




# Evaluating Implementation to Support Students & Schools

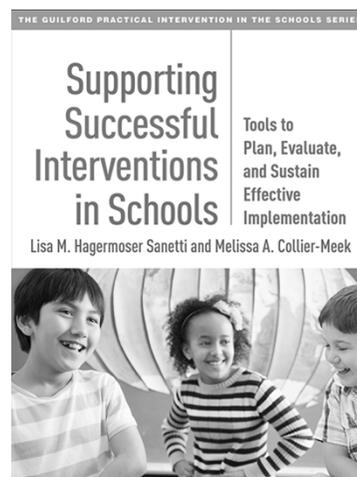
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## Conflict of Interest Statement

- Drs. Sanetti & Collier-Meek published a Guilford text on supporting implementation of school-based interventions, which they receive royalties from.



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## Learning Objectives:

- *Attendees will learn how to develop intervention fidelity tools for any intervention and make a plan to monitor implementation*
- *Attendees will practice how to graph and analyze intervention fidelity data alongside student outcomes to determine next steps*
- *Attendees will apply their intervention fidelity knowledge and practice to develop concrete action items to support a case in their setting*

## Agenda

- What is intervention fidelity and why should we care?
- Assess intervention fidelity
  - Creating intervention fidelity tools
  - Making a plan for collecting intervention fidelity data
- Evaluate intervention fidelity data
- Analyzing intervention fidelity and student outcome data





# Intervention Fidelity

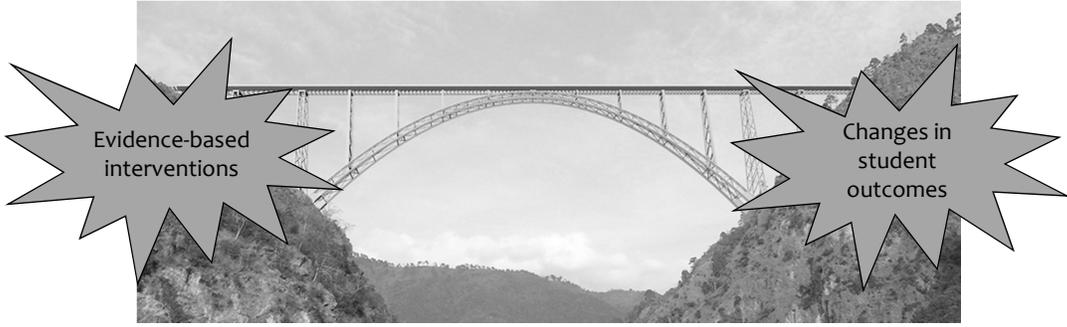
What is it? Why should I care?

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## What do we mean when we say intervention fidelity?



Evidence-based interventions

Changes in student outcomes

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## What do we mean when we say intervention fidelity?

### Adherence

- To what extent does the implementer deliver the intervention?

### Quality

- To what extent is the implementer enthusiastic, timely, and responsive when delivering the intervention?

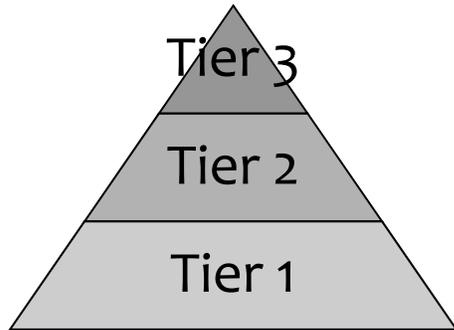
### Exposure

- How much time does the implementer spend delivering the intervention?

## Why is intervention fidelity important?

- Bridge between evidence-based interventions and student outcomes
- Key to quick and positive improvements in student outcomes
- Ensures we're not wasting our time on ineffective practices, extra meetings
- Documents that we did what we said (especially important for SPED)

## Why is intervention fidelity *especially important* for multi-tiered systems of support (MTSS - PBIS, RTI)?



- What happens if a group of students isn't doing well despite having MTSS at our school?
- We provide more intensive intervention support!
- But, what if the issue was actually implementation?!

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## Background

- 7<sup>th</sup> Grade MTSS Team
  - You!
  - Math Teacher: Mr. Feeny
  - English Teacher: Mr. Turner
  - Social Studies Teacher: Ms. Tompkins
  - Check-In/Check-Out Coordinator: Mr. Williams
- Students
  - Corey
  - Topanga

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## Identify a Learner Concern

- 7<sup>th</sup> Grade MTSS Team meets to discuss Office Discipline Referrals and grades
- Behavior concerns: “Disruptive behavior”
  - Calling out answers, talking about non-academic subjects with peers, walking around the room, using materials not needed for assignments
  - Cory, Topanga

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## Collect Baseline Data

- Teacher ratings (0-2) on following school-wide expectations

	Teacher Initials	Respectful			Responsible			Safe		
		0	1	2	0	1	2	0	1	2
Period 1		0	1	2	0	1	2	0	1	2
Period 2		0	1	2	0	1	2	0	1	2
Period 3		0	1	2	0	1	2	0	1	2
Period 4		0	1	2	0	1	2	0	1	2
Period 5		0	1	2	0	1	2	0	1	2
Period 6		0	1	2	0	1	2	0	1	2
Period 7		0	1	2	0	1	2	0	1	2
Total Points		_____ / 14			_____ / 14			_____ / 14		
		Overall Points: _____ / 42			Today's %: _____			Goal %: _____		

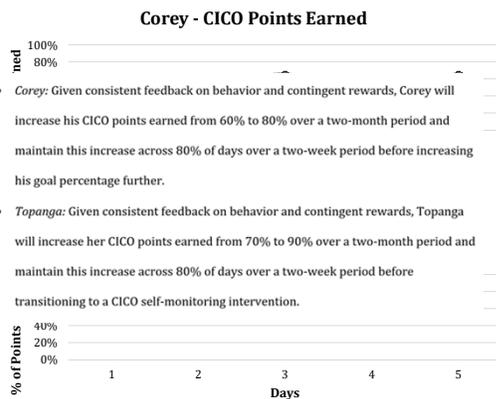
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# Confirm Concern and Set Goal

- Data collected for one week and summarized
- Review data
  - Behavior:
    - Corey: 60% of points
    - Topanga: 70% of points
- Write SMART goals
  - Specific, Measurable, Attainable, Realistic, Time-based



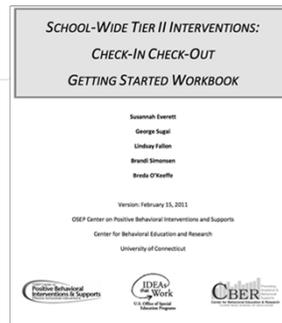
- Corey: Given consistent feedback on behavior and contingent rewards, Corey will increase his CICO points earned from 60% to 80% over a two-month period and maintain this increase across 80% of days over a two-week period before increasing his goal percentage further.
- Topanga: Given consistent feedback on behavior and contingent rewards, Topanga will increase her CICO points earned from 70% to 90% over a two-month period and maintain this increase across 80% of days over a two-week period before transitioning to a CICO self-monitoring intervention.

