

27 Evidence Based Best Practices for Students with Autism

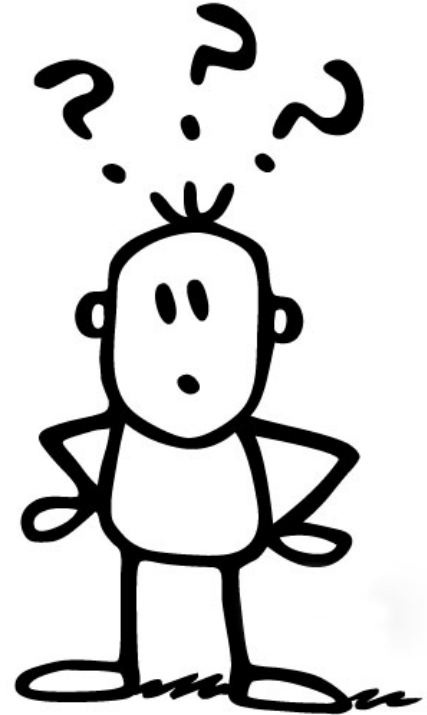
The background of the slide features a faint, grayscale image of a spiral-bound notebook. A pen with a gold-colored tip and a dark body is positioned diagonally across the notebook's pages. The notebook's spiral binding is visible on the right side.

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What are Evidence Based Practices (EBP)

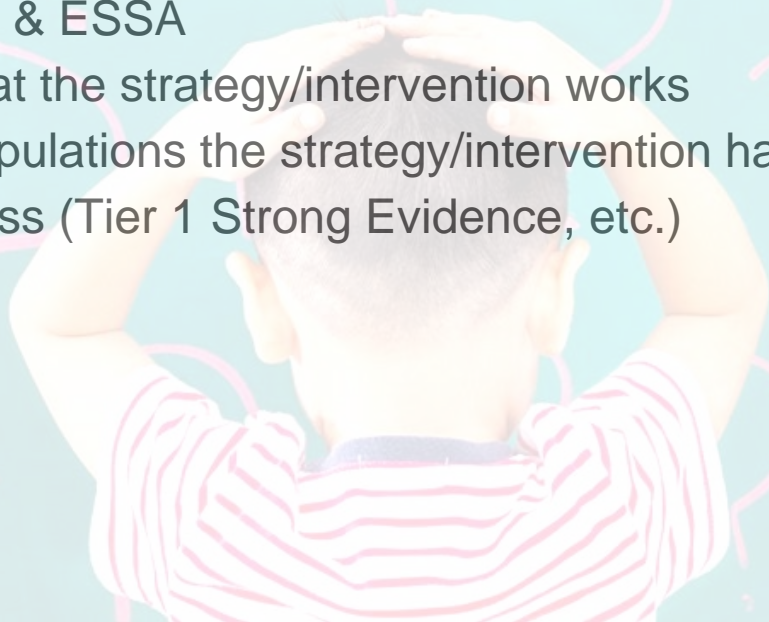
An evidence is any concept or strategy that is:

- Informed by research
- Analyzation of data
- Based on tested strategies/interventions
- Verified by subsequent studies (methods)



Why are EBP's important?

- Required by IDEA & ESSA
- Have evidence that the strategy/intervention works
- We know what populations the strategy/intervention have worked with
- Tiered effectiveness (Tier 1 Strong Evidence, etc.)



How do we choose EBP's?

Lets walk through one

- <https://ies.ed.gov/ncee/wwc/>

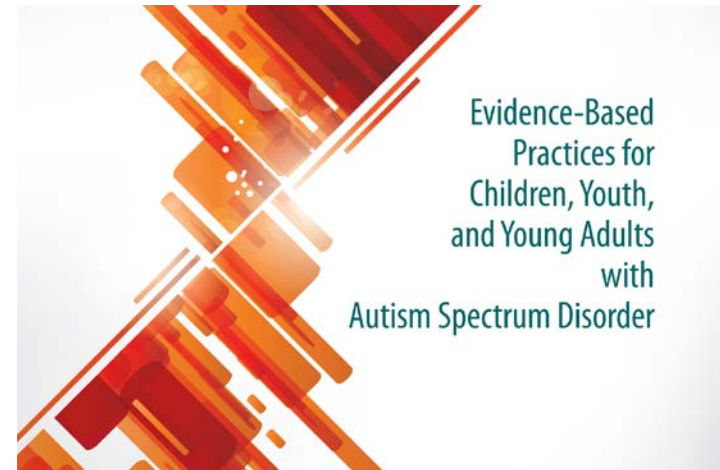


What do we know about Autism and EBP's?

