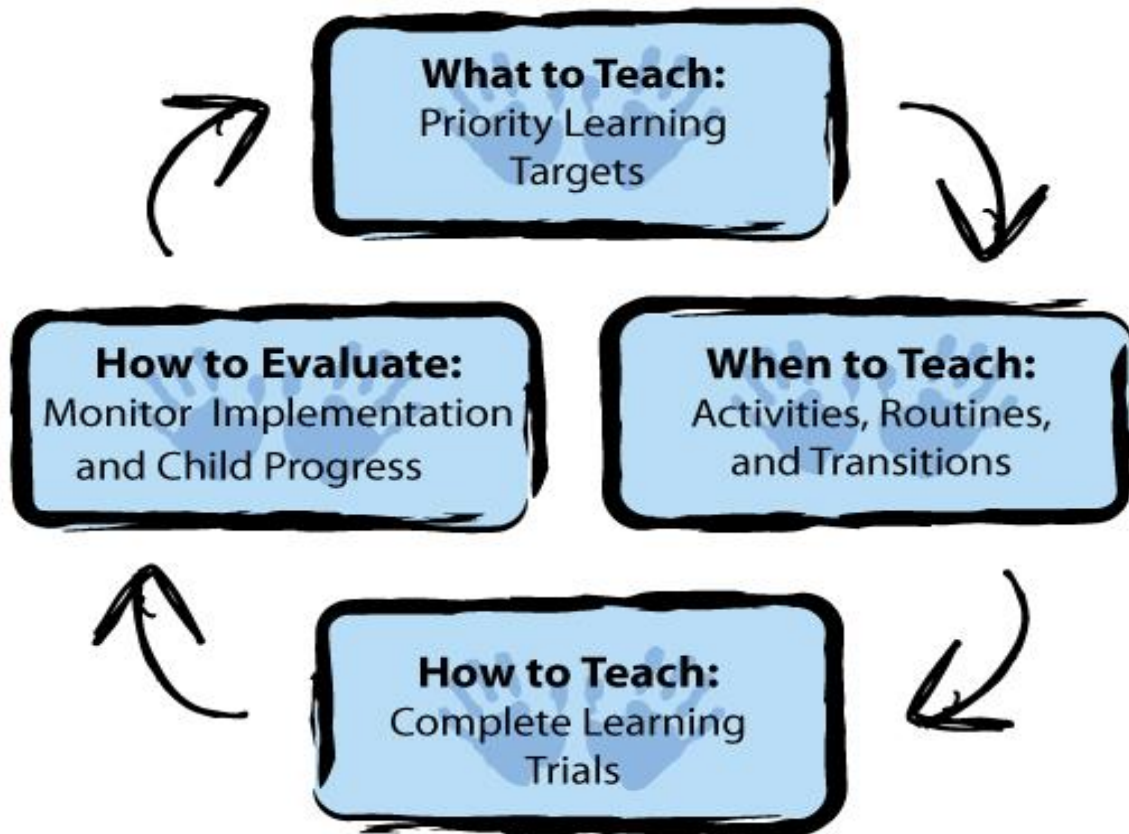
This guide will focus on 'How to Evaluate'. The 'How to Evaluate' component of embedded instruction includes key practices related to collecting, displaying, and interpreting data to determine (a) whether you are implementing embedded instruction with fidelity (i.e., *Am I doing it?*), (b) whether children are making progress on their priority learning targets (i.e., *Is it working?*), and (c) whether changes to your instruction are needed (i.e., *Do I need to make changes?*)**.**

How to Evaluate

How to Evaluate: Key Practices

12. Collect and analyze data to determine whether I am implementing instructional learning trials with fidelity (i.e., **Am I doing it?**).

13. Collect and analyze data to determine if children are making progress on their priority learning targets (i.e., **Is it working?**).

14. **Make data-informed decisions about whether changes are needed** to my instruction by considering (a) Am I doing it? and (b) Is it working?

Three Key Evaluation Questions

Am I doing it?

The first question is related to your (or other team members') implementation of embedded instruction. This means using strategies to help evaluate whether you are implementing embedded instruction and whether you are implementing A-B-C components so **complete learning trials** occur. Data should be collected about when learning trials occur for a priority learning target and whether implementation of the learning trial components results in complete learning trials. A term used to refer to this type of evaluation is "fidelity of implementation." Three questions are relevant to help address the evaluation of implementation fidelity: (1) Are learning trials occurring in the activities in which we planned for them to occur? (2) Are the number of planned trials occurring in these activities? and (3) Are the components (the A-B-Cs) implemented so that complete learning trials occur?

Is it working?

The second question helps determine whether embedded instruction is working for a child by collecting data on whether the child is acquiring, maintaining, mastering, generalizing, or adapting priority learning target behaviors. For example, you might measure the extent to which the child is learning a new skill or using the skill across different people or settings. Monitoring child progress on priority learning targets helps answer the question, "Is it working?"

Do I need to make changes?

The third question involves making data-informed decisions about whether changes are needed to your embedded instruction plan, how you implement the plan, or the priority learning targets established for a child. To answer question 3, you need to integrate and analyze evaluation data related to '*Am I Doing it*?' and '*Is it Working*?'

Here is a diagram of the three key questions for evaluating embedded instruction. The diagram below shows the relationship between "*Am I doing it?*" and "*Is it working?*". Answering these two questions helps you decide whether you should continue with or revise your implementation of embedded instruction— "*Do I need to make changes?*"

Three Key Questions for Evaluating Embedded Instruction

Am I doing it?

Implementation of embedded learning opportunities

Is it working?

Monitoring child progress

Do I need to make changes?

Continuing or modifying implementation of embedded instruction
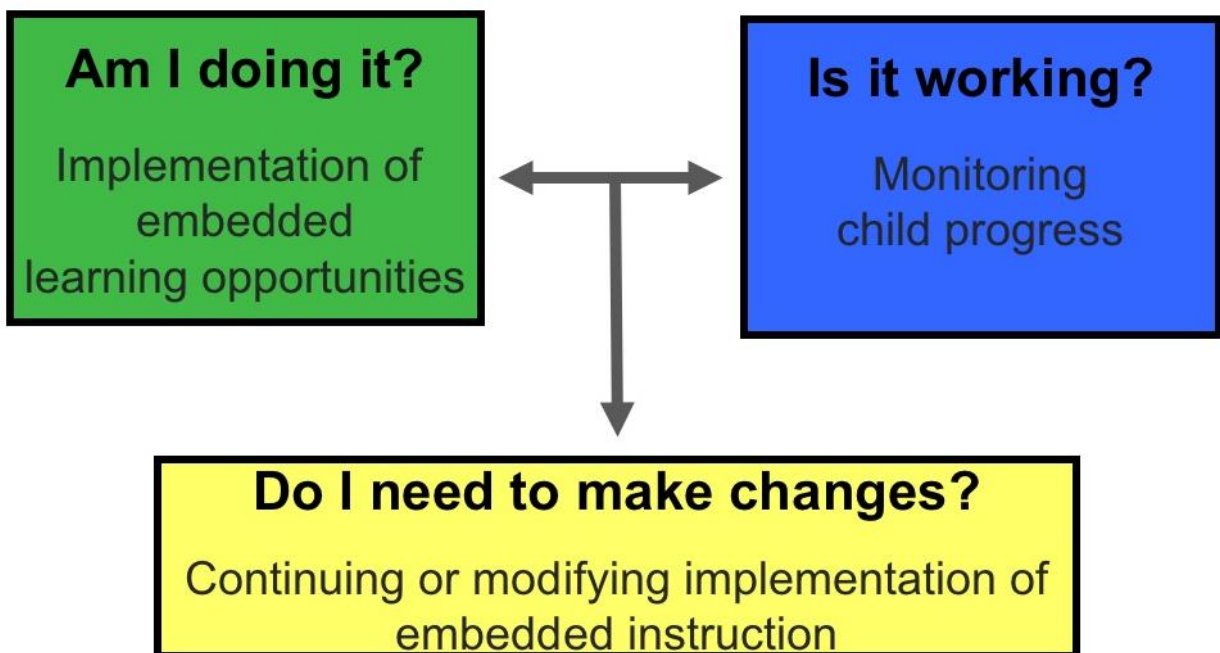
Am I Doing it?

Implementation Fidelity

There are three key questions to consider when evaluating whether embedded instruction is implemented as planned (i.e., "*Am I Doing it*?").

1. Are learning trials occurring in the activities in which they were planned to occur?

Review your planning documents to determine how many learning trials you planned to implement and when you planned to implement them. There are several ways you can review how many learning trials you planned to deliver. You could review your activity matrix to see how many learning trials you planned for a priority learning target or you could review how many learning trials were planned for an activity, routine, or transition.

2. Are the number of planned trials occurring in these activities?

Determine how many learning trials have been implemented by collecting data as you implement learning trials during ongoing classroom activities, routines, and transitions. Data collection is not likely to happen unless it is planned. This involves deciding how often implementation data will be collected, what method you will use to collect data (e.g., video, "real-time" data collection form), and who will collect the data.

Data can be collected on an ongoing basis throughout the day or it can be collected using a planned [probe] schedule. The probe approach is a way to collect data on a regular, but not continuous basis. You might decide to collect data during one activity each day or you might collect data on one child each day. The goal is to make sure you are collecting data for each child's priority learning target during all activities on a regular (probably weekly) basis.

3. Are the components (the A-B-Cs) implemented so that complete learning trials occur?

Examine implementation data to evaluate whether you implemented the trials accurately. Ask the following questions related to a complete learning trial:

- → Did you implement **complete** learning trials (A-B-Cs)?
- → Were the **antecedents** you implemented appropriate for the child's phase and pace of learning and individual interests and motivations?
- → Did the **behavior** specified in the priority learning target occur?
- → If **additional help** was needed, was it provided? Were the steps of the procedure followed correctly?
- → Were positive **consequences** delivered every time the priority learning target behavior occurred?
- → If the target behavior did not occur after additional help was provided, was **feedback** delivered to end the trial?

