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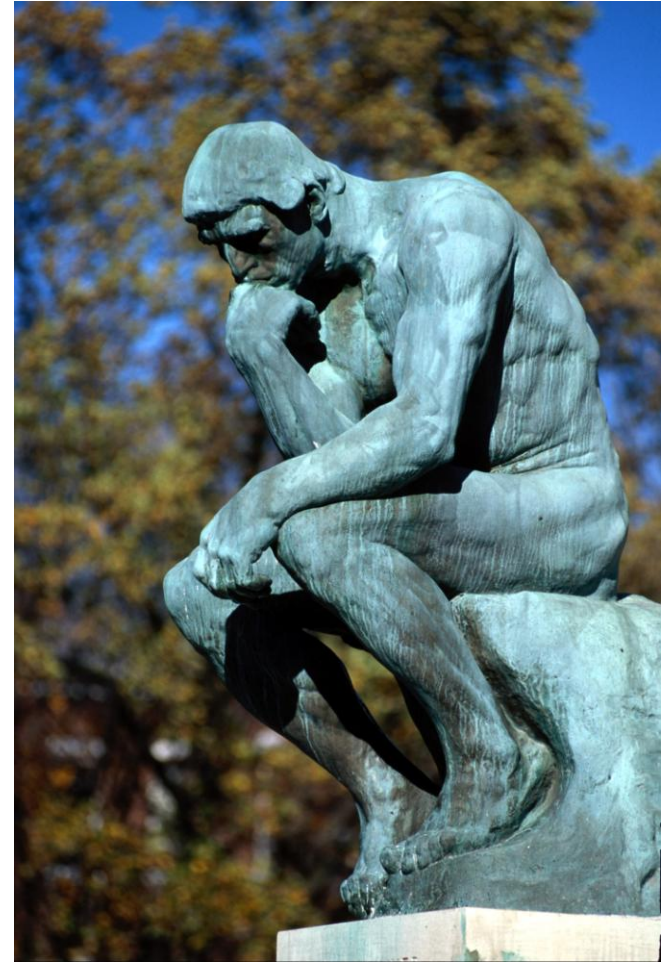## KENTUCKY AUTISM TRAINING CENTER

