Evidence-Based Practices for Children and Youth with ASD

Prompting Strategies

Time Delay

Self-Management

Peer-Mediated Intervention

Matt Brock

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Preview of Today

- Background on National Professional Development Center on ASD and Identification of Evidence-Based Practices
- Learning, Practicing, and Planning for Implementation of Evidence-Based Practice
  - Prompting Strategies
  - Time Delay
  - Self-Management
  - Peer-Mediated Intervention

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A Little Background About Me

- Preschool and elementary special education teacher
- Special education volunteer in US Peace Corps
- Technical assistance specialist with the National Professional Development Center on Autism Spectrum Disorders
- Currently a doctoral student in special education at Vanderbilt University

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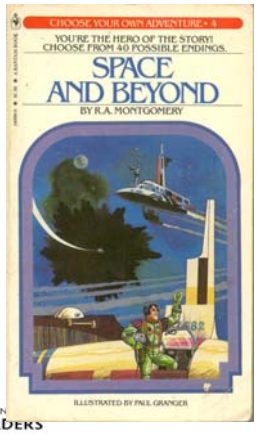
Choose your own adventure!

- Choose what content we will emphasize today
- Contribute examples that are relevant in your own practice
- Slow me down or ask questions if you want to know more



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Express Your Opinion

Yes!

I don't feel strongly either way

No

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National Professional Development Center on Autism Spectrum Disorders

A multi-university center to promote use of evidence-based practice for learners with autism spectrum disorders

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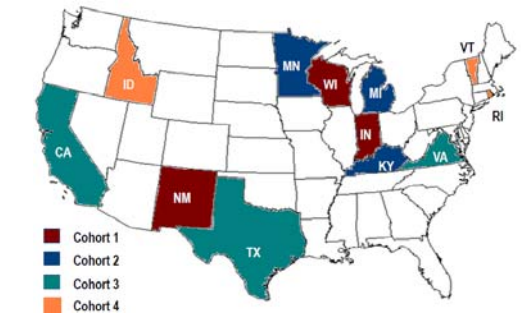
States to Partner with NPDC on ASD



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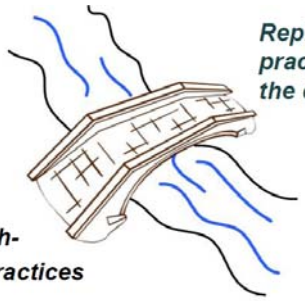
Bridging the Gap



Replicable practices in the classroom

Research-based practices

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Hurdles

- What practices are supported by research for children and youth with ASD?
- What is the best way to enable people to use these practices?

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Solutions

- What practices are supported by research for children and youth with ASD?
- What is the best way to enable people to use these practices?

- Systematic review of published research
- Manuals and Materials
- Coaching

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Classes of Interventions

- *Comprehensive Treatment Models*

  Multi-component programs designed to positively and systematically affect the lives of children with ASD and their families

- ***Focused Interventions***

  Procedures that promote individual skills or learning within a specific skill area

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NPDC Definition of Evidence-based Practices

Focused interventions that:

- Produce specific behavioral/developmental outcomes for a child
- Have been demonstrated as effective in applied research literature
- Can be successfully implemented in educational settings

(Odom, Boyd, Hall, & Hume, 2009)

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Process Used to Identify EBP

- Identified outcomes related to the core features of autism
- Reviewed literature related to these outcomes as well as the key words autism, ASD, and autism spectrum, limited by age (birth – 21)
- Identified and grouped interventions that addressed these outcomes/domains
- Determined criteria and whether an evidence base supported each of the practices

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NPDC Criteria

Minimum evidence to be identified as an EBP:

- Two randomized or quasi-experimental design studies,
- Five single subject design studies by three different authors, OR
- A combination of evidence—one group and three single-subject studies

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Evidence-Based Practices

- Antecedent-based interventions
- Differential reinforcement
- Discrete trial training
- Extinction
- Functional behavior assessment
- Functional communication training
- Naturalistic interventions
- Parent-implemented intervention
- Peer-mediated instruction/intervention
- Picture Exchange Communication System
- Pivotal response training
- Prompting
- Reinforcement
- Response interruption/redirection
- Self-management
- Social narratives
- Social skills training groups
- Speech generating devices
- Structured work systems
- Task analysis
- Time delay
- Video modeling
- Visual supports

