



Busy Analytical Bee

NEWSLETTER October

Welcome to the October edition. In this edition we are looking at using High Probability Sequences. We also celebrate the career of Fred S. Keller and a fantastic NET using YouTube. We continue our look at Differential Reinforcement and have some fantastic events, study tips and products.

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USING BEHAVIOURAL MOMENTUM TO CHANGE BEHAVIOUR

Behavioural Momentum is a phenomenon that occurs with responding. Relating to the physics of an object that is moving and caught in momentum, responding too can gain momentum. Mace et al (1988) wrote that "Behavioral mass was considered formally analogous to response strength and behavioral velocity as corresponding to response rate". Response strength relates to whether or not the response is high probability/high-p or low probability/low-p (how likely is it that the person will engage in that behaviour?) and response rate relates to how fast responses are made. If high probability responses are being made quickly, it is likely that there is behaviour momentum, and responding will continue. From this theory, High Probability Sequence (HPS) was developed.

HPS uses Behavioural Momentum to increase the likelihood that a low-p behaviour will be complied with. This procedure is an Antecedent procedure, changing the environment prior to the behaviour to increase the success and reduce challenging behaviours occurring. It is recommended with this procedure that you use 3-4 high-p responses, before issuing the low-p demand. High-p responses are responses the child makes quickly, accurately and with 100% compliance. It could be something they "like" doing, for instance, high fives, talking about a favourite topic, for example "Say Hot wheels!" (echoic response), or "What did you eat for

lunch?" (intraverbal). A low-p response is a response that your child does not comply with, but is within their repertoire. This could include a number of things, including transitions, writing, saying a certain thing or answering a particular question. These behaviours can be difficult to deal with because they are negatively reinforced (stimulus, "the demand", is removed from the environment which increases or maintains the probability of the challenging behaviour occurring in the future). This manipulates the motivating operations by delivering high-p demands and reinforcement (i.e. social praise).

This procedure has been proven effective on many occasions. Researchers have found it is effective for children who display challenging behaviours during transitions (Banda & Kubina, 2006 and Davis, Reichle & Southard, 2000). Banda & Kubina (2006) used a sequence of high-p responses to improve the transitions of a 13-year-old male with Autism. The low-p behaviours selected were unpacking his backpack, arranging his visual schedule and going to his locker. The high-p responses were answering questions like "Did you see the football yesterday?" and "How was your day?". They used an ABAB reversal design (Baseline (A), Intervention (B), Baseline (A), Intervention (B)) and recorded the average length of time it took each transition, which was 3.5, 2.7, 2.9 and 2.31 for each phases respectively. The average number of prompts was 9.4, 5.3, 5.6 and 3.8 for each phases respectively. This shows a decrease in time and the number of prompts required from staff. This supports that this intervention allowed this participant to be more independent and



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that HPS was a successful intervention.

Davis, Reichle & Southard, also saw success in an HPS intervention with two 6 year old boys with special edu-

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cational needs. They compared the HPS and using a distractor. The distractor condition involved given the child a preferred item, for example a toy or iPad and then beginning the transition. For the first child transitions improved from 7% success (baseline) to 94% for HPS and 91% using a distractor (intervention). The distractor intervention did, however, show a larger variability in the data for this child. The second child increased successful transitions from 10% (baseline) to 87.5% distractor and 72% HPS (intervention phase). For this child, they returned to baseline (26.6%) and then did a distractor only phase and the results were 86.6% success. In this study they also assessed social validity by conducting a survey and an observation. During the observation, the observer recorded the intervention being used for each transition. The HPS was used on a total of 9 out of 15 transitions, which shows a preference to this intervention over the distraction. This built on the survey, by supporting the positive responses made by staff regarding the intervention.

This intervention also works for other simple demands. HPS was used to increase the likelihood of a 7 year old with Down Syndrome and Attention Deficit Hyperactive Disorder (ADHD) complying to instructions like “come here”, “look at me” or “get work from the box”. This intervention was used by his classroom teacher, and showed an increase from 13% compliance in baseline, to 78% compliance in intervention phase. The researchers returned to baseline which showed a decrease again (17%) and then an increase in compliance when the intervention was reapplied (85%). The boy began to take Ritalin, which is medication to alleviate the symptoms of ADHD. When he was taking this medication his

baseline showed again a decrease in compliance (25%), but again increased (70%) when the intervention was reintroduced. This study supports the efficacy of this intervention, and that it is still effective for children taking Ritalin. It also shows that this procedure can be implemented in a classroom environment.