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# Step 4: Identify an Intervention

- Check-in/Check-Out (CICO)
  - Appropriate/feasible
- Components:
  - Daily check-In
  - Prompts, praise, feedback, and data collection each class period
  - Daily check-Out
  - Contingent Reward (meeting goal for 4 days)



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# Assess Intervention Fidelity

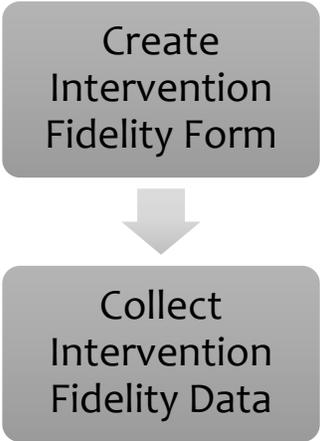
Create a Form & Collect Data

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## Assess Intervention Fidelity



```
graph TD; A[Create Intervention Fidelity Form] --> B[Collect Intervention Fidelity Data]
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# Intervention Fidelity Forms

	Monday	Tuesday
Review Expected Behavior (i.e., marks on behavior expectations)	Y /N /NA	Y /N /NA
Announce Criteria for Winning (e.g., below criteria, beat other team)	Y /N /NA	Y /N /NA
Review Reward	Y /N /NA	Y /N /NA
Record Start of Game	Y /N /NA	Y /N /NA
Tally Misbehavior	Y /N /NA	Y /N /NA
Record End of Game	Y /N /NA	Y /N /NA
Announce Whether Team "Won"	Y /N /NA	Y /N /NA
Record Class's Score on "Points Sheet"	Y /N /NA	Y /N /NA
SUM of "Y"		
TOTAL APPLICABLE		
% IMPLEMENTATION		

Intervention Step	Adherence*				Quality*		
	Implemented as Planned	Implemented w/ Deviation	Not Implemented	Not observed	Excellent	Good	Fair
Announce start of game	3	2	1	NA	4	3	2
Review expected behavior	3	2	1	NA	4	3	2
Review game rules	3	2	1	NA	4	3	2
Announce criteria for winning	3	2	1	NA	4	3	2
Review reward	3	2	1	NA	4	3	2
Record start of game	3	2	1	NA	4	3	2
Provide prompts for expected behavior	3	2	1	NA	4	3	2
Provide praise for expected behavior	3	2	1	NA	4	3	2
Tally misbehavior/positive behavior	3	2	1	NA	4	3	2

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# Create Intervention Fidelity Forms

- If there's a validated intervention fidelity form available, use it!
- If not, you'll need to make one...



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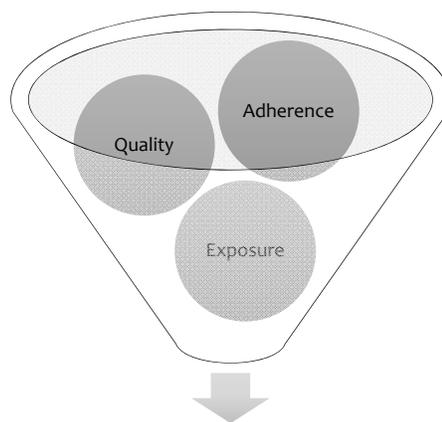


- Pull your intervention plan and determine discrete steps
- Develop operational definitions for each step
  - Observable
  - Measurable
  - Complete
- Consider adherence, quality, and exposure

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Treatment Fidelity

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- Direct observation – most direct, but not always feasible
- Permanent product review – feasible, but not relevant for all steps
- Self-report – versatile, but not always accurate

More intensive student interventions require more direct treatment fidelity assessment



- **Dichotomous checklist** – indicate whether or not step occurred
