

The background is a watercolor-style illustration. The top half features soft, blended washes of light blue and pale yellow. The bottom half is filled with a dense crowd of human silhouettes in profile, facing right. Most silhouettes are in shades of blue and purple, but one silhouette in the center is highlighted in a vibrant rainbow gradient from yellow at the top to red at the bottom. The overall style is artistic and humanistic.

Behaviour Change Procedures in
Behaviour Analysis and its relevance to
Education

Maria Relucio, PhD, BCBA

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Introduction

The book, *Behind the Schoolhouse Door*, is powerfully written for educators and teachers to understand and apply the principles of Behaviour Analysis, in the classrooms. You can read the few pages of the book [here](#).

Latham (1997) starts with introducing the rationale behind his search of effective instruction, by surveying teachers in almost 50 states in America, and exploring ways "to improve teachers' ability to function successfully in the classroom" (p. 4), extending the study to schools in foreign countries, and in the period of 16 years.

The initial finding of Latham (1997) was, teachers are very remarkable, good-natured people who are willing to take on their daily tasks. However, the respective university education they had, did not prepare them for this vocation. Pressured by being in carceral states, where their hands are tied to what the system dictates, teachers are not prepared to manage students' behaviours at all. Majority of them responding that on a 1 to 5 scale, they rate themselves to be a little over 1 in terms of preparation in managing students' behaviours. Latham attributes this lack of preparation to no reference or use of a scientific method, or even a law, guideline or principle, similar to other professions, that teachers learn and follow and in a universal sense will add professional competence (1997, p. 6).

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While Latham (1997) still agrees that teaching is an art, he argues that we must combine this with a sound knowledge of the science of instruction and human behaviour. After all, effectiveness, which means being successful in producing the desired effect or result, must be measured by professional knowledge aside from personal character. This means that we consider more skill-based measures to deem what is effective teaching and learning. Latham (1997) particularly looks into professional knowledge as supported by the teacher's understanding and application of the science of instruction and human behaviour. In this sense, Latham, in applying the principles of Behaviourism, looks into education as an enterprise supported or made up of human behaviour. Learning, skill acquisition and teaching are all behaviour, made up of antecedents, behaviours and consequences. In a very simple example, a teacher issues an instruction, a student makes a response, which is a kind of behaviour, and then the response is followed by a consequence, either a reinforcement if the response is correct or correction if it is not.

Latham (1997) introduces eight skills that the teachers must learn in order to understand and treat classroom behaviour scientifically and with professional knowledge:

"The skills include: (1) the ability to teach expectations; (2) the ability to get and keep students on task; (3) the ability to maintain a high rate of positive teacher-to-pupil interactions (including ensuring positive interactions with students who have developmental delays); (4) the ability to respond non coercively to inappropriate behaviour that is consequential; (5) the ability to maintain a high rate of risk-free student response opportunities; (6) the ability to serve problem-behaviour students in the primary learning environment; (7) the ability to avoid being trapped into responses (criticism, sarcasm, threats, questioning, logic, arguing, force, and despair); and (8) the ability to manage behaviour 'scientifically'" (p. 1, pp. 7ff).

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The principle of teaching is done in context, as Latham asserts. Through this context, children must be explicitly and clearly told what are the expectations they must meet. It is also like issuing an explicit instruction, based on the students' level of understanding and knowledge, so that the students will not falter on learning. When expectations are clear, it is likely the students would know what to do and how to respond. With learning and teaching being context specific, students must clearly understand what we expect of them in certain situations. If students cannot do what we expect, then we have to engage systematically to teach the skills to meet the expectations. This is where behaviour change procedures in Behaviour Analysis applied to Education are helpful.

Behaviour Change Procedures

In the application of Behaviour Analysis in Education, we can learn about teaching effectively through the following procedures:



