

Operant Conditioning – Part 2

Slide 1	Hello and welcome to an explanation of the techniques used in operant conditioning. This is the fourth in a series of six presentations on behavioral learning theories as they apply to schooling and education. My name is Bill Huitt and I am professor emeritus at Valdosta State University and adjunct faculty at Capella and Walden universities.
Slide 2	The primary objectives for this presentation are for you to be able to analyze case studies and properly describe the four components used in operant conditioning: identifying the target behavior, making a decision as to whether the
Slide 3	desired change in the target behavior should be an increase or decrease, identifying the consequence used (that is, is it a positive or negative stimulus), and identifying what action to take with the stimulus (that is, is the stimulus to be added or subtracted.)
Slide 4	These are the questions to ask when identifying what operant conditioning technique was used in each of the examples discussed in this presentation.
Slide 5	First, what was the target behavior and
Slide 6	was the frequency of the behavior increased or decreased? Remember that there are two operant conditioning techniques associated with each of these possible results. Therefore, the answers to these two questions will eliminate two possible techniques.
Slide 7	Next, what was the stimulus used? Was it positive or negative?
Slide 8	What action was taken with the stimulus? That is, was it added or subtracted? The answers to these questions will eliminate another possible technique, thereby identifying the operant conditioning technique used in the example.
Slide 9	In the first example, Billy likes to campout in the backyard. He camped-out on every Friday evening during the month of June. The last time he camped out, some older children snuck up to his tent while he was sleeping and threw a bucket of cold water on him. Billy has not camped out since.

Slide 10	First, what was the target behavior?
Slide 11	That's right, the target behavior in this example is camping out.
Slide 12	Second, was the target behavior increased or decreased?
Slide 13	Correct again. The target of camping out was decreased.
Slide 14	So, we know that positive reinforcement and negative reinforcement can be eliminated as possible techniques used in the example because both of those techniques increase the frequency of the target behavior.
Slide 15	Next, what was the consequence used?
Slide 16	Right, the consequence was the cold water thrown on him by the older children.
Slide 17	Was the water added or subtracted? Right again, it was added.
Slide 18	So, we know that the technique of punishment was used. A negative stimulus of cold water was added by the older children resulting in a decrease in camping-out behavior. This is an example of operant conditioning because a stimulus following a response changed the frequency of the response being emitted again.
Slide 19	A second example. At the beginning of the week, Madge raised her hand 3 times when the teacher asked a question. She then began calling on Madge every time Madge raised her hand. During the next class Madge raised her hand 4 times; in the following class she raised her hand 5 times.
Slide 20	First, what was the target behavior? Did you say Madge raising her hand? Excellent.
Slide 21	Next, was the target behavior of raising hand increased or decreased?

Slide 22	Right. Madge increased her raising her hand behavior.
Slide 23	So, we can eliminate two possible operant conditioning techniques, response cost and punishment, because those techniques result in a decrease in frequency of the target behavior.
Slide 24	Next, what was the consequence in this example?
Slide 25	It was the teacher calling on Madge.
Slide 26	Was the stimulus added or subtracted?
Slide 27	Right. The teacher added the stimulus of calling on Madge.
Slide 28	So, now we know that the operant conditioning technique used was not
Slide 29	negative reinforcement because that would have involved subtracting a negative or aversive stimulus to increase the frequency of the target behavior. And, therefore, this is an example of positive reinforcement. A positive stimulus of calling on Madge was added, resulting in an increase in Madge's raising her hand behavior.
Slide 30	In the third example, Greg is being conditioned using a token system. When he follows directions, he earns a point. When he misbehaves or does not follow a request, he loses points. At the end of each day, he can use his points or tokens to "buy" free time, TV privileges, and so forth. Greg used to call his mom names. Since he has been on the point system, his name calling has been reduced to almost zero. What was the target behavior?
Slide 31	Correct, the target behavior is Greg calling his mother names.
Slide 32	Was the target behavior increased or decreased?
Slide 33	That's right. The frequency of the target behavior was decreased.

