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Promoting the Emergence of Advanced Language Skills in Children with Autism

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Promoting the Emergence of Advanced Language Skills in Children with Autism

Caitlin Martin

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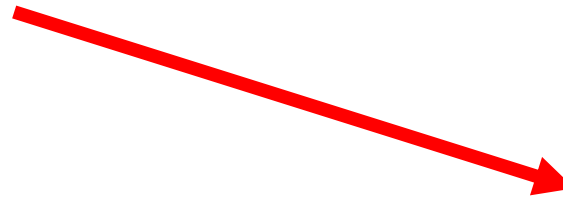
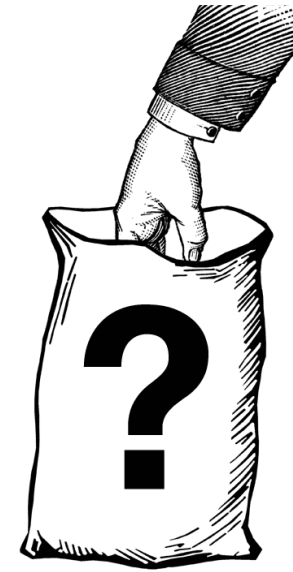
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Pittsburg State University

Language and Function

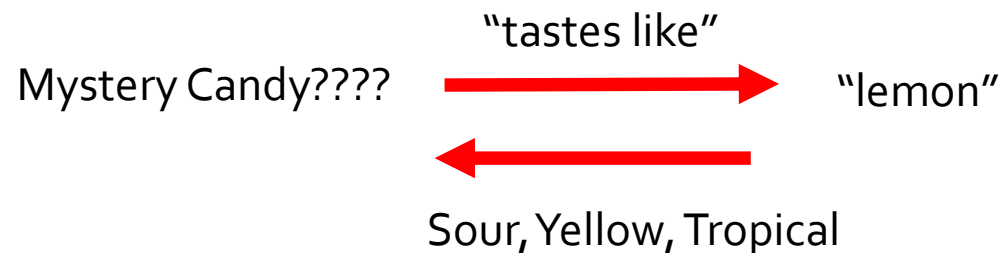
I have a piece of candy do you want it?

- Tastes like lemon
 - What are some attributes of "lemon"
 - Sour
 - Yellow
 - Tropical
- Mystery Candy?????.



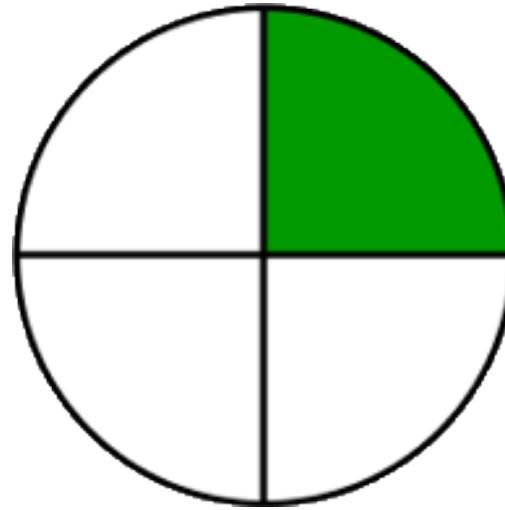
Making Assumptions: Why It Matters

- The ability to make assumptions helps with understanding our environment and being able to communicate with others about environmental stimuli (without actually contacting it).