Wong, et al. (2014) established a criteria that was used to scan research articles for evidence of effective strategies for serving students with autism.

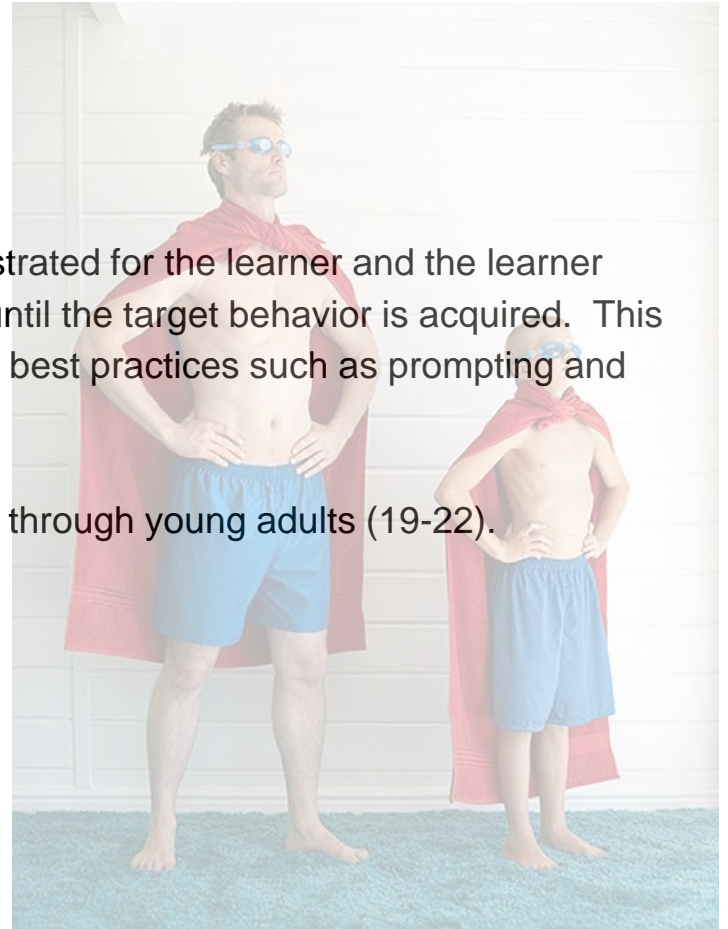
- Search resulted in 29,015 articles
- Criteria resulted in the inclusion of 456 articles
- Found evidence of 27 EBP's
- 6 new EBP's added

<http://cidd.unc.edu/Registry/Research/Docs/31.pdf>



Fundamentals of Behavior

- Modeling:
 - Modeling occurs when a target behavior is demonstrated for the learner and the learner imitates it. Modeling and imitation are employed until the target behavior is acquired. This strategy is often utilized with other evidence-based best practices such as prompting and reinforcement.
 - Ages:
 - Modeling is most effective with toddlers (0-2) through young adults (19-22).



Fundamentals of Behavior



- Prompting

- Prompting occurs when a physical, verbal, or gestural cue is given to the learner in an effort to support their acquisition of or engagement in a targeted behavior or activity. These cues are generally provided to the learner just before the learner attempts to utilize the targeted skill or behavior.
 - Prompting is considered foundational for the employment of other evidence-based practices.
 - Prompting is often utilized with time delay and reinforcement.
 - Prompting is part of the procedural protocol of pivotal response training, discrete trial teaching, and video modeling.
- Ages:
 - Prompting is most effective with toddlers (0-2) through young adults (19-22).