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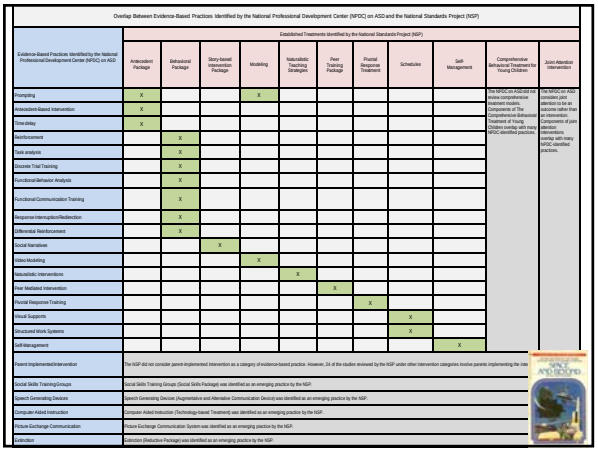

Overlap Between Evidence-Based Practices Identified by the National Professional Development Center (NPDC) on ASD and the National Standards Project (NSP)

Evidence-Based Practices Identified by the National Professional Development Center (NPDC) on ASD	Established Treatments Identified by the National Standards Project (NSP)										
	Antecedent Package	Behavioral Package	Story-based Intervention Package	Modeling	Naturalistic Teaching Strategies	Peer Training Package	Pivotal Response Treatment	Schedules	Self-Management	Comprehensive Behavioral Treatment for Young Children	Joint Attention Intervention
Prompting	X			X						The NPDC on ASD did not define comprehensive treatment models. Components of The Comprehensive Behavioral Treatment of Young Children overlap with many NPDC identified practices.	The NPDC on ASD considers joint attention to be an outcome rather than an intervention. Components of joint attention interventions overlap with many NPDC identified practices.
Antecedent-Based Intervention	X										
Time-delay	X										
Reinforcement		X									
Task analysis		X									
Discrete Trial Training		X									
Functional Behavior Analysis		X									
Functional Communication Training		X									
Response Interruption/Redirection		X									
Differential Reinforcement		X									
Social Narratives			X								
Video Modeling				X							
Naturalistic Interventions					X						
Peer Mediated Intervention						X					
Pivotal Response Training							X				
Visual Supports								X			
Structured Work Systems								X			
Self-Management									X		
Parent Implemented Intervention	The NSP did not consider parent-implemented intervention as a category of evidence-based practice. However, 24 of the studies reviewed by the NSP under other intervention categories involve parents implementing the inte										
Social Skills Training Groups	Social Skills Training Groups (Social Skills Package) was identified as an emerging practice by the NSP.										
Speech Generating Devices	Speech Generating Devices (Augmentative and Alternative Communication Device) was identified as an emerging practice by the NSP.										
Computer Aided Instruction	Computer Aided Instruction (Technology-Aided Treatment) was identified as an emerging practice by the NSP.										
Picture Exchange Communication	Picture Exchange Communication System was identified as an emerging practice by the NSP.										
Extinction	Extinction (Reductive Package) was identified as an emerging practice by the NSP.										

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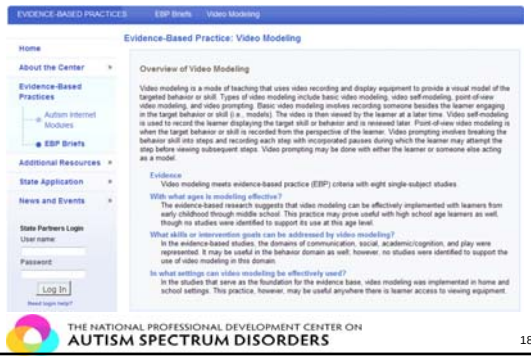
Overviews of Practices



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Step-by-Step Directions

- Detailed instructions for implementing each practice
- Match up with companion implementation checklists

Module: Video Modeling

Steps for Implementation: Video Modeling

These steps for implementation were adapted from:

LaCava, P. (2005). Video modeling: An online training module. (Kansas City: University of Kansas, Special Education Department). In Ohio Center for Autism and Low Incidence (OCALI): Autism Internet Modules. www.autisminternetmodules.org. Columbus, OH: OCALI.

The implementation process for video modeling is similar for each type of video modeling strategy (i.e., basic video modeling, video self-modeling, point-of-view modeling, video prompting). Ten steps are outlined below which describe how video modeling is implemented with learners with ASD.

Step 1. Targeting a Behavior for Teaching

In Step 1, teachers/practitioners focus on identifying a behavior for the learner with ASD to acquire and then clearly describe it so that accurate data can be collected throughout the intervention process to monitor its effectiveness (Sigafoos et al., 2007).

1. Teachers/practitioners identify a target behavior that is important for the learner to be taught.

Target behaviors may include communication skills (e.g., requesting, giving compliments, initiating interactions with peers).

2. Teachers/practitioners define and describe the target behavior so that is observable and measurable.

Example of a non-observable behavior: "Mary will increase her social skills with peers."