Verbal Capabilities

- Words, symbols, etc. don't look the same, but they might act the same.
- $\frac{1}{4}$ = one-fourth = .25 = $\frac{2}{8}$ =



Autism Spectrum Disorder

- Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5)
Diagnostic Criteria:
 - “Deficits in nonverbal communicative behaviors used for social interaction, ranging, for example, from poorly integrated verbal and nonverbal communication; to abnormalities in eye contact and body language or deficits in understanding and use of gestures; to a total lack of facial expressions and nonverbal communication.” (American Psychiatric Association, 2013)
- Understanding relationships between people, places, things, sounds, smells, and tastes can increase the ability to communicate desires, thoughts, and emotions

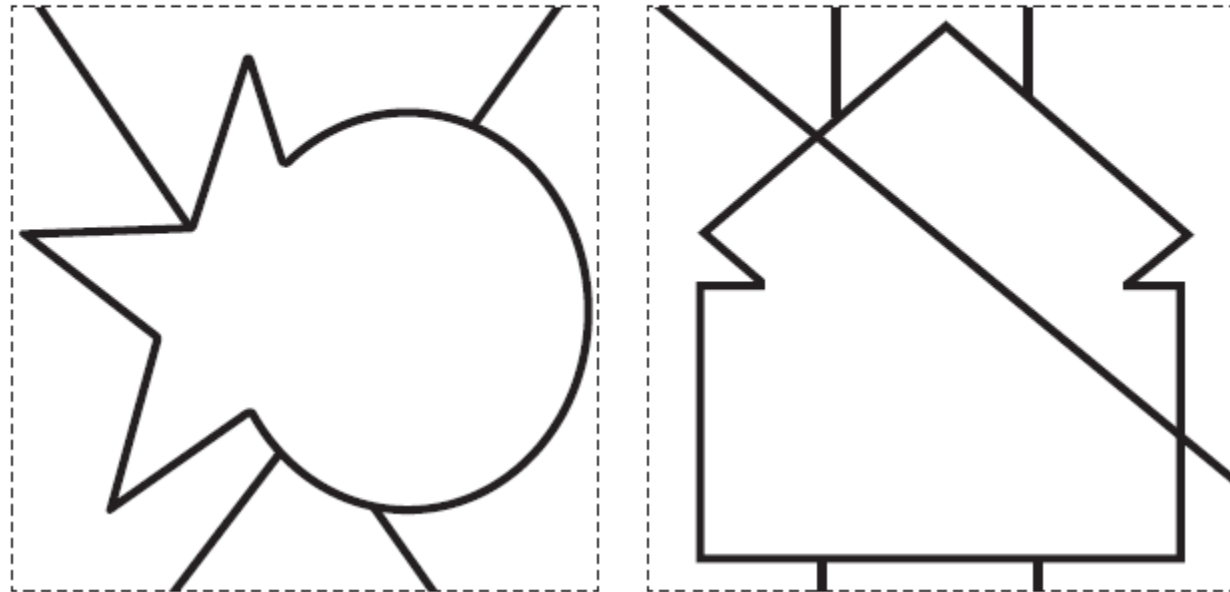
Methods: Assessment




- Train and assess four types of relations
 - Reflexivity: $a=a$, $b=b$, $c=c$
 - Symmetry: If $a=b$, then $b=a$
 - Transitivity: If $a=b$ and $b=c$, then $a=c$ and $c=a$
 - Equivalence: If $a=b$ and $a=c$, then $b=c$ and $c=b$
- Each relation has three levels
 - Basic
 - Intermediate
 - Advanced
- Each level has two programs
- One child (age 6) completed the assessment
- The assessment was completed in one day in the student's normal educational setting with breaks after each type of relation


Stimuli Example: Symmetry

Pre-Assessment Stimuli

Symmetry: Basic Assessment Program 1 – Stimulus Class 1



Present a yellow marker at the top of the table with  and  beneath it. Point to the yellow marker and say, “This is the same as this,” and point to .

Present  at the top of the table with a coin and the yellow marker beneath it. Say, “Find the same.”