- **Likert scale** – range of ratings from full to no implementation
- **Frequency count** – tally each time step occurs
- **Duration** – indicate how long a step occurred for
- **Time sampling** – Tally within an intervention if the step occurred
- **Multiple choice** – brief descriptions for different levels of implementation
- **Fill in the blank** – narrative description of implementation



- List the intervention steps
- Include rating option for each dimension of treatment fidelity
- Include space for summarizing treatment fidelity data

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## Treatment Fidelity Forms

**CICO Observation Form**  
Teacher observed:  Rating  Not

Date: \_\_\_\_\_

**Intervention Step**  
Student checked in with a designated staff member before school started.  
Check-in staff positively acknowledged student at check-in, gave student daily progress report, and ensured student had materials for class.  
Teacher prompted behavior expectations throughout class.  
Teacher prompted behavior expectations throughout class.  
Teacher provided behavior-specific praise v engaged in expected behavior.  
Teacher calmly provided error correction for error.  
Teacher provided student with feedback at end of class.  
Student checked out during last 10 minutes of class.  
Student was provided a reward if appropriate.

**DAILY PROGRESS REPORT**

KEY: 2- Great Job!  
1- Some Improvement Needed  
0- Will try harder

DATE: 02/15/18

	Teacher Initials	Respectful	Responsible	Safe
Period 1	JE	0 1 2	0 1 2	0 1 2
Period 2	CA	0 1 2	0 1 2	0 1 2
Period 3	JW	0 1 2	0 1 2	0 1 2
Period 4	JD	0 1 2	0 1 2	0 1 2
Period 5	JD	0 1 2	0 1 2	0 1 2
Period 6	JD	0 1 2	0 1 2	0 1 2
Period 7	JK	0 1 2	0 1 2	0 1 2
Total Points		7 / 14	7 / 14	7 / 14
Overall Points:	41 / 42	Today's %: 50	Goal %: _____	

Comments: \_\_\_\_\_

Parent/Guardian Signature \_\_\_\_\_

**CICO Self-report**

Name  
 Mr. Feeny  
 Mr. Turner  
 Ms. Tompkins  
 Mr. Williams

CICO Steps \*

Expected to be observed in the beginning of class: Yes  No  Not needed

Expected to be observed during class: Yes  No  Not needed

Expected to be observed at the end of class: Yes  No  Not needed

Expected to be observed for error: Yes  No  Not needed

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## Assess Intervention Fidelity

Create  
Intervention  
Fidelity Form



Collect  
Intervention  
Fidelity Data

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Train the  
individual(s)  
responsible for  
collecting data

Determine the  
frequency of  
data collection

Establish  
regular data  
review

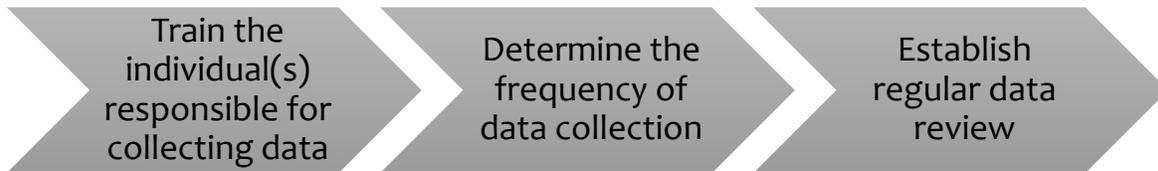


- Train the individual to complete the assessment accurately