Fundamentals of Behavior

- Reinforcement

- Reinforcement is utilized to teach learners new skills and increase or decrease target behaviors. Reinforcement establishes a direct connection between the target behavior or skill and a consequence. This strategy may result in positive or negative reinforcement and is almost always utilized with other evidence-based practices (i.e. prompting, pivotal response training, discrete trial teaching, functional communication training).
 - Positive reinforcement: A reinforcer (something desired by the learner) is given to the learner upon the performance of the targeted skill or behavior. This may be utilized with a token economy system as well, where tokens are earned for the performance of targeted skills or behaviors and later exchanged for a desired tangible or activity.
 - Negative reinforcement: The removal of an object or activity when the targeted behavior or skill is exhibited (e.g. taking a break after completing a certain number of math problems).
- Ages:
 - Reinforcement is most effective with toddlers (0-2) through young adults (19-22).

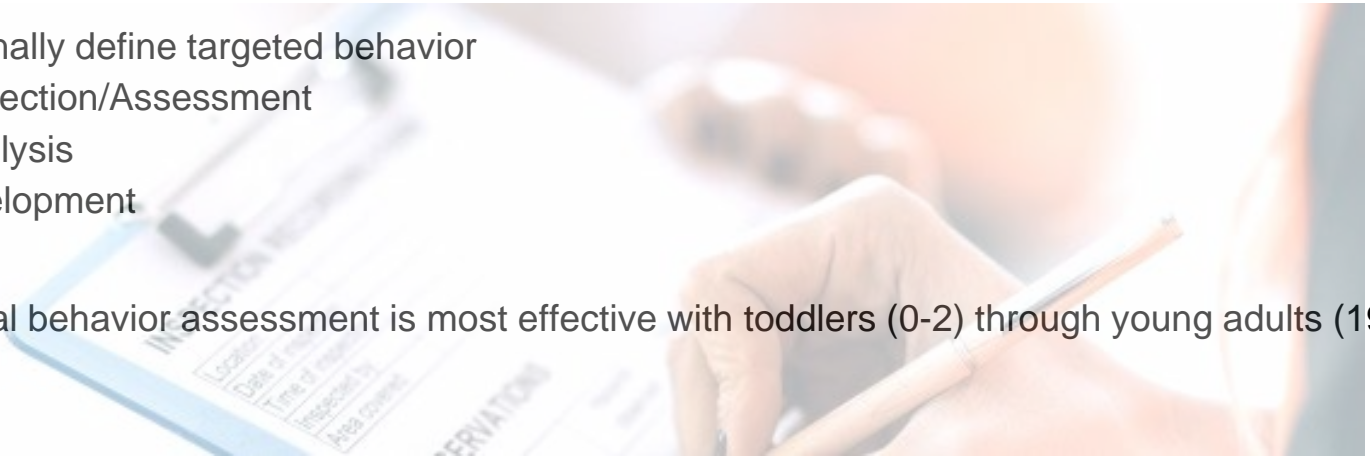
Fundamentals of Behavior

- Time Delay

- Time delay (TD) is a strategy used to systematically fade the use of prompts during instructional activities. Within this strategy, a brief delay is provided between the initial instruction and any additional instructions or prompts. Two types of time delay procedures are generally utilized:
 - Progressive time delay: The adult gradually increases the waiting time between an instruction and any prompts that might be used to elicit a response from a learner.
 - 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.
- Ages: Time delay is most effective with preschoolers (3-5) to young adults (19-22).

Functional Behavior Assessment

- Functional behavior assessment is a systematic analysis of a learner's behavior seeking to determine the cause or function behind it. Once the function is determined, interventions and strategies may be employed to meet the functional need through more effective or appropriate behaviors.
 - Operationally define targeted behavior
 - Data Collection/Assessment
 - Data Analysis
 - BIP Development
- Ages:
 - Functional behavior assessment is most effective with toddlers (0-2) through young adults (19-22).



Instruction

- Discrete Trial Teaching

- Discrete trial teaching utilizes one-on-one instruction to teach skills in a planned, controlled, and systematic manner. This strategy utilizes repeated or mass trials. Within discrete trial teaching a clear antecedent and consequence is clearly planned and implemented.
 - Instructional trial begins when teacher presents a clear direction or stimulus, eliciting a specific behavior.
 - Positive praise or tangible rewards are utilized to reinforce the desired behavior.
 - Data collection is an important part of this strategy, so teacher may monitor progress.
 - Other strategies utilized with discrete trial teaching include task analysis, prompting, time delay, and reinforcement.
- Ages:
 - Discrete trial training is most effective with preschoolers (3-5) through elementary school learners (6-11).