Example of an observable and measurable behavior: "Mary will initiate interactions with peers by saying, 'Hi,' at lunch and small group work time each day without prompting from adults."

Step 2. Having the Correct Equipment

Teachers and other practitioners must have access to two basic pieces of equipment to implement video modeling techniques with learners with ASD: (a) something to make the video and (b) something to show the video (Sigafoos et al., 2007).

1. Teachers/practitioners acquire a video recording device (e.g., hand-held camera, computer technology).

Implementation Checklists

Implementation Checklist for Naturalistic Intervention

	Observation	1	2	3	4	5	6	7	8
	Date	2/3/10							
	Observer's Initials								
Step 1. Identifying a Target Act		Score**							
1. Teachers/practitioners select a specific target act/skill to be the focus of intervention that:									
a. focuses on prelinguistic or linguistic communication and/or		2							
b. social skills.		2							
2. Teachers/practitioners confirm that the target act is in the learner's IEP or IFSP.		2							
Step 2. Collecting Baseline Data									
1. Prior to intervention, teachers/ practitioners determine the learner's current use of the target skill.									
2. Teachers/practitioners take data on the target skills a minimum of three times in more than one environment.		NA							

***Scoring Key: 2 = implemented; 1 = partially implemented; 0 = did not implement; NA = not applicable*

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Questions?

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Prompting Procedures

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I use prompting!

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Prompting—Maybe Not So Simple

- Do you have an exit strategy?
  - Systematic planning
  - Fading over time
  - Building independence

- Are you a one trick pony?
  - Overreliance on verbal prompts
  - Overreliance on physical prompts

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Prompting & Prompts

- Prompting Procedures –
  - Any help given to learners to assist them in using a specific skill
- Prompts –
  - Specific forms of assists given before or as the learner attempts to use a skill

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3 Components of Prompting Procedures

- All of these prompting procedures contain three main components:
  - the **antecedent** (i.e., target stimulus ***and*** cue/task direction) that tells the learner to use the target skill,
  - the **target skill** (i.e., learner response), and
  - the **consequence** (i.e., feedback/reinforcement provided by teachers/practitioners).

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Types of Prompts

- Physical – hand-over-hand
- Gestural – gesture signal
- Model – show what to do
- Visual – pictorial/written cue/object
- Verbal – spoken words/signs

- Controlling prompt – prompt that almost always results in success for the learner

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Variations on Prompts

- Model prompts
  - Full model
  - Partial model
    - Only part of target skill (e.g. hand raising)
- Physical prompts
  - Full physical
  - Partial physical
    - Tap, nudge, light push, etc.

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Prompting Procedures

- Simultaneous (or errorless prompting)
  - Cue and controlling prompt delivered simultaneously
- Least-to-most (or system of least prompts)
  - Sequence from the least amount of help to the most amount of help
- Graduated Guidance
  - Gradually removing prompts during teaching

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New Skills: Simultaneous Prompting

- Used to teach learners with ASD new skills
- Can be used for discrete or chained skills
- Only one prompt is used: controlling prompt
- Controlling prompt = prompt that almost always results in success for the learner

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Concept of Trial with Simultaneous Prompting

Draw the child's attention to the stimulus and give the cue or task direction → Give the controlling prompt → When the learner gives the correct response, immediately offer reinforcement and label the behavior

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An Example of Simultaneous Prompting

"Look, Evan! I can stack a block on top." [models stacking] "Now you stack a block on top." → Provide hand-over-hand assistance → When Evan stacks the block, tickle him, and say "Great job Evan, you stacked a block on top!"

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Another Example

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Practice Activity

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Acquired or Partially Acquired Skills: Least-to-Most Prompting

- NOT for new skills or skills for which the learner has not yet demonstrated success
- Can be used for discrete or chained skills
- In addition to the controlling prompt, one or more additional prompt levels are identified
  - Usually best to only use 2-3 levels

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Concept of Trial with LTM Prompting

Draw the child's attention to the stimulus and give the cue or task direction

Give Least Intrusive Prompt

Give More Intrusive Prompt

Provide hand-over-hand assistance

When the learner gives the correct response, immediately offer reinforcement and label the behavior

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An Example of LTM Prompting

"Look, Evan! I can stack a block on top." [models stacking] "Now you stack a block on top."

Point to the top of the block tower

Nudge Evan's elbow

Give the controlling prompt

When Evan stacks the block, tickle him, and say "Great job Evan, you stacked a block on top!"