Slide 34	Positive reinforcement and negative reinforcement can be eliminated as possible techniques used in the example because both of those techniques increase the frequency of the target behavior.
Slide 35	And, therefore, the technique used was either response cost or punishment because both of those techniques focus on decreasing a target behavior.
Slide 36	In this example, what was the consequence?
Slide 37	Right, points were deducted when Greg called his mom names.
Slide 38	Were the points added or subtracted?
Slide 39	They were subtracted.
Slide 40	Therefore, we know that the technique used was not punishment.
Slide 41	In fact, the technique used was response cost. Greg had points deducted when calling his mom names, which resulted in a decrease in that target behavior.
Slide 42	Astute learners will notice that Greg both received points for appropriate behavior and had points deducted for inappropriate behavior. If the example were changed to read "Greg used to never raise his hand before he spoke. Since he has been on the points system, he raises his hand almost every time and waits to be called on," the technique used would have changed.
Slide 43	In this case the target behavior was.....Greg raising his hand and waiting to be called on.
Slide 44	And that target behavior was....increased.
Slide 45	The consequence is receiving points and these were....added when he behaves appropriately.

Slide 46	So, now this is an example of positive reinforcement. Points are added when Gregg behaves appropriately, resulting in an increase in that behavior. When deciding how to use operant conditioning, it is critical to go through the steps of identifying the target behavior, deciding whether it should be increased or decreased, and then deciding on a stimulus and whether that should be added or subtracted to attain the desired outcome. Otherwise, operant conditioning can become rather confusing.
Slide 47	In the following example, John does not go to the dentist every 6 months for his checkup. When he finally went, the teeth cleaning was so painful that his mouth hurt for several days. After the second time he did this, he now has his teeth cleaned every 6 months. What was the target behavior?
Slide 48	Correct. The target behavior is going to the dentist to have his teeth cleaned.
Slide 49	Was the going-to-the-dentist behavior increased or decreased?
Slide 50	That's right. It was increased.
Slide 51	So, we can eliminate two possible operant conditioning techniques:
Slide 52	response cost and punishment because those techniques result in a decrease in the frequency of the target behavior.
Slide 53	What was the consequence?
Slide 54	Right. The consequence was his mouth hurting for several days.
Slide 55	Was the consequence added or subtracted? The mouth hurting was subtracted.
Slide 56	So, we can eliminate positive reinforcement as that would involve adding a pleasant stimulus.
Slide 57	Therefore, this is an example of negative reinforcement. When going-to-the-dentist behavior was increased, the negative stimulus of mouth-hurting for several days was subtracted.

Slide 58	In summary, it is always best to use positive reinforcement, if possible. This includes selecting a target behavior that you want to increase, identifying a pleasant or positive stimulus that you can add when the target behavior or its near approximation is emitted. Remember, if the target behavior does not change, it does not mean that operant conditioning does not work. It simply means you have identified a neutral stimulus, not a consequence.
Slide 59	If the learner is not emitting any behavior that can be modified into a target behavior, the next choice is to use negative reinforcement. In using this technique, you would first place the learner in a negative or aversive situation in which the learner can escape or avoid by engaging in the target behavior. When the target behavior is emitted, the negative or aversive stimulus is removed, at which point you can now use positive reinforcement to increase the frequency of the behavior even more. It is best to focus on increasing behavior. However, there are times when decreasing an inappropriate or undesirable target behavior is warranted. It is best to first use response cost by removing a pleasant or positive stimulus when the learner engages in an unwanted target behavior. When the desired behavior is emitted then that same consequence can be given to the learner to increase the desired target behavior.
Slide 60	Finally, if punishment is warranted (that is the only technique that works to decrease an unwanted behavior), the negative stimulus that is added should be something that can be removed when a desired target behavior is emitted. Notice that in using operant conditioning, any focus on reducing unwanted target behaviors must be paired with increasing a complimentary desired target behavior. For example, if a teacher wants to reduce a child's calling out answers before she is called on, a focus on reducing that behavior should be paired with increasing raising one's hand behavior. Reducing inappropriate or undesired behavior does not automatically lead to an increase in desired target behavior. That desired target behavior must be conditioned.
Slide 61	This concludes the presentation on using operant conditioning techniques. Previous presentations focused on an overview of three behavioral learning theories—classical conditioning, operant conditioning, and contiguity theory—a more complete introduction to classical conditioning theory, and an overview of operant conditioning theory. The next presentation provides an introduction to schedules for applying consequences and then there is a summary presentation on using behavior modification techniques from both classical and operant conditioning theories. Additionally, there are several short quizzes that learners can use to check their understandings of the different learning theories.