- Review the form and practice together

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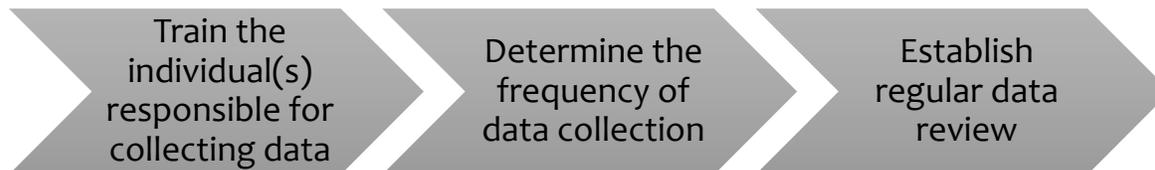


- Consider the intensity of the intervention and related decisions
- Commit to ongoing data collection as treatment fidelity data change over time
- Be responsive to the data – collect data more frequently when intervention fidelity data has been low

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- Figure out when learner outcome and treatment fidelity data will be reviewed
- Make sure relevant stakeholders can participate in data review

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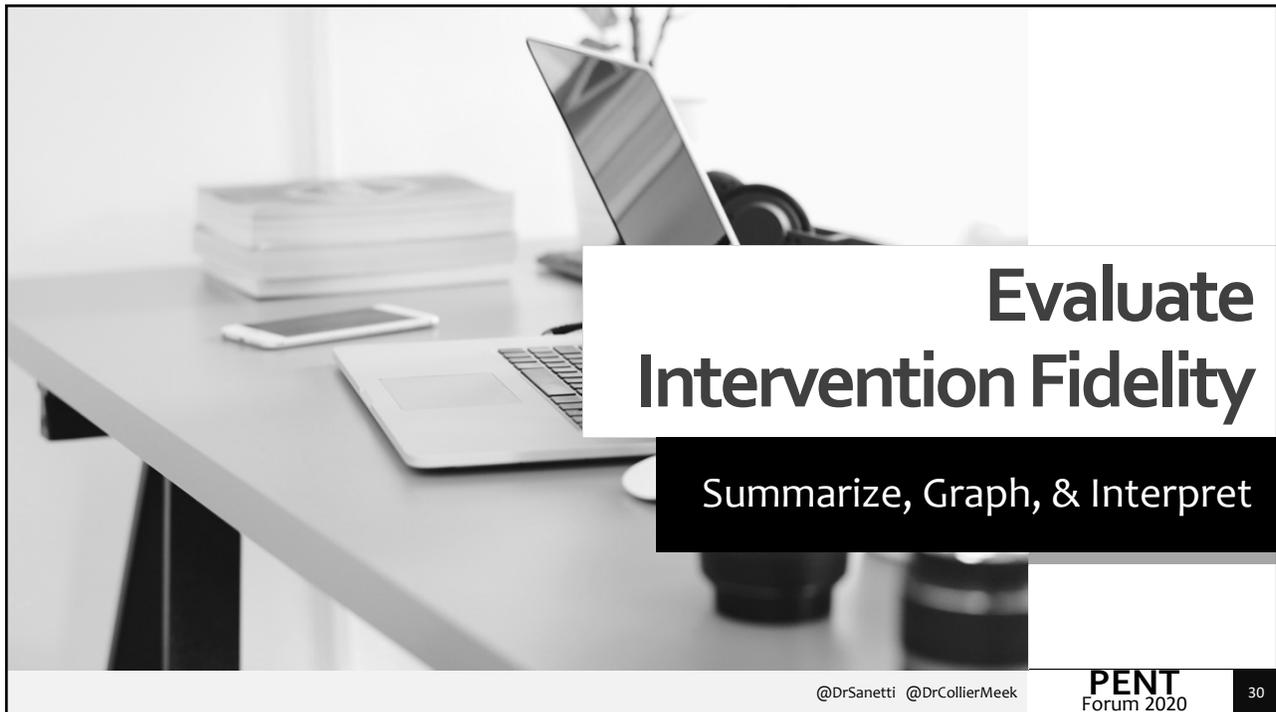
## Intervention Fidelity Plan

- Multiple methods of intervention fidelity data collection:
  - Direct observation during one class for each implementer every two weeks (adherence)
  - Teachers completed daily self-report ratings (adherence)
  - Permanent product ratings of completed CICO forms

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# Evaluate Intervention Fidelity

Summarize, Graph, & Interpret

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## Evaluate Intervention Fidelity

- AKA – what do I do with these intervention fidelity data?



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- *Session intervention fidelity* – What is the percentage of intervention steps implemented as planned during this session?
- *Intervention step fidelity* – What is the extent to which a particular intervention step was been implemented over time?

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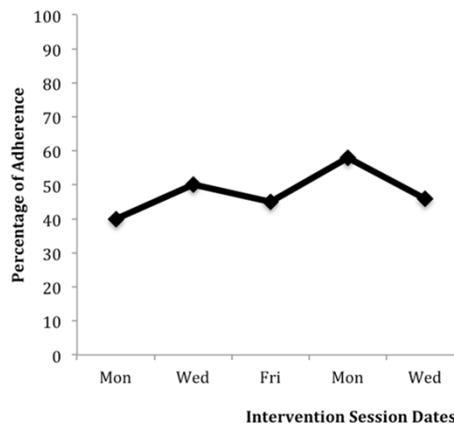
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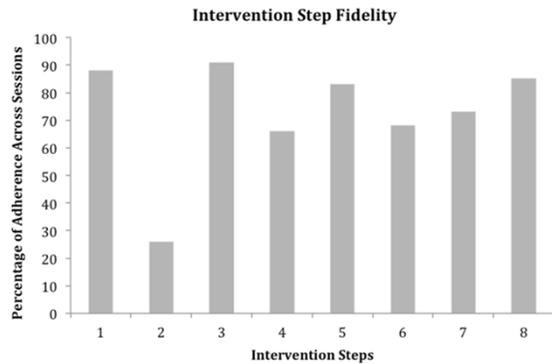
- *Session intervention fidelity*

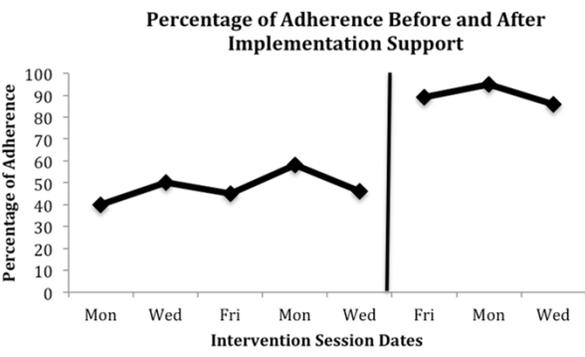
What is the percentage of intervention steps implemented as planned during this session?



- *Intervention step fidelity*

What is the extent to which a particular intervention step was been implemented over time?

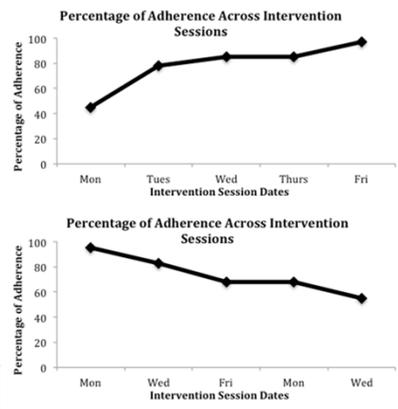




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- *Level – How much intervention is being provided?*

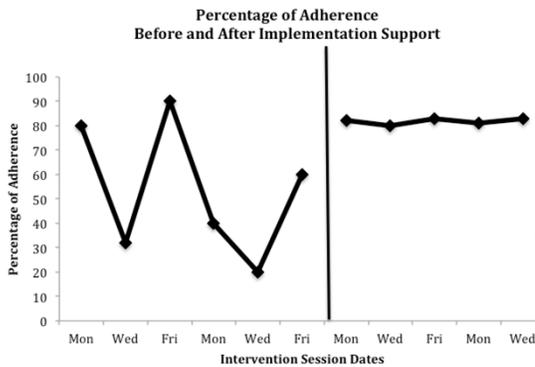
Average value of the measured outcome (e.g., mean of intervention fidelity) within a phase



↑

- *Trend-Is the implementation increasing or decreasing over time?*

Pattern of change in the data over the course of time



- ↑
    - Variability-Does implementation vary day-to-day?
- the amount of “bounce” of data (i.e., the spread of data above and below the average)

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- ↑
