

# Evidence Based Practice Training:

## Time Delay (TD)

Adapted from Sam, A., & AFIRM Team. (2015). *Time Delay*. Chapel Hill, NC: National Professional Development Center on Autism Spectrum Disorder, FPG Child Development Center, University of North Carolina. Retrieved from <https://afirm.fpg.unc.edu/time-delay>

# What is CAPTAIN

The California Autism Professional Training And Information Network (CAPTAIN) is an interagency network developed to support the understanding and use of evidence based practices (EBPs) for individuals affected by Autism Spectrum Disorders (ASD) across the state of California.



[www.captain.ca.gov](http://www.captain.ca.gov)



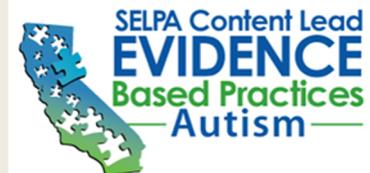
# What is CAPTAIN

Marin County SELPA in partnership with CAPTAIN, are members of the Statewide System of Support as the SELPA Content Lead for ASD.

This project is funded by the California Department of Education and the California Collaborative for Educational Excellence.



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# Levels of Professional Development to Reach Implementation



This is a Workshop/Training and is designed to increase your KNOWLEDGE of the topic. Implementation supports to assist you with use of this EBP will be outlined following the TRAINING/WORKSHOP

# Before We Begin...

- Please complete the Pre Training Assessment:

*\*Trainer must enter their Regional specific link to Pre-Training Assessment\**

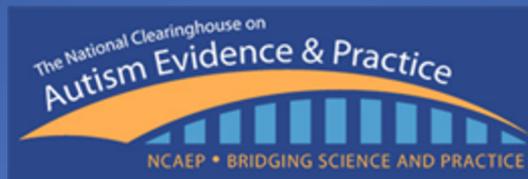
# Learning Objectives

Describe what EBPs are

Develop knowledge about Time Delay as an evidence based practice for skills teaching

Describe the two different types of time delay procedures in preparation for using them in practice

# What are Evidence Based Practices?



NCAEP definition of an EBP:

“Focused intervention practices that have evidence of efficacy in promoting positive outcomes for learners with ASD.”

Steinbrenner, J. R., Hume, K., Odom, S. L., Morin, K. L., Nowell, S. W., Tomaszewski, B., Szendrey, S., McIntyre, N. S., Yücesoy-Özkan, S., & Savage, M. N. (2020). Evidence-based practices for children, youth, and young adults with Autism. The University of North Carolina at Chapel Hill, Frank Porter Graham Child Development Institute, National Clearinghouse on Autism Evidence and Practice Review Team.