Instruction

- Task Analysis
 - Task analysis takes a complex skill or “chained” skill and breaks it into smaller components or steps in order to teach the skill. The learner may be taught the smaller steps or components of the skill until the entire skill is mastered (“chaining”). Other evidence-based practices should be utilized when teaching the smaller skills (i.e. reinforcement, video modeling, time delay).
 - Ages:
 - Task analysis is most effective with preschoolers (3-5) through middle schoolers (12-14).



Instruction

- Technology Aided Instruction and Intervention
 - Technology aided instruction and intervention is utilized when technology is the focus of a given intervention that supports the goals or outcomes of the learner. This intervention includes a wide variety of equipment such as speech-generating devices, tablets, equipment, virtual networks, etc. The common feature of the intervention is the technology and the instructional procedures utilized to teach the learner how to employ it.
 - Ages:
 - Technology aided instruction and intervention is most effective with preschoolers (3-5) through high schoolers (19-22).

Intervention

- Antecedent-Behavior Intervention

- Antecedent-behavior intervention is generally utilized preceding a functional behavior assessment identifying the function of the target behavior and the environmental factors that impact it. Given this factor, the environment or activity is altered in an attempt to prevent the target behavior. Common antecedent-behavior interventions include:
 - modifying educational activities, materials, or schedule
 - incorporating student choice in educational activities/materials
 - preparing students ahead of time for upcoming activities
 - varying the format, level of difficulty, or order of instruction during educational activities
 - enriching the environment to provide additional cues or access to additional materials
 - modifying prompting and reinforcement schedules and delivery
- Antecedent-behavior intervention is most effective with toddlers (0-2) through young adults (19-22).

Intervention

- Cognitive Behavior Intervention

- This strategy is based on the belief that one's behavior may be altered through cognitive processes. Learners are taught to recognize when their emotions and negative feelings are intensifying and then utilize strategies to alter their thinking. This strategy is often utilized with other evidence-based best practices such as social narratives, parent implemented interventions, and reinforcement. Cognitive behavior interventions are most often utilized with learners who struggle with behaviors related to emotions. These may include:
 - Anxiety
 - Anger
 - Sadness
- Ages
 - Cognitive behavior intervention is most effective with elementary school learners (6-11) through high school (15-18).