After you address the three key questions:

Graph Your Data—Compare Planned Trials to Implemented Trials

Compare how many trials were planned and how many trials were implemented. Data can be compared at two levels: (a) global, focused on comparing how many total trials you planned versus how many you implemented across all activities, routines, or transitions for each priority learning target; or (b) specific, focused on comparing planned versus implemented trials for each priority learning target in each activity, routine, or transition.

Global:
Planned versus implemented trials for four of Matthew's priority learning targets across the day

Specific:
Planned versus implemented trials for one of Matthew's priority learning targets for two activities

Decide whether you have implemented embedded instruction as planned. If you decide that implementation did not occur as planned, then you will need to consider whether and how the plan should be revised.

Case Study: Embedding Instruction with Davion

Let's look at how we might evaluate implementation of embedded instruction. We will use Davion and his priority learning targets to illustrate how you would evaluate implementation of embedded instruction.

Let's look at some of the priority learning targets written for Davion along with the activity matrix created for him to see what his teacher planned.

Priority Learning Target 1: Davion will initiate play with another child by asking to join in (e.g., Can I play?, My turn) following a teacher model during centers, free play, and outside at least once a day for five consecutive days.

Priority Learning Target 2: Davion will count sets of up to 3 moveable objects (e.g., blocks, toy cars, crackers) when asked by an adult during centers, free play, and snack for 80% of the opportunities across a day for two consecutive days.

Activities	Davion's priority learning targets and number of learning trials planned
Arrival	
Circle	
Centers	*Initiate play by asking to join—2* *Count 3 objects—2*
Outside	*Initiate play by asking to join –2*
Snack	*Count 3 objects—2*
Class Activity	
Free Play	*Initiate play by asking to join —2* *Count 3 objects—2*
Departure	
Transitions	

Review: Number of trials planned.
Priority Learning Target 1 (Initiate play by asking to join) = 6
Priority Learning Target 2 (Count 3 objects) = 6

**Implement the instructional plan
(deliver learning trials using A-B-C)
and collect data on implementation**

Look at the data collection sheet to determine how many learning trials were implemented to address each priority learning target across activities, routines, and transitions during the day.

Davion's Priority Learning Targets	Number of Learning Trials Implemented
Initiate play by asking to join	2
Count 3 objects	6
Total	8

Two trials were delivered for priority learning target 1 (Initiate play by asking to join) and six trials were delivered for priority learning target 2 (Count 3 objects) across activities, routines, and transitions during the day.

Compare the number of learning trials that were planned for each priority learning target with the number of learning trials implemented.

Davion's Priority Learning Targets	# Planned	# Implemented	Difference
Initiate play by asking to join	6	2	4
Count 3 objects	6	6	0
Total	12	8	4

Miss Lou and her team implemented fewer trials than were planned for priority learning target 1 (Initiate play by asking to join). For priority learning target 2 (Count 3 objects) each of the planned trials were implemented.

Examine the quality of implementation to see if all learning trial components (A-B-Cs) were delivered for each trial and for each priority learning target.

Learning Trials	Antecedent	Child Behavior	Additional Help (Prompts)	Consequence/Feedback	A-B-C Implemented with Fidelity
Initiate play by asking to join **(6)**	**A**	**B**	**AH**	**C**	**Yes/No**
Trial 1	√	√	√	√	*Yes*
Trial 2	√	√	√	√	*Yes*
Trial 3			*NOT DELIVERED*		*No*
Trial 4			*NOT DELIVERED*		*No*
Trial 5			*NOT DELIVERED*		*No*
Trial 6			*NOT DELIVERED*		*No*
Count 3 objects **(6)**	**A**	**B**	**AH**	**C**	**Yes/No**
Trial 1	√	√	√	√	*Yes*
Trial 2	√	X	X	X	*No*
Trial 3	√	√	√	√	*Yes*
Trial 4	√	X	X	X	*No*
Trial 5	√	X	X	X	*No*
Trial 6	√	√	*N/A*	X	*No*

√ = *Implemented*

X = *Not implemented*

When you examine the data for priority learning target 1 (initiate play by asking to join), you see that two complete trials were implemented and four of the planned trials were not implemented. The criterion for the behavior 'initiate play by asking to join' is 'at least once a day for 5 consecutive days.' Given Davion is just acquiring the skill and required additional help on both occasions, it would be beneficial to provide all six of the planned opportunities.

Even though all six trials were implemented for priority learning target 2 (count 3 objects), four of the trials (Trials 2, 4, 5, and 6) were not implemented with fidelity. For three trials (Trials 2, 4, and 5), the target behavior did not occur and there was no additional help or feedback to complete the trial. For one trial (Trial 6), the target behavior did occur, but no consequence was provided. Davion needs Miss Lou to provide additional help when the behavior is not demonstrated and a consequence or feedback to support his ability to achieve the criterion of '80% of the opportunities across a day for two consecutive days.'

After Davion's teacher reviews the quality of implementation with respect to the A-B-Cs, she might decide to continue implementing embedded instruction in the same way or she might decide to make changes to her implementation. Before making this decision, however, she needs to consider Davion's progress on these two priority learning targets.

At this point, Davion's teacher has gathered important evaluation data about the need to provide additional learning trials for priority learning target 1 (initiate play by asking to join). She also knows it will be important to consistently provide additional help when the behavior is not demonstrated and a consequence when the behavior does occur for priority learning target 2 (count 3 objects).

Is it Working?

Considerations for Monitoring Child Progress

Monitoring child progress is something you already do as a teacher. It is also an essential part of evaluating embedded instruction. Embedded instruction focuses on helping children learn skills in the activities and settings in which they need to use these skills. We have referred to this as the instructional context for learning. When we evaluate child progress in embedded instruction, it is important that we evaluate children's use of targeted skills within the ongoing activities, routines, and transitions of the classroom.

Monitoring child progress will help you decide if adjustments need to be made in your implementation of embedded instruction. The data you collect will help you locate and identify possible barriers to child progress and determine other instructional strategies that might be more effective or efficient for learning skills. When you begin monitoring child progress, the following questions can help guide you:

▶ What behaviors are targeted? What type of data do I need?

▶ How should I collect data for different types of behaviors?

▶ How often should I collect data? When? Where? And who should collect data?

▶ How should I display, summarize, and analyze child data?

▶

In this section, we provide additional information to help you answer each of the How to Evaluate questions with a particular focus on *"Is it working?".*

Three Key Questions for Evaluating Embedded Instruction

Am I doing it?

Implementation of embedded learning opportunities

Is it working?

Monitoring child progress

Do I need to make changes?

Continuing or modifying implementation of embedded instruction
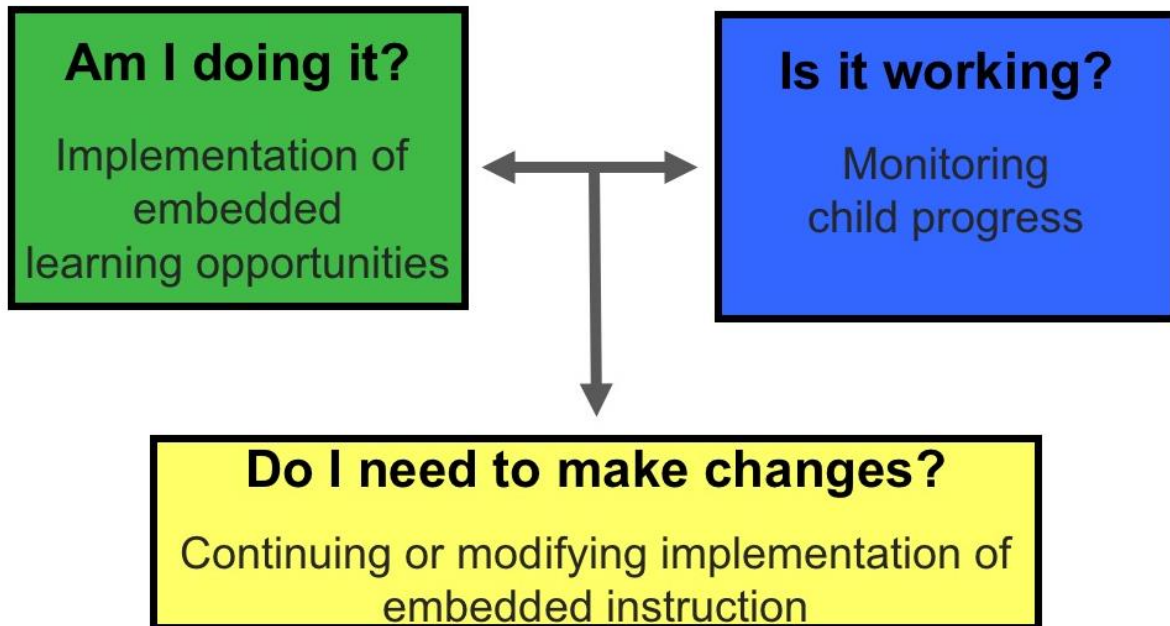
What Behaviors are Targeted?

Typically, child behaviors fall into one of the following categories or domains:

- ➢ Motor
- ➢ Adaptive
- ➢ Social
- ➢ Cognitive and Pre-academic
- ➢ Communication

Some preschool programs might use different categories or domains. The categories are less important than the focus (i.e., the desired behavior) of the priority learning target you have selected.

To evaluate child performance or monitor child progress, priority learning targets must be _specific, observable, measurable,_ and have _clearly stated conditions and criteria for performance_.

Why do you need observable priority learning targets?

An observable behavior is important because it describes what you will see or hear the child do. If you can observe behavior, you can count it or measure it. An observable priority learning target behavior is one that can be (a) seen or heard, and (b) at least two people can agree has occurred.

Why do you need measurable priority learning targets?

To evaluate child performance or monitor child progress, you need to consider what dimensions of the behavior are important to measure. For example, do you want to know how well a child does something, how often a child does something, or how long the child does something?

Here are some examples of observable and measurable **behaviors**:

> With partial physical prompting [Child] will **greet** at least two **peers by patting, touching, or smiling** when they arrive at the classroom in the morning or join a small group activity for five consecutive days.
>
> [Child] will **manipulate (e.g., open, close, turn on/off)** at least four **materials/objects/toys with both hands** following an adult model during centers and free play activities for five consecutive days**.**
>
> [Child] will independently **pedal a tricycle forward at least 25 feet** each day for four consecutive data collection probes during playground and gym activities.

