Applied Behavior Analysis and Public Education

Lauren Lanier, Abigail Fannin & Jennifer Schkade

Collaborative Autism Resources & Education (CARE)
ABA in Public Education Pre-Questionnaire

Learning Lab – TCASE 2014 Interactive Conference

1. What is applied behavior analysis (ABA)?

2. What populations can be served using ABA procedures?

3. What problems do you foresee/experience implementing ABA procedures in a classroom, campus, and/or district?

4. What are some current ways you are using positive reinforcement in your classroom, campus, and/or district?
ABA in Public Education Post Questionnaire

Learning Lab – TCASE 2014 Interactive Conference

1. What is applied behavior analysis (ABA)?

2. What populations can be served using ABA procedures?

3. Do you feel more confident about using ABA for your classroom, campus, and/or district after this presentation? YES NO

4. What interventions/topics would you like to know more about?

Comments

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If they can’t learn the way we teach, we teach the way they learn
- O. Ivar Lovaas

WELCOME!

PLEASE TAKE THIS TIME TO FILL OUT THE QUESTIONNAIRE AT YOUR SEAT.

Applied Behavior Analysis and Public Education

Lauren L. Lanier, M. Ed., BCBA
Abigail G. Fannin, M. Ed., BCBA
Jennifer L. Schiavo, M. Ed., BCBA

What is Applied Behavior Analysis (ABA)?

“The science in which tactics derived from the principles of behavior are applied systematically to improve socially significant behavior and experimentation is used to identify the variables responsible for behavior change.”
(Cooper, Heron & Heward, 2007)
Behavior is motivated by 4 possible functions.

- Attention
- Escape / Avoidance
- Access to a tangible / activity
- Automatic / Self-stimulatory

Later: The Three Term Contingency!

ABA MYTHS IN PUBLIC EDUCATION

Myth #1: ABA is Exclusively for Autism

- We must not mistake ABA as a therapy for autism, rather it is a science.
- It is the science of behavior change across all organisms that exhibit behavior.
- As Dillenburger & Keenan (2009) wrote, a wide range of techniques have been based on applied behavior analysis that has been used to help people with many behaviors and diagnoses.
Myth #2: ABA is Only for 1:1 Instruction

- It has been shown that the most effective environment for conducting behavioral research is the natural environment (e.g., the classroom).
- Project Follow Through, the largest and most expensive federally funded experiment ever, was conducted from 1968-1977 (Heward, 2000).
- Nine approaches to teaching academic skills were examined, and the only two models to show encouraging results were the behaviorally based ones: Direct Instruction and behavior analysis (Gersten, Carnine, & White, 1984).

Myth 3: Public Misconception of ABA Terminology

In 1978, Turkat & Feuerstein examined articles in the New York Times and found that, “time and again, behavior modification was equated incorrectly with such procedures as psychosurgery, brainwashing, drugs, sensory deprivation, and even torture” (p. 194).

ABA Terminology Explained

- Reinforcement is defined as an environmental change contingent on a behavior that increases the future frequency of that behavior (Cooper, Heron, & Heward, 2007).
  - Positive Reinforcement
  - Negative Reinforcement
- As a concept, punishment is defined as an environmental change contingent on a behavior that decreases the future frequency of that behavior (Cooper, Heron, & Heward, 2007).
  - Positive Punishment
  - Negative Punishment
ABA uses Punishment?!?!?

As Horner (2002) acknowledges, “punishment is a natural and ongoing part of life” (p. 465).

Teachers, parents, friends, and society in general employ punishing strategies in the form of reprimands, red marks on papers, parking tickets, spankings, and social jibes (Horner, 2002).

ABA & PBS

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ABA In Public Education

In 2004, the Individuals with Disabilities Education Improvement Act (IDEA, 2004) was passed that mandates that public education use behavioral methods to handle classroom behaviors (P.L. 108-446).

- Functional Behavior Assessment
- Positive Behavior Supports
- Classroom and Student Management
- Behavioral Interventions
- Prevention of Behavioral Problems
ABA in Public Education

- Greenberg (2007) applied teacher-training packages to teachers using ABA. In this study, costs were lowered after exposure to the treatment package occurred showing that the relative cost of implementing an ABA program will decrease over time.
- These projections could be comparable to retaining a student that might otherwise be sent to an alternative campus for undesirable behavior.
- Alternative placements are paid for out of school district funding and alleviating the need for this expenditure has the potential to save more money than the cost of training teachers in simple behavioral methods to prevent those undesirable behaviors from occurring.

Classroom-friendly ABA Procedures

- Discrete Trial Teaching
- Differential Reinforcement
- Extinction
- Token Economies
- Response Cost
- Group Contingencies
  ...and more

Discrete Trial Teaching (DTT)

- DTT is a series of "teaching attempts" with each "attempt" called a discrete trial or sometimes just a trial.
- Example
  - Teacher presents a field of three shapes and says, "Jane, find a circle."
  - Jane finds the circle.
  - Teacher says, "Way to go Jane! That is a circle! The force is with you!" (Jane is a Star Wars fan)
- Always take into consideration the specific student's interests.
Differential Reinforcement & Extinction

- **Differential Reinforcement** is the implementation of reinforcing the appropriate response (or behavior you wish to increase) at a higher intensity than all other responses.

- **Extinction** is commonly paired with differential reinforcement and is the discontinuing of a reinforcement of a previously reinforced behavior.

- Differential reinforcement can employ group contingencies in which a consequence is contingent on the behavior of one or all members of a group (Cooper, Heron, & Heward, 2007).

Token Economies

- Token economies are very valuable tools in classroom or school-wide settings.

- Three major components:
  - (a) a specified list of target behaviors;
  - (b) tokens or points that participants receive for emitting the target behaviors; and
  - (c) a menu of back-up reinforcers that participants obtain by exchanging tokens they have earned (Cooper et al., 2007, p. 560).

- Token economies have been proven effective in small and large groups. The strength of the back-up reinforcers chosen is paramount to the success of the system.

Response Cost

- The removal of an item contingent upon the occurrence of a specific problem behavior or failure to meet predetermined criteria.

- No empty threats! If you say you are going to take an item when a behavior occurs (or doesn't), be prepared to follow through.

- Consider behavior contracts…
Group Contingencies

- A contingency in which reinforcement for all members of a group is dependent on the behavior of (a) a person within the group, (b) a select group of members within the larger group, or (c) each member of the group meeting a performance criterion.
  - Choral Responding
  - Group Token Economies
  - Group Response Cost

Additional Classroom Interventions

- Pivotal Response Training
- Direct Instruction
- Verbal Behavior
- Shaping
- Chaining
- Task Analysis

Data Collection

- Antecedent, Behavior, Consequence (ABC)
- Frequency
- Duration

Useful tools for easy data collection can be found!
According to R. Douglas Greer (1992), “the school environment must be specifically designed to maintain and improve upon the applications of the science of behavior in order to be successful in its implementation.”

References

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THANK YOU FOR ATTENDING!

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(Cooper, Heron & Heward, 2007)
Why does he keep doing that?!?

Behavior is motivated by 4 possible functions:

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