Stimuli
Example:
Transitivity

Pre-Assessment Stimuli

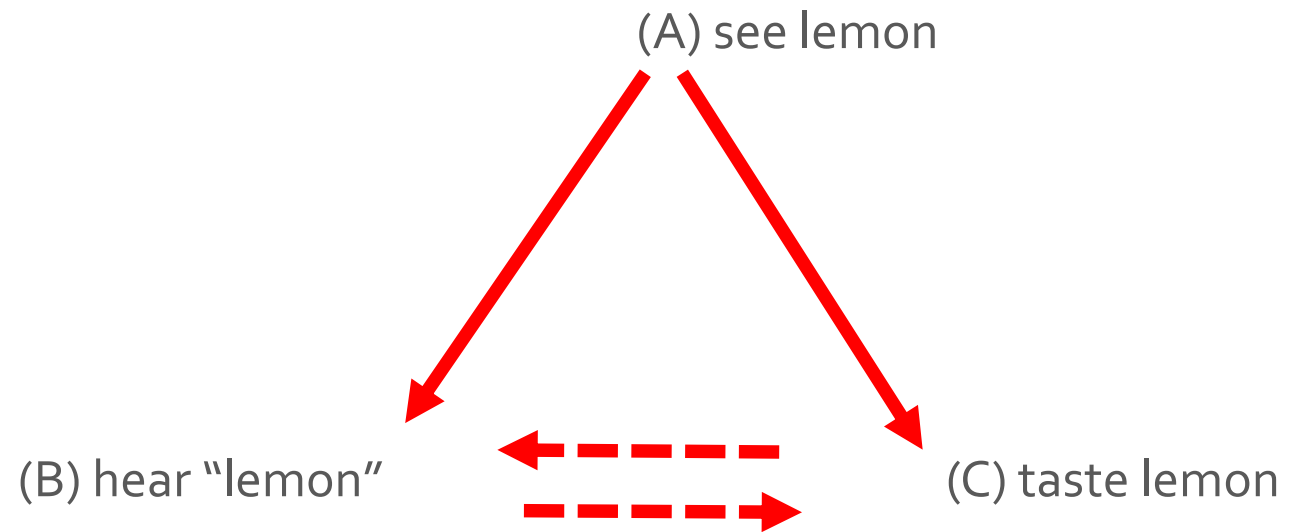
Transitivity: Basic Assessment Program 2 – Stimulus Class 1

mof

fep

Present *mof* and *fep* at the top of the table. Point to *mof* and say, "This is mof."
Say, "Mof is the same as gak."
Present *mof* at the top of the table with a blank piece of paper and a pencil beneath it. Say, "Copy this."
Wait 15 seconds and present a blank piece of paper and the pencil. Say, "Write gak."
If learner writes gak, say "Now write it another way."