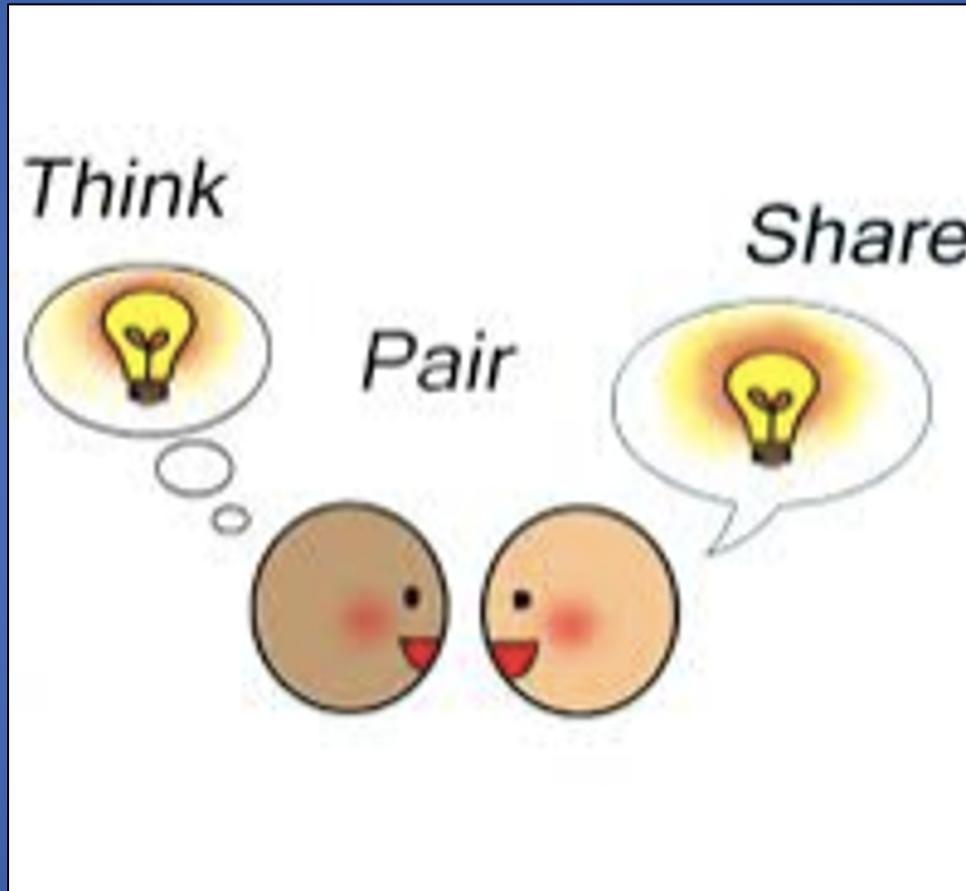
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Name of EBP		Time Delay (TD)					
Definition of EBP		Time delay (TD) is a practice used to systematically fade the use of prompts during instructional activities. With this procedure, a brief delay is provided between the initial instruction and any additional instructions or prompts. The evidence-based research focuses on two types of time delay procedures: progressive and constant. With progressive time delay, the practitioner gradually increases the waiting time between an instruction and any prompts that might be used to elicit a response from a learner. As the learner becomes more proficient at using the skill, the practitioner gradually increases the waiting time between the instruction and the prompt. In constant time delay, a fixed amount of time is always used between the instruction and the prompt as the learner becomes more proficient at using the new skill. Time delay is always used in conjunction with a prompting procedure (e.g., least-to-most prompting, simultaneous prompting, graduated guidance).					
Outcome Areas		Age Ranges					
		0-2	3-5	6-11	12-14	15-18	19-22
		Toddlers	Preschoolers	Elementary School	Middle School	High School	Young Adults
	Communication		✓	✓	✓		✓
	Social	✓	✓	✓	✓		
	Joint attention	✓	✓	✓			
	Play		✓	✓			
	Cognitive		✓	✓			
	School readiness		✓	✓		✓	✓
	Academic/ Pre-academic		✓	✓	✓		✓
	Adaptive/ self-help		✓	✓	✓	✓	✓
	Challenging/ Interfering behavior		✓	✓			
	Vocational			✓	✓	✓	✓
	Motor		✓				
	Mental health						
	Self-determination						

(Steinbrenner, 2020)

# Think - Pair - Share



# Time Delay:

- A prompting procedure that systematically fades prompts during instructional activities
- A foundational practice that is used along with these other evidence-based practices: **prompting and differential reinforcement**

# Why Use Time Delay?

- Time delay is associated with low error rates during instructional activities, because the use of controlling prompts results in near-errorless learning.
- Time delay procedures can be used throughout the day in both individual and small group instructional activities.

# Skills That Can Be Taught Using Time Delay

- Academic skills (multiplication facts, sight word reading, letter/number identification)
- Language and communication (e.g. requests, signs)
- Social skills (greeting adults/peers, exchanging materials)
- Motor skills (riding a bike, throwing a ball)
- Play skills (pretend play)

# Examples of How Time Delay Is Being Used



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# Prerequisite Skills Needed to Benefit from Time Delay

ABILITY	PREREQUISITE DESCRIPTION
RESPOND TO INSTRUCTIONAL CUES	Learner must be able to look in the direction of the team member when a cue or attention-getting strategy is used.
WAIT	In general, learners should be able to wait for approximately four seconds. With constant time delay in particular, learners must be able to wait for a prompt if s/he is not certain of the correct response.
IMITATE OTHERS	A key to the instructional process is the ability to imitate others. When beginning to teach a skill, an adult will provide a cue, wait for the learner to respond, and then provide a prompt to teach the target skill.
STAY SEATED DURING INDIVIDUAL OR SMALL GROUP TIME	Learners must be able to stay at an activity for 5 to 10 minutes before time delay procedures can be used to teach skills.
INCREASE POSITIVE BEHAVIORS IN RESPONSE TO REINFORCERS	Learners should have a history of using behaviors more frequently after appropriate reinforcers have been provided.
FOLLOW ONE-STEP INSTRUCTIONS	Learners should be able to follow simple, one-step instructions or respond to transition objects/cards.

