



ABA for SLPs

Catherine Horton, MS, CCC-SLP, BCBA
Lori Frost, MS, CCC-SLP
Jo-Anne Matteo, MS, CCC-SLP
Jill Waegenare, MA, CCC-SLP
Pyramid Educational Consultants, Inc.



Disclosures

Jo-Anne Matteo
Jill Waegenare
Catherine Horton
Lori Frost

Financial: Each receives compensation as an employee of Pyramid Educational Consultants, Inc.
Non-financial: No relevant non-financial relationships to disclose

• Copyright, 2016 Pyramid Educational Consultants



Applied Behavior Analysis

“The process of systematically applying interventions based upon the principles of learning theory to improve socially significant behaviors to a meaningful degree and to demonstrate that the interventions employed are responsible for the improvement in behavior.”

(Baer, Wolf and Risley, 1968;
Sulzer-Azaroff & Mayer, 1991)

• Copyright, 2016 Pyramid Educational Consultants



Key Concepts of ABA

- Behavior is observable
- Behavior is measurable
- Behavior is related to the environment
 - Things that happen before (antecedents)
 - Things that happen after (consequences)

• Copyright, 2016 Pyramid Educational Consultants



What Are the Issues?

- To date, ABA-based strategies have the most support as scientifically validated for ASD.
- The incidence of autism has risen dramatically.
Virtually **all** learners with autism have deficits in the areas of speech, language, and communication.
- SLPs must be knowledgeable of ABA terms and concepts in order to actively participate in team discussions and planning

• Copyright, 2016 Pyramid Educational Consultants



Our “Students”

- Student Characteristics
- Which do we talk about at the end of the day?
- Which ones do we address first?



• Copyright, 2016 Pyramid Educational Consultants



What does “to learn” mean?

- Teaching involves manipulating the Antecedent events and the Consequence events in order to change behavior.
- Learning leads to a change in behavior:
 - After a successful lesson, the student can do something he couldn't do before the lesson.

Goal = ALL students will learn new skills

• Copyright, 2016 Pyramid Educational Consultants



The Pyramid Approach to Education

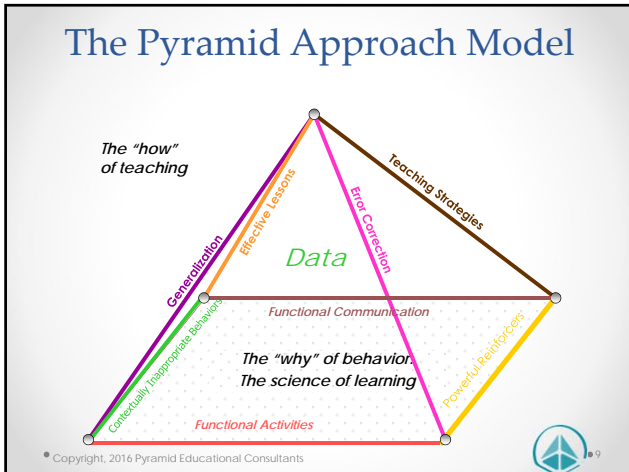
Andy Bondy, PhD

- A systematic approach to designing teaching programs
- Based on a broad spectrum application of Applied Behavior Analysis (ABA)
- Blends motivational systems, functional activities, and creative communication training with the science of learning

**The Pyramid Approach to Education (Bondy, 2010)*


• Copyright, 2016 Pyramid Educational Consultants





Functional Activities


- *Why* do we have schools?
 - To teach skills to
 - Get a job
 - Live independently
 - Teach versus “take care of”
- *What* do we teach?
 - Skills necessary for independence
 - “A functional skill... is an action that will be performed by someone else if a person with disabilities does not perform it” Lou Brown, 1984
- *What* materials do we use?



• Copyright, 2016 Pyramid Educational Consultants




Why is this important for SLPs?


