



Busy Analytical Bee

NEWSLETTER May

Welcome to the May edition. In this edition we take a look at the Echoic and how we can successfully teach this skill. I've celebrated the career of Barbara Esch, looked at feet/hand painting for including all those important targets and there is also plenty of events to check out!

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TEACHING ECHOICS TO CHILDREN WITH AUTISM

Within Applied Behaviour Analysis (ABA) the main principles are derived from many of B. F. Skinner's work. One of these relates to breaking down language, not by form or topography, but by function. Skinner proposed that language could be categorised into Verbal Operants. The main Verbal Operants include mand, tact, echoic, and intraverbal. The Echoic is distinguished because it has point to point correspondence to what is heard and what is heard and said is vocal. Here is an example below.

Antecedent	Behaviour	Consequence
Discriminative Stimulus (S^D) "Say Hello"	"Hello"	"Well done"

An example of an echoic response in the three term contingency

The echoic develops in the first stages in a child's language development. Children begin to babble and then sounds are shaped towards the words they hear in the environment. Parents will often repeat "Mama" and "Dada" to young children to help the child develop an echoic repertoire and repeat the sounds. As language develops in an alarming rate in typical development and considering language is very complex, Behaviourist believe there is many factors supporting this. These include reinforcement from parents (Social praise, attention, etc.) and automatic reinforcement (an innate desire to speak and sound more like those around us).

It is also suggested that the neutral stimulus of adult

vocalisations become paired up and reinforcing through process associated with feeding, nappy changes, cuddles, etc. (unconditioned reinforcers; innate). This process of stimulus-stimulus pairing has been explored as a way to teach children with Autism echoic behaviours. This has simply been done by delivering a reinforcer (e.g., a piece of chocolate) whilst an adult repeats a sound (e.g., /ah/) Stock et al (2008) and Esch (2005) have both explored this and compared this to other interventions. Their research supported results that stimulus-stimulus pairing, is ineffective in teaching the echoic. Esch et al (2005) did find that differential reinforcement was a more successful intervention in their paper. This was done by delivering the preferred reinforcer contingent upon the child making any vocalisation. In this experiment they observed an increase in vocalisations, compared to the other experiments conducted.

It is also believed that development of the mand repertoire is essential to building echoic skills. The mand, simply, is requesting. Being able to ask for items enables us to access things we want and need, for example, food, drinks, warmth, attention, etc.. Here is an example:

Antecedent	Behaviour	Consequence
Motivation for drink; thirst	"drink" / "Can I get a drink, please?"	Drink obtained

An example of a mand response in the three term contingency

During language development the mand is the first op-

erant to emerge. A baby cries, and then these cries begin to be distinguishable to the mother, depending on the need of the baby. This also must successful operant to teach as it is reinforced by the exact item or activity that is motivated, as stated by Drash et al (1999) “specific reinforcers [the item requested] produced stronger verbal behavior than did non-specific reinforcers”.

Drash et al investigated how effective using the mand repertoire is in teaching the echoic. They found that the mand was an important prerequisite to teaching echoics. Mand training involved placing items out of reach and reinforcing vocalisations and shaping these up. They then assigned the sound heard most frequently to specific reinforcers and these sounds were used as mand and echoic targets. When these were established they were able to then begin expanding the echoic repertoire.

Echoic is an important skill for language, as echoics can be used to transfer language into other verbal operants, for example when teaching tacts or intraverbals. Consider the mand repertoire of your client when devising a plan, and consider using differential reinforcement to expand vocalisations. If you want support to develop an echoics intervention, speak to a BCBA or BCaBA, or look into further research by Barbara Esch as she is a Speech Pathologist and Behaviour Analyst.

Drash, P. W., High, R. L., & Tudor, R. M. (1999). Using mand training to establish an echoic repertoire in young children with Autism. *The Analysis of Verbal behaviour*, **16**, 29-44.

Esch B. E., Carr, J. E., & Michael, J. (2005). Evaluating stimulus-stimulus pairing and direct reinforcement in the establishment of an echoic repertoire of children diagnosed with Autism, *The Analysis of Verbal Behavior*, **21**, 43-58

Stock, R. A., Schulze, K. A., & Mirenda, P. (2008). A comparison of stimulus-stimulus pairing, standard echoic training, and control procedures on the vocal behavior of children with Autism, *The Analysis of Verbal Behavior*. **24**, 123-133.

<https://filic.kr/p/7burAc>



PRODUCTS

This months product [wish lists](#) contains great resources needed for arts and crafts activities. Encourage your child in mark making and their imagination with all these different materials. You could create rockets, or puppets or paint a beautiful picture! There will be plenty of opportunities for mands, tacts, receptive and intraverbal targets around colours, shapes and more!