Intervention

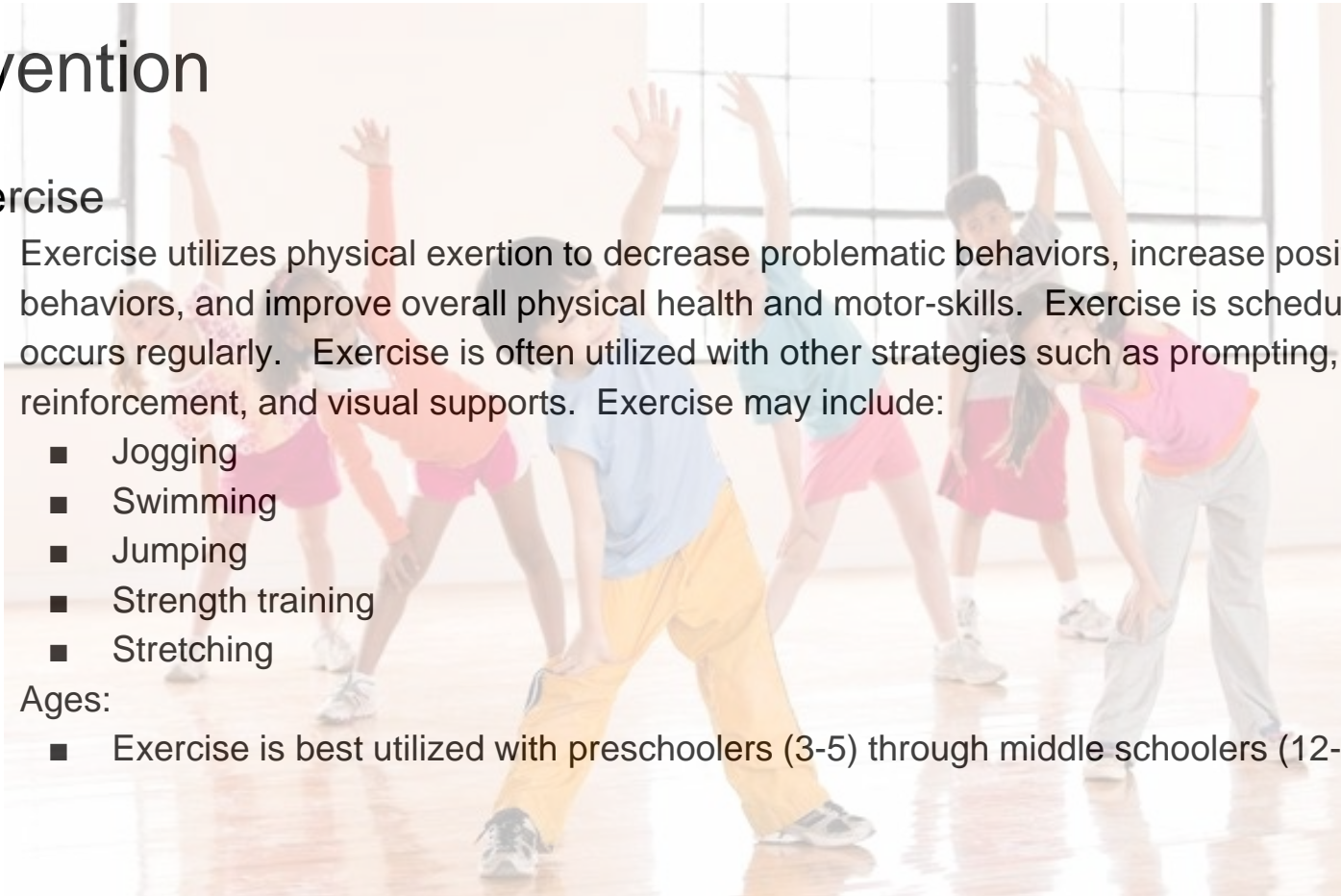
- Exercise

- Exercise utilizes physical exertion to decrease problematic behaviors, increase positive behaviors, and improve overall physical health and motor-skills. Exercise is scheduled and occurs regularly. Exercise is often utilized with other strategies such as prompting, reinforcement, and visual supports. Exercise may include:

- Jogging
- Swimming
- Jumping
- Strength training
- Stretching

- Ages:

- Exercise is best utilized with preschoolers (3-5) through middle schoolers (12-14).



Intervention

- Naturalistic Intervention

- Naturalistic interventions is a variety of practices including environmental arrangements, interaction techniques, and strategies based on applied behavior analysis. Targeted behaviors are based on student interests and are naturally reinforcing. Naturalistic interventions occur within typical activities, routines, and settings in which the learner engages.
- Ages:
 - Naturalistic intervention is most effective with toddlers (0-2) through elementary school children (6-11).

Intervention

- Pivotal Response Training

- Pivotal response training is a naturalistic intervention that utilizes the fundamentals of applied behavior analysis (ABA). This strategy builds upon the learner's interest, and is especially effective in supporting communication, language, play, and social behaviors. Pivotal response training enhances pivotal learning variables: motivation, responding to multiple cues, self-management, and self-initiations of social interactions. Key procedures include:
 - child choice,
 - reinforcement of attempts,
 - incorporation of maintenance tasks,
 - direct/natural reinforcers contingent on appropriate behavior
- Ages:
 - Pivotal response training is most effective for toddlers (0-2) through middle schoolers (12-14).

Intervention



- Video Modeling

- Video modeling utilizes video equipment to record and display a visual model of a targeted behavior or skill. Video modeling may include:
 - Basic video modeling: Shows an individual other than the learner engaging in the targeted behavior or skill.
 - Video self-monitoring: A recording of the learner engaging in the behavior or skill. May be edited to remove adult prompts.
 - Point-of-view video modeling: Recording is taken from the point-of-view or perspective of the learner, demonstrating what he/she will see when he or she performs the targeted behavior or skill.
 - Video prompting: The targeted behavior is broken into steps. Each step is recorded following breaks. When the learner watches each step, he/she may practice the step prior to watching the subsequent step.
- Ages:
 - Effective for toddlers (0-2) to young adults (19-22).

