

Analysis of Behaviorist Learning Methods

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“Behaviorism refers to a psychological approach which emphasizes scientific and objective methods of investigation. The approach is only concerned with observable stimulus-response behaviors, and states all behaviors are learned through interaction with the environment” (McLeod, 2017). More specifically, “three basic assumptions are held to be true. First, observable behavior rather than internal thought processes is the focus of study... Second what one learns is determined by the elements in the environment, not by the individual learner. And third, the principles of contiguity... and reinforcement... are central to explaining the learning process” (Merriam, Caffarella, & Baumgartner, 2007, p. 278). The objectives of this paper are to consider the contributions of Watson and Skinner to the behaviorist learning method, the influences of behaviorism in K12 and corporate environments, how behaviorism is exhibited within Twitter, behaviorism versus andragogy regarding motivating learners, and how behaviorism may be applied to instructional design.

John B. Watson is considered the “father of American behaviorism. His perspective was radical in that he did not accept or acknowledge the influence of mental processes on behavior” (Tuckman & Monetti, 2011, p. 226). In 1913 Watson published the article “Psychology as the behaviorist views it,” which is often called “the behaviorist manifesto” (McLeod, 2017). He is most well-known for his experiment on an 11-month-old infant named Little Albert. “Watson’s purpose was to see if he could condition fear in Little Albert and then get that fear to generalize to other stimuli” (Tuckman & Monetti, 2011, p. 226). Watson is quoted as saying, “Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in, and I’ll guarantee to take any one at random and train him to be any type of specialist I might select

...regardless of his talents, penchants, tendencies, abilities..." (Tuckman & Monetti, 2011, p. 226).

B. F. Skinner's "major contribution to understanding learning is known as operant conditioning ... which means to reinforce what you want the individual to do again; ignore what you want the individual to stop doing" (Merriam, Caffarella, & Baumgartner, 2007, p. 279). "It is important to recognize that, in operant conditioning, the behavior is ultimately contingent on the consequence, not the signal, but the signal helps cue or guide the learner to choose to perform the appropriate response, the one on which reinforcement depends or is contingent" (Tuckman & Monetti, 2011, p. 237).

Behaviorism has influenced the K12 and corporate environments. In the K12 environment, the principles of behaviorism are clearly seen in the use of positive reinforcement and educational software programs. "Positive reinforcement involves the addition of a reinforcing stimulus following a behavior that makes it more likely that the behavior will occur again in the future. When a favorable outcome, event, or reward occurs after an action, that particular response or behavior will be strengthened. One of the easiest ways to remember positive reinforcement is to think of it as something being added" (Cherry, 2018). Tuckman and Monetti (2011) offer the following ways "teachers can effectively use reinforcers:

- Provide reinforcers soon after a student behaves in a way that improves their learning or makes the class a better place to learn.
- Let students choose the types of reinforcers they want to receive.
- Use praise or other types of reinforcement to increase the academic performance of students, not just their social behavior in your classroom.
- Instead of evaluative praise, consider clearly describing what you notice students doing in class" (p. 247).

"Regarding educational software programs, Weegar and Pacis (2012) state, "Like the teaching machine, computer software designed for students help to reinforce student behavior. Skinner's

early work and findings with the teaching machine can be applied to modern day computer programs, they are fundamentally the same. Skinner's teaching machine provides a connection to today's digital world which can be generalized and described as the roots of behaviorism."

In the corporate environment "perhaps the most tangible way in which companies put motivation theories into action is by instituting incentive systems. Incentives are reward systems that tie pay to performance" (University of Minnesota, n.d.). Two examples of these incentives are piece-rate systems and gainsharing. "Under piece rate incentives, employees are paid on the basis of individual output they produce. ... These systems are suitable when employee output is easily observable or quantifiable and when output is directly correlated with employee effort... These plans may encourage employees to work very fast, but may also increase the number of errors made. Therefore, rewarding employee performance minus errors might be more effective... Piece rate systems can be very effective in increasing worker productivity" (University of Minnesota, n.d.). "Gainsharing is a companywide program in which employees are rewarded for performance gains compared to past performance. These gains may take the form of reducing labor costs compared to estimates or reducing overall costs compared to past years' figures. These improvements are achieved through employee suggestions and participation in management through employee committees... These programs can be successful if the payout formula is generous, employees can truly participate in the management of the company, and if employees are able to communicate and execute their ideas" (University of Minnesota, n.d.).