  - Develop a summary statement that accounts for the trend, level, and variability of intervention fidelity across time and highlights specific intervention step fidelity.
    - Are critical intervention steps being implemented regularly?
    - Is the extent of intervention fidelity sufficient for the learner to make adequate progress?
  - Make determination – is intervention fidelity sufficient?

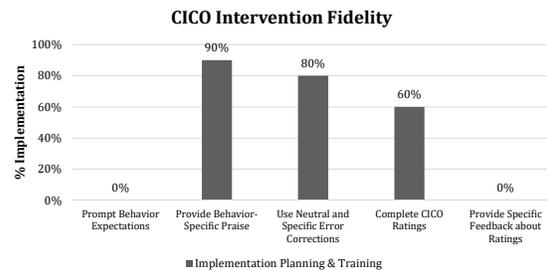
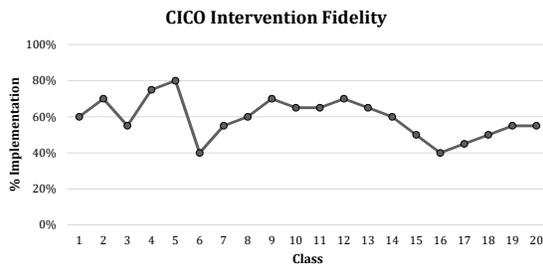
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# Evaluate the Intervention Fidelity

- **Mr. Turner (English):** Inconsistently completed CICO form (60% of time), high rates of praise, did not prompt behavior or provide specific feedback



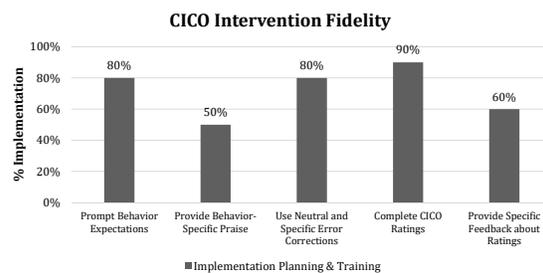
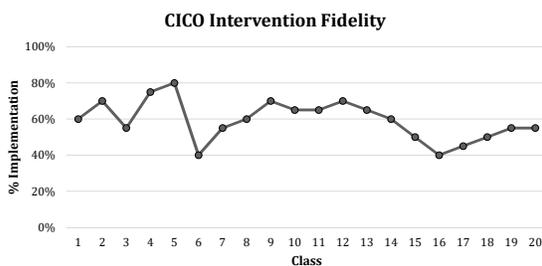
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# Evaluate the Intervention Fidelity

- **Mr. Feeny (Math):** Variable/inconsistent implementation across steps of CICO



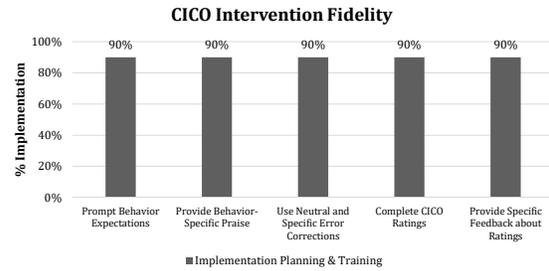
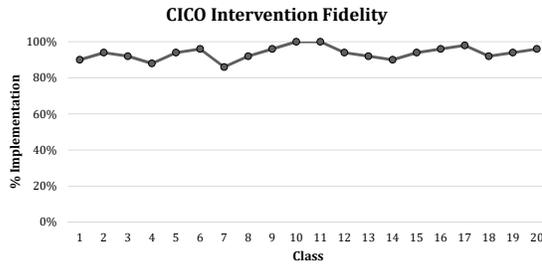
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# Evaluate the Intervention Fidelity

- **Ms. Tompkins (Social Studies):** 90%+ adherence across CICO steps



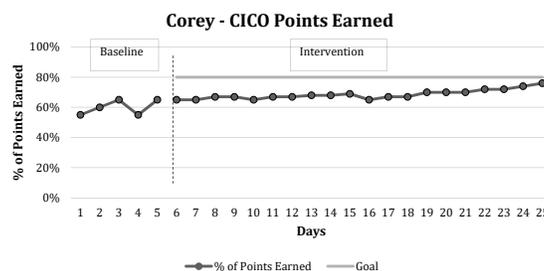
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# Evaluate Student Outcomes

- **Corey:** Making sufficient progress towards goal



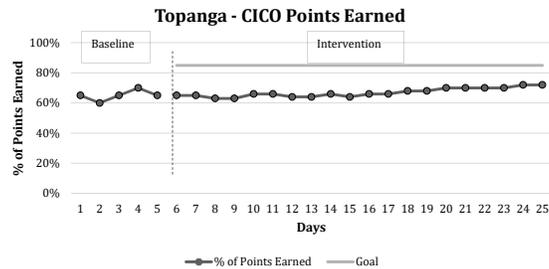
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# Evaluate Student Outcomes

- **Topanga:** Making insufficient progress towards goal



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## Analyze Fidelity & Student Outcomes

Make Data-based Decisions

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## Bring Together Intervention Fidelity & Student Outcome Data

		Student Outcome Data	
		<i>On-Track to Meet Goal</i>	<i>Not On-Track to Meet Goal</i>
Intervention Fidelity Data	<i>Sufficient</i>	Data Profile A	Data Profile D
	<i>Insufficient</i>	Data Profile B	Data Profile C

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### Data Profile A: On Track to Meet Student Goal & Sufficient Intervention Fidelity

- Based on the data, the intervention is effective
- No changes are required!

#### Action Steps:

- ✓ Continue to deliver intervention at current levels of intervention fidelity
- ✓ Regularly evaluate learner outcome and intervention fidelity data

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## Data Profile B: On Track to Meet Student Goal & Insufficient Intervention Fidelity

- Is the intervention goal and expected rate of student progress appropriate?
- Is there a problem with the intervention fidelity assessment system?