Intervention

- Differential Reinforcement of Alternative, Incompatible, or Other Behavior
 - Differential reinforcement of alternative, incompatible, or other behavior teaches learners new skills and positive behaviors, by reinforcing desirable behaviors and ignoring inappropriate ones. This strategy is often paired with other evidence-based practices (i.e. prompting) to teach the learner more functional behaviors that are incompatible with the interfering behavior. The learner is provided reinforcement when:
 - When the learner is engaging in specific desirable behaviors and not displaying the interfering behavior.
 - The learner is engaging in a behavior that is physically impossible to do while engaging in the interfering behavior.
 - The learner is not engaging in the interfering behavior.
 - Ages
 - Differential reinforcement is best utilized with preschoolers (3-5) to young adults (19-22).

Intervention

- Response Interruption Redirection

- Response interruption redirection is a strategy utilized to divert the learner's attention and reduce interfering behaviors through the use of a prompt, comment, or other distraction. This strategy is employed most often when behaviors are repetitive, self-injurious, or stereotypical.
 - Often implemented upon completion of an FBA to identify the function of the interfering behavior.
 - Particularly useful with interfering behaviors that are persistent and occur in the absence of others, in a number of different settings, and a variety of tasks.
 - Interfering behaviors are often not maintained by attention of escape.
 - Interfering behaviors are most often maintained by sensory reinforcement and are often resistant to interventions.
- Ages:
 - Response interruption redirection is most effective with preschoolers (3-5) to young adults (19-22).

Intervention

- Extinction

- Extinction is based on applied behavior analysis and utilized to reduce or eliminate negative behaviors. A functional behavior assessment is critical to employing this intervention. Upon assessment of the behavior, the reinforcing consequence supporting the negative behavior is removed in an effort to reduce it or eliminate it all together.
 - Often implemented with differential reinforcement and functional behavior assessment.
- Ages:
 - Extinction is most effective with preschoolers (3-5) to high schoolers (15-18).

Intervention

A photograph of a woman holding a child's hand outdoors. The woman is wearing a dark dress with a light floral pattern. The child is wearing a light-colored, patterned top. They are standing in a sunlit area with trees in the background. The image is slightly faded to allow text to be overlaid.

- **Parent Implemented Intervention**

- Parent implemented intervention is a program upon which parents are trained to provide some or all of a given intervention. Examples include interventions to improve communication, play, self-help and overall improvement in behavior. Parent trainings may be provided via:
 - Didactic instruction
 - Modeling
 - Coaching
 - Performance feedback
- Ages:
 - Parent implemented intervention is most successful with toddlers (0-2) to elementary school children (6-11).

Intervention

- Peer Mediated Instruction and Intervention
 - Peer mediated instruction and intervention is a strategy to teach typically developing peers ways to interact with and help students with autism develop appropriate behaviors, communication, and social skills.
 - Typically developing peers are taught systematic ways to engage with students with autism.
 - Students are paired or placed in cooperative learning groups and taught ways in which to engage students with autism in natural settings.
 - Ages:
 - Peer mediated instruction and intervention is most successful with preschoolers (3-5) to high school students (15-18).

