Busy Analytical Bee

NEWSLETTER August

Welcome to the August edition. This edition looks at errorless correction procedures, the career of Ray Miltenberger, the park as an NET, events and more! Hope you have a great summer!

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ERRORLESS CORRECTION PROCEDURES

Often when learning a new skills errors may occur. When working with learners with learning difficulties acquisition of skills can require more teaching trials. Decreasing the likelihood of errors is important for all teachers and parents, to help these learners be successful and learn skills more efficiently. Error-correction procedures are often adopted in teaching, and Cooper, Heron and Heward (2007) describe these as "repeating a learning trial, having the student practice correct performance, or giving the student additional work". This procedure aims to support acquisition of skills and is common practise within the field of Applied Behaviour Analysis (ABA). The use of error correction for some learners increases acquisition because, "trial repetition enhances stimulus control over correct responding" (Rodgers & Iwata, 1991).

To develop understanding of how learning occurs under this procedure, Rodgers & Iwata (1991) explored three conditions using novel symbols and stimulus equivalence; differential reinforcement (baseline), error-correction (practice) and error-correction (avoidance). Differential Reinforcement involved simply delivering denser reinforcement for correct responses, and no consequence following errors. The authors note that this condition still improved learning. Learning was, however, accelerated in the other two conditions. The practise condition involved repeating the learning trial until a correct response was made, and avoidance involved an alternative task being presented (colour matching). The participants differed in their progress in these two conditions, 3 participants acquiring skills faster in the avoidant condition and 2 participants responding better to the practice condition.

Practice methods are often adopted, and Barbetta et al (1993) investigated two types of practice conditions for teaching reading (whole word vs. phonetical prompts). The found that whole word error correction procedures to be most effective, which supported previous research. They found that 100% of the practise trials ended with a correct response when the whole word prompt was used, compared to 40% for the phonetical prompt. This may attribute to the accelerated acquisition in the whole word condition, as fewer errors took place during learning. This research was extended to assess whether immediate or delay prompts were most successful (Barbetta et al, 1994). They found that immediate prompts to be most effective when teaching sight words.

Often error correction may be used to improve acquisition, when the intervention being investigated is producing slow acquisition; the intervention alone is not as effective and additional support is required. Cannella-Malone et al (2012) observed this and investigated the use of error correction with video modelling procedure. They found that video modelling with error correction was most effective (when compared to video modelling without error correction). This shows that error correction supports learning, and may assist ac-

quisition of skills when implementing from the onset.

Barbetta et al (1993) state that "teachers are left in the unsettling position of being aware of the importance of correcting student errors but receiving little in the way of empirically supported guidance in how to do so". These researchers discussed here, have demonstrated that error correction procedures that use whole word prompts, that are immediate are most effective, or that using error correction alongside other interventions (i.e., video modelling) which lead to faster acquisition. Barbetta et al 1994 state that "provide additional support for error correction that is direct, immediate and ends with the student actively emitting the correct response". Error correction procedures are effective for a teaching a variety of skills including language and self-help skills, as demonstrated by the research discussed here (Barbetta et al 1993; Barbetta et al, 1994; Rodgers & Iwata, 1991; Cannella-Malone et al, 2012). For more advice about developing a teaching programme that uses error correction, speak to a Behaviour Analyst.

Barbetta, P. M., Heward, W. L., & Bradley, D. M. C. (1993). Relative effects of whole-word and phonetic-prompt error correction, on the acquisition and maintenance of sight words by students with developmental disabilities. *Journal of Applied Behavior Analysis*, **26**, 99-110.

Barbetta, P. M., Heward, W. L., Bradley, D. M., & Miller, A. D. (1994). Effects of immediate and delayed error correction on the acquisition and maintenance of sight words by students with developmental disabilities. *Journal of Applied Behavior Analysis*, **27**, 177-178.

Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). Applied Behaviour Analysis (2nd ed.) New Jersey: Pearson Education, Inc.

Cannella-Malone, H. I., Wheaton, J. E., Wu, P, Tullis, C. A., & Park, J. H. (2012). Comparing the effects of video prompting with and without error correction on skill acquisition for students with intellectual Disability. *Education and Training in Autism and Developmental Disabilities*, **47**(3), 332-344.

Rodgers, T. A. & Iwata, B. A. (1991). An Analysis of error-correction procedures during discrimination training. *Journal of Applied Behavior Analysis*, **24**, 775-781.