# Using Time Delay

- Adults identify the Target Stimulus that they ultimately want the learner to respond independently to
- Adults provide a controlling prompt (prompt which ensures learner will use the target skill) before learner responds
- Time Delay reduces errors and increases reinforcement opportunities

# Identify the Target Stimulus

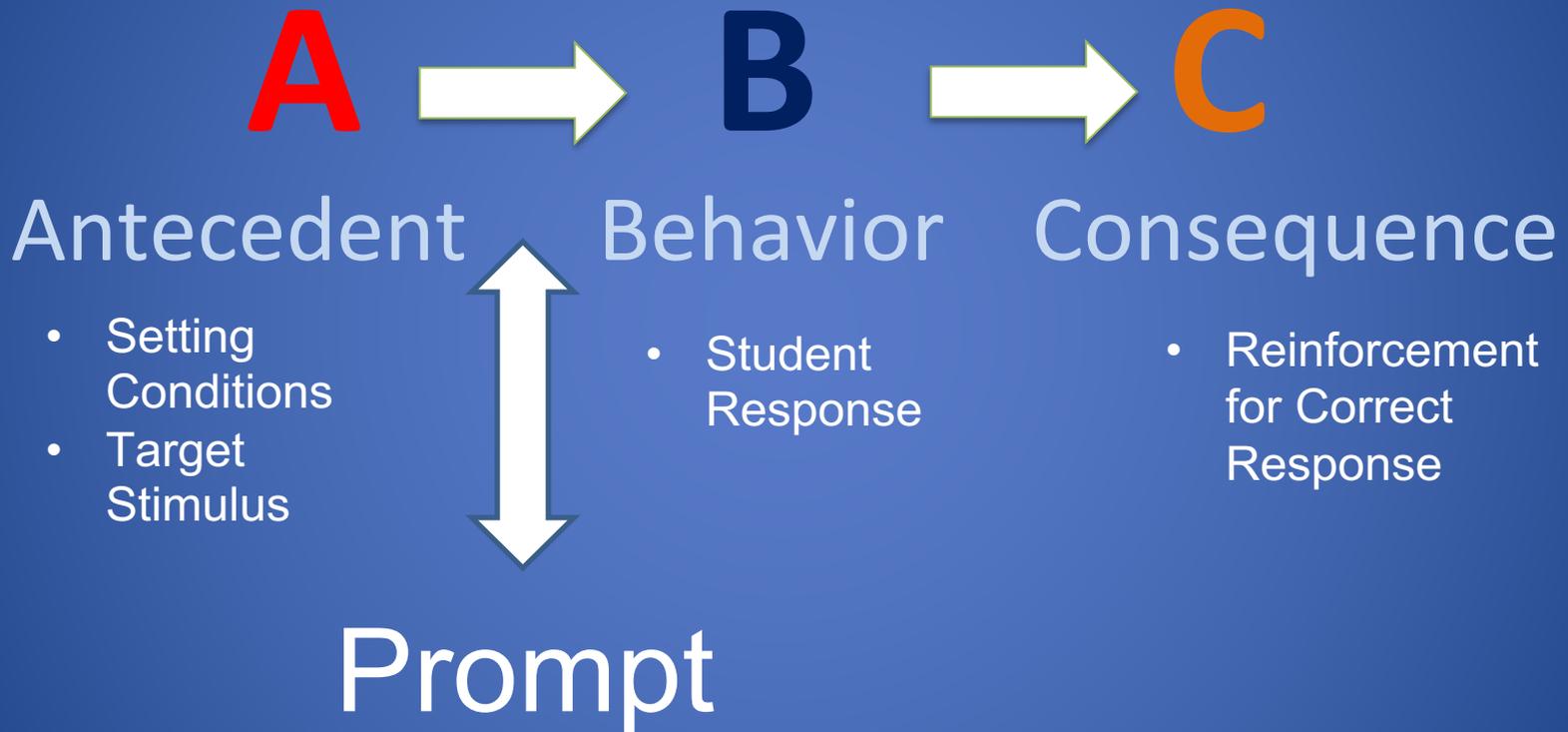
TARGET BEHAVIOR	TARGET STIMULUS
LEARNER GREETES A PEER BY SAYING, "HELLO."	Presence of a peer
LEARNER READING WORDS.	Presence of text
LEARNER WASHES HANDS.	Dirty hands