From: <https://filic.kr/p/9tXLK9>

EVENTS

UK Society for Behaviour Analysis (UK-SBA) have announced the next event in their speakers series. Prof. Greg Hanley will be in London on the 10th and 11th May. For more information and to book your place, please visit the [website](#).

Beyond Autism are holding a workshop ‘Introduction to ABA’ workshop, across 4 days in June for £250. Please book through the [website](#).

Child Autism UK have several workshops available for the Initial Tutor Training course (2 day workshop), Behaviour Management Strategies course (1 day), Lead Tutor Training (1 day), School Shadowing course and Social Skills and Playdates course (1 day) in Manchester and Bracknell. Visit the [website](#) for more info.

The SF-DDARIN and the Centre for Behavior Solutions (CBS) Ltd are hosting a workshop in Coventry on Tuesday 26th June, titled ‘Behavioural well-being in special schools: How to reduce behaviour that challenges and improve everyone’s well-being. To find out more or book a place email Diana Smith at diana.smith@warwick.ac.uk

You can study in the comfort of you home with Florida Institute of Technology (FIT). They have a wide range of [courses](#) (costs vary) to help you develop you understanding of the principles of Behaviour Analysis. Continuing Education (CE) Units available on many courses.

TERMINOLOGY

Scrolling is a definition given when a client is producing several response behaviours. An example of this is when a child is learning the word water and when presented with water vocalises “cookie, cake, juice, water”. It is important to be vigilant with responses that occur in this manner and ensure there is a clear break between the scrolling behaviour and the correct response. Also it is important that reinforcement is delivered only contingent on a clear response to avoid rewarding scrolling behaviour. You may need to discuss with your supervisor if you are concerned your client is scrolling as this is a significant barrier to learning.

STUDY TIPS

Here is a [wish list](#) which contains a variety of books to read during your studies. It is important that you use more than one resource when studying to improve your chances of passing the exam, and to really increase your understanding of all those terms and principles!. Good luck!

PEOPLE WHO INSPIRE US

This month we are celebrating the wonderful career of Barbara Esch., BCBA-D, CCC-SLP. Esch is a behaviour Analyst and speech pathologist. Esch studied her MA in speech pathology at Michigan State University, and then received her PhD in Applied Behaviour Analysis at Western Michigan University. She founded the Special Interest Group Speech Pathology, of the Association for Behavior Analysis International. She has authored research in *The Analysis of Verbal Behavior* and the *Journal of Applied Behaviour Analysis*, and also the Echoic Skills Assessment, which is part of the Verbal Behavior Milestones Assessment and Placement Program (VB-MAPP). Esch has worked for over 30 years and has worked in United States, Europe and Australia. Esch has supported the use of Behavioural principles and analysis to improve speech, language and feeding skills. She has had an incredible impact on bringing Speech Pathology and Behaviour Analysis together and is well known for her contributions. Check out this [interview](#) from 2015 to learn more.

NATURAL ENVIRONMENT TEACHING (NET) IDEA

This month's activity is feet and/or hand painting, which is an interesting activity. This NET allows opportunities for mands for feet, hands, paper and paint/paintbrush (mand 5M, 6b), or for a missing item (Mand, 6M). The child may also mand using pronouns “paint my feet” vs “paint your hand” or actions (e.g. stamp, walk, jump) and could use adverbs (Mand 8c, 7M, 13f). You can also generalise tacts of different body parts, or tacts of actions (“what am I doing? - painting/jumping/etc”) and colours (Tact 5M, 6b, 7a, 8M, 10d). It's great for generalising matching skills of body parts (VP-MTS 10b) or imitation skills (MI 5M). You could also incorporate In-traverbals “you paint with—a paintbrush” or “you wear shoes on you—feet” (IV 7c, 8M). You could also place feet outlines on the paper and have your client place their feet inside to promote motor co-ordination. This activity could also be naturally reinforcing for walking with flat feet if your client engages in toe-walking. Some children really enjoy messy play, although it may require a lot of cleaning after (although great opportunity to mand to clean if your client is motivated (Mand 7c).

Preceding skills reference to the VB-MAPP Assessment tool: Sundberg, M. L. (2008) Verbal Behavior Milestones Assessment and Placement Program: The VB-MAPP. Concord, CA: AVB Press.



From: <https://i1c.kr/p/hYMQ6f>

Next month we're looking at *Precision Teaching (plus it's an interview edition)*, so be sure to subscribe so you receive the next exciting edition.

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