- If communication only occurs for 30-minutes per day, twice a week it is simply another activity scheduled into the day – not functional communication!
- Survey the day and assist the team to capture or create opportunities for communication



• Copyright, 2016 Pyramid Educational Consultants

Communication Across the Day

Schedule Picture	Time	Staff	Activity	Communication Targets
	8:30	Mrs. Y	Arrival. Learners enter room, empty and hang book bags, put home-school log in basket on teacher’s desk. Mrs. Y has a jar of snacks and small toys on her desk containing items the learners like. Amy has trouble unzipping her book bag.	1) <u>Hello!</u> 2) <u>I need help</u> 3) <u>Can I have a sticker?</u>
	8:35		Transition to schedule (empty bag)	
	8:36	Mr. J	Bathroom. Amy uses the toilet, washes hands—she is independent at both tasks, so today the soap is out of reach.	4) <u>I want help with soap</u>
	8:41		Transition to schedule (Amy finishes task sequence)	




• Copyright, 2016 Pyramid Educational Consultants

Powerful Reinforcers

Two approaches to getting students to participate in activities

- o "Make" them
- o Entice them


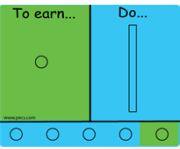


The Pyramid Approach involves enticing with powerful reinforcers

© Copyright, 2016 Pyramid Educational Consultants

Pyramid Principles for Using Powerful Reinforcers

- Grandma's Secret
- Reinforcers are always student defined – can be social or tangible
- Use a *reinforcer-first* strategy
- No reinforcer, no lesson!





© Copyright, 2016 Pyramid Educational Consultants

Let's Make a Deal

What goes into a good deal?

- Who picks the type of reinforcer?
- Which comes first- R+ or demand?
- Workers expect a VISUAL contract including:
 - o How much R+
 - o How often do we get paid?
 - o When do we get paid? (When's the next one?)
 - o Can we re-negotiate the deal?
 - o When do we get a vacation (or break)?



© Copyright, 2016 Pyramid Educational Consultants

Why is this important for SLPs?

- SLPs first need to build rapport with students – best accomplished by pairing self with reinforcers
- To teach communication, start by having students ask for their favorite items
- Visual reinforcement systems can be used to increase motivation for other targeted skills (ex: receptive tasks, such as noun identification)

© Copyright, 2016 Pyramid Educational Consultants

Functional Communication



Functional communication involves behavior (defined in form by the community) directed to another person who in turn provides related direct or social rewards.

(Bondy & Frost, 2002)

• Copyright, 2016 Pyramid Educational Consultants



Functional Communication?



• Copyright, 2016 Pyramid Educational Consultants



Functional Communication

- Not all behaviors are communicative
- Must occur between two people
- Two broad categories – requesting and commenting



• Copyright, 2016 Pyramid Educational Consultants



Nine Critical Communication Skills

Expressive

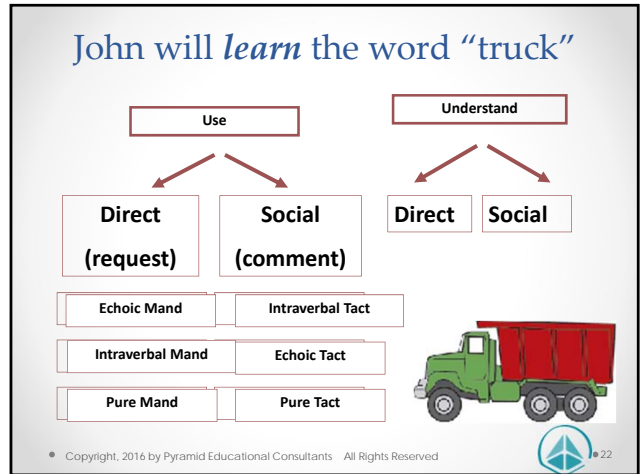
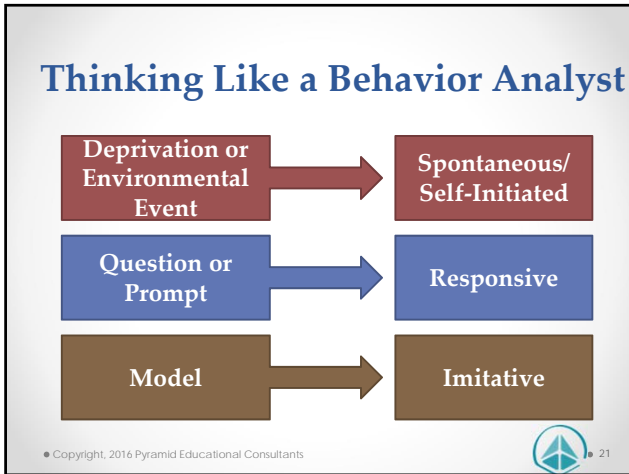
1. Request reinforcers
2. Request assistance
3. Request a break
4. Accept
5. Reject