# Identify the Controlling Prompt

- The Controlling prompt is the prompt that is highly likely to get the student to perform the correct behavior or skill
- It should be the least intrusive prompt that **ALWAYS** works
- You will be fading the prompt quickly using the identified Time Delay procedure

**Prompts = Physical, Gestural, Modeling,  
Visual/Picture, Verbal**

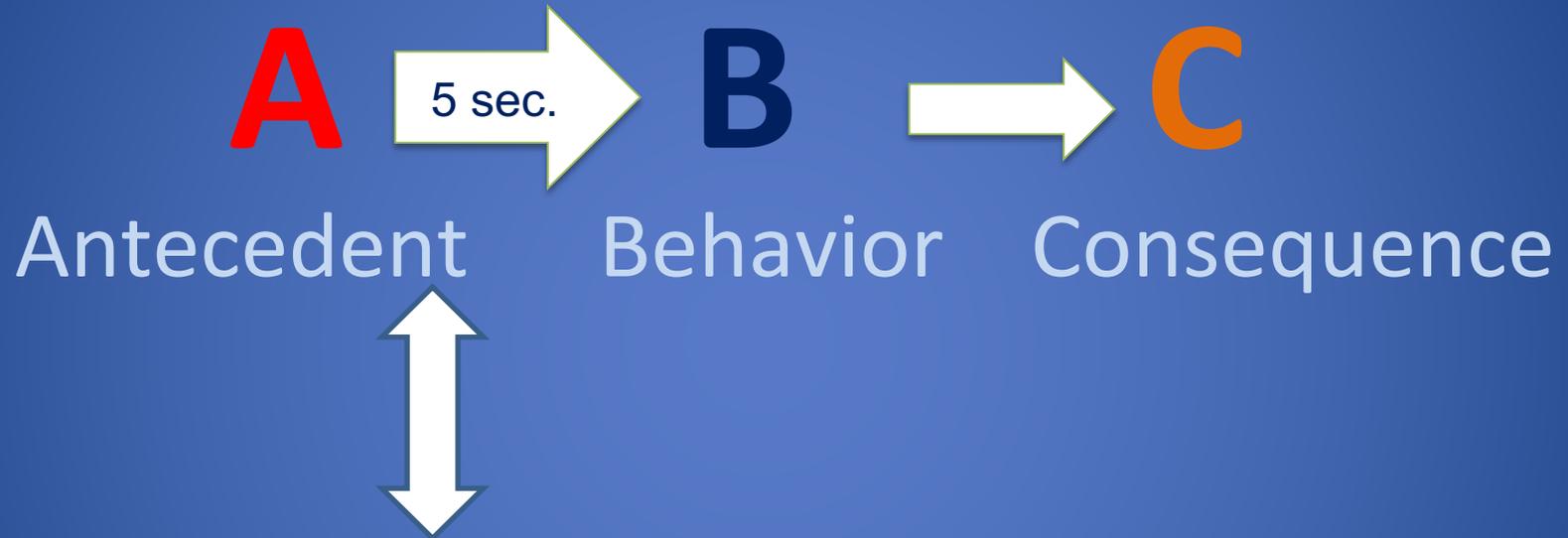
# When Does A Prompt Happen?



# Two Type of Time Delay Procedures

PROCEDURE	DESCRIPTION
<b>CONSTANT TIME DELAY (CTD)</b>	<p>When beginning to teach a target skill/behavior using CTD, provide a 0-second delay (no delay) between the cue and prompt. Model prompts are the most common prompt type to use with this procedure.<sup>7</sup> After a minimum of two trials using the 0-second delay, adults use a fixed amount of time between the cue and the controlling prompt (typically 3-5 seconds). This delay allows learners to acquire a new skill without becoming prompt dependent.<sup>8-9</sup></p>
<b>PROGRESSIVE TIME DELAY (PTD)</b>	<p>Like CTD, adults use a 0-second delay when first teaching a target skill/behavior. Then, adults gradually increase the wait time rather than using a fixed time interval. The delay is usually increased to a 5 second interval, but can be as much as 10 seconds.</p>

# Constant Time Delay



Constant Time Delay: Prompt always occurs after a set interval of time.