Effective Strategies for Students with Autism as Applied within a System of PBS

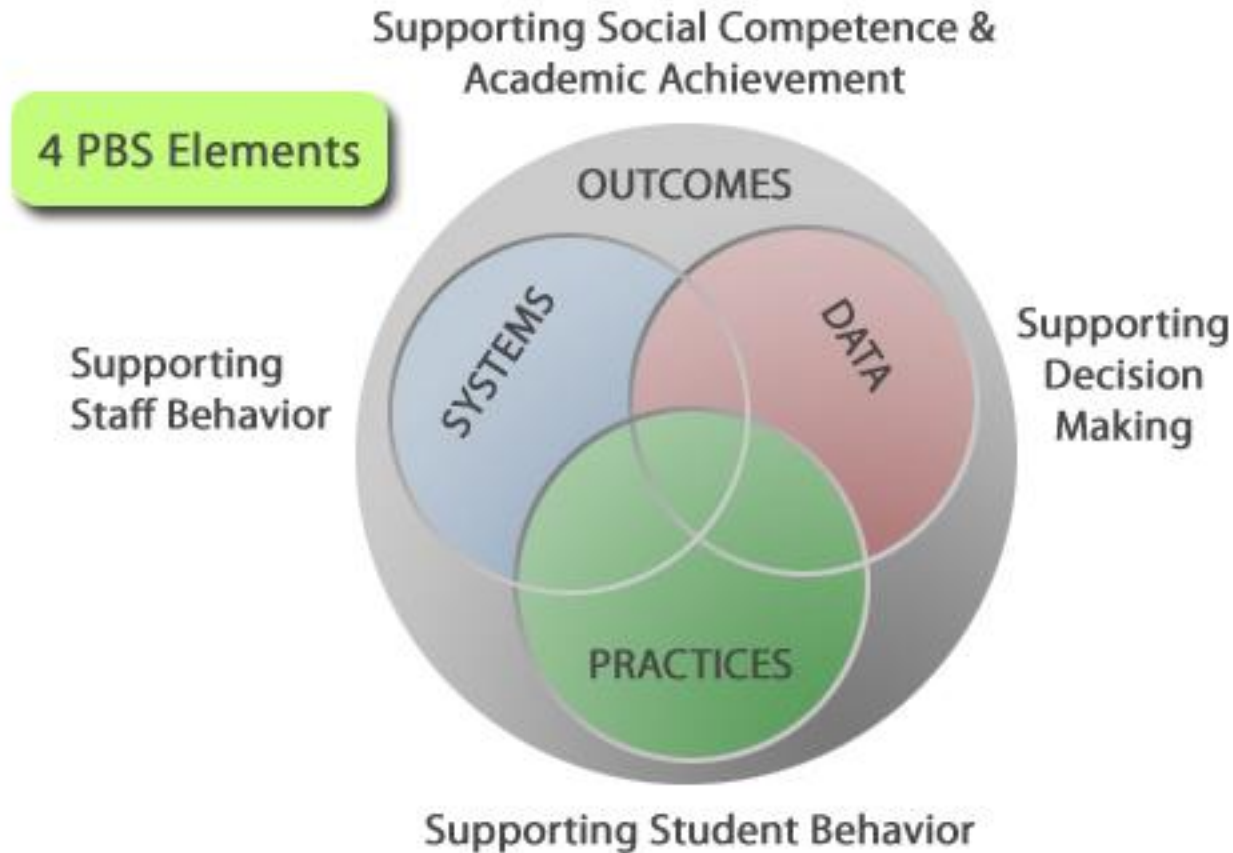**G. Richmond Mancil, Ph.D.**

7th International PBS Conference

March 25-27, 2010

- Background
- PBS Framework
- Evidence based practices for ASD
- The 'fit' within the PBS framework
- Examples of practices within the framework

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Promotes the optimal development, learning, achievement, employment, and well being of individuals with ASD and to provide support for their families is defensible

IDEIA (2004) requires the use of scientific, evidence-based practices for children and youth with disabilities