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1. Premack Principle and High Probability Response Sequence: named after its creator, David Premack (1959), the application of this principle presents an opportunity for the learner to first engage in easy and known skills or targets, which have a high probability to be accomplished with the correct and independent responses. Then, as the behavioural momentum of compliance goes, the learner may engage in the low probability response, a skill or target that the learner might find hard to do or something he or she is learning. We usually state this teaching procedure: "*First --- , Then ---*".
2. Antecedent Preparation using Non-Contingent Reinforcement: A child or learner is a human being who values praise or attention or care, that are intrinsically human. These are sometimes powerful to be given, when there is no expectation, or when there is no task demand. Non-Contingent Reinforcement (NCR) is response independent, outside of the contractual contingency (no behaviours necessary to get that reinforcement). It is actually providing a positive social reinforcement, sometimes as attention or praise, that we all, as humans, need.
3. Functional Communication Training: Developed by Carr & Durand (1985), FCT is a technique that teaches the child or learner to communicate appropriately and replace maladaptive behaviours that they learned to use as a form of communicate. It becomes functional in two ways: (1) FCT uses the motivation or drive of learner to get something, to evoke a response is functional in that moment, and (2) by systematically and functionally, teaching the behaviour to get what they want. An example of this is when your child wants some cookies, and that is very motivating at that moment, you teach your child to verbally (vocally or non-vocally through sign, PECS or AAC) request for what they desire and want.
4. Imitation Training through different modelling (videos, peers and adults in the home or school community): Imitation bypasses some aspects of what is said or spoken but imitation still communicates because it activates that mirror neurons through which we learn about sameness, resemblance or repetition as principles to learn about the environment. As children become learners in the school systems, imitation is a powerful tool to systematically help the child learn about things that are meaningful and socially significant, for him or her as an individual and also for his or her participation in the school community.

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5. Prompting through Errorless Learning: there are several kinds of prompting methods. However, in Behaviour Analysis in Education, what is found helpful is that response prompts given to the learner in a most to least procedure. This could be as physical, verbal, visual or auditory prompts to evoke that response from the learner. In an errorless learning procedure, it ensures the student's success by having most to fewest prompts, cues, hints or scaffolds, until the student learns about the expectation and performs what is expected independently.
6. Shaping through Differential Reinforcement: This is a process of systematically reinforcing the successive approximations that are near and/or the same as the correct or independent response.
7. Teaching Tasks and Functional Routines through Task Analysis and Chaining: Behaviour chains are a sequence of discrete responses; we relate each small step to the accomplishment of the desired result or task or response or behaviour. This leads to reinforcement. Chaining is by which each step in the chain becomes a signal or cue to evoke the next step. We require a task analysis or breaking down the task into simple or smaller steps in order, so that the learner can do each step, and as we prompt and shape, the learner systematically learns to evoke or emit the correct or independent response. There are four kinds of behaviour chains: forward (behaviours are taught in the natural occurring order), backward (behaviours are taught backwards, with the first few steps the teacher does and last step is taught to the child or learner, first), backward with leaps ahead (while the last step is taught to the child or the learner, first, there are steps within the chain that the learner can perform as he or she evokes the response), and total-task presentation (where all the steps in the chain are taught to the learner, at the same time).

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8. Token Economy Systems: A contractual or behavioural contingency that is based on the systematic reinforcement of target behaviours, through the use of tokens, as stars, check marks, stickers, material tokens or coins. We can exchange earned tokens for back-up or primary reinforcers which are preferred: edible, activity, tangible, social or sensory reinforcers. Outside the operant conditioning contingency, the tokens may have no value or worth but when paired with back-up reinforcers, the value of the tokens is that they can exchange it to something desired – remember, stimulus-stimulus pairing in classical conditioning. Apart from reinforcement as a result, the Token Economy system shapes the behaviour of generalizing reinforcers, such as the tokens which can be exchanged with something valuable, accepting the delay of the delivery of reinforcement, and enforces choice, i.e., the child or learner can choose what reinforcers to exchange his or her earned tokens for. In this sense, tokens are earned, learned, secondary reinforcers. However, tokens are generalized conditioned reinforcers because just like with the tokens or money or coins, they can exchange it for something that has value to the person.
9. Group contingencies: Like a contract, terms in the contingency contracting are usually understood and agreed by both parties: the learner/s and the teacher. There is a very clear expectation of tasks or behaviours, and when will the reinforcement or reward will be given. There is also the reliance on behavioural data to support that they have met the terms of the contract. Maybe useful in systems of schooling, group contingencies present that a consequence is issued based on the behaviour of: one member or a few members in a group (dependent), part of the group who meets the contingency (independent) and all of the individuals in the group must meet the contingency (interdependent).
10. Forms of self-management through following a visual schedule, getting into transitions and accomplishing routines correctly independently

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Conclusion

The teaching profession should embrace the standards of teaching that will systematically pursue the science of learning. The tools and methods in the behaviour change procedures, through the science of instruction and study of human behaviours, open various ways that will put to work what is effective: meeting the desired result for the students through ways that are individualized, having an instruction that is based on research and is/are sensitive to the students' respective needs. These are the components of an evidence-based practice employed in ABA, and what educators can learn from to manage behaviours, scientifically, and to have that effective teaching and develop a sense of enjoyment in learning.

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