# Example of Constant Time Delay

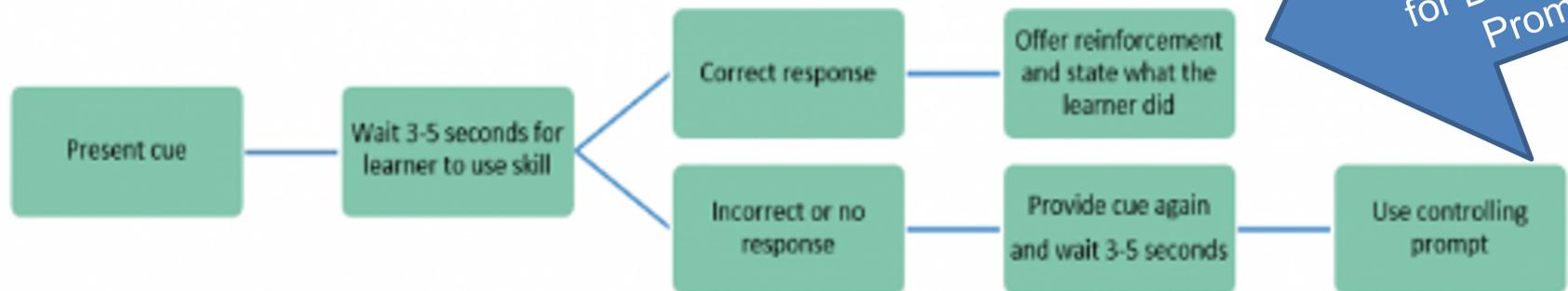


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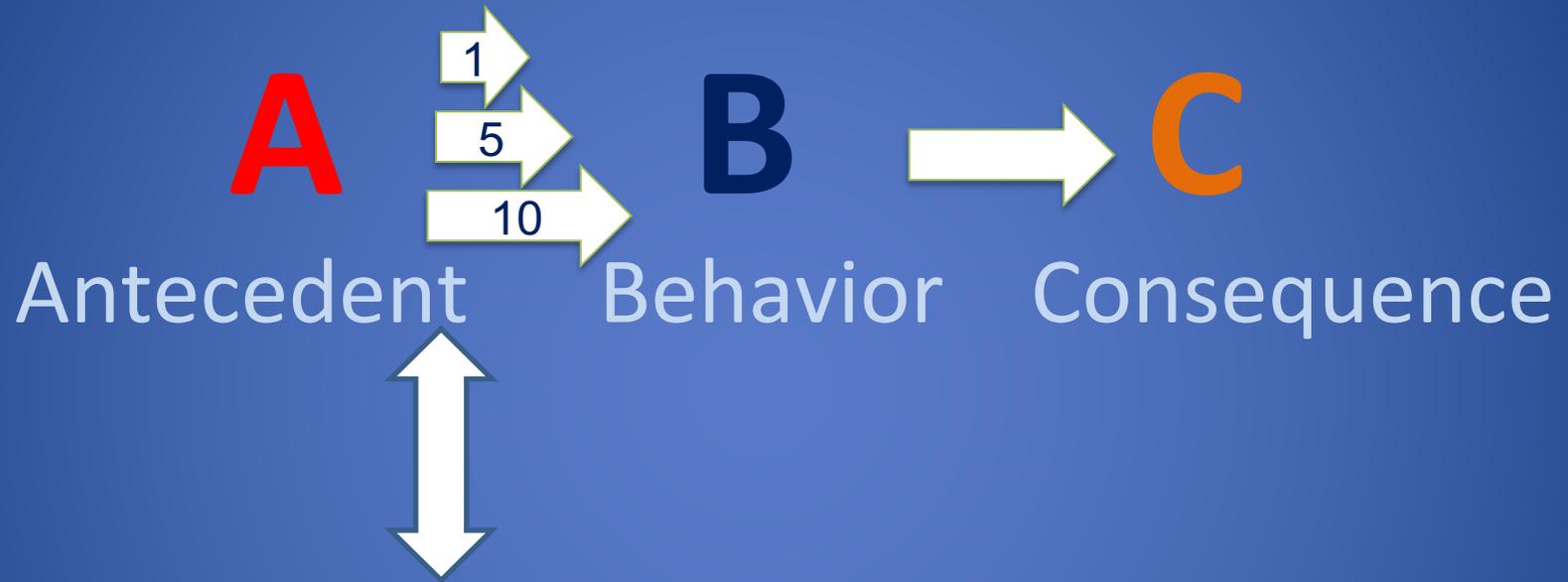
# Consequence: How To Respond to Student Using Constant Time Delay Procedure

