KidsAbility™

Applied Behaviour Analysis

Applied Behaviour Analysis (ABA): "A scientific approach for discovering environmental variables that reliably influence socially significant behaviour and for developing a technology of behaviour change" (Cooper, Heron, & Heward, 2007, p. 3). In other words, ABA is a scientific approach that uses strategies to increase socially significant behaviours and decrease behaviours that are impeding with daily functioning and learning.

Why is ABA Important?

ABA offers an understanding of human behaviour and how to improve it
(Cooper, Heron, & Heward, 2007).

What is Behaviour?

"Human behaviour is everything people do, including how they move and what they say, think and feel" (Cooper, Heron, & Heward, 2007, p. 25). It is a person's interaction with the environment. Behaviour can be described in terms of what it looks like (E.g. he flapped his hands back and forth), but it can also be characterized by the function of that behaviour (*why* he engaged in that behaviour) (Cooper, Heron, & Heward, 2007).

ABA Techniques

"ABC"s (Antecedent, Behaviour, Consequence)

Antecedent: What happens right <u>before</u> the behaviour/what triggers the behaviour
Behaviour: The behaviour itself
Consequence: What happens <u>after</u> the behaviour

ABC's

Example:
Antecedent: A father asks his child to clean up his toys (placed a demand)
Behaviour: The boy cries and falls to the floor
Consequence: The father picks up the toys for him (child escaped the demand)

Collecting information on the ABC relationship will help you to understand **why** your child's challenging behaviour is occurring.

See the "Functions of Behaviour" handout for more information

Examining Motivation

Your child's motivation is essential when teaching a new skill. Children with Autism Spectrum Disorder may not be intrinsically motivated to complete tasks and/or engage in social interaction. Sometimes additional strategies to increase their motivation are needed.

Strategies to Increase Motivation

Offering Choice/Choice Board

Offering choice allows your child to have more control over their day and the activities they complete, and using a choice board can be a helpful visual support. You can give your child choice in what they want to play with, choice in order of activities, and/or choice in the activities themselves. Choice boards can be presented in the form of a list, for children who can read, or it can display a variety of picture options to your child The list or picture can illustrate a variety of preferred foods, toys, games, and/or activities that your child enjoys. It allows the child to see what is available in each environment and at any given time. You can offer the child choice multiple times during the day to ensure they are motivated.

Offering choice will not only have a positive impact on your child's life, but it has also been shown to decrease problem behaviour and increase task engagement (Canella, O'Reilly, & Lancioni, 2005).

Reinforcer Choice Board
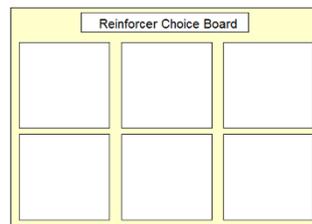
Examples

Derek has trouble getting dressed in the morning. Giving him choice in the order of activities (order in which he gets ready) might be helpful to increase motivation to complete this task.

Tommy has trouble eating new foods and doesn't like to sit at the table at dinnertime. You can give him choice in what he can eat for dinner (E.g. "Do you want chicken or beef?") and you can also provide him with choice in where he sits to eat dinner, if appropriate (E.g. "Do you want to sit at the table, or on the couch?").

Increasing the Reward

Children may engage in challenging behaviour to receive attention from others, escape a task, access an item (E.g. toy/activity), or because the behaviour is internally reinforcing (sensory). To learn more about this, see the "Functions of Behaviour" handout.

When you have determined *why* your child is engaging in a particular behaviour, or what your child is trying to gain by engaging in this behaviour, you can provide that item/activity to the child freely to prevent or reduce the need to engage in the problem behaviour (Cooper, Heron, & Heward, 2007).

You can also increase the amount of praise and attention you are giving your child when you catch them behaving appropriately. You can praise the child and give

him/her an edible or tangible item (E.g. a skittle or a favourite toy) when you notice the child behaving well. If you want to increase a positive behaviour, you need to reward it. Sometimes children need extra rewards to increase a positive behaviour. This "extra" reinforcement (i.e. reward) can then be faded over time, as needed.