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Another Example

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Practice Activity

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Avoid Prompt Dependence

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Guidelines for Effective Prompting

- Prompts should focus student's attention on the discriminative stimulus, not distract from it
- Prompts should be as weak as possible
- Unplanned prompts should be avoided
- Prompts should be faded as quickly as possible
  - prompt dependency occurs as result of using prompts when not needed
- Think carefully about target stimulus

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Graduated Guidance Example

Doll Play

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Meet Abby Case Study

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Evidence Based Practices:
Time Delay

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What we're going to cover…

- What is time delay?
- Why should I use time delay?
- When could I use time delay?
- How do I implement time delay?
- How do I know if it's working?

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What is Time Delay?

- Practice that focuses on fading the use of prompts during instructional activities
- Time delay procedures are always used in conjunction with prompting and reinforcement.
- With time delay, prompts are provided *before* learners respond, which reduces errors and provides more opportunities for reinforcement.
- These prompts are called *controlling prompts.*

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Does the evidence base support using time delay with toddlers?

- Evidence base for time delay procedures is strongest with learners ages 6-11 years.
- There are a several studies that support using time delay with younger children, including toddlers.

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Why use time delay?

- Effective and efficient way to teach learners with ASD new skills
- User-friendly
- Easy to implement
- Associated with low error rates during instructional activities

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When can time delay be used?

- Time delay can be used during
  - 1:1 activities
  - small group instruction
  - ongoing routines and activities
- Time delay can address a variety of skills
  - pre-literacy
  - play/leisure
  - language/communication
  - self-help
  - social

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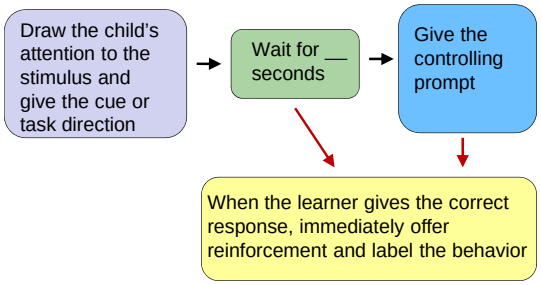
Concept of Trial with Time Delay



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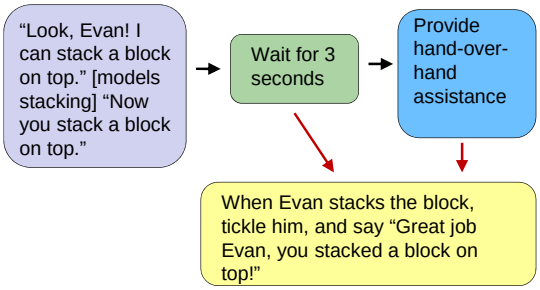
An Example



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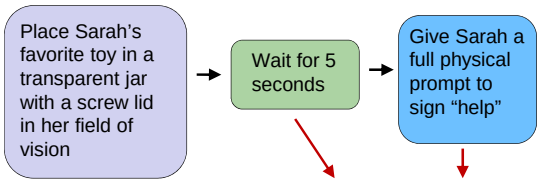
Another Example



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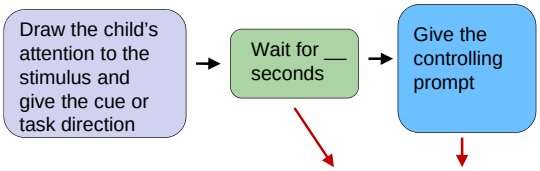
How do you pick the cue or task direction?



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How do you pick the cue or task direction?

Draw the child's attention to the stimulus and give the cue or task direction

- What will cue the learner to do the target behavior?
  - Naturally occurring event
  - Completion of one event or activity
  - External signal
  - Material or environmental manipulation
  - Task direction

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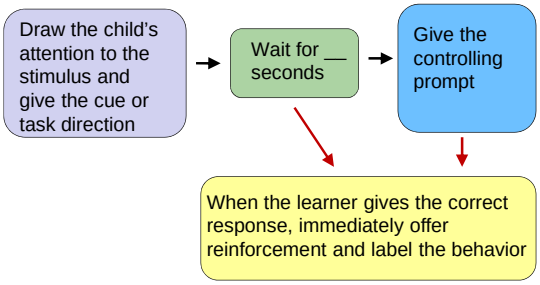
How do you pick the controlling prompt?



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How do you pick the controlling prompt?

- Select the prompt that ensures that that the learner will use the target skill correctly
- Use the least intrusive prompt that will still ensure that the learner is successful

Give the controlling prompt

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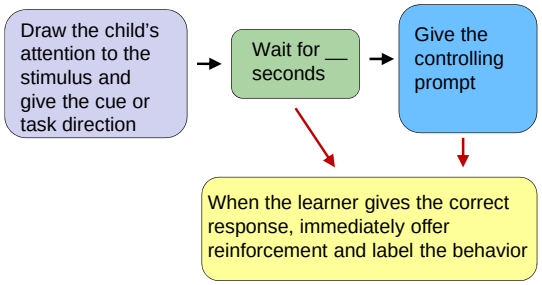
How do you choose a reinforcer?