Here are some examples of priority learning targets that are **NOT** observable or measurable:

> [Child] will demonstrate understanding of shapes.
>
> [Child] will participate during small group activities.
>
> [Child] will respond to group directions.
>
> [Child] will refrain from hitting.

Additional information about selecting priority learning target behaviors for embedded instruction is located in the Module 2: What to Teach and When to Teach Workbook and Practice Guide from this workshop series.

Why are conditions and criteria important?

Measurable priority learning targets include the conditions under which the behavior will occur and a level of acceptable performance. Specifying the conditions under which the behavior will occur and the level of acceptable performance is called performance criteria.

Performance criteria specify the level of acceptable performance and how often the child is to perform the behavior to demonstrate he/she has met the criteria (e.g., four times for 3 consecutive days, twice for 5 consecutive days, etc.). With appropriately selected criteria, you will know when a child has achieved the targeted performance. Performance criteria also guide your decision about how often you need to collect data on a specific priority learning target.

Performance criteria will vary depending on the child's phase of learning (e.g., acquisition, fluency, maintenance, generalization, and adaptation) the priority learning target is developed to address. First, review the definition for each phase of learning.

Embedded instruction is useful during each <u>phase of learning</u>:

✓ **Acquisition**- Learning a new skill

✓ **Fluency-** Gaining the ability to perform a skill in a continuous or fluid way

✓ **Maintenance**- Using the same skill over time

✓ **Generalization**- Using learned skills or behaviors across different settings, people, times, activities, or materials

✓ **Adaptation-** Using elements of previously learned skills that can be adapted to new demands and situations

Now review the following examples of how the same priority learning target has been changed to reflect different phases of learning.

Acquisition:

Tabitha will initiate play with **a preferred peer** either verbally or nonverbally (e.g., sign 'play', say 'play', tap peer, give object) **following a verbal prompt from her teacher** in **center activities 6 times across 4 consecutive days**.

❖ Here Tabitha is acquiring the skill of initiating play with a preferred peer in one activity with help from her teacher.

Fluency:

Tabitha will initiate play with **a preferred peer** either verbally or nonverbally (e.g., sign 'play', say 'play', tap peer, give object) in **center activities 6 times across 4 consecutive days**.

❖ Here Tabitha is becoming fluent with initiating play with a preferred peer in one activity without adult help.

Maintenance:

Tabitha will initiate play **with one familiar peer** either verbally or nonverbally (e.g., sign 'play', say 'play', tap peer, give object) during **regular child initiated activities at least 2 times per day for 6 weeks**.

❖ Here we are evaluating whether Tabitha maintains her ability to initiate play with familiar peers from her class over time in child initiated activities. Data on her performance could be collected weekly.

Generalization:

Tabitha will initiate play with **at least two familiar peers** either verbally or nonverbally (e.g., sign 'play,' say 'play', tap peer, give object) in **small group games and playground activities 6 times in total for 2 consecutive days**.

❖ Here Tabitha is learning to generalize initiating play with two familiar peers from her class across two activities with different characteristics and levels of structure.

Adaptation:

Tabitha will initiate play with **unfamiliar peers** (e.g., from another class) either verbally or nonverbally (e.g., sign 'play,' say 'play,' tap peer, give object). She will initiate play with **at least two unfamiliar peers at resource and playground activities one time each day for one week.**

❖ Here Tabitha is learning to adapt her ability to initiate play with peers, she is working on this PLT during activities where she has the opportunity to interact with peers in other classes who are unfamiliar or less familiar.

What Type of Data Do I Need?

Identifying the features and characteristics of the targeted behavior will influence the type of data you collect.

Different types of data you collect might include:

- → Frequency
- → Accuracy
- → Level of Support
- → Duration
- → Latency
- → Endurance

Each type of data is defined and illustrated through <u>abbreviated</u> priority learning targets below:

<u>Frequency:</u> The number of times a child demonstrates a target behavior within a specified period of time.

➢ The period of time can be an interval (e.g., 15 seconds) or an entire activity/event (e.g., circle, snack, centers). The best way to collect frequency data is by counting it.

Examples:
- ✓ [Child] will sign "more" three times a day.
- ✓ [Child] will verbally answer questions three times during circle time.
- ✓ [Child] will initiate interaction with his/her peers two times within a 10-minute observation.
- ✓ [Child] will use more than 10 different utterances across four daily activities and routines.

<u>Accuracy:</u> The extent to which a child's behavior matches the targeted performance specified or how well a child demonstrates the target behavior.

➢ At times, the amount of assistance required (e.g., independently, without support, with hand-over-hand) or whether the child needs reminders or contextual cues can be noted. To collect accuracy data, you can calculate the percentage of correct trials (# correct behaviors/total # trials).

Examples:
- ✓ [Child] will spell his/her first name correctly (e.g., all letters in order).
- ✓ [Child] will count 5 objects.

Level of Support: **The amount of assistance a child needs to complete a task.**

➢ The way to collect this type of data is to record the level of assistance required to finish the task. This might be done by taking notes or using a rating scale.

Examples:
- ✓ [Child] will make a request using at least 2 words following a teacher model during centers, free play, and outside at least once a day for five consecutive days.
- ✓ [Child] will independently hang his/her coat without reminders.

Duration: **The amount of time it takes to complete a priority learning target behavior or the amount of time a target behavior lasts.**

➢ The way to collect duration data is by timing how long it takes the child to complete the target behavior or how long the target behavior lasts.

Example:
- ✓ [Child] will stand on both feet, holding onto to a table or chair, without additional adult support for 30 sec.

Latency: **How long it takes a child to initiate the target behavior (i.e., response onset) after an antecedent has occurred.**

➢ The way to collect latency data is by timing the elapsed time between the antecedent and the onset of the behavior.

Examples:
- ✓ [Child] will verbally answer, "What do you want?" within 1 min. of being asked the question.
- ✓ [Child] will start to pick up at least one toy within 2 min. of a teacher saying, "It's time to clean up," during centers.

Endurance: **How long, how far, or how many times a child can emit a target behavior before she/he fatigues (e.g., how many steps can a child take, how many steps can a child climb, how far can a child walk using a walker).**

➢ There are various ways to collect endurance data based on the behavior criteria, such as rating scales, counting, or timing.

Examples:
- ✓ [Child] will walk 17 steps without stopping.
- ✓ [Child] will pedal forward and steer bicycle at least 16 feet.

How do I Collect Data?

After you determine what type of **behavior** you are measuring and have identified the performance **conditions** and **criteria**, you can plan for how you will evaluate child progress.

(1) Learner	Mia will
(2) Behavior	request objects using a 1-2 words (e.g., "want ball," "bowl")
(3) Conditions	independently
(4) Activities	during breakfast, snack, and table games
(5) Criterion	on 3 occasions each day for five consecutive days.

Data are typically collected relative to the nature of the child behavior and the conditions and criteria associated with priority learning targets. Here are some options to consider.

→ If you want the behavior to happen more often→ count it—frequency
→ If you want the behavior to be accurate → calculate % correct—accuracy
→ If you want to record level of prompting and supporting→ descriptive notes or rating scales – level of support
→ If you want to record how long a behavior lasts or the onset of a response→ time it—duration or latency
→ If you want to describe the behavior (it's form and topography)→take notes
→ If you want to document or obtain a permanent record of the behavior→ collect products or work samples

How often should I collect data?

Frequency of data collection is influenced by the nature of the behavior. Some priority learning targets might only occur once or twice a day while others might occur more often throughout the day. Consider what is feasible given the number of adults and children in the classroom and the demands on your time during particular activities.

You want to have enough data to help you decide how well the child is performing or whether she/he is making progress. We know a child's performance might vary somewhat from day to day, but the goal is to gather enough data that you have a picture of the child's "typical" performance with respect to the priority learning target. It is helpful to examine your schedule carefully; plan how often it is feasible for you to collect data, while considering how much data you will need to obtain a picture of the child's "typical" performance. Planning for data collection ensures you are devoting a sufficient amount of time to these important evaluation activities.

Embedded instruction occurs daily across activities, routines, and transitions, but data collection is likely to occur at specific times during the week using probes. Plan and schedule to collect probe data based on what you want to know about the child's performance.

When should I collect data?

Deciding _when_ to collect data on child behaviors might involve four considerations:

1. <u>When the skill is being taught</u>—If you are planning to teach the skill during snack and centers, that information will be useful in knowing when to collect data.

2. <u>When the child naturally needs to be able to use the skill</u>—For example, while you might be planning to teach choice-making during snack and centers, you might also want to measure whether the child makes choices during other activities that would be natural times for the child to make choices (e.g., small group, morning circle).

3. <u>When the behavior is most likely to occur</u>—For example, you might only see the child make a choice occasionally during large group, whereas there might be many opportunities for the child to make choices during center time. Thus, observing during center time would provide more opportunities for observing the priority learning target behavior than observing during large group time.

4. <u>What conditions and performance criteria are specified</u>—If you have specified multiple activities, such as arrival, centers, and snack, you should collect a sample of data from each of these activities to see if a child is consistently demonstrating the priority learning target behavior across different settings.

Where should I collect data?

The next step is to consider is _where_ the data will be collected. The activities in which data collection should occur might depend on whether the child is acquiring a skill, becoming fluent with the skill, maintaining the skill, generalizing the skill, or adapting the skill. For example,
- ✓ If the child is _acquiring_ a skill, it would be important to collect data on the child's use of the skill in the activity in which the child is learning the skill.
- ✓ If you want to know if a child is _fluent_ with a skill, collect data during authentic opportunities for the child to use the skill.
- ✓ If you are interested in determining if the child _generalizes_ the skill across activities, you might want to collect data in an activity in which instruction is not targeted, but which represents a context in which the skill would be functional.

Who should collect data?

It is also important to designate _who_ will be collecting the data. It will be important to make a data collection schedule. This can be done in a variety of ways. For example, you could make a matrix that is primarily a data collection matrix – combining all of the decisions you just made for data collection. The data collection matrix specifies who collects the data, during what activities, and on what days. An example of a data collection matrix can be seen on the next page.

