Behaviorism (A Hitchhiker's Guide to Learning Theory)

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Background

Behaviorism was the first major *scientific* theory of learning. Of course, all cultures have had philosophies and practices for learning, because it is so fundamental in our lives. It is how cultures come about, in fact. Confucius spoke elegantly about learning; Socrates also had strong opinions about learning. But psychology and education didn't try to become scientific until relatively recently.

Behaviorism began as a strong branch of the very new field of psychology at the beginning of the 20th century. Essentially, behaviorism was a philosophical stance that the only valid evidence for the new science should be observable behavior, not people's potentially unreliable descriptions of their thoughts and mental states, and that investigating mental processes was pointless. It didn't care about mental processes, and even viewed thought as just a form of internal speech (which is not *entirely* wrong sometimes). Behaviorism proposed that all learning comes from observation and imitation. It saw learning as modifying behavior through reinforcement of successful or acceptable behaviors. It was a kind of trial and error—you behaved until you got the response you wanted(unless you were already smart and could anticipate the correct response). You observed, behaved, and then got feedback about whether you behaved correctly enough. That's behavioral learning in a nutshell. It is an elegant theory.

Behaviorism was the predominant theory of learning into the 1960's, and it generated the most instructional principles and strategies up to the end of that decade. Today it carries a lot of negative baggage—visions of rats in mazes, dogs salivating, pigeons pecking buttons for food, and of electric shocks, and it has a reputation for being overly simplistic. But even though it is no longer very prevalent in the education literature as a theory, it is still influential in organizational management, for instance, and behavioral therapy is still an important clinical psychological practice. But even in education and training, it is very prevalent in the things we do.

Application

When is the last time you wrote a behavioral learning objective? That is a behaviorist principle.

When was the last time you developed or used job competencies to define learning needs? A behaviorist principle.

When is the last time you wanted learners to answer questions to check whether they had learned something you just discussed, or had them do practice exercises with immediate feedback? That is behaviorist.

Have you been concerned with the level of prerequisite skills of your learners? Have you broken down skills into small, manageable tasks to be mastered progressively? All behaviorist.

So you can see, it has been a foundation for instructional design and is quite pervasive still, because its principles have immediate, tangible power to ground training in solid evidence.

Behaviorism led to the development of something called programmed instruction, an instructional design strategy that taught new things step by step, teaching very small chunks of information and skills, and makiung sure students used that new information or skill and got feedback about whether they could use it correctly before moving onto new chunks. Instruction in this format is still used today in math education, for example, and in foreign language instruction. And it works. You can even see the influence of this strategy in some COMET modules, such as The Fire Environment module, in the S290 Series on Wildland Fire Behavior (http://www.meted.ucar.edu/fire/s290/unit1/), which asks frequent questions to ensure learners are grasping what is being taught. However, in this case there is a lot of attention to the cognitive processes of learners as well as reinforcing their behaviors.

Limitations

One of the major contributions of behaviorism is the concept of feedback. According to this theory, learning hinges on receiving feedback about whether a behavior, like answering a question or performing a task, is correct and incorrect. And if it is incorrect, the learner needs to know why so that their behavior can change. I don't think anyone can dispute the importance of feedback in learning, but behaviorism doesn't tell us much about the kinds of questions to ask or the learning activities to offer. It can lead to rote methods of teaching.

The limitations of behaviorism arise from the fact that it takes this very narrow view on the concept of mind and mental processes. In fact, it essentially views the mind as a black box. This doesn't really help explain HOW people learn the variety of things they learn, let alone explain in any useful way how they perform complex tasks like weather forecasting. It doesn't help us distinguish learning methods appropriate for different learning outcomes. For that you need to go to the cognitive learning theories, which are the next ride in this hitchhike.