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Anatomy of an Adaptive Pathway

Each chapter contains 2–3 Adaptive Pathways on the top most difficult concepts (MDCs) identified by our research. For example, in the Learning chapter, data from both students and instructors suggests that operant conditioning is one of the most difficult concepts. Therefore, one of the three Adaptive Pathways in the learning chapter focuses on operant conditioning.

But, we know the answer to *"Why do students struggle with this concept?"* is often multifaceted, which is why each Adaptive Pathway addresses between one and three specific misconceptions related to the MDC. Each Adaptive Pathway begins with a *pinpoint question*—a multiple-choice question we wrote to specifically target a common misconception. Distractor items were written to fit the misconception, so we know if a student answers the multiple-choice question incorrectly, they could benefit from targeted instruction that focuses on that specific misconception of the difficult concept, and they are provided with a short targeted video that addresses that specific misconception. If, however, a student answers the pinpoint question correctly, they automatically proceed to the pinpoint question for the next misconception (i.e., Step 2), keeping them on pace to move through the chapter.

In the operant conditioning example, we know students often have difficulty understanding that positive reinforcement involves adding something to increase a behavior, whereas negative reinforcement involves removing something aversive to increase behavior (**LO 5.2**: Adaptive Pathway 5.2.1). Students also tend to confuse the concepts of negative reinforcement and

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