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How do you choose a reinforcer?

- Conduct reinforcer assessment
- Consider
  - What has motivated learners in the past
  - Learner's deprivation state (i.e., what do they want that they can't easily get?)
  - Reinforcers that are appropriate for the target skill and instructional task

When the learner gives the correct response, immediately offer reinforcement and label the behavior

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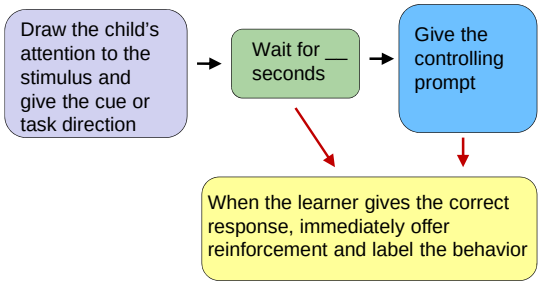
How long do you wait?



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How long do you wait?

Wait for __ seconds

When starting to teach a new skill, don't wait at all!

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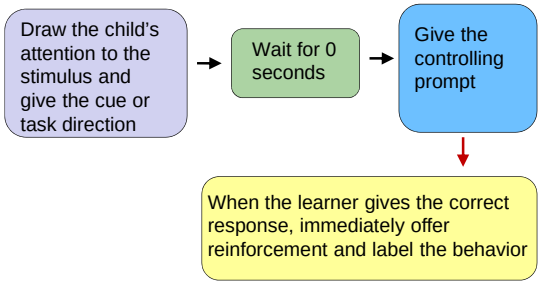
Start With 0-Second Delay



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Increasing the Delay

- Length of delay should be based upon:
  - learner characteristics (e.g., how long it takes learner to respond) and
  - task characteristics (e.g., how long it takes a different learner with similar skills to complete the task)

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Increasing the Delay

You have a choice between two different strategies:

- Constant time delay
  - Fixed number of seconds (e.g., 3, 4, 5 seconds)
- Progressive time delay
  - Gradually increases across trials or sessions (e.g., 1 second, then 2 seconds, then 3 seconds)

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Constant Time Delay

Draw the child's attention to the stimulus and give the cue or task direction → Always wait for the same number of seconds (e.g., 3) → Give the controlling prompt

When the learner gives the correct response, immediately offer reinforcement and label the behavior

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Progressive Time Delay

Draw the child's attention to the stimulus and give the cue or task direction → Gradually increase delay over time (e.g., first 2, then 3, then 4) → Give the controlling prompt

When the learner gives the correct response, immediately offer reinforcement and label the behavior

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Example: Brushing Teeth

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Example: Imitation

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Practice Activity

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Troubleshooting

- The learner gives the wrong response
  - Ignore the response
  - Go to the next trial
- The learner gives the wrong response in multiple trials after the controlling prompt has been given
  - Change to a more intensive controlling prompt

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Troubleshooting

- The learner does not respond at all
  - Deliver the controlling prompt
  - Insert another response interval
  - Provide feedback
    - Correct – provide reinforcement
    - Incorrect – ignore and go on to next trial
    - Does not respond again – ignore and move on to next trial
- The learner does not respond at all in multiple trials
  - Use a more motivating reinforcer

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Another Practice Activity

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Sample Data Collection Sheet

Module: Time Delay

Time Delay Data Collection Sheet

Learner: Toby

Person collecting data: Ms. Darchuck

Activity/setting: Playtime/Home

Target skill: Stacking Blocks

Date: 2/3/11	Delay: 4 seconds		Date: 2/3/11	Delay: 4 seconds	
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		

Key: + = performed correctly; - = performed incorrectly

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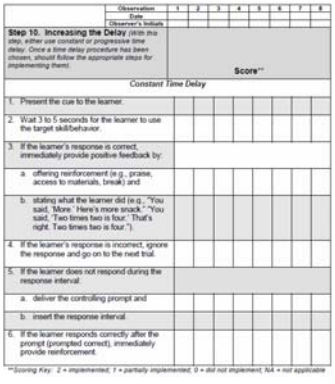
Implementation Checklist



Observation	1	2	3	4	5	6	7	8
Date								
Observer's Initials								
Step 10. Increasing the Delay (With this step, either use constant or progressive time delay. Once a time delay procedure has been chosen, should follow the appropriate steps for implementing them).	Score**							
Constant Time Delay								
1. Present the cue to the learner.								
2. Wait 3 to 5 seconds for the learner to use the target skill/behavior.								
3. If the learner's response is correct, immediately provide positive feedback by:								
a. offering reinforcement (e.g., praise, access to materials, break) and								
b. stating what the learner did (e.g., "You said, 'More.' Here's more snack." "You said, 'Two times two is four.' That's right. Two times two is four.").								
4. If the learner's response is incorrect, ignore the response and go on to the next trial.								
5. If the learner does not respond during the response interval:								
a. deliver the controlling prompt and								
b. insert the response interval.								
6. If the learner responds correctly after the prompt (prompted correct), immediately provide reinforcement.								