- Is something outside of the intervention related to student improvements?

### Action Steps:

- ✓ Review prior research, check assessment data system, and talk with stakeholders to identify issue
- ✓ Based on identified issue, make corrective changes

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## Data Profile C: Not On Track to Meet Student Goal & Insufficient Intervention Fidelity

- VERY common scenario
- Students need to actually receive intervention to make progress!
- Need to promote intervention fidelity!

### Action Steps:

- ✓ Select appropriate implementation strategy– review implementation history, intervention fidelity data, and consider strategies
- ✓ Deliver implementation strategy
- ✓ Regularly evaluate student outcome and intervention fidelity data

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## Data Profile D: Not On Track to Meet Student Goal & Sufficient Intervention Fidelity

- Intervention is not effective to help this student achieve his or her goal
- Make sure you're confident in the intervention fidelity data

### Action Steps:

- ✓ Double check intervention fidelity data
- ✓ Modify or change the intervention

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## Evaluate Intervention Fidelity & Student Outcomes

Teacher	Treatment Fidelity	Corey's Outcomes	Data Profile	Action Steps
Mr. Turner	Insufficient-low level	On-track to meet goal	B	Consider change
Mr. Feeney	Insufficient - variable		B	Consider change
Ms. Tompkins	Sufficient		A	None!

Teacher	Treatment Fidelity	Topanga's Outcomes	Data Profile	Action Steps
Mr. Turner	Insufficient-low level	Not on-track to meet goal	C	Implementation Support
Mr. Feeney	Insufficient - variable		C	Implementation Support
Ms. Tompkins	Sufficient		D	Modify Intervention

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## Select an Appropriate Implementation Strategy

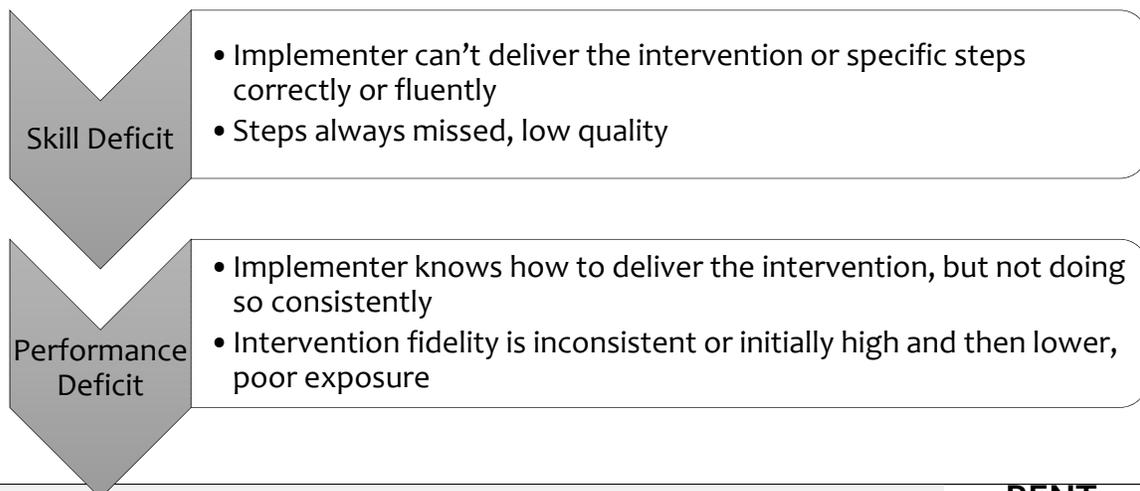
- Consider implementation history
  - What support has the implementer received in the past?
- Review intervention fidelity data to evaluate whether the issue is a skill or performance deficit
- Consider relevant strategies and select one for implementer and context

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## Select an Appropriate Implementation Strategy

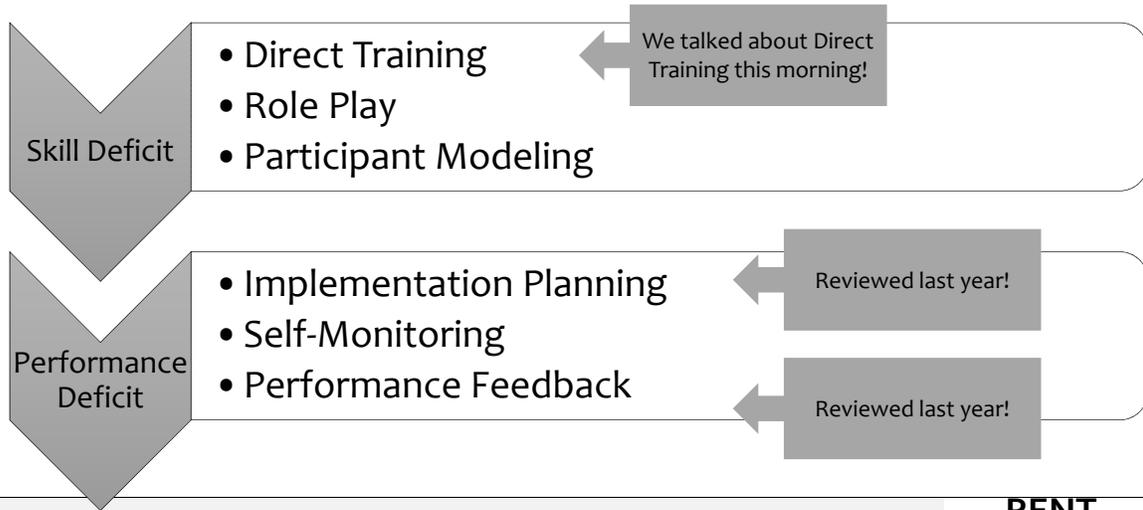


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# Implementation Strategies



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# Use Evaluation Results to Inform Implementation Support

Implementer	Results of Evaluation	Type of Implementation Support
Mr. Turner	Did not deliver some intervention steps	Skill deficit