Data Collection Matrix

Schedule	Mia	Matthew
Arrival		
Morning Activity/Free Play	Name colors **Assistant-M, T, W**	
Breakfast	1-2 word request for object **Team Rotate Each Day-Daily**	
Circle		Move objects or himself in relation to another object or location **Assistant-Daily**
Table Games	1-2 word request for object **Activity Facilitator-Daily**	Hold marker/paintbrush and make markings on paper **Activity Facilitator-Daily**
Outdoor Play		Move objects or himself in relation to another object or location **Team Rotate Each Day-Daily**
Snack		
Centers	Name colors **Teacher-M, T, W**	Hold marker/paintbrush and make markings on paper **Teacher-Daily**
Departure		
Transitions		

54

Displaying and Analyzing Data

Selecting an appropriate way to display the data will depend on what you would like to know. Research suggests that graphing is an effective way to display data. When we use graphs, we are able to describe the child's performance and progress and make predictions about future performance. Different graphs can also help us identify relationships between the child's performance and other variables (e.g., activities or time of day).

You can use:

An Outline of Written Notes

Pie Charts

Level of Support Across Trials

- Independent
- Gestural or Pictorial Prompt
- Verbal Prompt
- Partial Physical Assistance
- Full Physical Assistance
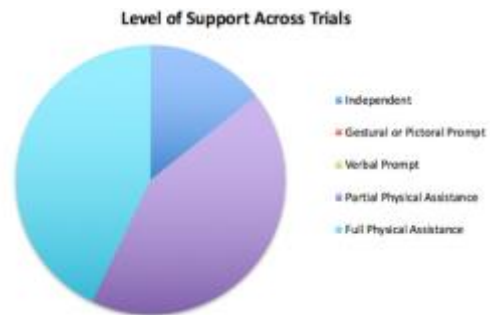
Tables with Tally Marks

	Activity	Occurrences	Total
10/20/2009 Time: 9:00-9:15	Center time	////	4
10/20/2009 Time: 10:30-10:45	Outdoor play	//	2
10/20/2009 Time: 11:20-11:40	Lunch		

Activity or Routine	Level of Support			
	I	V	PP	FP
Snack		✓✓	✓	
After Outside			✓✓	✓
Lunch	✓	✓✓		

I = independent   V = verbal prompt
PP = partial physical prompt   FP = full physical prompt,

Graphs (e.g., bar graph, line graph)
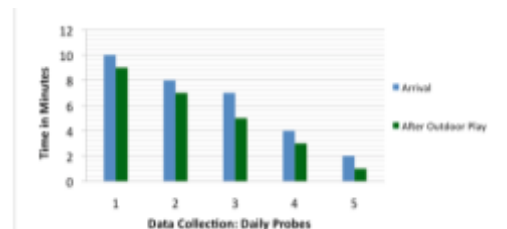
When deciding how to display data, consider with whom you will be sharing the data. If your main purpose is to share the data with the child's family, consider which display will be the clearest and most helpful for them in understanding their child's progress.

Depending on how the data are collected and displayed, they can provide information about a variety of different aspects of the child's progress. Here are some questions that data can help us answer:

> ▶ How often does the child perform the behavior?
>
> ▶ How accurately does the child perform the behavior?
>
> ▶ Which behavior(s) does the child do independently?
>
> ▶ What types of supports, adaptations, or assistance does the child need to perform a specific behavior?
>
> ▶ How long does the child perform the behavior?
>
> ▶ Is the child making progress?
>
> ▶ What influences child performance?

Do I Need to Make Changes?

Making Decisions

The diagram below shows the relationship between "*Am I doing it*?" and "*Is it working*?". Answering these two questions helps you decide whether you should continue with or revise your implementation of embedded instruction— "*Do I need to make changes?"*
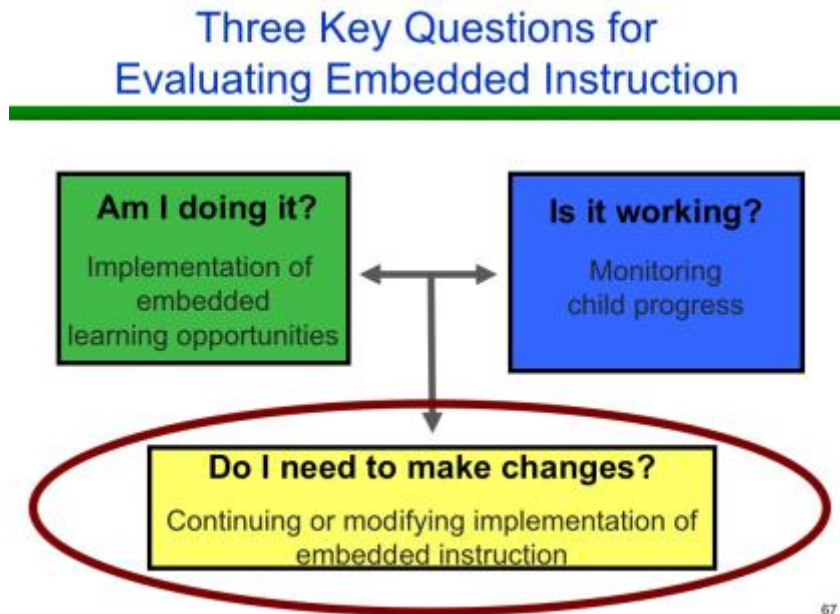
Continuing or Modifying Implementation

You need to evaluate how well you are implementing embedded instruction before determining if embedded instruction is working for the child.

➢ You might learn you have not implemented embedded instruction in the planned activities, or as frequently as you planned. You might also learn that the trials you are implementing are not implemented with fidelity (e.g., complete trials with an A-B-C). This suggests you need to work on implementing embedded instruction consistently and with fidelity.

➢ If you have implemented embedded instruction consistently as planned and with fidelity, but it is not working for the child, you might need to adjust your implementation of some of the components of complete learning trials to fit the child's phase and pace of learning.

➢ If the child is making progress, you may continue implementing embedded instruction as you have been or choose to develop a new priority learning target and/or instructional plan.

Using both sources of evaluation data (i.e., *Am I doing it?* and *Is it working?*) is necessary for making data-informed decisions about whether changes are needed.

What to do if the child is <u>not</u> making progress?

If the child's data show that he/she is not making progress, here are some things to consider:

- Look at the implementation data you collected:

  - ✓ Examine the amount of trials you actually delivered
  - ✓ Compare the number of complete learning trials delivered to the number of incomplete learning trials

- Revisit your plan. Changes you might consider are:

  - ✓ Adjusting the amount of embedded learning opportunities planned for the priority learning target or activity
  - ✓ Changing the behavior targeted (e.g., if the behavior is too hard for the child, consider breaking it down into smaller steps or a more achievable behavior)
  - ✓ Changing antecedents or consequences
  - ✓ Changing accommodations, modifications, or instructional procedures
  - ✓ Changing the type or timing of prompts
  - ✓ Changing the activities in which you embed learning trials
  - ✓ Changing the instructional context by considering the peers and materials involved

- Closely examine days when the child is more responsive:

  - ✓ Reconsider the child's preferences for times of day, activities, materials, or certain peers that may make a difference in his or her response
  - ✓ Think about differences in the way you delivered trials on days that the child was more responsive

What to do if the Child has Made Progress or Achieved the Priority Learning Target

You might adjust the performance criteria by considering the different phases of learning (i.e., acquisition, fluency, maintenance, generalization, and adaptation). For example, if the data indicate the child has met the performance criteria with respect to acquisition, you might change the criteria to reflect fluency.

Another option is to increase the complexity of the desired behavior. For example, you might have the child make 3-word requests rather than 1-word requests.

You might decide to write a new priority learning target, if the child has met criteria for the specified target. This decision will be based on the child's IEP goals and activity-focused assessment data about what additional skills the child needs to learn to be engaged and to access and participate in the early learning environment.

Examples of Data-Informed Decision Making

This section describes six priority learning targets. Following the priority learning target, each case illustrates how to collect and display data and how to consider (a) *"Is it working?"*, (b) *"Am I doing it?",* and (c) *"Do I need to make changes?".* Types of data described in this section include:

➢ Frequency Data
➢ Accuracy Data
➢ Level of Support
➢ Duration Data
➢ Latency Data
➢ Endurance Data

Frequency Data

Frequency data give information about the number of times a child demonstrates a target behavior within a specified period of time. The period of time can be an interval (e.g., 15 seconds) or an entire activity/event (e.g., circle, snack, centers).

Example Priority Learning Target

• Mia will independently request objects using 1-2 words (e.g., "want ball," "bowl") during breakfast, snack, and table games on 3 occasions each day for five consecutive days.