**Scoring Key: 2 = implemented; 1 = partially implemented; 0 = did not implement; NA = not applicable

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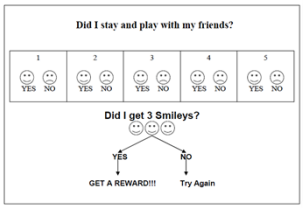
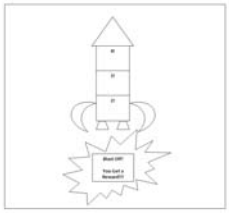
Evidence Based Practices:

Self Management





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Selecting Evidence-Based Practices

EVIDENCE-BASED PRACTICES FOR CHILDREN AND YOUTH WITH ASD

- Antecedent-Based Interventions (ABI)
- Computer-Aided Instruction
- Differential Reinforcement
- Discrete Trial Training
- Extinction
- Functional Behavior Assessment
- Functional Communication Training
- Naturalistic Intervention
- Parent-Implemented Interventions
- Peer-Mediated Instruction and Intervention
- Picture Exchange Communication System (PECS)
- Pivotal Response Training
- Prompting
- Reinforcement
- Response Interruption/Redirection
- Self-Management
- Social Narratives
- Social Skills Groups
- Speech Generating Devices/VOCA
- Structured Work Systems
- Task Analysis
- Time Delay
- Video Modeling
- Visual Supports

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Visual Supports

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Structured Work System Examples

Examples

Left-to-right

Matching

READING GROUP

Written List →

1. Read pages 1-15 in "Legends" book ___
2. Answer questions on worksheet ___
3. Raise hand to have teacher check answers ___
4. Computer ___

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Visual Schedules

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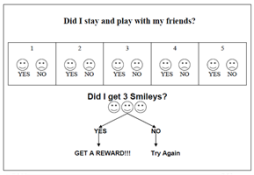
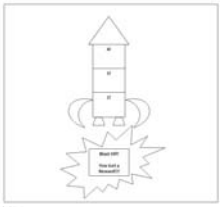
Key Components of Self-Management

Learners are taught to:

1) discriminate between appropriate and inappropriate behaviors
2) accurately monitor and record their own behaviors
3) reward themselves for behaving appropriately





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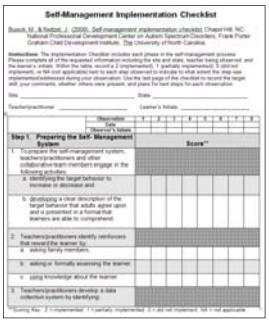
Steps of Self-Management

1) Preparing the Self-Management System
2) Teaching Learners to Use the Self-Management System
3) Implementing the Self-Management System
4) Promoting Independence with the Self-Management System



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Background: Meet Kayla

- 7-year-old student with ASD
- very verbal and is educated primarily within the general education setting
- difficulty with certain social behaviors, such as raising her hand in class
- favorite subject is math
- math teacher frustrated because Kayla often talks out in class rather than raising her hand when she wants to contribute or ask a question.

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Step 1: Preparing the System

Identifying and Clearly Describing Target Behavior

Kayla will raise her hand without talking during math class when she wants to ask a question or make a comment.

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Step 1: Preparing the System

Identifying Reinforcers that Reward the Learner

- Ask learner
- Ask family members
- Use what you already know

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Step 1: Preparing the System

Developing a Data Collection System

- Type of Data
  - Frequency or
  - Interval
- Determine Initial Criterion

Frequency Recording Sheet for Self-Management (Adult/Practitioner)

Learner: Kayla

Person collecting data: Mrs. Jones

Target behavior/skill: raising hand without talking when she wants to ask a question or make a comment

Date	Place an 'X' or '√' each time the learner engages in the target behavior during the observation	Activity/setting
2/10	✓✓✓	Math/Classroom
2/13	✓✓✓✓✓	Math/Classroom
2/15	✓✓✓	Math/Classroom
2/22	✓✓✓✓✓	Math/Classroom
2/23	✓✓✓✓	Math/Classroom