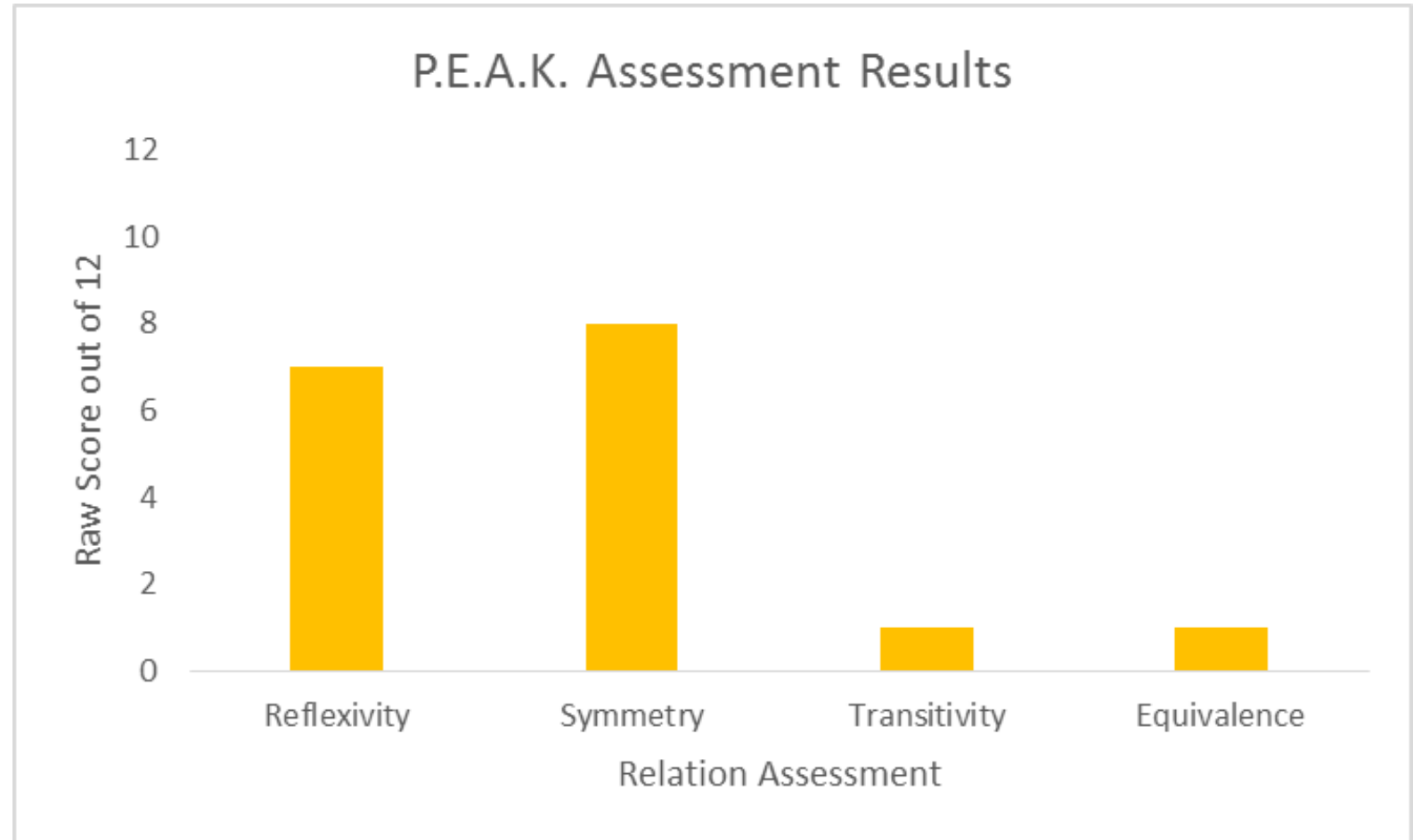
Assessing Different Senses



Assessment Findings

The participant scored better with the first two, more simple relations than with the second two, which are more complex.

The participant yielded higher results with the intermediate and advanced sections than the basic, suggesting that the training on the basic level prepared the participant for the next two levels.