One of the ways we see behaviorism at work in the real world is with Twitter, specifically in its addictive qualities due to dopamine. Weinschenk (2102) explains, "With the internet, twitter, and texting you now have almost instant gratification of your desire to seek..."

Dopamine starts you seeking, then you get rewarded for the seeking which makes you seek more.” In her article, Weinschenk (2012) includes connections to behavioral terminology when discussing dopamine and how it is involved in variable reinforcement schedules, and Pavlovian cues like sound when a text message or email arrives, or a visual cue, that enhances the addictive effect. In that same article she also provides a practical solution: “One of the most important things you can do to prevent or stop a dopamine loop, and be more productive is to turn off the cues.”

McLeod (2013) points out, “Behaviorists are strong believers in determinism. Their most forthright and articulate spokesman has been B. F. Skinner. Concepts like ‘free will’ and ‘motivation’ are dismissed as illusions that disguise the real causes of human behavior.” In stark contrast to this belief regarding motivation as an illusion are Knowles’ assumptions with respect to andragogy, or “the art and science of helping adults learn” (Merriam, Caffarella, & Baumgartner, 2007, p. 84). For example, the following are two of Knowles’ assumptions: “The most potent motivations are internal rather than external” and “Adults need to know why they need to learn something” (Merriam, Caffarella, & Baumgartner, 2007, p. 84).

While the tenets of behaviorism, especially regarding motivation, may not fully align with those of andragogy, “behaviorism is the philosophy that most underlies adult career and technical education and human resource development... identifying the skills needed to perform in an occupation, teaching those skills, and requiring a certain standard of performance of those skills... to enhance on-the-job performance” (Merriam, Caffarella, & Baumgartner, 2007, p. 281). Keramida (2015) provides another example of behaviorism in instructional design: “behavioristic principles are also still applicable in gamification... In gamification, as well as in other types of eLearning activities, reinforcement of a certain desired behavior can occur in two

ways: either by eliciting from learners particular learning outcomes and rewarding these outcomes by assigning points, grades, badges, higher position in leaderboards, etc, or by removing from learners specific benefits, for example points, lives, etc, in order to make them try to avoid undesired consequences of their behaviors.”

## References

- Cherry, K. (2018). Positive reinforcement and operant conditioning. *Verywell Mind*. Retrieved from <https://www.verywellmind.com/what-is-positive-reinforcement-2795412>
- Keramida, M. (2015). Behaviorism in instructional design for eLearning: When and how to use. *eLearning Industry*. Retrieved from <https://elearningindustry.com/behaviorism-in-instructional-design-for-elearning-when-and-how-to-use>
- McLeod, S. (2013). Freewill and determinism. *Simply Psychology*. Retrieved from <https://www.simplypsychology.org/freewill-determinism.html>
- McLeod, S. (2017). Behaviorist approach. *Simply Psychology*. Retrieved from <https://www.simplypsychology.org/behaviorism.html>
- Merriam, S., Caffarella, R., and Baumgartner, L. (2007). Learning in adulthood: A comprehensive guide. San Francisco, CA: Jossey-Bass.
- Tuckman, B., & Monetti, D. (2011). Educational psychology. Belmont, CA: Wadsworth, Cengage Learning.
- University of Minnesota. (n.d.). Organizational behavior: 6.5 Motivating employees through performance incentives. Retrieved from <http://open.lib.umn.edu/organizationalbehavior/chapter/6-5-motivating-employees-through-performance-incentives/>
- Weegar, M. A., & Pacis, D. (2012). A comparison of two theories of learning -- behaviorism and constructivism as applied to face-to-face and online learning. Retrieved from <https://www.g-casa.com/conferences/manila/papers/Weegar.pdf>

Weinschenk, S. (2012). Why we're all addicted to texts, twitter and google. *Psychology Today*.

Retrieved from <https://www.psychologytoday.com/us/blog/brain-wise/201209/why-were-all-addicted-texts-twitter-and-google>