Teachers are accountable for their instructional/ intervention practices

Instructional/ intervention decisions should be data driven

Material on EBPs and autism derived from the NPDC on ASD, 2009

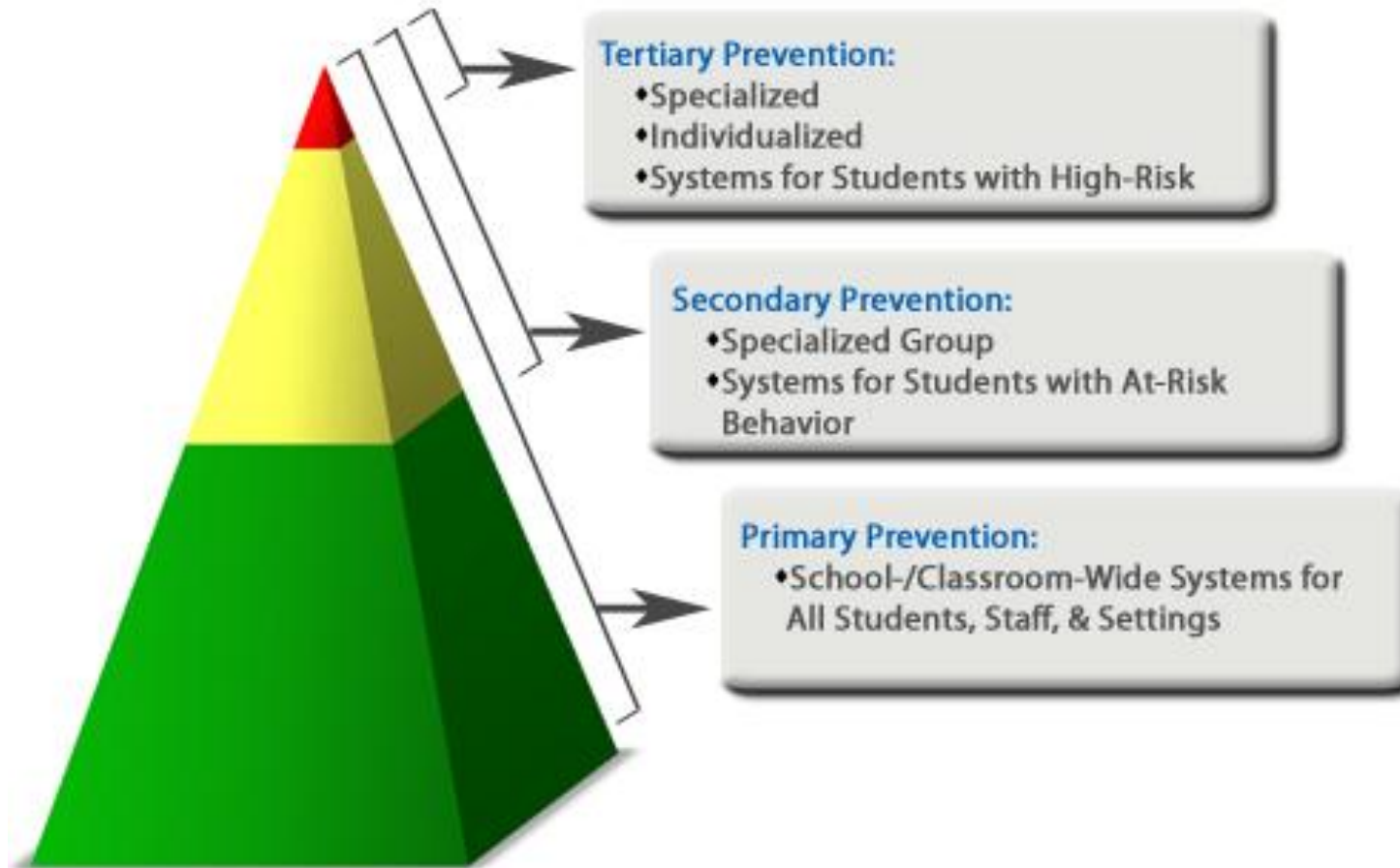These four elements are guided by six important principles:

1. Develop a continuum of scientifically based behavior and academic interventions and supports.

2. Use data to make decisions and solve problems.

3. Arrange the environment to prevent the development and occurrence of problem behavior.

4. Teach and encourage prosocial skills and behaviors.

5. Implement evidence-based behavioral practices with fidelity and accountability.

6. Screen universally and monitor student performance & progress continuously

Must be established through peer-reviewed research in scientific journals using:

- *Randomized or quasi-experimental design studies.* Two high quality experimental or quasi experimental or quasi-experimental studies,
- *Single-subject design studies.* Three different researchers must have conducted five quality single subject design studies, or
- *Combination of evidence.* One high quality randomized or quasi-experimental group design study and three high quality single subject design studies conducted by at least three different investigators or research groups.

High quality in this context means no critical design flaws.

- (Horner, Carr, McGee, Odom, & Wolery, 2005); (Nathan & Gorman, 2002); (Odom, Bratlinger, Gersten, Horner, Thomspon, & Harris, 2004); (Rogers, & Vismara, 2008)

PBS Framework.