**Constant Time Delay** (after the predetermined 0-second delay trials):



Use Differential Reinforcement for Beating the Prompt

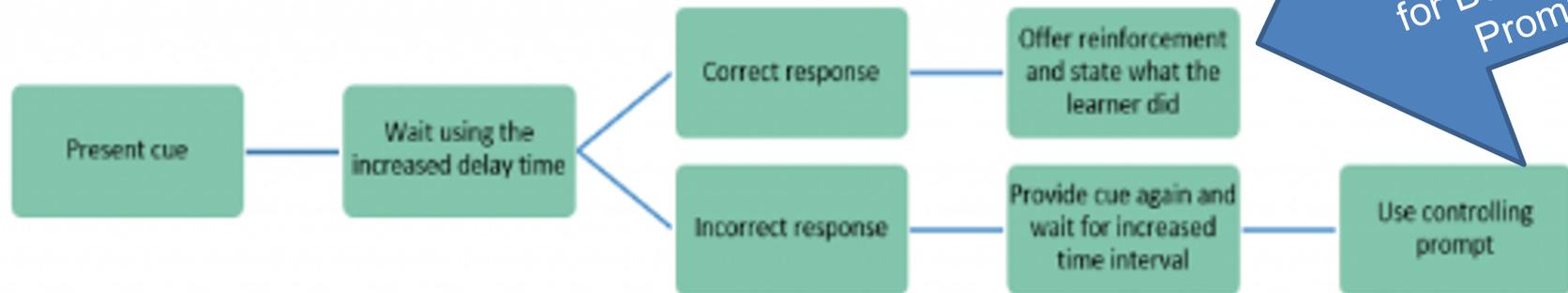
# Progressive Time Delay



Progressive Time Delay: Amount of time between the target stimulus and the prompt gradually increases.

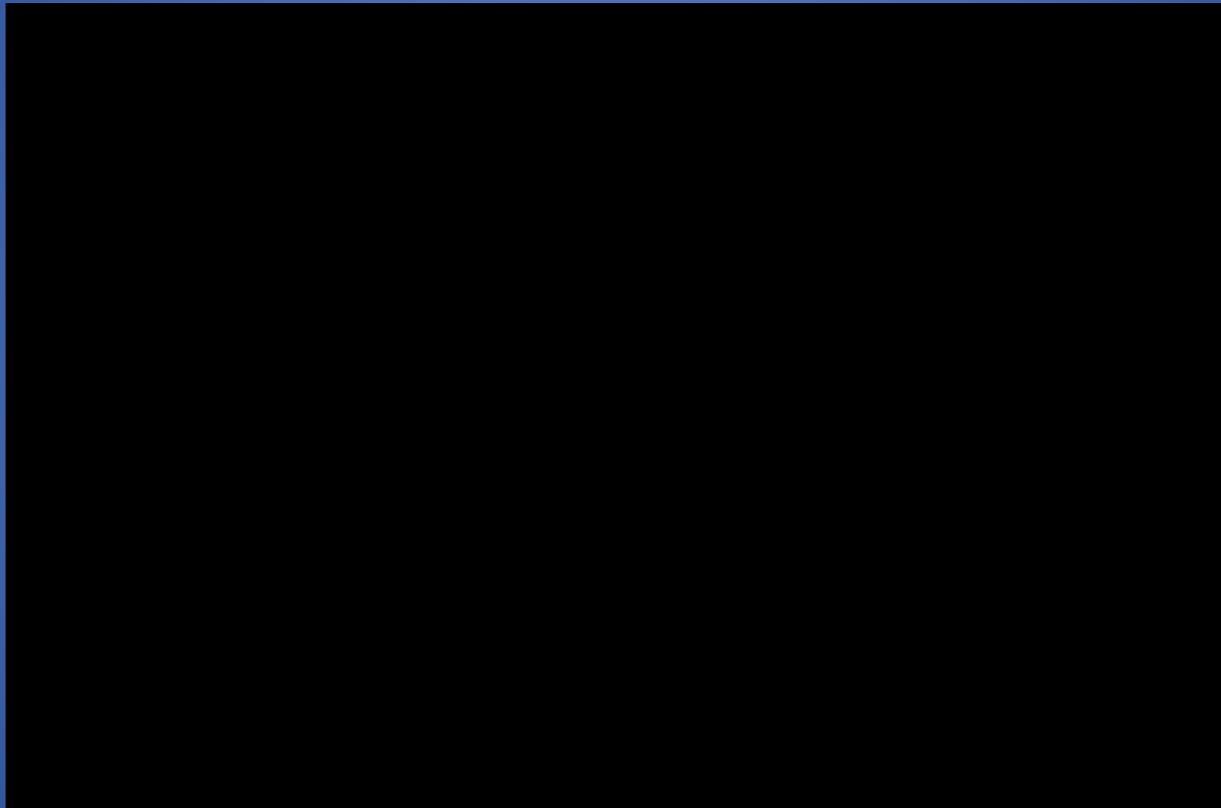
# Consequence: How To Respond to Student Using Progressive Time Delay Procedure