Collect Data

Day	Activity	Count
Monday	*Breakfast*	**/**
	Snack	
	Table Games	**/**
Total		2
Tuesday	*Breakfast*	**/**
	Snack	**/**
	Table Games	**/**
Total		3

Day	Activity	Count
Wednesday	*Breakfast*	**/**
	Snack	
	Table Games	**/**
Total		2
Thursday	*Breakfast*	
	Snack	
	Table Games	**/**
Total		1
Friday	*Breakfast*	
	Snack	**/**
	Table Games	**/**
Total		2

Display Data

1-2-word request for an object
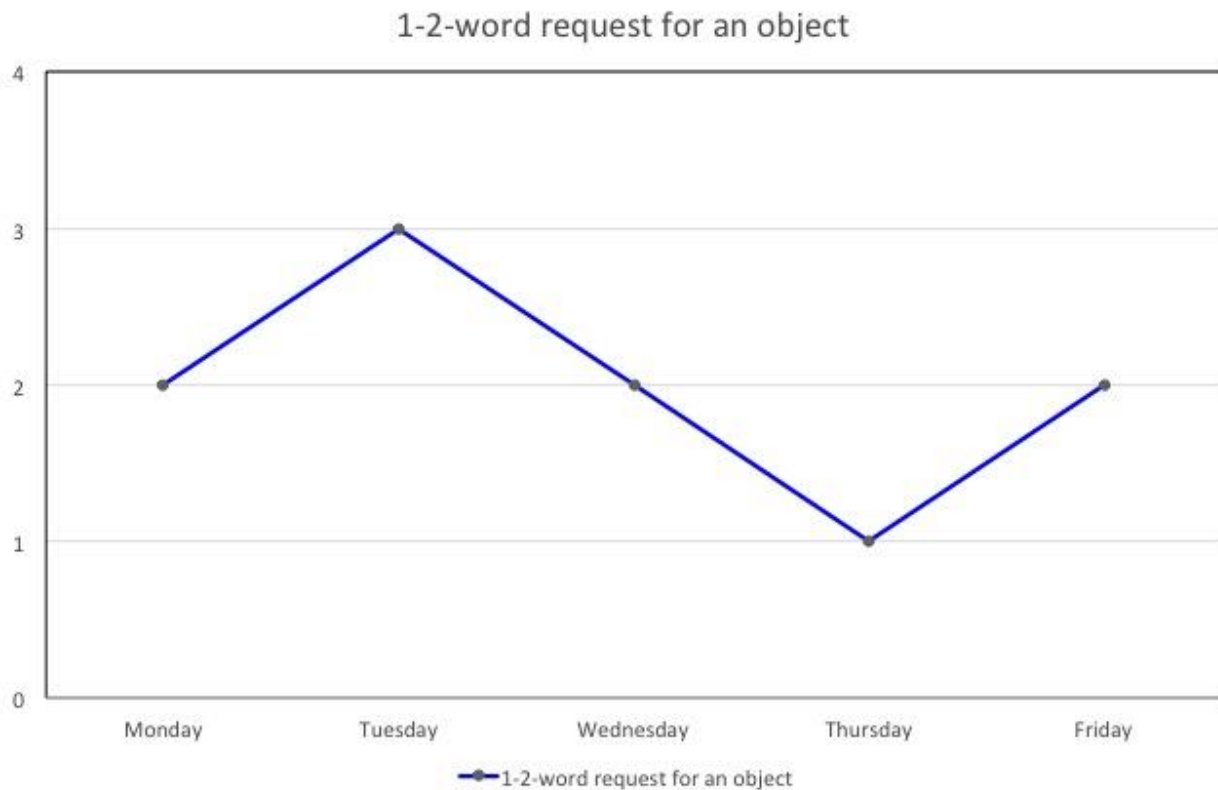
Interpret Child Performance Data (*Is it Working?*)

When you look at Mia's performance over the week, you see there is variability in the number of times she performed the target behavior each day. You can also see she is not meeting the criteria of 3 occasions each day for five consecutive days.

Interpret Data on Your Implementation (*Am I Doing it?*)

Your assistant teacher has collected the data on your implementation and, together, you review it to see if the quality of implementation is affecting Mia's performance. When you look at the data, you determine you are delivering the planned number of learning trials and they are complete learning trials.

Make a Decision (*Do I Need to Make Changes?*)

Where should you go from here? You have implemented embedded instruction with fidelity, but Mia is still not making progress toward the priority learning target. At this point, you should revisit your plan and make some changes. On your instructional plan, you have designated the antecedent to be visible materials and an expectant look. When you review Mia's performance, you decide the antecedent does not consistently elicit the targeted behavior. For the following week, you decide to change your instructional plan to use a question, which gives Mia a choice paired with a visual prompt for the antecedent (e.g., "Mia, do you want goldfish or pretzels?" [show snack]). You will continue to collect data on your implementation of embedded instruction (Am I doing it?) and Mia's performance (Is it working?) to see if this new plan will work.

Accuracy Data

Accuracy data reflect the extent to which the child performs the behavior correctly or how well the child demonstrates the behavior. Accuracy can be measured by percent of correct demonstrations.

Example Priority Learning Target

- Davion will count sets of up to 3 moveable objects (e.g., blocks, toy cars, crackers) when asked by an adult, during centers, free play, and snack for 80% of the opportunities across a day for two consecutive days.

Collect Data

In order to measure the accuracy with which Davion is performing his target behavior, you must determine the performance standard. In this case, there are two pieces of information required to make this determination:

1. Is he performing the behavior indicated within the priority learning target?
   - ➢ **Count sets of up to 3 moveable objects**

2. Is he performing the behavior to the criterion indicated in the priority learning target?
   - ➢ **80% of opportunities across a day for two consecutive days**

To measure accuracy, you can examine the percentage of correct behaviors observed. One way to do this would be to make a table that allows you to record the number of times Davion has an opportunity to perform the behavior and the number of times Davion performs the behavior according to the criteria specified in his priority learning target.

For example, the following table might be used to collect data:

Days	Activity	Target Behavior	Opportunities	Proportion and Percentage
Monday	Centers	///	/////	3/5 = 60%
	Free play	////	////	4/4 = 100%
	Snack	//	///	2/3 = 67%
Total		9	12	75%
Tuesday	Centers	/	////	1/4 = 25%
	Free play	//	////	2/4 = 50%
	Snack	////	////	4/4 = 100%
Total		7	12	58%
Wednesday	Centers	/	////	1/4 = 25%
	Free play	/	////	1/4 = 25%
	Snack	////	/////	4/5 = 80%
Total		6	13	46%
Thursday	Centers	///	///	3/3 = 100%
	Free play	///	////	3/4 = 75%
	Snack	///	/////	3/5 = 60%
Total		9	12	75%
Friday	Centers	//	////	2/4 = 50%
	Free play	//	////	2/4 = 50%
	Snack	//	////	2/4 = 50%
Total		6	12	50%

Display the Data

Once you have collected data across multiple activities and days, you can display the data to determine the accuracy with which Davion is performing his priority learning target.

Count sets of up to 3 moveable objects
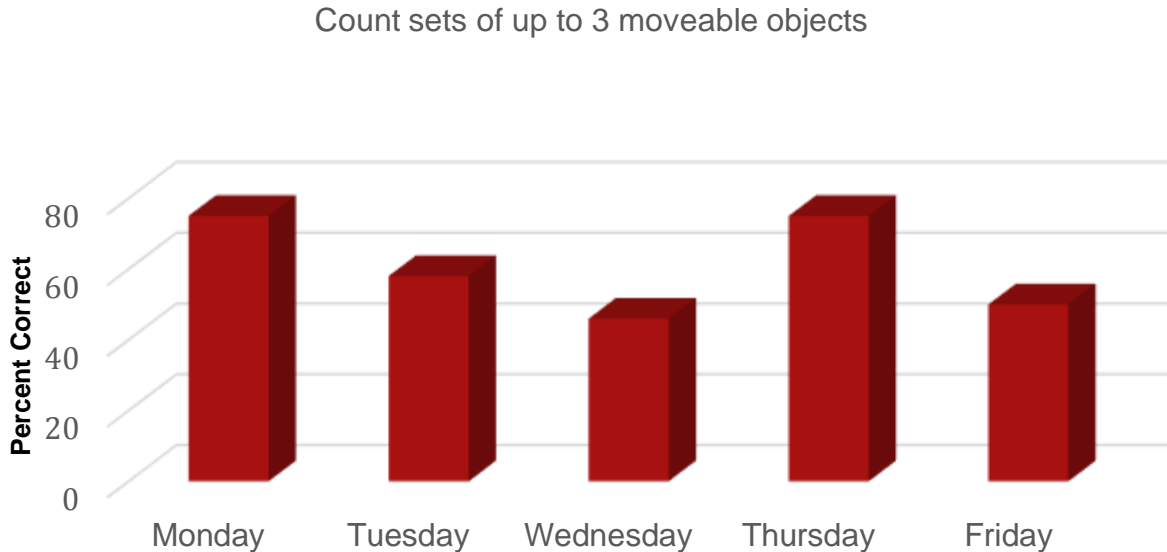
Interpret Child Performance Data (*Is it Working*?)

Data on the percentage of opportunities for which Davion correctly counted sets of up to 3 moveable objects shows that he has not yet demonstrated the target behavior in 80% of opportunities presented across a day for 2 consecutive days. His performance on Monday and Thursday was up to 75%, but it was inconsistent throughout the week for this priority learning target. To identify possible reasons for the variability in Davion's performance, it is important to review your implementation and the activities in which you embedded your instruction.

Interpret Data on Your Implementation (*Am I Doing it?*)

You find that Davion demonstrated the target behavior most accurately during snack time, but there were some days where his accuracy was higher in centers or free play. After collecting data on your implementation of complete learning trials with Davion, your classroom assistant told you that, when you were sitting next to him and providing systematic opportunities for him to practice, all of the learning trials you delivered were complete learning trials. She noted that during centers and free play, you continued to deliver learning trials, but there were times you didn't provide additional help for Davion when he didn't demonstrate the target behavior because you were interacting with other children. On the days you provided additional help, the percent of trials in which the target behavior occurred was higher.

Make a Decision (*Do I Need to Make Changes?*)

Based on the evaluation data from both your implementation and Davion's performance, you may decide to pay better attention (i.e., not accept approximations) to Davion's behavior and to deliver additional help when he does not demonstrate the behavior during centers and free play. Your correct implementation will help Davion improve his counting and generalize it to the other settings. You may also review your activity matrix and decide to distribute trials more carefully across activities and routines, so Davion has more opportunities to practice counting during activities and routines that are meaningful to him and feasible for you and your team.

Level of Support

Data on the level of support tell us how much assistance a child requires (e.g., independently, without support, with hand-over-hand) to complete a task.

Example Priority Learning Target

* Matthew will hold a marker or paintbrush and make markings on a piece of paper during art activities at table games, and centers. Matthew will make at least 6 markings in one activity each day for four consecutive days.