Receptive

1. Respond to "wait" or "no"
2. Respond to directions
3. Follow a schedule
4. Transition

• Copyright, 2016 Pyramid Educational Consultants





Contextually Inappropriate Behavior

- Behavior that occurs in the wrong place, at the wrong time, persists too long, or is too weak or forceful
- We are concerned with the *function*, not the form, of the behavior

• Copyright, 2016 Pyramid Educational Consultants

3 Functions of Behavior

- To gain some type of R+
- To escape/avoid
- Elicited

• Copyright, 2016 Pyramid Educational Consultants

Pyramid Principles for Managing CIBs

- Systematically teach acceptable *alternative* behavior that serves the *same function*
- **FEAB**- **F**unctionally **E**quivalent **A**lternative **B**ehavior

• Copyright, 2016 Pyramid Educational Consultants



CIBs and SLPs Potential FEABs

Function	FEAB
Gain Access to Reinforcement	Request reinforcer Indicate "yes"
Avoid/Escape	Indicate "no" Request break
Elicited	Respond to "wait" Follow schedule "Surprise"

• Copyright, 2016, Pyramid Educational Consultants



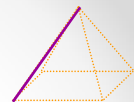
Why is this important for SLPs?

- Students engage in challenging behavior when they do not have the communication skills to meet the same function
- SLPs should assist the team in identifying the function of the CIB
- SLPs should lead the team in teaching the FEAB, as many of these replacements are communication skills

• Copyright, 2016 Pyramid Educational Consultants



Generalization



- Two approaches to generalization
 - Train skill to mastery then generalize
 - Teach generalization from the beginning
- The **Pyramid Approach** involves planning for generalization from the beginning
 - Stimulus
 - Response

• Copyright, 2016 Pyramid Educational Consultants



Why is this important for SLPs?

- Emily Rubin (2016) states, “Students with autism need access to communication and learning supports in all settings to help them understand social expectations, what others think and how to engage successfully with peers” (<http://leader.pubs.asha.org/article.aspx?articleid=2527044>)
- SLPs must consider their service delivery model to teach students to communicate in a variety of settings, with a variety of people for many different items/materials/activities

© Copyright, 2016 Pyramid Educational Consultants



Effective Lessons

- Discrete trial format
 - Short, repeatable behaviors
 - Repetition is not always helpful!
 - Example: Articulation Drills
- Sequential lesson format
 - Create task analysis: Determine steps that will be performed in a specific order
 - Backward chains vs. Forward chains
 - Example: Message Construction on SGD



© Copyright, 2016 Pyramid Educational Consultants



PECS IV+



Type	Steps
	3
	3
	5
	1
	12

1		Wake device
2		Open Sentence Starters
3		I WANT
4		Open Attributes
5		5
6		BIG
7		PURPLE
8		Open Food
9		GRAPES
10		Get Communicative Partner
11		SPEAK
12		CLEAR

© Copyright, 2015 Pyramid Educational Consultants



Effective Lessons

- Teacher-led lessons
 - Can lead to prompt dependency
 - Are standard in mainstream education
- Student-initiated
 - Foster independence and spontaneity
 - Necessary for success in “real world”

© Copyright, 2016 Pyramid Educational Consultants



Why is this important for SLPs?