EVENTS

PBS Festival will be held on the 20th September in Winchester. Speakers include Roy Deveau, Andy McDonnell, Julie Eshleman, Jonathan Beebee and more! Find out more on the website!

On the 27th-29th September there is an online event hosted by Blossom ABA. This will be presented by Steve Ward BCBA. The timings would be 1:30-9:30pm (BST) on some days. The cost for early bird is £50-£225, depending on the ticket and/or days you want to attend. Find out more by visiting the Eventbrite Page.

Contextual Consulting offer a variety of online webinars and workshops on their website. 'Enhancing your ACT practice with Relational Frame Theory (RFT) - a Master class', will be hosted on the 10th and 11th of October in London presented by Yvonne Barnes-Holmes. There is also, 'ACT for Young People—the Thriving Adolescent' will be on the 14th and 15th of November in London, presented by Dr Louise Hayes.

The UK-SBA is hosting Dr Susan Schneider on the 17th October in London. Dr Susan Schneider authored 'The Science of Consequences: How they Affect Genes, Change the Brain and Impact our World'. Registration will open in August, so check the website for more information!

TERMINOLOGY

Response cost: This is when a reinforcer is removed or withdrawn due to the occurrence of a target behaviour. This is commonly associated with token boards, when tokens are removed, this delays the delivery of the back-up reinforcers.

NATURAL ENVIRONMENT TEACHING (NET) IDEA

It's the summer holidays so why not take your learning to the park! This could be the perfect NET for an early or advanced learner. For an early learner you can work on generalising mands for actions, pushing on the swing or tickles when they come down the slide (mand 1-5M, 7-10M). Playing on the playground offers great opportunities for strengthening their motor movements, balance and co-ordination (MI* 1M, 2M, 4M, 5M, 10M. IP† 2M, 3M, 4M). Playing appropriately without adult interactions for a few minutes is an important skill that could have social significance for their family (IP† 9M). This activity may offer opportunities for generalising language targets around park related activities (slide, swings), for example labelling these when asked "What is this?" (tact: 1-7M), identifying the playground equipment, i.e., "show me the roundabout" (LR** 9M, 10M) or "What do you play on at the park?" or "A tree is a type of..." [plant] (IV~ 8M-11M, 14M, 15M). This could be opportunity to generalise labels or receptive targets around verbs, for example "What am I doing?" and performing an action, e.g., running, climbing, etc. (tact 8M) or "show me running/spinning/etc," (LR** 4M, 8M, 9M). This could also be a great opportunity for generalising and supporting social skills. This could be in imitating peers (ˆSBSP 5M, 6M), playing alongside peers (ˆSBSP 4M), or interacting with peers (ˆSBSP 3M, 7M-15M). These skills can be worked on by role-playing prior to going to the park and/or in vivo when at the park. Also, you may have opportunities on your way there for other targets as you may pass cars, buses or people, for instance community helpers (tact 7M, 9M, 15c), or an opportunity to discuss/practise road safety.

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.
*MI: Motor Imitation, †IP: Independent Play **LR: Listener Responding. ~IV: Intraverbal. ˆSBSP: Social Behavior and Social Play.

Picture taken from: https://flic.kr/p/gzi4Nc

STUDY TIPS

Check out Wise Bytes which is a free access website with videos and questions to help you study! You can view everything without a log in, but if you want to collect CEUs then you can add your email and pay. Its extremely interactive and can't wait for more content to be added! Bookmark this website!

PEOPLE WHO INSPIRE US

This month I am celebrating the career of Ray Miltenberger. In 1985, he received his Ph.D. from Western Michigan. He was a professor at North Dakota State University from 1985 until 2006, then he moved to the University of South Florida to become the director of the Applied Behavior Analysis Masters Program. He has also served as president of Association of Behaviour Analysis International. He has published over 200 research articles and chapters, and he has also held editorial positions for the *Journal of Applied Behavior Analysis*, *Journal of Behavioral Education*, *Behavioural Interventions*, *Journal of Positive Behavioral Interventions* and *Education and Treatment of Children*. He received many awards, including the Award for Distinguished contributions to Applied Research from the American Psychological Association. You can learn more about Miltenberger on his ABAI page or his South Florida page.

PRODUCTS

Check out ABACUS INK Design company. They are a UK based company producing teaching resources. These can be used to support your home programme, prices around £20-£25.

Next month we're looking at *Cancer Prevention and Treatment*, so be sure to subscribe so you receive the next exciting edition.

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