**Progressive Time Delay** (after the predetermined 0-second delay trials):

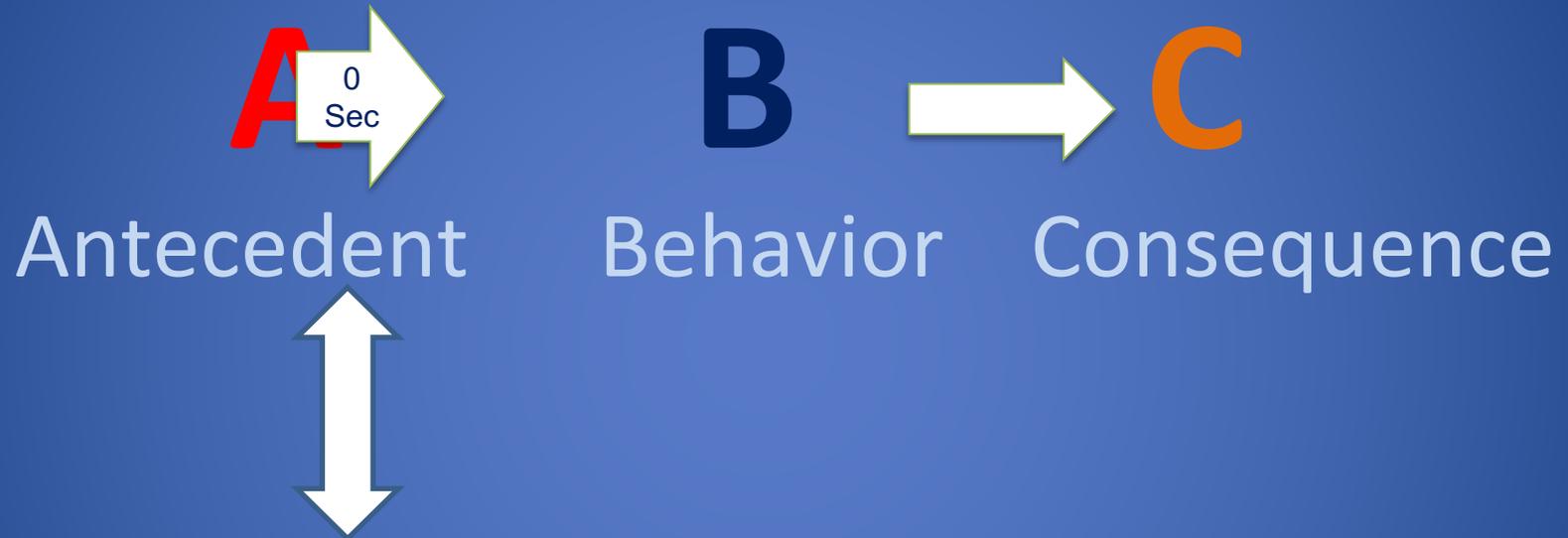


Use Differential Reinforcement for Beating the Prompt

# Example of Progressive Time Delay



# Always Start With a Zero Second Delay



Zero Second Delay: Immediately provide the controlling prompt (0 second delay) after the target stimulus is presented.

Let's  
Practice!



Brian is working on single digit addition. His cue is a flashcard with an addition problem on the card ( $1+5=$  ). He sometimes will get the answer if you wait for 3 seconds.