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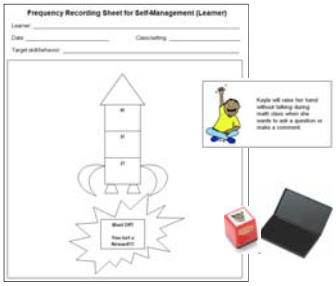
Step 1: Preparing the System

Developing Recording System for the Learner

- Start with criterion that learner will be successful with
- Base system on learner characteristics



Frequency Recording Sheet for Self-Management (Learner)

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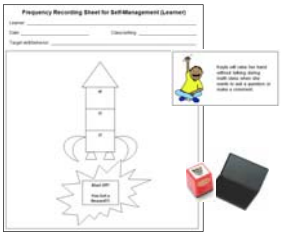
Step 2: Teaching Learners the System

- teach learner to demonstrate correct behavior
- teach learner how to use self-recording system
- teach the learner to discriminate between examples of correct and incorrect behavior



Frequency Recording Sheet for Self-Management (Learner)

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Step 3: Implementing the System

Use your implementation checklist to evaluate someone implementing self-management

Selected Steps from Self-Management Implementation Checklist

Step 3. Implementing the Self-Management System

Score**

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Step 4: Promoting Independence

- conduct ongoing, intermittent checks to determine whether learners continue to accurately self-record and acquire reinforcement
- gradually increase the criterion by ensuring that learners are successful at the current criterion before increasing it further.
- gradually increase the session length while simultaneously increasing the criterion.
- gradually increase the interval length as the session length increases.

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Pop Quiz!!

1. describe several different practices that promote independence
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3. describe the steps of self-management

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Evidence Based Practices:
Peer-Mediated Intervention

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Why Peer-Mediated Interventions?

- Effective means for **facilitating and increasing social interactions**
- Avenue for fostering more natural socialization with **less direct adult support**
- Evidence shows that **learning is not hindered** for student with ASD or peers relative to business-as-usual
  - Some studies show that academic outcomes for some peers may actually improve

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Difficulties in Social Interaction

- Single, most defining feature of ASD
- Nonverbal behaviors (e.g., eye-to-eye gaze, facial expression, gestures)
- Developing and maintaining peer relationships
- Sharing enjoyment, interests, or achievements with others (e.g., pointing out objects, bringing objects)
- Social or emotional reciprocity

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Adult Support

- Schools are increasingly utilizing paraprofessionals as a means of facilitating inclusion
- Without training, paraprofessionals sometimes inadvertently limit the interactions that students with ASD have with their peers in general education settings
- Peer-mediated interventions provide a means for general education teachers and paraprofessionals to foster, and not hinder, interactions with peers

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Peer-Mediated Interventions

- A system in which students teach other students or classmates, social skills and academics.
- Used to teach children with ASD ways of interacting with others in natural environments
- Can begin during the preschool years and continue through adulthood.

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Types of Peer-Mediated Interventions

- Social
  - Peer networks
  - Facilitation of social interactions
  - Conversation/activity partner
- Academic
  - Peer tutor
  - Cooperative Learning Groups
- Combination
  - Peer support

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Goals of Peer-Mediated Interventions

- Teach peers ways to interact with children with ASD
- Increase the frequency of social interactions between children with ASD and peers
- Extend opportunities for social interactions across the day
- Minimize adult support during interactions

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Who Would Benefit Most From Peer-Mediated Interventions?

- Most useful with children who:
  - have limited communication skills,
  - rarely initiate or respond to interactions with peers, and/or
  - do not appear to be benefiting from group instruction.

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Benefits of Peer-Mediated Intervention

- Increased social responding
- Increased social initiations
- Heightened social engagement
- Improved quality of life

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Steps for Implementation

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Steps 1 and 2

- Address the selection and preparation of peers
- Does not include the child with ASD
- Teacher preparation essential and modeling is common

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Step 1: Selecting Peers

- Select 2-3 peers that:
  - have good social/play skills;
  - are well-liked by other peers;
  - have a positive social interaction history with the child with ASD;
  - are generally compliant with adult directives;
  - are willing to participate; and
  - attend school on a regular basis.

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Step 2: Training and Supporting Peers

- Typically takes place in a quiet area of the classroom
- All materials are organized and close at hand.
- Involves a series of phases

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Step 2a: Appreciating and Recognizing Differences

- Talk to peers about similarities and differences (e.g., likes/dislikes, needs, abilities)
- Explain how peers learn from each other in the classroom (e.g., games, leisure activities, lunch together, songs, during play)
- Give a brief overview of similarities and differences between peers and children with ASD

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Step 2b: Introducing Strategies to Peers

- Strategies introduced one at a time
- Includes opportunities for practice with adult and with each other
- Daily training sessions help peers learn key interaction skills (e.g., 4-5 sessions).
- Peers learn specific skills that are used to facilitate social interactions during learning activities.