- SLPs should understand these terms, in order to speak the same language as behavior analysts
- SLPs should actively structure and guide teams to incorporate both teacher-led and student-initiated lessons

• Copyright, 2016 Pyramid Educational Consultants



Teaching Strategies



- Teaching a new skill involves “helping” the student to perform the new behavior
- The “help” we provide = *prompt*
- Prompt types include physical, verbal, gestural, visual...
- #1 Rule of Prompting – *If you put it in, you take it out!*

• Copyright, 2016 Pyramid Educational Consultants



Teaching without Prompting-Shaping

- Why?
 - If you don't use prompts, you don't have to remove them (no risk of prompt dependency)
- How?
 - Change the criterion for success (reinforcement)
 - Small changes add up to big changes over time
 - Guess at the size of the change and then see if it works
- Do not combine with prompting

• Copyright, 2016 Pyramid Educational Consultants



Why is this important for SLPs?

- Prompt dependency is common among learners with Complex Communication Needs – we must consider this issue when planning our communication lessons
- We can use shaping for articulation training and other lessons!

• Copyright, 2016 Pyramid Educational Consultants



Minimizing and Correcting Errors

- Error correction strategies
 - Correct it, don't just FIX it!!
 - 4-Step Error Correction Procedure
 - Within discrete lessons
 - Backstep Error Correction Procedure
 - Find error in sequence; re-establish routine with prompt to prevent error



• Copyright, 2016 Pyramid Educational Consultants



Discrete Lessons

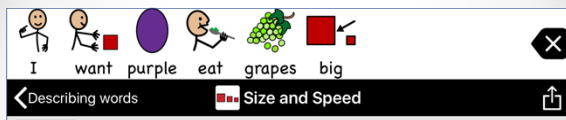
Step	Appropriate Stimulus Control?	Analysis
1. Model correct answer	No	Student merely imitates
2. Practice the response by repeating the original stimulus	No	Student could be repeating last correct response
3. Switch to new task	Stimulus control is changed	Student switches to something different
4. Repeat the original stimulus	YES!!!	Student independently responds

The 4-Step Error Correction Procedure!

• Copyright, 2016 Pyramid Educational Consultants



Sequential Lessons



- Teacher takes the student *back* in the sequence to last correct *step* and prompts the next step
- Teacher differentially reinforces

The Backstep Correction Procedure!

• Copyright, 2016 Pyramid Educational Consultants



Why is this important for SLPs?

- Provides a consistent way to respond to errors – resulting in more rapid skill acquisition!
- Avoids the probability of practicing errors

• Copyright, 2016 Pyramid Educational Consultants



Data Collection and Analysis

- Purpose of data collection
 - To determine if the lesson is effective
 - To determine what changes to make
- Collect more data early and less later
- Type of data should relate to goal
- Analyze and summarize for trends

© Copyright, 2016 Pyramid Educational Consultants



Why is this important for SLPs?

- We must document that our students are making progress.
- If no progress, use the Pyramid as your problem-solving tool

© Copyright, 2016 Pyramid Educational Consultants



Pyramid Analysis: Sequencing Cards



© Copyright, 2016 Pyramid Educational Consultants




Bottom Element of Pyramid	Analysis
Functional Activity	Is this lesson meaningful from the student's perspective?
Reinforcement	What type and when?
Functional Communication	What expressive or receptive skills should also be incorporated into this lesson?
Contextually Inappropriate Behavior	Are there challenging behaviors that are interfering? If so, what is the function?


© Copyright, 2016 Pyramid Educational Consultants



Top Element of the Pyramid	Analysis
Generalization	Use variety of sequences, increase accuracy and fluency Will the student actually perform the sequence?
Lesson Formats	Discrete or Sequential Lesson? Both!
Teaching Strategy	Which prompt type? Prompt elimination?
Error Correction	Discrete Error = 4-Step Sequential Error = Backstep
Data Collection	Is the student making progress? If not, what changes will be made?

© Copyright, 2016 Pyramid Educational Consultants  45

For more information,
contact Pyramid
Educational Consultants
www.pecs.com

© Copyright, 2016 Pyramid Educational Consultants  46