Mr. Feeny	Delivered some intervention steps inconsistently; Barriers to full dosage of math intervention	Performance deficit
 Ms. Thompkins	Delivered intervention with sufficient fidelity	None needed at this time

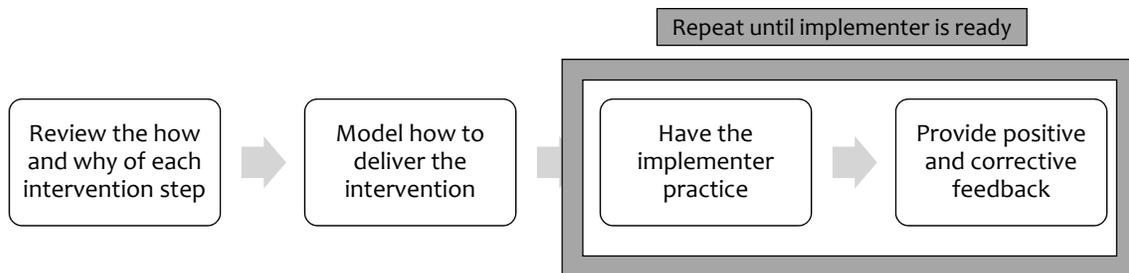
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## Direct Training

- Before we can expect someone to engage in a new behavior, we must teach them how to do it



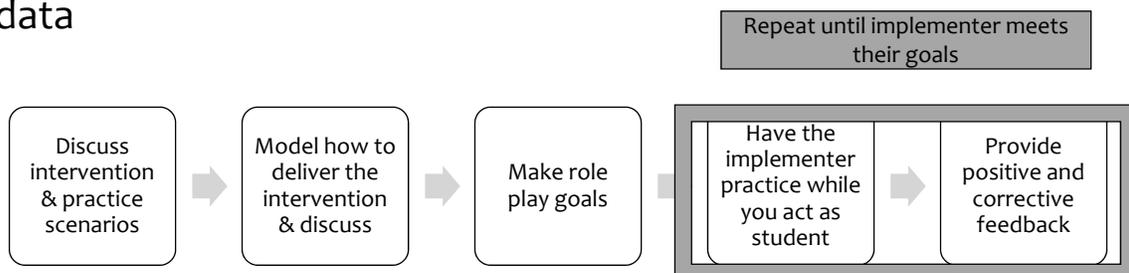
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## Role Play

- Focus on the modeling and role play component of Direct Training
- Identify practice scenarios based on the intervention fidelity data



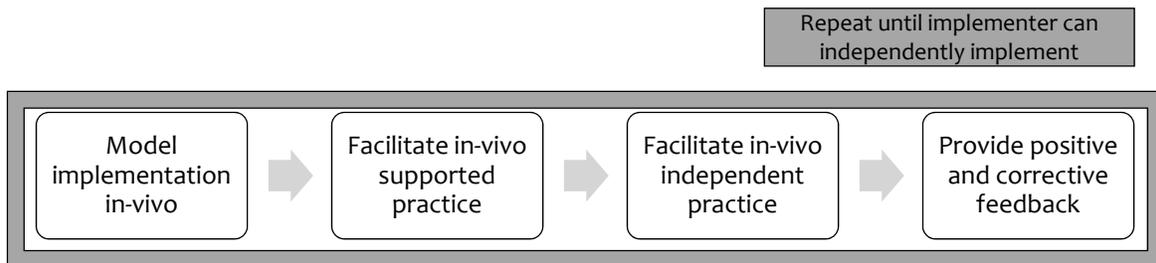
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# Participant Modeling

- Similar to Role Play, but occurs in the implementation setting
- Meet with implementer in advance to discuss intervention and in-vivo practice

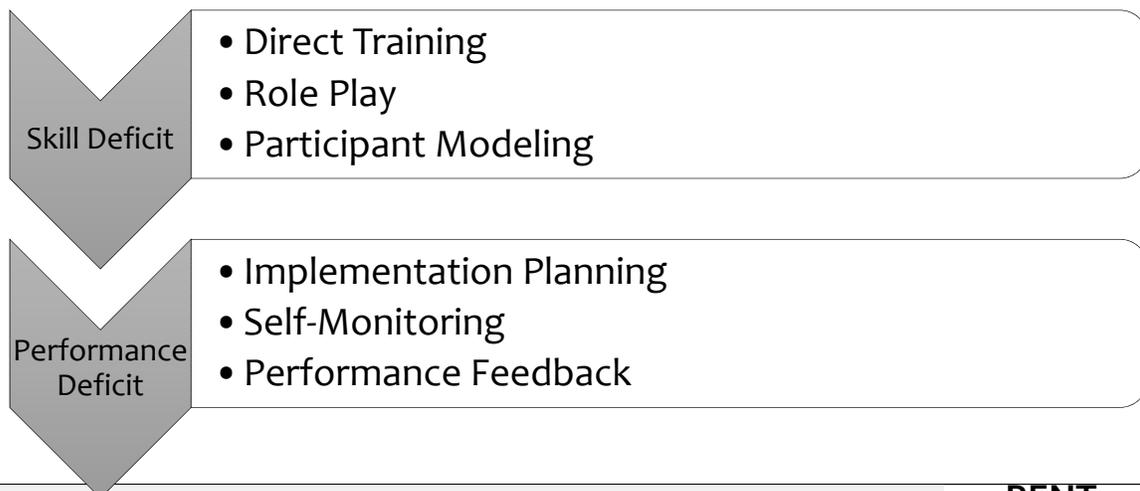


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# Implementation Strategies



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# Implementation Planning

- Structured process to adapt intervention and prepare implementer
- Includes Action Planning and Coping Planning
- Has improved teacher and parent treatment fidelity of academic and behavior interventions (Fallon, Collier-Meek, Sanetti, Feinberg, & Kratochwill, 2016; Sanetti & Collier-Meek, 2015; Sanetti, Collier-Meek, Long, Byron, & Kratochwill, 2015; Sanetti, Collier-Meek, Long, Kim, & Kratochwill, 2014; Sanetti, Williamson, Long, & Kratochwill, 2017)

# Implementation Planning – *Action Planning*

Intervention Step	To be implemented				Resources Needed?
	When?	How often?	For how long?	Where?	

# Implementation Planning – *Coping Planning*

II. Coping Plan	
Potential Major Barrier to Intervention Implementation	Strategy to Implement the Intervention Nevertheless

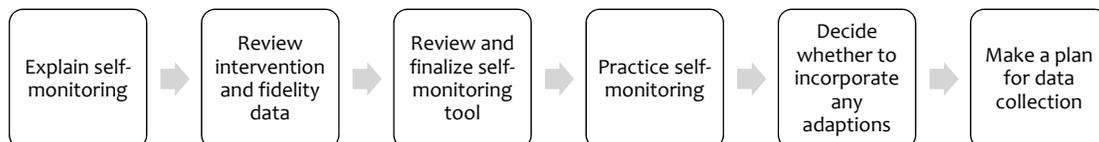
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## Self-Monitoring

- Developing a self-monitoring plan for the implementer
- When we monitor our behavior, we attend to it more closely, and it will often change



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# Self-Monitoring Adaptions

## Antecedent tactics

- Proactive efforts to encourage the implementer to self-monitor (e.g., prompts, posting)

## Self-evaluation

- Compare data to self-monitoring and/or implementation goal

## Reinforcement

- Provide reinforcement (e.g., praise, small gift card) when implementer meets goals

## Performance feedback

- Meet to review intervention fidelity, learner outcome, and self-monitoring data

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# Performance Feedback