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Interaction Skills Taught During Training Sessions

- Organize play (e.g., "let's play with the puzzles")
- Share ("would you like to have lunch with me?")
- Provide assistance ("can I help you put that puzzle together?")
- Persistence ("that's it, keep going")
- Provide affection and praise (pats, hugs, high fives, smiles, etc.)

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Teaching Peers How to Use Skills

- During training sessions, the teacher:
  - describes the skill,
  - demonstrates through role play with a peer,
  - encourages peers to use the skill through role play with each other,
  - provides subtle reinforcement during the practice session, and
  - provides more explicit feedback at the end of the session.

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Video: Teaching How to Share (Step 2)

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Video: Teaching Persistence

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Step 3: Peers and Child with Autism in Structured Play Session

- In Step 3, child with ASD is now included.
- Structured play settings help peers practice skills (e.g., sharing, organizing) with child with ASD.
- Implemented daily for approximately 5-8 minutes
- As peers become more successful, activities are implemented within ongoing classroom routines and activities.

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Teacher Responsibilities

- Introduce activity to peers and child with ASD
- Provide prompts to peers to use skills with child with ASD
- Reinforce use of skills by peers and child with ASD

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Video: Structured Play Session (Step 3)

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Step 4: Implementing in Classroom Settings

- When planning and implementing in classrooms, several factors should be addressed:
  - classroom arrangement;
  - material selection;
  - identification of responsible staff; and
  - use of prompts and reinforcement.

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Classroom Arrangement

- Peer-mediated activities take place daily at approximately the same time each day.
- Activities should take place in quiet area of the classroom.
- At least 15 minutes should be set aside for each activity.
- Play activities should not take place during preferred activities.

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Material Selection

- To increase peer interactions and social engagement, limit materials to those that:
  - contain a specific theme (e.g., restaurant, post office),
  - include an element of sociodramatic play,
  - may require assistance in operating (e.g., building a road, puzzles), and
  - are not commonly available in the classroom.

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Activities and Materials That Promote Social Interaction

- Sand table
- Story telling, reading a book
- Doll house with people
- Building a road with cars and trucks
- Car garage
- Turn-taking games
- Doctor
- Farm animals and blocks
- Grocery store
- Play-doh
- Puppet show
- Games, Puzzles
- Others???

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Identification of Responsible Staff

- One staff member should be consistently responsible for:
  - training peers,
  - implementing the learning activities, and
  - observing child progress.

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Step 5: Extending Initiations Across the Day

- Step 5 is focused on helping child with ASD and peers generalize skills.
- Two strategies are used to help children generalize skills:
  - embedded intervention and
  - classwide peer buddy system.

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Embedded Intervention

- Instruction is provided within child-initiated, naturalistic interactions.
- Opportunities for peer interactions should be included in at least 3 classroom routines and activities per day.
- Use of an activity matrix helps organize activities and helps ensure that learning opportunities will occur.

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Sample: Activity Matrix

Activity	Goal
Arrival/departure	Say “hello/goodbye” to peer
Free play	Exchange materials with peers at blocks, housekeeping, writing center
Small group	Exchange materials with peers; ask peers for “more”
Circle time	Give musical instruments to peers; give/take materials from peers
Outside	Ask for turn

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Classwide Peer Buddy System

- Used to increase the number of peers who interact with the child with ASD
- Children in the class have different play partners each day.

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Example: Peer Buddy System

- Chart displays pairs of children's names printed on individual cards.
- Each day, the cards are rotated so the children have different buddys each day.
- At buddy time, children check the chart and find their name and their buddy's name.
- During free play, children play with their buddies.

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Monitoring Child Progress

- Important component of implementing peer-mediated interventions
- Direct observation helps to assess the quality and quantity of children's social engagement.
- Provides information about how the activity can be altered to increase social interactions

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What to Monitor

- Whether peer initiates interactions with child with ASD
- Whether the child with ASD responds to peers
- Whether the child with ASD initiates with the peer
- Whether the peer responds to the child with ASD
- Whether the child with ASD engages in any inappropriate behaviors

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Sample Data Sheet

Time	Activity	Target Behaviors					
		Looking at peer	Parallel play	Taking turns	Exchanging materials	Requesting items	Asking to play

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Peers Benefit as Well

- Interviews with students from multiple peer programs indicate that the majority of the student enjoyed teaching their peers with ASD and felt that they too improved their academic and/or social skills (Kamps, et. al., 1998)

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For more information about evidence-based practices for children and youth with ASD…..

……visit the National Professional Development Center on Autism Spectrum Disorders website.

http://www.autismpdc.fpg.unc.edu

Online modules are available at www.autisminternetmodules.org