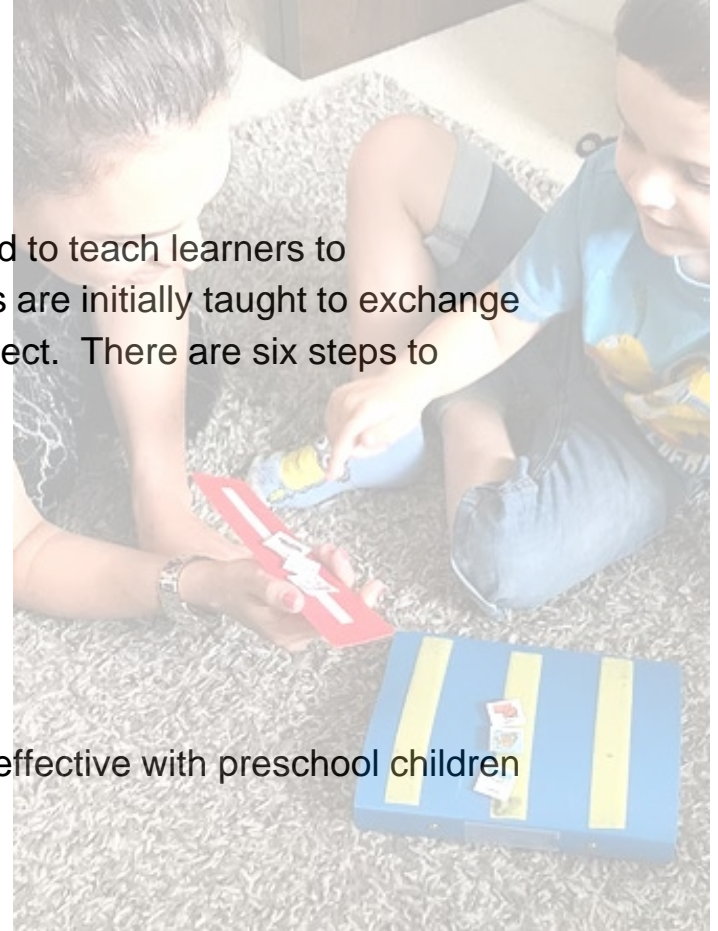
Communication

- Visual Supports
 - Concrete cues that:
 - Organize the learning environments
 - Set expectations for activities, routines, and behaviors
 - Provide reminders
 - Provide preparation or instruction
 - Ages:
 - Visual supports is most effective with toddlers (0-2) to young adults (19-22)

Communication

- **Picture Exchange Communication System**

- Picture exchange communication systems are utilized to teach learners to communicate in social contexts. Most often, learners are initially taught to exchange a picture of a desired object in order to obtain the object. There are six steps to utilizing Picture Exchange Communication Systems:
 - “How” to communicate
 - Distance and persistence
 - Picture discrimination
 - Sentence structure
 - Responsive requesting
 - Commenting
- Picture exchange communication systems are most effective with preschool children (3-5) to middle schoolers (12-14).



Communication

- Functional Communication Training
 - Functional communication training is a systematic practice to eliminate inappropriate behaviors and communication through replacing them with more appropriate behaviors or communication skills. This strategy is followed by an FBA (Functional Behavior Assessment) upon which the function of the targeted behaviors is delineated and a replacement communication behavior is identified and taught that meets the same need or purpose.
 - Reinforcement is utilized to meet the same/similar reinforcement as is supporting the problem behavior.
 - Problem behavior is usually set to extinction
 - It is important to note that the alternative response is a recognizable form of communication (i.e. picture exchange, vocalization, manual sign, etc.)
 - Ages
 - Functional communication training is most successful with preschool children (3-5) to high school students (15-18).

Social

- Self Management
 - Utilized to support learners in self-regulating their behavior. This strategy encourages learners to identify appropriate versus inappropriate behaviors, accurately record their own behaviors, and to reinforce themselves for behaving appropriately.
 - Initially learners may need adult support. However, once self management is regulated, adults allow the learner to take control and monitor his/her own behaviors.
 - Self management is often utilized with modeling, visual modeling, and visual supports.
 - Ages
 - Self management is most successful with preschool students (3-5) to young adults (19-22).