- Brief meeting to share data with the implementer
- Hold meetings on an ongoing basis (e.g., weekly, daily, as needed)

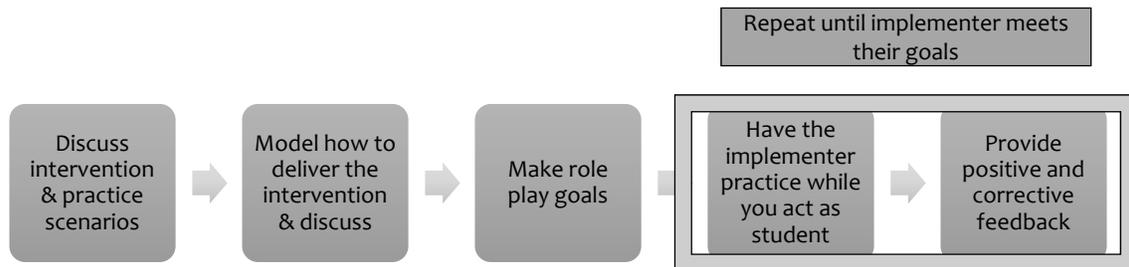


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## Mr. Turner – Skill Deficit - Role Play



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## Mr. Turner – Skill Deficit - Role Play

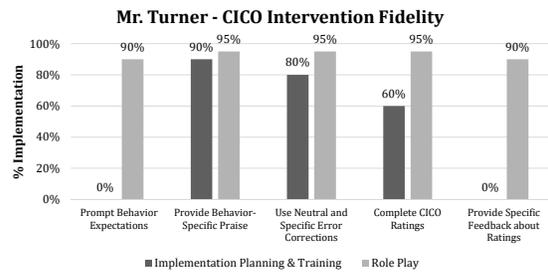
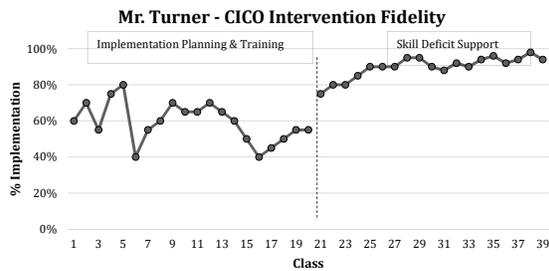
- Discuss intervention and practice scenarios
  - Review CICO
- Model how to deliver the intervention and steps
  - Prompt behavior expectations
  - Complete CICO ratings
  - Provide specific praise about ratings
- Make role play goals
  - Comfortable with prompting behavior expectations and providing specific praise
- Have the implementer practice while you act as the student
- Provide positive and corrective feedback

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# Evaluate the Intervention

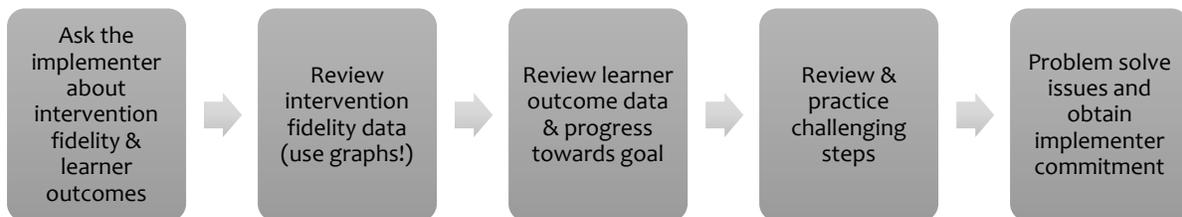


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# Mr. Feeny – Performance Deficit -Performance Feedback



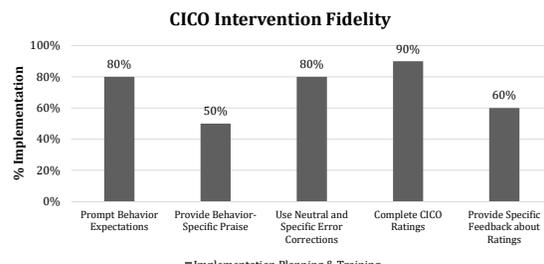
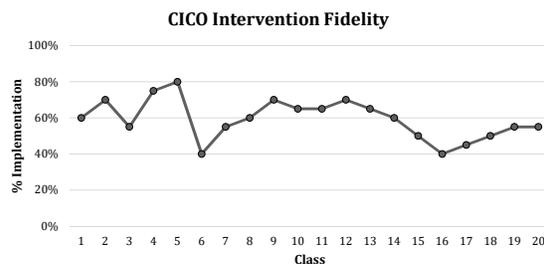
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# Mr. Feeny – Performance Deficit -Performance Feedback

- Ask the implementer about intervention fidelity and learner outcomes
- Review intervention fidelity data
  - Insufficient dosage of math intervention

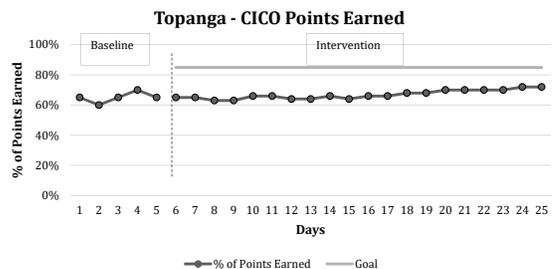


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- Review learner outcome data and progress towards goal
- Review and practice challenging steps
  - Provide behavior specific feedback
  - Provide specific feedback about ratings
- Problem solve issues and obtain implementer commitment
  - Insufficient math intervention dosage

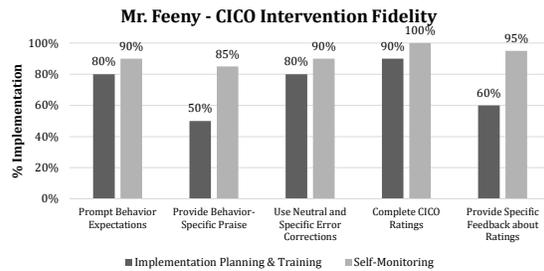
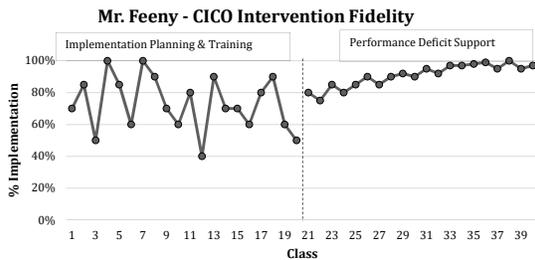


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# Evaluate Intervention Fidelity



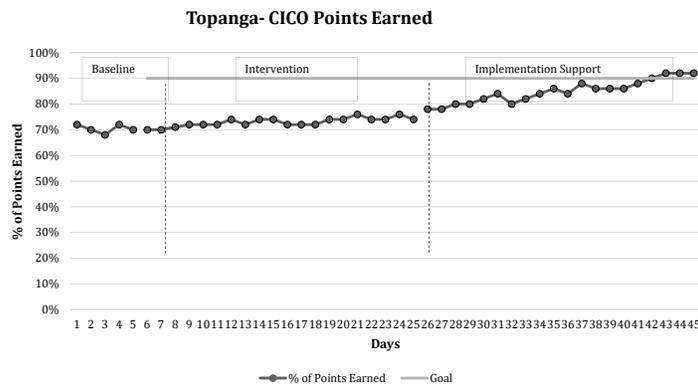
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# Evaluate the Student Outcomes

- **Topanga: Making sufficient progress towards goal**



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## Overview of Session

- What is intervention fidelity and why should we care?
- Assess intervention fidelity
  - Creating intervention fidelity tools
  - Making a plan for collecting intervention fidelity data
- Evaluate intervention fidelity data
- Analyzing intervention fidelity and student outcome data

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## Evaluating Implementation to Support Students & Schools

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