This procedure is very simple to use and can have positive results for children who display non-compliance. It is also ethical as it avoids the implementation of a punishment procedure for non-compliance, but instead increasing the likelihood of compliance and enabling reinforcement to be delivered. If you would like to use these procedure, discuss it with your consultant or Board Certified Behaviour Analyst (BCBA).

Banda, D. R., & Kubina Jr, R. M. 2006. The effects of a high-probability request sequencing technique in enhancing transition behaviors, *Education & Treatment of Children*, **29**(3), 507-516.

Belfiore, P. J., Basile, S. P., & Lee, D. L. 2007. Using High probability command sequence to increase classroom compliance: The role of Behavioral Momentum, *Journal of Behavioral Education*, **17**, 160-171

Davis, C. A., Reichle, J. E., & Southard, K. L. 2000. High-Probability requests and a preferred item as a distractor: Increasing successful transitions in children with behavior problems, *Education & Treatment of Children*, **23**(4), 423-440.

Killu, K., Sainato, D. M., Davis, C. A., Ospelt, H., & Paul, J. N. 1998, Effects of High-Probability request sequences on Pre-schoolers' compliance and disruptive behavior, *Journal of Behavior Education*, **8**(3), 347-368.

Mace, F. C., Hock, M. L., Lalli, J. S., West, B. J., Belfiore, P., Pinter, E., & Brown, D. K. 1988. Behavioral Momentum in the treatment of noncompliance. *Journal of Applied Behavior Analysis*, **21**, 123-141.

Picture from: <https://flic.kr/p/eagUfh>



NATURAL ENVIRONMENT TEACHING (NET) IDEA

This month's activity is around watching YouTube clips. Most children love to watch a variety of clips and videos on YouTube. These can vary around different topics, characters or interests. If your child is highly motivated by watching YouTube, then you can still capitalise on many learning opportunities and generalisation! You can simply watch clips around their interests, for example Thomas the Tank Engine, Barbie or In the Night Garden. There are many mands you can work on, including pause, play, go back/rewind it, make it louder/quieter, make the screen bigger (mand: 1M-10M). Depending on the device you use there could be opportunities for the following mands, iPad, Phone, Computer, mouse, keyboard and headphones (mand 1M-10M). These mands can be also transferred into receptive or tact targets around the device, for example,

"show me the computer screen", or "what's this part of the iPad called?" (LRFFC: 10c tact: 11h). Watching different videos can open up a wide variety of possibilities of targets. You could cover receptive or tact targets for nouns, verbs, adjectives and prepositions (Listener responding: 10M. Tact: 10d, 10e, 12d, 12e, 12M, 13d, 13M, 14b-14M). For instance, you could pause an 'In the Night Garden' clip and pause it as Iggle piggle is sleeping and ask "What is he doing?" (tact: 10a) or "Look he's sleeping, can you show me sleeping" (LR: 4d, 8M). Or another example could be in another clip (of any variety) and asking to label or identify the characters (LR 5M, 6a), or items in the background, like furniture (chairs, beds, etc.) or colours, e.g. "What colour is the ship?" (LR: 10M, tact 7M, 10M). There is opportunity to generalise intraverbals, for instance if there is a bed in the background, pausing it and asking "A bed is something you....?" (LRFFC 8a-8M) . You could also finish the song they are singing with a fill in, or if there is a star, for example, pause the clip and say "Twinkle, Twinkle, Little...." (IV 6c, 6d).

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.
LR: Listener Responding. LRFFC: Listener responding Feature Function Class.
IV: Intraverbal



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TERMINOLOGY

Differential reinforcement is an important aspect of teaching. Differential reinforcement generally means that the reinforcement matches the response that is made. For instance a good accurate response that is under acquisition gains access to a powerful reinforcement (praise, a big piece of cookie and tickles), whereas a response that is considered mastered that is less accurate than typical, will be taught errorlessly and then receive a less powerful reinforcement (praise). There are also specific Differential reinforcement schedules outlined. Over the next few months we will discuss these schedules.

Over the last two months, we discussed Differential Reinforcement of Incompatible Behaviours (DRI) and Differential Reinforcement of Alternative Behaviours (DRA). This month we are discussing Differential Reinforcement of Other Behaviours (DRO). In this procedure a reinforcer is delivered after a length of time has passed, or at a specific interval contingent upon the target (challenging) behaviour has not occurred. For example, if the target behaviour is head banging, a edible (chocolate for example) is delivered every 30 seconds that elapses with the child not head banging. 0

PRODUCTS

This months [wish list](#) includes products you might need for the VB MAPP assessment for targets in Level 1 of



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the VB MAPP. These include simple puzzles, shape sorters and cause and effect toys, and much more.