Methods: Training

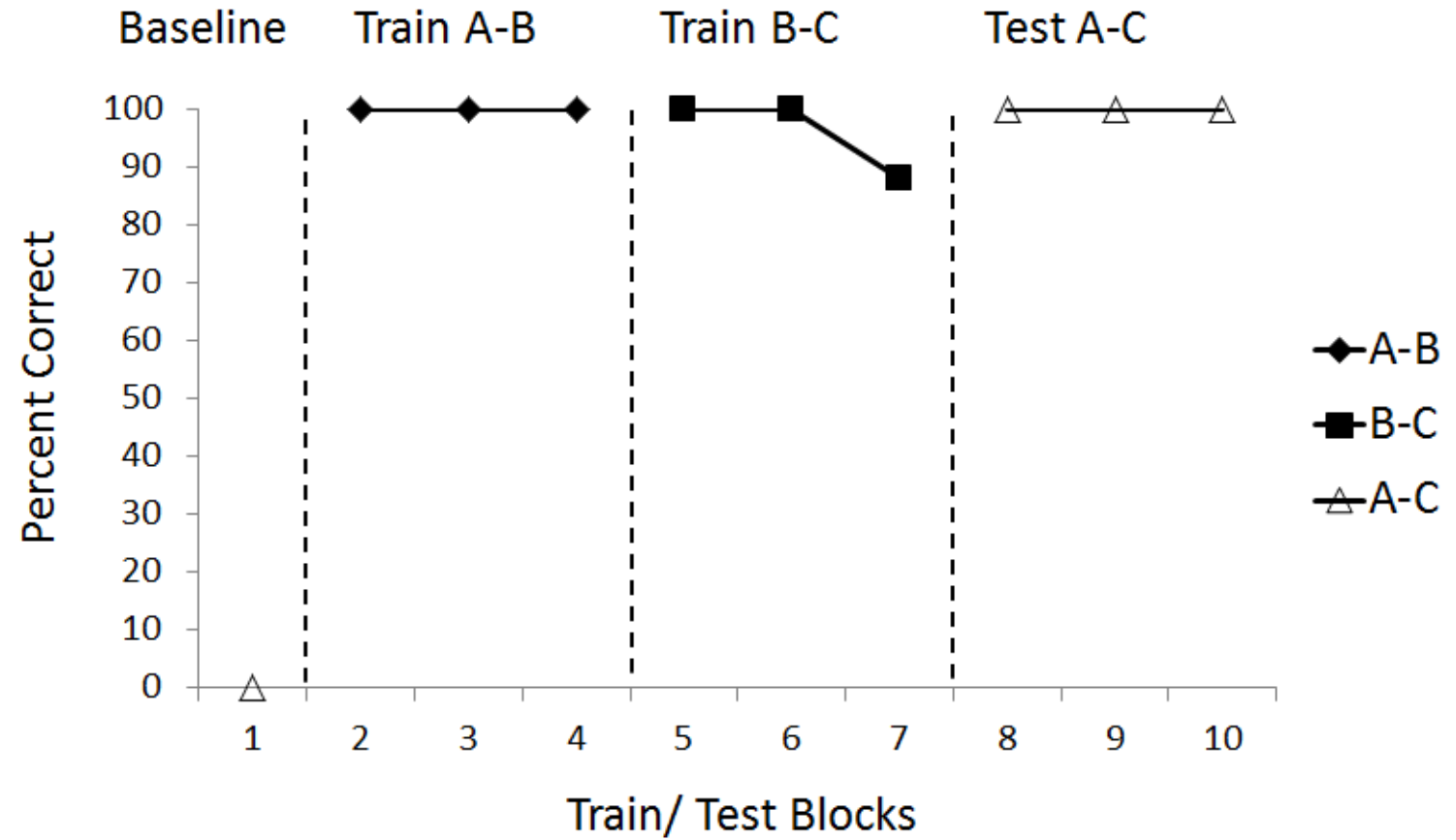
- According to the assessment, the child scored in the early transitivity section
- Transitivity 9P was used for training
- The child was shown three sets of pictures with relating stimuli
 - (A) drop glass of water, (B) broken glass on the floor, (C) clean up broken glass
 - (A) slip on ice, (B) get hurt, (c) go to the doctor
 - (A) pull someone's hair, (B) person is sad, (C) say sorry to the person
- The child was trained on $A=B$ and $B=C$, and then evaluated on their ability to identify that $A=C$
- No prompting rewards provided for $A=C$

Methods: Training



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Findings: Training



Discussion

Confounds

- Comorbidity: Attention Deficit Hyperactivity Disorder
- Limited attention span
- Many distractions in the classroom (students, teachers, toys, etc.)
- Limited time to introduce, assess, and train due to modified classroom schedule

Further Training

- The first training with the P.E.A.K.-E system yielded promising results
- With more training, the child could advance through the program and gain more understanding of language through assumptions
- Increase empathy and theory of mind

Reference List

- American Psychiatric Association. (2013). Diagnostic and Statistical Manual of Mental Disorders (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Dixon, M. (2015). P.E.A.K. Relational Training System: Equivalence. Carbondale, IL: Shawnee Scientific Press, LLC.