Continuum of School-Wide Instructional & Positive Behavior Suport

Tertiary Prevention:
- Specialized
- Individualized
- Systems for Students with High-Risk

Secondary Prevention:
- Specialized Group
- Systems for Students with At-Risk Behavior

Primary Prevention:
- School-/Classroom-Wide Systems for All Students, Staff, & Settings

Figure citation: http://www.pbis.org/
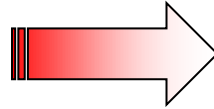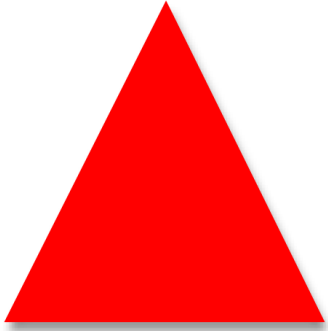
- Prompting
- Reinforcement
- Time delay
- Video modeling
- Visual supports
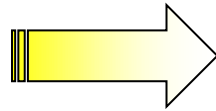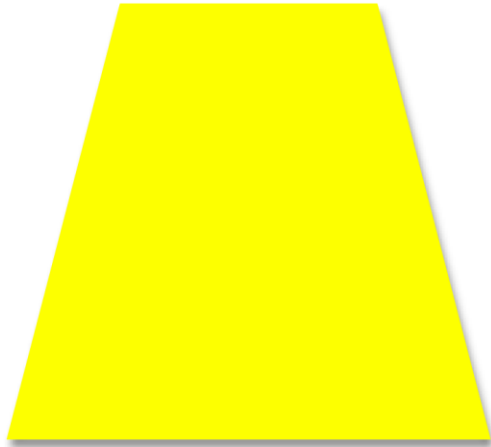
- Computer-aided instruction
- Differential reinforcement
- Naturalistic interventions
- Peer-mediated instruction/ intervention
- Prompting
- Reinforcement
- Response interruption/ redirection
- Self-management
- Social narratives
- Social skills training groups
- Speech generating devices (SGD)/ VOCA
- Task analysis and chaining
- Time Delay
- Video modeling
- Visual Supports

- Computer-aided instruction
- Differential reinforcement
- Discrete trial training
- Extinction
- Functional Behavioral Assessment
- Functional Communication Training
- Naturalistic interventions
- Parent-implemented interventions
- Peer-mediated instruction/ intervention
- PECS
- Pivotal response training
- Prompting
- Reinforcement
- Response interruption/ redirection
- Self-management
- Social narratives
- Speech generating devices (SGD)/ VOCA
- Structured work systems
- Task analysis and chaining
- Time Delay
- Video modeling
- Visual Supports

Examples of the Fit:

- Before we begin, here are a few things to keep in mind:
  - Only brief definitions are provided.
  - Typically, there is more involved than the abbreviated description given.
  - Some articles may have been overlooked.
  - Ages and domains relate to articles reviewed, thus, many of the practices could theoretically be across the other areas and age ranges.

- **What is it?**
  - Involves using praise and/ or other rewards for desired behaviors and appropriate communication, while ignoring inappropriate behaviors.

- **What age and domains?**
  - Age 2 to 21 years.
  - Behavior and communication.

- **SP example:**
  - Class wide reward system (e.g., large group contingency).

- **TP example:**
  - Implementing DR following and FBA and child specific.

$$S^D \rightarrow R \rightarrow S^R \rightarrow \text{ITI}$$
$$(S^P)$$

- **What is it?**
  - One-to-one instructional approach used to teach appropriate behavior and communication skills in a planned, controlled, and systematic manner. Each teaching opportunity has a definite beginning and end.

- **What age and domains?**
  - Age 2 to 12 years.
  - Behavior and communication.

- **TP example:**
  - Mand training for a cracker or other preferred food item.

Challenging Behavior

- **What is it?**
  - Used to reduce or eliminate unwanted behavior. Involves withdrawing or terminating the positive reinforcer that maintains an interfering behavior. Do not confuse with planned ignoring (only is extinction if function is attention).

- **What age and domains?**
  - Age 2 to 15 years.
  - Behavior and communication.

- **TP example:**
  - Child who engages in aberrant behavior to escape interaction is not allowed to escape. For example, the interventionist may follow the child with the item and a picture card and continue to use a prompt system.

- **What is it?**
  - Systematic way of determining the underlying communicative function or purpose of a behavior, so that an effective intervention plan can be developed.