Example
Sarah has difficulty transitioning into the car in the morning. If Sarah successfully transitions into the car without engaging in any challenging behaviours, make sure you give her lots of praise for this. You can even give her a small candy or allow her to play on the iPad when she gets into the car without engaging in challenging behaviours. Over time, this candy/iPad time can be faded out, although you want to continue providing praise for this positive behaviour.

Prompting

Prompts are used to increase the likelihood that the child will engage in a desired response (Alberto & Troutman, 2003). Prompts include physical guidance to complete a task, visuals and/or verbal cues. Prompts help the child learn a new skill/behaviour, but should be faded over time so that the child learns to complete the skill/behaviour independently.
Prompt Fading: Gradually reducing the prompt needed over time (Alberto & Troutman, 2003).

Prompt Fading Example
Fading the physical prompt of guiding a child's hands may follow this sequence:
(a) supporting wrists
(b) touching hands lightly
(c) touching forearm or elbow
(d) withdrawing physical contact altogether

Fading ensures that the child does not become overly dependent on a particular prompt when learning a new skill (Cooper, Heron, & Heward, 2007).
Please refer to the Prompting handout for more information

Reinforcement

Reinforcement is the presentation or removal of something immediately following a response/skill, which <u>increases</u> the likelihood that the response/skill will occur again (Alberto & Troutman, 2003).

It is **important** because it can be used to teach new skills, or teach a new behavior and it can increase a child's motivation to complete an undesirable task.

Types of Reinforcement (Cooper, Heron, & Heward, 2007)
- <u>Edible Reinforcers</u>: preferred foods/drinks
- <u>Sensory Reinforcers</u>: preferred sensory stimulation such as tickles, massager, music, sparkling lights etc.
- <u>Tangible Reinforcers</u>: preferred toys, stickers etc.

- Activity Reinforcers: preferred games, leisure activities, listening to music, privileges (first in line), special events (trip to movies)
- Social Reinforcers: physical contact, praise, attention

Please refer to the Reinforcement hand out for more information

Data Collection

Data collection is an important aspect of ABA. We can collect data on the occurrence of positive behaviours, track improvements in new skills being taught, and track the occurrence of problem behaviours (how often they are happening, the duration of problem behaviour, etc).

Baseline data is data collected before any behaviour change/new skill acqusition strategies have been implemented. It is important because it allows the therapists to see what skills or behaviours the child engages in before you put in any treatment.

For example, baseline data might reveal that a child's tantrums are consistently followed by parent attention, and this can be used in designing an intervention of ignoring outburst (Cooper, Heron, & Heward, 2007).

It is important to collect data because it allows you to:
- Track skills over a period of time (daily, monthly, yearly)
- See if there was an increase or decrease in the skill
- Make revisions if necessary (i.e. the skill/behaviour is increasing when it is meant to decrease)

Generalization

Generalization occurs when skills learned in one setting (or with one person) are exhibited without training in other settings (or with other people) (Stokes & Baer, 1977).

To generalize skills means to practice the skills in multiple environments with a variety of people. For example, a child can learn to zip up their coat at therapy, at school, and in the home with different therapist, school staff and parents/siblings to ensure the skill is generalized to all of these different people and environments.

It is important to generalize skills because if you do not practice the skills in a variety of different locations and with different people, the skill may only be retained in a certain setting. For example, the child may only know how to zip up their coat at therapy and not at home or at school. ABA aims to transfer skills to all settings and individuals.

References

Alberto, A.A., & Troutman, A.C. (2003). *Applied behavior analysis for teachers*. (6th ed.). NJ: Merrill Prentice Hall.

Cannella, H. I., O'Reilly, M. F., & Lancioni, G. E. (2005). Choice and preference assessment research with people with severe to profound developmental disabilities: A review of the literature. *Research in Developmental Disabilities, 26*, 1-15.

Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). *Applied behavior analysis* (2nd ed.). Upper Saddle River, NJ: Pearson Education, Inc.

Stokes, T.F., & Baer, D.M. (1977). An implicit technology of generalization. *Journal of Applied Behavioural Analysis*, 10, 349-367.

Visual Strategy Kit. School Support Program, Autism Spectrum Disorder. Thames Valley Children's Centre- *Visual Strategies*, *Working for Boards.*