Collect Data

In this example, the criterion statement suggests it would be important to collect data on the number of markings Matthew makes (i.e., frequency). In addition, his target does not specify that he will make markings with assistance, so you might be interested in knowing how many markings Matthew makes independently in comparison the number of times he needs assistance to make markings. You may use a simple system composed of tally marks or a checklist. Your data collection sheet may look as follows:

Day	Activity	Performance I= Independent M= Following Model P= Physical Prompt	Independent Responses
Monday	*Table Games*	**P P P I I I**	**3/6**
	Centers	**I I I I I I**	**6/6**
Total			9/12
Tuesday	*Table Games*	**M P P P P P**	**0/6**
	Centers	*Went home sick*	*NA*
Total			0/6

Day	Activity	Performance I= Independent M= Following Model P= Physical Prompt	Independent Responses
Wednesday	*Table Games*	*Absent*	*NA*
	Centers	*Absent*	*NA*
Total			N/A
Thursday	*Table Games*	**P P M M M M P**	**0/7**
	Centers	**I I I I I I I I I**	**9/9**
Total			9/16
Friday	*Table Games*	**M M I I M I**	**3/6**
	Centers	**M M I I I I I**	**5/7**
Total			8/13

Display Data

Level of Support—Markings on Paper
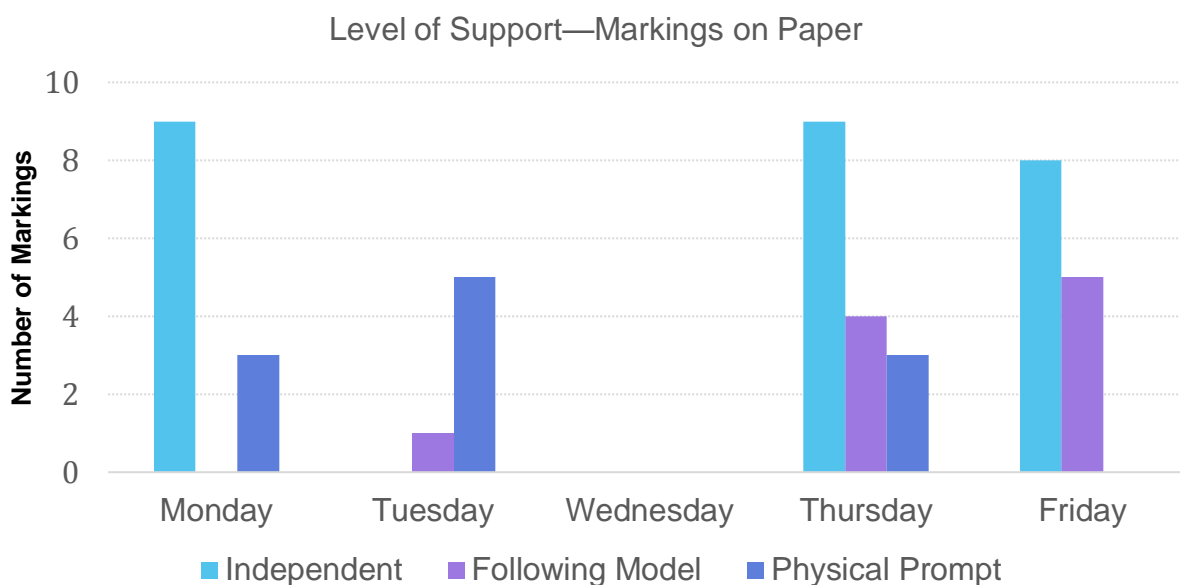
Interpret Child Performance Data (*Is it Working?*)

You examine the total number of markings made per day and what level of support was provided. You also examine what percentage of total markings across the week were made independently, with a model, or with a physical prompt. From these data, you conclude that Matthew is making progress towards his target behavior, but has not mastered the skill yet. On Monday and Thursday, he independently demonstrated the behavior during centers, but he required additional help (e.g., following a model or physical prompt) for half or more of his opportunities in art activities at table games. He went home early on Tuesday and did not come to school Wednesday. You will need to collect more data next week.

LEVEL OF SUPPORT

Pie chart: Physical 24%, Model 21%, Independent 55%
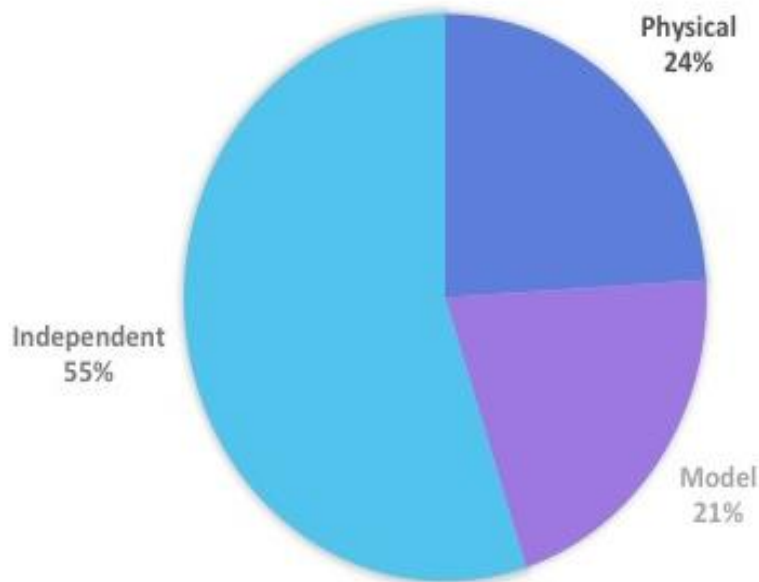
Interpret Data on Your Implementation (*Am I Doing it?*)

The data you collected by viewing the video footage of your implementation of embedded instruction during table games and centers showed that you delivered learning trials with 100% fidelity. You provided opportunities for Matthew to demonstrate his target behavior and implemented the components of complete learning trials with fidelity. In fact, you provided more trials than planned during some activities!

You also looked back at your lesson plans and noticed that Matthew prefers to paint and typically only uses markers when the easel is available.

Make a Decision (*Do I Need to Make Changes?*)

Data you collected about Matthew's performance on the target behavior indicate he is making progress and data collected on your performance indicate you are delivering complete learning trials. This information might lead you to decide to keep working on the same behavior in coming week without making any adjustment to your implementation. Or perhaps, you might try a modification to promote his independence during art activities at table games by providing an inclined surface for Matthew to enhance the position of his arm at the table when he is using markers or paintbrushes.

Duration Data

Duration data reflect the length of time it takes to <u>complete</u> a response.

> Duration can be expressed as:
> - Total duration
> - Duration per occurrence of behavior
> - Percent of time (50% of total time)

Example Priority Learning Target

- Lily will complete a 1-step direction within 1 minute (e.g., Hang up backpack, go to the table, line up) of hearing the direction, when verbally directed by an adult during morning activity, breakfast, and transitions for 4 out of 5 opportunities provided each day for 1 week.

Collect Data

In this example, you have specified the activity Lily is participating in on the data collection form below. This information may be important when analyzing the data later. You have completed the data collection form as follows:

- = Desired behavior <u>did not</u> occur in this minute

+ = Desired behavior <u>did</u> occur in this minute

AH= Additional Help

Student: *Lily*   **Date:** *Wednesday*   **Activity:** *Morning Activity*

Direction	Time (in minutes)					Notes
	1	2	3	4	5	
Teacher: "Lily, sign in."	-	+ AH				*Gestural prompt from mom*
Teacher: "Lily, hang up your backpack."	-	-	-	+ AH		*Watches other children unpacking; Hand-over-hand*
Paraprofessional: "Lily, pick lunch."	-	+ AH				*Gestural prompt from paraprofessional to pick visual cue card*
Teacher: "Lily, go to the sink."	+					*Touches shoulder and points when direction is provided*
Teacher: "Lily, go to the carpet."	+					*Touches shoulder and points when direction is provided.*

The data collection form shows data for one day; however, you will collect data each day of the week during different activities, as noted in the priority learning target.

Display Data

Complete 1-step direction within 1 minute
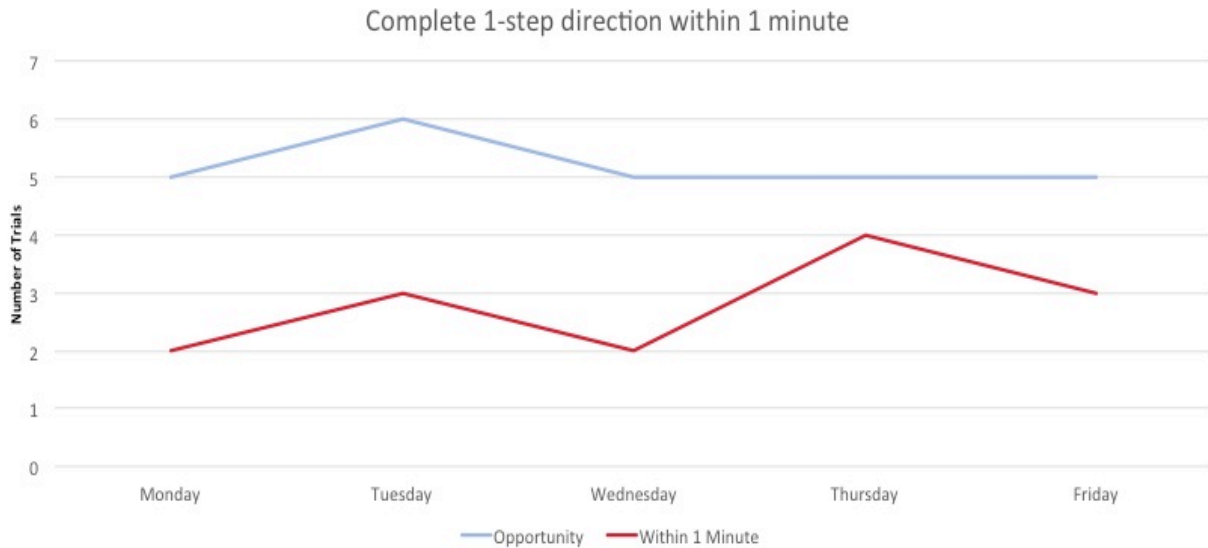
Interpret Child Performance Data (*Is it Working?*)

In the graph above, you compiled data each day of the week.

First, you should look at whether Lily has reached the criterion, "complete a 1-step direction within 1 minute for 4 out of 5 opportunities provided each day for 1 week." The graph shows that she reached her goal on Thursday. Lily has accomplished the first part of the criterion, which was complete a 1-step direction within 1 minute. However, the second part of the criterion is that she maintains the behavior for 5 consecutive days. She has only reached the criterion once.