- **What age and domains?**
  - Age 2 to 15 years.
  - Behavior and communication.

- **TP example:**
  - Billy bites his arm intensely each time he is asked to complete an academic task. The teacher completes an FBA and determines the function is to escape the task demand. This type of approach always is individual based.

- **What is it?**
  - Systematic practice to replace inappropriate behavior or subtle communicative acts with more appropriate and effective communicative behaviors or skills.

- **What age and domains?**
  - Age 2 to 12 years.
  - Behavior and communication.

- **TP example:**
  - After the teacher completed the FBA on Billy, she chose a communicative response to teach him. Following this, she reinforced the new communicative response and placed the challenging behavior on extinction.

Step 3: Develop and Implement a Treatment Plan

Step 2: Identify a Communicative Response
- Verbal
- Picture based
- Gesture
- Assistive technology device

Step 1: Conduct an FBA
- Indirect measures
- Direct Measures

- **What is it?**
  - Collection of practices including environmental arrangement, interaction techniques, and behavioral strategies that are used to promote appropriate communication and social skills.

- **What age and domains?**
  - Age 2 to 21 years.
  - Behavior, communication, and social.

- **SP example:**

- **TP example:**

- **What is it?**
  - Parents on taught to provide individualized intervention to their child to improve/ increase a wide variety of skills and/ or to reduce interfering behaviors.

- **What age and domains?**
  - Age 2 to 12 years.
  - Academic, behavior, communication, play, social, and transition.

- **TP example:**
  - A parent implements milieu therapy in the home environment by conducting environmental sabotage to enhance communication initiation of their little girl with ASD.

- **What is it?**
  - Using PECS, learners are taught to give a picture of a desired item to a communicative partner in exchange for the item. There are six phases of PECS instruction, with each phase building on the previous phase.

- **What age and domains?**
  - Age 2-15 years.
  - Behavior, communication, and social.

- **TP example:**
  - Eric does not have a formal communication system. He typically engages in challenging behavior to get items he desires, particularly his favorite food, chips. The teacher begins the first phase of PECS to get Eric to use a picture card in exchange for a chip.

- **What is it?**
  - Method of systematically applying the scientific principles of applied behavior analysis. PRT builds on learner initiatives and interests.
- **What age and domains?**
  - Age 2 to 15 years.
  - Behavior, communication, play, and social.
- **TP example:**

- **What is it?**
  - Include any help given to learners to assist them in using a specific skill. Prompts are generally given by an adult or peer before or as a learner attempts to use a skill.

- **What age and domains?**
  - Age 2 to 21 years.
  - Academic, behavior, communication, play, social, transition.

- **PP example:**
  - Lines are in the middle of every hallway to remind all children to walk on the right side of the hallway.

- **SP example:**
  - A stop sign is put on the teacher's closed shelf to prompt student not to open the cabinet.

- **TP example:**
  - The teacher uses a visual timer for Johnny, who has difficulty transitioning between activities.

- **What is it?**
  - Time delay is a practice that focuses on fading the use of prompts during instructional activities. This practice is always used in conjunction with prompting procedures such as least-to-most prompting, simultaneous prompting, and graduated guidance. With this procedure, a brief delay is provided between the initial instruction and any additional instructions or prompts.

- **What age and domains?**
  - The evidence base shows that time delay is an effective intervention for learners with ASD ranging from 6 to 11 years of age.
  - Academic, play/leisure, language/communication, and social skills.

- **PP example:**
  - The school bell rings to change classes and then rings to indicate the students should be in class. There is a time delay before the third ring to indicate again that the students should be in class.

- **SP example:**
  - The teacher prompts the class to begin working and waits 5 seconds before providing another cue.

- **TP example:**
  - Melody's teacher verbally prompts her to ask for the toy. The teacher waits 6 seconds before providing a more intrusive prompt.