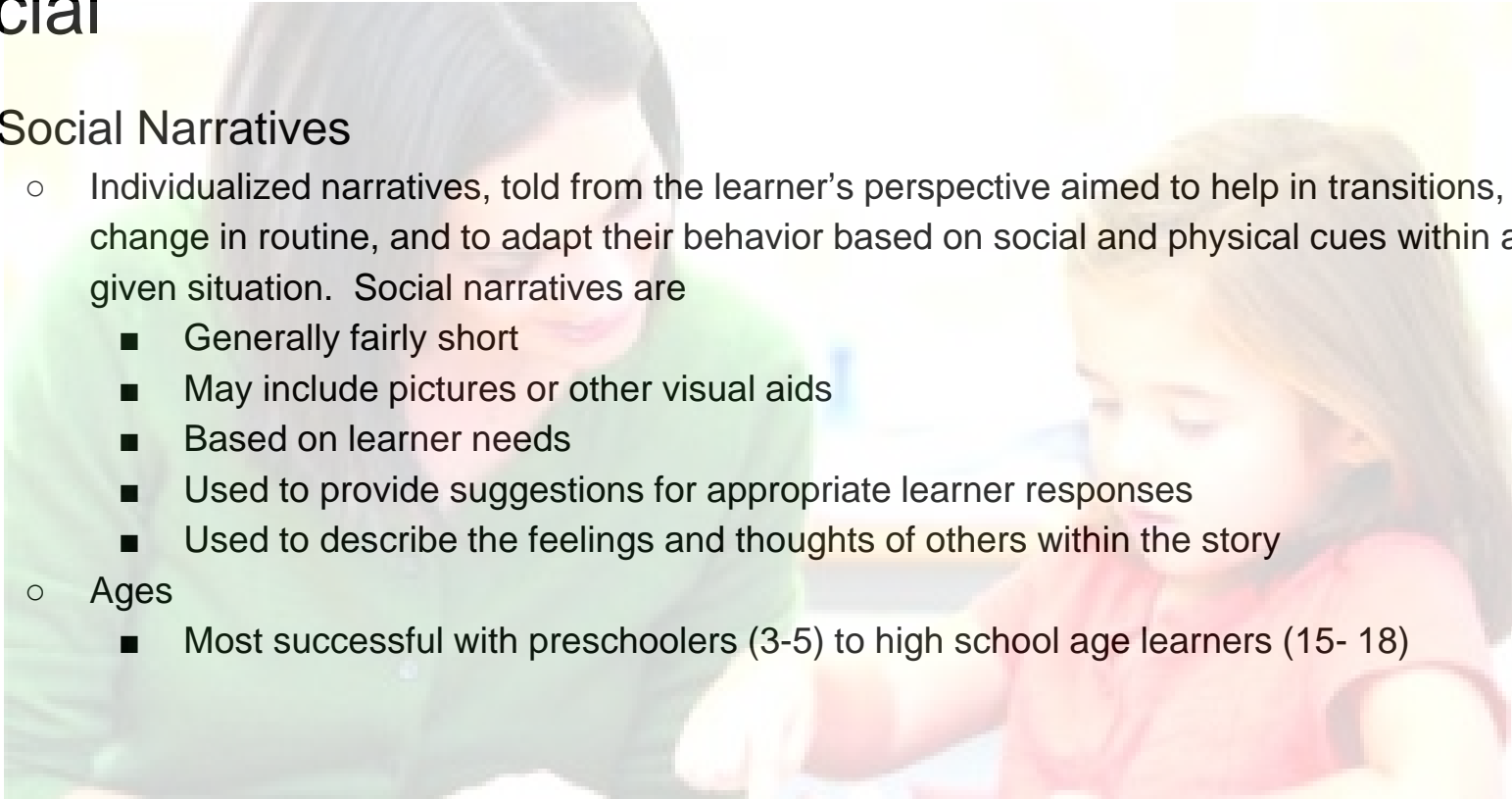
Social

- Scripting
 - Providing the learner with a written or verbal description of a given situation or skill. The purpose behind scripting is to help learners anticipate what may occur within a specific setting or activity and to give them the skills to appropriately participate.
 - Scripting is practiced repeatedly prior to use within the given situation/activity
 - When scripts have been mastered and learners are able to successfully utilize it within the appropriate situation/activity, the script should systematically be faded.
 - Scripting is often utilized with prompting, reinforcement, and modeling
 - Ages:
 - Most successful with preschoolers (3-5) to high school students (15-18).

Social

- Social Narratives

- Individualized narratives, told from the learner's perspective aimed to help in transitions, change in routine, and to adapt their behavior based on social and physical cues within a given situation. Social narratives are
 - Generally fairly short
 - May include pictures or other visual aids
 - Based on learner needs
 - Used to provide suggestions for appropriate learner responses
 - Used to describe the feelings and thoughts of others within the story
- Ages
 - Most successful with preschoolers (3-5) to high school age learners (15- 18)



Social

- Social Skills

- Individual and group instruction designed to teach appropriate interactions with typically developing peers. Includes:
 - Role play
 - Feedback
 - Promotion of positive interaction with peers
- Ages:
 - Successful with toddlers (0-2) to young adults (19-22)

Social

- Structured Playgroups

- Purposefully selected small groups of students utilized to teach a wide variety of outcomes
 - Includes students without disabilities
 - Clearly defined interactions that target a specific place and defined activity
 - Adult leading the activity drive roles and themes
 - Scaffolding and supports offered to the student as needed to ensure success
- Ages:
 - Most successful with elementary children, ages 6-11