Interpret Data on Your Implementation (*Am I Doing it?*)

You think about whether something different occurred on Thursday that may have helped to increase Lily's performance.

- – Did you deliver more learning trials on these days compared to other days? No
- – Did you deliver more *correct* learning trials on these days? No
- – Did you spend more time with Lily? No
- – Did you deliver the antecedent differently? Yes
- – Was the activity or consequence more rewarding for Lily? Not sure

The data collection notes you recorded on Wednesday show Lily was able to complete 1-step directions within 1 minute when a gestural prompt was provided with the natural cue.

Make a Decision (*Do I Need to Make Changes?*)

You decide to modify the instructional plan and your implementation for next week—pairing a gestural prompt with the natural cue (verbal direction).

Latency Data

Latency data reflect how long it takes a child to <u>initiate</u> the target behavior (i.e., response onset) once an antecedent has occurred (i.e., prompt or stimulus is presented).

Example Priority Learning Target

- When an adult gives a group or individual directive/request (e.g., "Put your toys away," "Time to clean up," "Please put on your coat,"), Kiera will respond with a verbal or motor action **within 1 minute of the direction/request**, at least 4 times a day for five consecutive days.

Collect Data

For this behavior, you might count the number of times Kiera does the behavior (e.g., begins to pick up a toy) within 1 minute of the direction/request (antecedent) or you might time how much time elapses from the antecedent to the time Kiera initiates a response. The table below shows both of these types of data.

Data Collection Form							
Days of the Week	\# of opportunities presented and **time** between a teacher direction and initiation of the behavior (**in seconds**)						Summary Total \# of responses w/in 1 minute
Monday	1 *87*	2 *96*	3 *82*	4 *81*	5 *79*	6 *90*	*0*
Tuesday	1 *65*	2 *75*	3 *73*	4 *75*	5 *78*	6 *71*	*0*
Wednesday	1 *61*	2 *58*	3 *66*	4 *59*	5 *69*	6 *70*	*2*
Thursday	1 *55*	2 *58*	3 *58*	4 *66*	5 *64*	6 *60*	*4*
Friday	1 *72*	2 *66*	3 *60*	4 *60*	5 *54*	6 *58*	*4*

Display Data
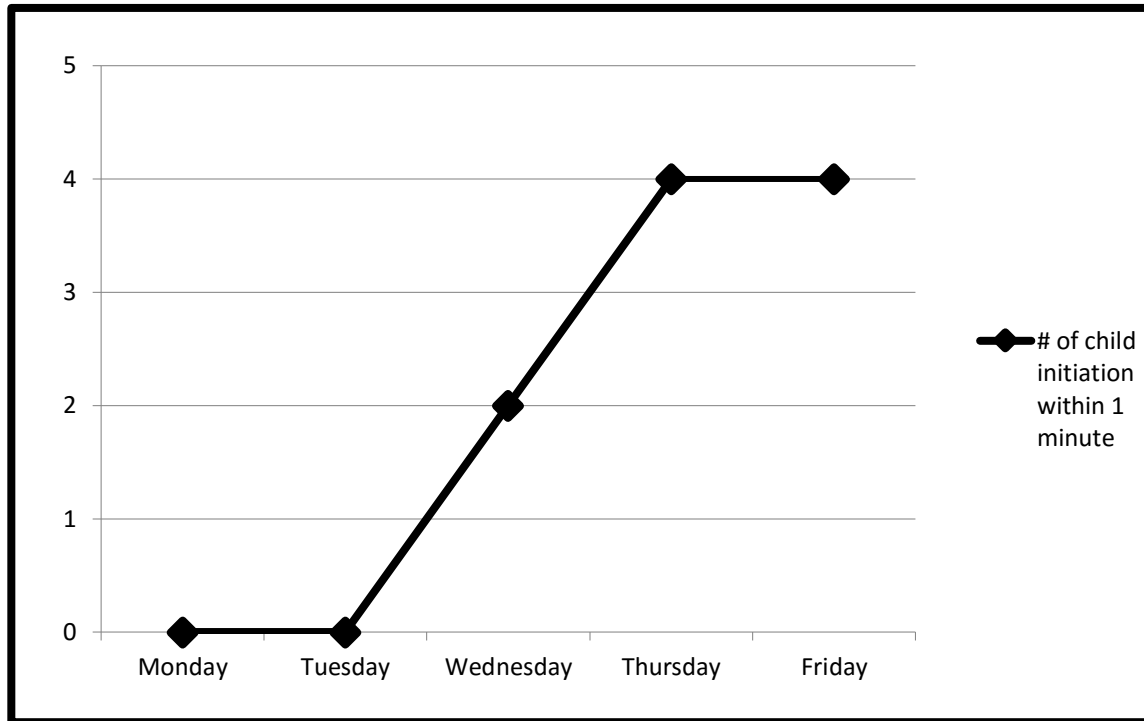
Interpret Child Performance Data (*Is it Working?*)

Data show that although Kiera did not begin to perform the behavior at criterion level in the first 3 days of the week, she had 4 behavior initiations within 1 minute following a teacher direction on Thursday and Friday. The data show an increasing pattern, which demonstrates that the she is making progress toward mastering the priority learning target and meeting the criterion of '4 times a day for five consecutive days'.

Interpret Data on Your Implementation (*Am I Doing it?*)

Data collected on your delivery of learning trials showed that you delivered learning trials correctly 90% of the time. However, you also noticed that for some trials on Monday and Wednesday, you did not wait 1 minute to allow her to begin to perform the behavior before providing a physical prompt.

Make a Decision (*Do I Need to Make Changes?*)

Child performance data show Kiera is making progress toward acquiring the skill. However, you only have 2 data points at the criterion level in the current week. Therefore, you need to work with Kiera on the same skill in coming week(s), while paying attention to the amount time (1 min) you provide her to initiate a response after your task direction/request.

Endurance Data

Endurance data show how long, how far, or how many times a child can emit a target behavior before she/he fatigues. Endurance data help address a child's "capacity" to perform a target behavior.

Example Priority Learning Target

- With the assistance of her walker, Shaira will take 15 steps (e.g., on the playground, from one building to another, leaving or walking to the bus) without stopping to take a break. She will do this four times over the course of two days.

Collect Data

To collect data on this target you can create a distance scale shown in the data collection form below.

Key: Complete the key below by qualifying the behavior.

0= _0-4 steps_   **1=**_5-9 steps_   **2=**_10-14 steps_   **3=** _15 steps+_

Time of Day	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Leaving bus	0 1 ② 3	0 1 ② 3	0 ① 2 3	0 1 2 ③	0 1 2 ③
To lunch	0 ① 2 3	0 ① 2 3	0 1 ② 3	0 1 2 ③	0 1 ② 3
To recess	0 1 2 ③	0 1 ② 3	0 1 ② 3	0 ① 2 3	0 1 ② 3
To class	0 ① 2 3	0 ① 2 3	0 ① 2 3	0 ① 2 3	0 1 2 ③
To bus	⓪ 1 2 3	⓪ 1 2 3	0 1 2 ③	0 1 ② 3	0 ① 2 3
Total 3's circled	_1_	_0_	_1_	_2_	_2_

Display Data

15+ Steps

Key: **0=** *0-5 steps*   **1=***6-10 steps*   **2=***11-15 steps*   **3=** *15 steps+*

Interpret Child Performance Data (*Is it Working*?)

According to the scale, a score of 3 indicates that Shaira has reached her goal of walking 15 steps (or more) without stopping, when her walker was accessible. You have totaled how many instances this happened each day and graphed it. Looking at the graph, it is clear that the Shaira reached the criterion of walking at least 15 steps four times across two days. This occurred on Thursday and Friday.

Interpret Data on Your Implementation (*Am I Doing it?*)

Looking at the data you collected on your implementation, it is clear that you have been delivering all of the complete learning trials that you have planned.

Make a Decision (*Do I Need to Make Changes?*)

Where do we go from here? Just because the child has achieved this priority learning target does not mean that you no longer need to embed trials! It is time to write a new priority learning target. One idea is to use the original priority learning target as the beginning foundation and increase the performance criterion, either by extending how many consecutive days you would like to see the behavior occur or by increasing the number of steps you would like her to walk without stopping. You should also consider whether another behavior or skill is a higher priority for you to focus on for the next few weeks, while continuing to support the maintenance of Shaira's ability to use her walker to move from place to place.

Wrap-Up

Data Collection Tips

These tips are provided to give you ways to think about collecting data. They can be used to collect data on your implementation of embedded instruction (*Am I doing it?)* and to monitor your target child's progress (*Is it working?).*

Pocket Counting: Transfer pennies or other small objects from one pocket to another each time a target behavior is observed or a complete learning trial is delivered. Count the number of pennies transferred to measure the ***frequency*** of the target behavior or complete learning trials.

Empty Jar: Drop pennies or other small objects into a jar each time a target behavior occurs or a complete learning trial is delivered. Count the number of pennies in the jar to measure the ***frequency*** of the target behavior or complete learning trials.

Masking Tape or Wide Rubber Band on Wrist: Write the names and target behaviors on masking tape or on rubber bands placed around your wrist. Record slash marks next to the appropriate behavior. Or, make slash marks on the masking tape or rubber band each time a complete learning trial is delivered. At the end of class, count the slash marks for a ***frequency*** count. Or, wear thin rubber bands of different colors for each priority learning target, move the bands from one wrist to the other as the trials are implemented or behaviors are observed.

Clipboards: Clipboards can be organized so that there is a separate clipboard for each target behavior, a separate clipboard for each child with priority learning targets, or a clipboard for each center or area in which data is collected. Clipboards can also hold charts for collecting data on teacher implementation of embedded instruction. Pre-made data collection sheets can be on the clipboard or just paper for anecdotal notes. The clipboards can be gathered and data recorded permanently at the end of the day.

Small spiral notebook: A small pocketsize notebook can be used to jot down data. During a break or at the end of the day, information can be recorded permanently.

Apron: An apron with pockets can be worn during class. Data taken on small notes can be collected on small piece of paper stored in the pockets. These can be permanently recorded at the end of the day.