- **What is it?**
  - Video modeling is a mode of teaching that uses video recording and display equipment to provide a visual model of the targeted behavior or skill. Types of video modeling include basic video modeling, video self-modeling, point-of-view video modeling, and video prompting.

- **What age and domains?**
  - Early childhood through middle school. This practice may prove useful with high school age learners as well, though no studies were identified to support its use at this age level.
  - Behavior, communication, social, academic/cognition, and play.

- **SP example:**
  - The teacher plays a video model of safety procedures for the science lab.

- **TP example:**
  - Jill's teacher does a POV video modeling of going through the line and Burger King and ordering food.

- ## What is it?
  - Social narratives are interventions that describe social situations in some detail by highlighting relevant cues and offering examples of appropriate responding. They are aimed at helping learners adjust to changes in routine and adapt their behaviors based on the social and physical cues of a situation, or to teach specific social skills or behaviors. Social narratives are individualized according to learner needs and typically are quite short, perhaps including pictures or other visual aides.

- ## What age and domains?
  - Early childhood to middle school.
  - Repetitive behavior, social interactions, disruptive behavior, generalization of independent behavior, expression of frustration, choice-making and play, and on-task behavior.

- ## SP example:
  - The teacher creates a social narrative for all students in the classroom that describes expected behavior on the field trip to the zoo.

- ## TP example:
  - Sarah's mom writes a social narrative explaining what to expect on the visit to her grandmother's house for the weekend.

- **What is it?**
  - Visual supports are any tool presented visually that supports an individual as he or she moves through the day. Visual supports might include, but are not limited to, pictures, written words, objects within the environment, arrangement of the environment or visual boundaries, schedules, maps, labels, organization systems, timelines, and scripts.

- **What age and domains?**
  - Preschool through middle school age.
  - Task engagement, social interaction, play, transition time, on-task behavior, and self-help.

- **PP example:**
  - A stop sign is put on the door to the faculty restroom to prompt all students to not enter.

- **SP example:**
  - Class schedule is posted on the wall for all students in the classroom.

- **TP example:**
  - An individual schedule is created for Billy with photographs related to each item.

Response Interruption/ Redirection

- **What is it?**
  - Response interruption/redirection (RIR) is an evidence-based practice used to decrease interfering behaviors, predominantly those that are repetitive, stereotypical, and/or self-injurious. RIR often is implemented after a functional behavior assessment (FBA) has been conducted to identify the function of the interfering behavior.

- **What age and domains?**
  - Age range of 3 to 21 years of age.
  - Severe interfering behaviors (repetitive, SIB), off-task behavior.

- **SP example:**
  - Class is loud and begin repeating the same question to the teacher. The teacher redirects by saying, "Remember, you should be working on your assignment."

- **TP example:**
  - The teacher holds Jeffrey's hand just prior to his engagement in wrist biting.

- **What is it?**
  - Electronic devices that are portable in nature and can produce either synthetic or digital speech for the user. SGD may be used with graphic symbols, as well as with alphabet keys. Variety of skills including initiation, expressive language, joint attention, and pragmatics.
- **What age and domains?**
  - Age 2 to 12 years.
  - Communication and social.
- **SP example:**
  - An entire class, including typically developing, use and Ipod with an approved application to communicate between classmates.
- **TP example:**
  - Denise does not communicate her wants and needs. The teacher uses an Ipod with Iconversate for Denise. She teaches Denise how to use this device to communicate.

- **What is it?**
  - Task analysis is the process of breaking a skill into smaller, more manageable steps in order to teach the skill. May be taught through chaining (forward, backward, or total task presentation).

- **What age and domains?**
  - Age 2 to 21 years.
  - Academic, behavior, communication, play, social, and transition.

- **SP example:**
  - Entire class is taught long division using backward chaining.

- **TP example:**
  - Sally has difficulty putting her jacket on. The teacher completes a task analysis and using forward chaining to teach the skill.

This powerpoint and other material relevant to autism may be found at: https://louisville.edu/education/kyautismtraining

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