STUDY TIPS

Find great podcasts around Behavioural topics, check out [Behaviour Observations Podcasts](#). These podcasts are great for people wanted to listen to a variety of topics, from a variety of professionals working in the field. Take a break from the books and develop your knowledge further with one of these great podcasts!

EVENTS

The Applied Behaviour Analysis Forum (ABAF) hold regular meetings for their members. They will be releasing dates for 2015, so for more information you can go to their website <http://www.abaf.org.uk/forum>, also you can email Nick Barratt on Nick.Barratt@dimensions-uk.org to become a member and join the mailing list.

Knopse ABA is offering an [Introductory ABA/VB workshop "Be your child's best teacher"](#) on the 5-6th of November 2016. The workshop will be held in Hannover, Germany and presented in English and German. For more information, go to the website for a break down of topics covered within the workshop, and for contact details if you wish to book a space, contact them directly via [email \(info@knopse-aba.com\)](mailto:info@knopse-aba.com).

Keys for Learning are hosting Robert Schramm BCBA of Knopse ABA, on the 16th November in Edinburgh. For professionals the tickets cost £130, or £110 for parents. This workshop is entitled "Be Your Child's Best Teacher: An intro to ABA and Verbal Behaviour with a focus on building motivation". To book, email Gemma Gilmour (gemma.gilmour@keysforlearning.co.uk).

ICEP Europe are offering a [course in ABA](#). The next dates are for the Autumn term (10th October—2nd December). It costs £455 and includes five interactive learning modules, lasting approx. 20 hours.

Contextual Counselling are offering a workshop in March 2017, and is an introduction [to Acceptance Commitment Therapy \(ACT\)](#), presented by Benjamin Schoendorff. This will be held in London and cost £220 (early bird).

UK-SBA are hosting a [workshop](#) with Aubrey Daniels, Ph.D. The dates are the 7th and 8th of November, and will be in London. Registration will open soon!

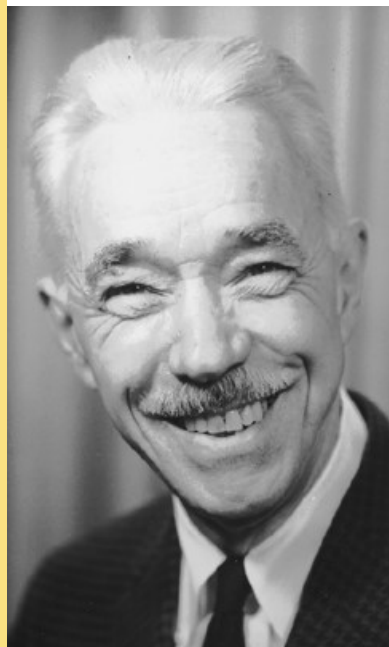
A workshop entitled 'How to reduce restrictive practices through Positive Behaviour Support' will be held on the 20th October (1:30-4:00pm), in Manchester. Email info@redstonepsychology.co.uk to book (cost £35pp).

[Child Autism UK](#) offer a variety of courses throughout the year. There are courses including "Increasing motivation", "School Shadowing" and more!

The Applied Behaviour Analysis Forum (ABAF) hold regular meetings for their members. For more information you can go to their [website](#), also you can email Nick Barratt on Nick.Barratt@dimensions-uk.org to become a member and join the mailing list.

PEOPLE WHO INSPIRE US

Fred S. Keller was born January 1899 near New York. During the First World War he served as a sergeant, in the American Expeditionary Force. Following this Keller pursued his studies by first obtaining a B.S degree from Tufts University, Massachusetts, in 1926. He continued his studies in psychology at Harvard, and he completing a M.A, in 1928 and his Ph.D in 1931. He began teaching, first at Colgate University for 7 years (1931-1939). He moved to Columbia, obtaining a job as an instructor of psychology and then progressed over the years to assistant profession, then associate professor and finally becoming the chairman of the department from 1959. Fred Keller worked alongside another psychologists, a colleague at Columbia, William Schoenfeld, to write a textbook Principles of Psychology, and offer, for the first time, offered four hours of laboratory work a week, in addition to two hours of lectures to their students. During these experiments students observed rats in mazes and how they responded to stimuli and rewards. Keller's paper "Goodbye teacher ..." featured in the Journal of Applied Behaviour Analysis in 1968 which introduced Personalised System of Instruction



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(PSI; aka "The Keller Plan". In 1970, Fred Keller was awarded the Distinguished teaching Award. He past away in 1996, at his home in North Carolina.

Remember to contact us at our email account busyanalyticalbee@gmail.com and like our [Facebook page](#) and check out the [website](#) and [Twitter page](#).

Next month the topic will be exercise, so be sure to check your inboxes on the 1st of October.

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