Video: Activities can be videotaped to see if a behavior is occurring or to determine when complete learning trials are being delivered.

Golf or Lap Counters: A counter can be kept in a pocket or on a belt loop. Pressing each time a behavior occurs or a complete learning trial is delivered records ***frequency.***

Anecdotal Notes: Notes can be written to describe how much and what type of assistance children need to complete tasks, as well as number of trials delivered.

Learning Trial Implementation

Quality Checklist

Review data to determine if trials were implemented correctly. Check for the features described in the table below.

Features	Criteria
✓ Did you implement **complete** learning trials?	Each learning trial has an antecedent, a behavior, additional help (if needed), and a consequence or feedback.
✓ Were all the materials needed to implement the planned **antecedents** available?	All materials needed are available and are placed strategically in the classroom where they will be used.
✓ Were the **antecedents** appropriate?	Antecedents were appropriate to elicit the priority learning target behavior, matched the child's phase and pace of learning, and fit naturally into the ongoing activity.
✓ Did the priority learning target **behavior** occur?	The child performs the behavior as expected, either following the antecedent or with additional help.
✓ If an **additional help** (prompt) was provided, were the steps of the procedure followed correctly? Was it helpful?	The additional help (prompts) should help the child perform the targeted behavior. Check to see if too much or too little help was provided for the child as part of the antecedent or the additional help.
✓ Were planned **consequences** delivered?	Consequences should occur immediately after the target behavior. Consequences should be appropriate for the child and fit into the on-going activity.
✓ Was **feedback** provided?	If the target behavior did not occur after additional help was provided, it is important to provide feedback that tells or shows the child what behavior was expected.

References

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Recommended Readings:

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Otrosky, M. & Horn, E. (2002). *Young exceptional children monograph No. 04: Assessment: Gathering meaningful information [Monograph].* New York, NY: Sage.

Recommended Website:

National Center for Quality Teaching and Learning—15 minute In-service Suites http://eclkc.ohs.acf.hhs.gov/hslc/tta-system/teaching/practice/iss-library.html

Appendix

The following pages contain sample data collection forms that can be copied or adapted for your use. While the form may be labeled, according to the type of data collected, that does not mean each form is limited to only that type of data. Make the forms your own, depending on what fits your needs!

Frequency Data

Name: _____   **Date**_____

What I am looking for: _____

Activity	Count	Total	Comments

Accuracy – Measuring level of assistance in one activity with multiple steps

Name: _____

Learning Target:
Criteria:

Date:

Trial	1	2	3	4	5
Break LT down into smaller steps					
Assistance	I	I	I	I	I
	G/V	G/V	G/V	G/V	G/V
	PP	PP	PP	PP	PP
	FP	FP	FP	FP	FP
	R	R	R	R	R

Date:

Trial	1	2	3	4	5
Break LT down into smaller steps					
Assistance	I	I	I	I	I
	G/V	G/V	G/V	G/V	G/V
	PP	PP	PP	PP	PP
	FP	FP	FP	FP	FP
	R	R	R	R	R

Date:

Trial	1	2	3	4	5
Break LT down into smaller steps					
Assistance	I	I	I	I	I
	G/V	G/V	G/V	G/V	G/V
	PP	PP	PP	PP	PP
	FP	FP	FP	FP	FP
	R	R	R	R	R

KEY: I- Independent
G/V- Gestural/Verbal Prompt
PP-Partial Physical Prompt
FP-Full Physical Prompt
R-Resistance/Refusal

For the trials: Break the learning target down into the multiple steps. For example:
    Trial 1: Get coat off the hook
    Trial 2: Put on coat
    Trial 3: Fasten fasteners (snaps, buttons, zipper

Developed at the Experimental Education Unit
University of Washington

Accuracy – Measuring Level of Assistance across Multiple Activities

Name: _____ **Date:** _____

Learning Target:

Criteria:

Date	Activity	Prompts	Date	Activity	Prompts	Date	Activity	Prompts
		I G/V PP FP R			I G/V PP FP R			I G/V PP FP R
		I G/V PP FP R			I G/V PP FP R			I G/V PP FP R
		I G/V PP FP R			I G/V PP FP R			I G/V PP FP R
		I G/V PP FP R			I G/V PP FP R			I G/V PP FP R
		I G/V PP FP R			I G/V PP FP R			I G/V PP FP R
		I G/V PP FP R			I G/V PP FP R			I G/V PP FP R
		I G/V PP FP R			I G/V PP FP R			I G/V PP FP R
		I G/V PP FP R			I G/V PP FP R			I G/V PP FP R
		I G/V PP FP R			I G/V PP FP R			I G/V PP FP R
		I G/V PP FP R			I G/V PP FP R			I G/V PP FP R
		I G/V PP FP R			I G/V PP FP R			I G/V PP FP R
		I G/V PP FP R			I G/V PP FP R			I G/V PP FP R
		I G/V PP FP R			I G/V PP FP R			I G/V PP FP R
		I G/V PP FP R			I G/V PP FP R			I G/V PP FP R
		I G/V PP FP R			I G/V PP FP R			I G/V PP FP R
		I G/V PP FP R			I G/V PP FP R			I G/V PP FP R

Key: **I** = Independent **G/V** = Gestural/ Verbal **PP** = Partial Physical Assistance **FP** = Full Partial Assistance **R** = Refusal

Duration Data Collection Form

Name: _____

Learning Target: _____

Date: _____

Activity	Time (in second or minutes)	Notes
	1 2 3 4 5 6 7 8 9 10	
	1 2 3 4 5 6 7 8 9 10	
	1 2 3 4 5 6 7 8 9 10	
	1 2 3 4 5 6 7 8 9 10	
	1 2 3 4 5 6 7 8 9 10	
	1 2 3 4 5 6 7 8 9 10	
	1 2 3 4 5 6 7 8 9 10	
	1 2 3 4 5 6 7 8 9 10	

Latency Data Collection Form

Child: _____

Week of: _____

Target Behavior: _____

Criterion: _____

Days of the Week	# of opportunities presented Time between a teacher direction and initiation of the behavior (in seconds)								Summary Total # of correct responses
Monday	1	2	3	4	5	6	7	8	
Tuesday	1	2	3	4	5	6	7	8	
Wednesday	1	2	3	4	5	6	7	8	
Thursday	1	2	3	4	5	6	7	8	
Friday	1	2	3	4	5	6	7	8	

Behavior Likert Scale for Intensity or Endurance Behaviors

Name: _____ Date: _____

Priority Learning Target: _____

Activity/ Time of Day	Monday	Tuesday	Wednesday	Thursday	Friday
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Average Score:	Average ____	Average ____	Average ____	Average ____	Average ____

Key: Complete the key below by qualifying the behavior. 0 would be no occurrence going to 3 being the most severe.

0= _____   1= _____   2= _____   3= _____

Event Recording

Form 1: Frequency over time

Student: _____ Observer: _____

Behavior: _____

_____

	Date	Time Start Stop	Notations of Occurrences	Totals
1				
2				
3				
4				
5				
Weekly total				
1				
2				
3				
4				
5				
Weekly total				

Number of Events

Dates of Observation
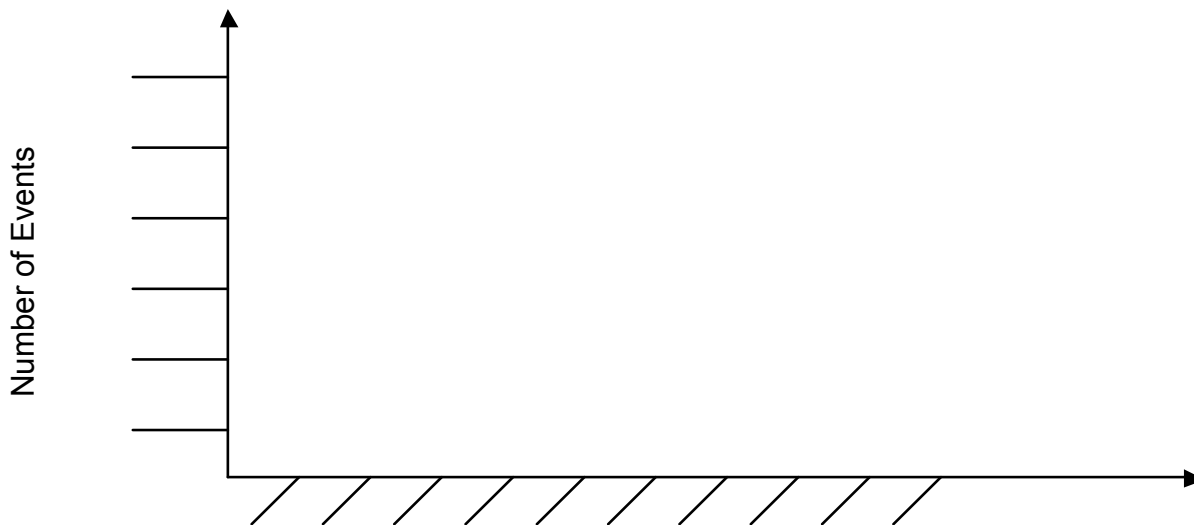
Interval Recording

Name_____   **Date** _____

_____ Interval

Activity _____
Observer _____
Condition_____

Interval	Behavior _____	Engaged (+/-)	Prompt (+/-)	Interval	Behavior _____	Engaged (+/-)	Prompt (+/-)
1				36			
2				37			
3				38			
4				39			
5				40			
6				41			
7				42			
8				43			
9				44			
10				45			
11				46			
12				47			
13				48			
14				49			
15				50			
16				51			
17				52			
18				53			
19				54			
20				55			
21				56			
22				57			
23				58			
24				59			
25				60			
26				61			
27				62			
28				63			
29				64			
30				65			
31				66			
32				67			
33				68			
34				69			
35				70			

Weekly Record of Behavior Occurrence

Child: _____

Learning Target: _____

Criteria: _____

	6am	7	8	9	10	11	12pm	1	2	3	4	5	6	7	8	9	night
Mon																	
Tues																	
Wed																	
Thurs																	
Fri																	
Sat																	
Sun																	

Key

Student Initiated: _____

Teacher Assisted: _____

Other behavior: _____