**How long should his teacher wait before providing the controlling prompt when first using time delay?**

- ▶ 0 seconds
- ▶ 1 second
- ▶ 2 seconds
- ▶ 3 seconds

# Monitor Student Responding

LEARNER RESPONSE	DESCRIPTION
UNPROMPTED CORRECT RESPONSE	Learner uses the target skill/behavior correctly without prompts within the time delay interval.
PROMPTED CORRECT RESPONSE	Learner uses the target skill/behavior correctly after being prompted.
UNPROMPTED INCORRECT RESPONSE	Learner attempts to use the target skill/behavior without prompts within the time delay interval, but performs it incorrectly.
PROMPTED INCORRECT RESPONSE	Learner attempts to use the target skill/behavior after being prompted, but performs it incorrectly.
NO RESPONSE	Learner does not initiate use of the target skill during the time delay interval.

# Collect Data To Determine if TD is Working

Time Delay



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---Data Collection---

Learner's Name: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Observer(s): \_\_\_\_\_

Target Behavior(s): \_\_\_\_\_

**Data Collection:**  
Use this form when collecting data on time delay procedures. Remember to collect data on skills/behavior completed correctly with prompts and without prompts.

Target Skill:					
Controlling Prompt:					
Date:	Delay:		Date:	Delay:	
Trial #	Before Prompt	After Prompt	Trial #	Before Prompt	After Prompt
1			1		
2			2		
3			3		
4			4		
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		

+ = performed correct; - = performed incorrectly; 0=no response

# Troubleshooting

If the learner with ASD is not showing progress with time delay, ask yourself the following questions:

- Is the target skill or behavior well defined?
- Is the skill or behavior measurable and observable?
- Is the skill too difficult and needs to be broken down into smaller steps?
- Has enough time been devoted to using this practice?
- Was time delay used with fidelity based upon the implementation checklist?
- Does the learner have the prerequisite skills and abilities for time delay?
- Are reinforcements used that are motivating to the learner?
- Are team members responding to the learner's attempts appropriately?

# Implementation Fidelity is Critical!



What does this mean?

“Implementing an intervention in the same manner in which it was done in the evidence-based research”



# Implementation Fidelity is Critical!



## How implementation fidelity achieved:

1. Use Implementation Checklists for the EBP to capture fidelity of implementation
2. Refer to EBP Fact Sheets
3. Use AFIRM self-learning modules on EBPs
4. Attend training on the EBPs
5. Access coaching on the EBP until fidelity is attained

# Next Steps

**Before you start:**

**Have you...**

- Identified the behavior?
- Collected baseline data through direct observation?
- Established a goal or outcome that clearly states when the behavior will occur, what the target skill is, and how the team will know when the skill is mastered.

*If the answer to any of these is "no", refer to the "Selecting EBP's" section on the website.*

## Time Delay (TD) —Implementation Checklist—

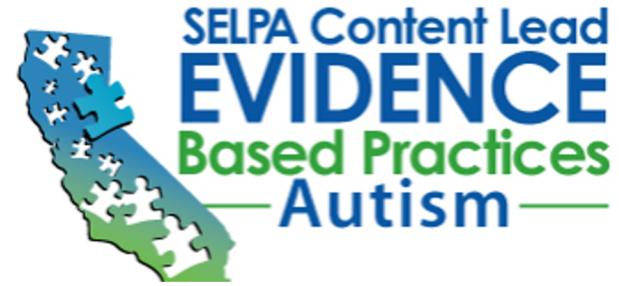
	Observation	1	2	3	4
	Date				
	Observer's Initials				
<b>Step 1: Planning</b>					
1.1 Assess learner's current abilities					
1.2 Select target stimulus and cue					
1.3 Select controlling prompt					
1.4 Select reinforcers					
1.5 Identify times and activities for using time delay					
1.6 Determine time delay procedure					
<b>Step 2: Using</b>					
2.1 Establish learner attention and provide cue					
2.2 Deliver controlling prompt					
2.3 Increase time delay					
2.4 Respond to learner's attempts					
<b>Step 3: Monitoring</b>					
3.1 Collect and analyze data on target behaviors					
3.2 Determine next steps based on learner progress					

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# Post Training

- Please complete the Post Training Assessment:

*\*Trainer must enter their Regional specific link to Post-Training Assessment\**



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