

Applied Behavior Analysis

PURPOSE:

The Applied Behavior Analysis (ABA) project is designed to allow the student to apply the principles of operant conditioning in an attempt to change a personal behavior.

OVERVIEW:

ABA is a general term for the application of behavioral learning/conditioning principles for the purpose of changing human behavior. For this project, one will:

1. Conduct a General Observation
2. Make a Specific Behavior Selection (Target Behavior)
3. Determine the Free Operant Level of the Target Behavior
4. Conduct a Specific Observation and Determine the Target Behavior's Antecedents
5. Set a Behavioral Goal (Terminal Behavior)
6. Determine a Set of Reinforcers and Punishers (as needed)
7. Select a Behavior Management Technique
8. Identify Specific Contingencies for One's Behavior Management Technique
9. Implement the Behavior Management Technique
10. Evaluate the Behavior Management Program

PROCEDURE / SPECIFICS:

As indicated above, an ABA has 10 sequential steps. Below is a detailed description of each step and how each step should be completed.

1. Conduct a General Observation:

One should determine the general situation in which they are interested (e.g., homework, weight loss, smoking) and make a series of observations of these situations (approximately 5 observations at a minimum). The purpose of these observations is to determine regularities in one's behavior and to identify a specific behavior from these situations and regularities. NOTES OF THESE OBSERVATIONS SHOULD BE KEPT FOR THE FINAL REPORT.

Brief Example: I am interested in my eating behavior, specifically decreasing the amount of food I eat. I observe my eating behavior for a week and notice a regularity - I tend to eat more after 9 p.m. than the rest of the day.

2. Make a Specific Behavior Selection (Target Behavior):

One should select a specific and measurable behavior from the myriad of behaviors that occur during the observed situations. This behavior should be stated in as specific and measurable terms as possible.

Brief Example: I am in interested in reducing my eating after 9 p.m

3. Determine the Free Operant Level of the Target Behavior:

In order to modify a behavior, one must know how often that behavior occurs. One should determine how the target behavior can best be measured (e.g., checklist, tallies, video tape) and then monitor the target behavior recording the target behavior's rate, frequency, duration, and interval. NOTES OF THESE OBSERVATIONS SHOULD BE KEPT FOR THE FINAL REPORT.

Brief Example: I have determined that this target behavior occurs 5-7 nights per week, between 9 pm and 1 am, involves the ingestion of both low & high calorie and low & high fat foods, and usually involves one full meal followed by several smaller meals.

4. Conduct a Specific Observation and Determine the Target Behavior's Antecedents:

These specific observations should focus on (1) what behaviors typically precede the target behavior, (2) do any of these antecedent behaviors seem to "cause" the target behavior, and (3) what are the personal and environmental consequences of the target behavior. The goal of this step is to try to determine how the target behavior fits into the overall behavioral scheme and what seems to be reinforcing or punishing the target behavior. NOTES OF THESE OBSERVATIONS SHOULD BE KEPT FOR THE FINAL REPORT.

Brief Example: I have noticed that these eating behaviors are preceded by (1) my not eating all day, (2) turning on the TV, and (3) being bored. Further, the consequences are such that even when I become satiated, I continue to eat.

5. Set a Behavioral Goal (Terminal Behavior):

The final goal must be specified in specific, quantifiable, and observable terms. The terminal behavior results in the success criteria.

Brief Example: My goal is to eat no more than one small meal after 9 p.m., no more than 4 nights per week, involving only low calorie and fat foods.

6. Determine a Set of Reinforcers and Punishers:

In order to modify one's behavior, one must reinforce desired behaviors and punish, in some way, undesired behaviors. Thus, one must determine what can be used to reinforce and punish. These reinforcements and punishments should be specific to the target behavior; that is, they must be able to be linked with the target behavior.

Brief Example: I can reinforce good eating performance with a Friday movie, a dinner with my wife at a nice restaurant, not having to clean the kitchen, or buying a new shirt (or some other piece of clothing). I can punish poor eating performance by cleaning the whole house the next day, by not being allowed to watch TV the next night, or having to sleep on the couch that night.

7. Select a Behavior Modification Technique:

Select a process for modifying one's behavior, either (1) extinction, (2) differential reinforcement of other behaviors (DRO), (3) shaping, or (4) reinforcement of incompatible behaviors.

Brief Example:

8. Identify Specific Contingencies for One's Behavior Modification Technique:

One needs to specify the exact nature of the behavior-reinforcement contingency. This includes the reinforcement schedule. Determine how often one will get reinforced and punished and for what behaviors. Delineate specific behaviors and specific reinforcers or punishers.

Brief Example: If I do not eat or eat only one small low calorie / low fat meal between 9 p.m. and bedtime my wife will give me a backrub. Also, if I do not eat or eat only one small low calorie / low fat meal between 9 p.m. and bedtime Sunday through Thursday, then my wife and I go out for dinner and a movie Friday night.

9. Implement the Behavior Modification Technique:

One needs to apply their behavior modification program for 4 weeks (unless the target behavior has been achieved). Records of the rate, frequency, duration, and interval of the target behavior should be kept during this 4 week period. Also, notes of how the behavior modification technique is working or not working should be kept. Finally, running notes of a formative nature should be kept, that is, an ongoing narrative on how the process is going, strengths and weaknesses of the program, and insights and learning that has occurred as the result of this experience. NOTES OF THESE OBSERVATIONS SHOULD BE KEPT FOR THE FINAL REPORT.

Brief Example: A fair amount of progress is being made in the first week. Success has been achieved on each night and I have been reinforced on each night (backrub) and on Friday (dinner and movie). I am finding it more difficult from 9-10 than any other time. I have also noticed that I have been going to be earlier than usual (11 pm vs 1 pm). I think that this may be so that I do not lose my control. . . (This section of notes is usually fairly extensive and narrative in nature).

10. Evaluation and Modification of Behavior Modification Program:

This evaluation should be both formative, on-going during the 4 weeks, and summative, a final evaluation. If the formative evaluation determines that one's behavior is not changing in the manner desired, a change in the Behavior Modification Technique may be necessary. New reinforcers and punishers may need to be initiated and/or a whole new approach may be needed. These evaluations should be as specific as possible and may be charted or graphed. Can changes in rate, frequency, duration, and interval of the target behavior be measured? NOTES OF THESE OBSERVATIONS SHOULD BE KEPT FOR THE FINAL REPORT.

Brief Example: Results indicated the Behavior Modification Technique to be successful. Poor eating performance was recorded only once the first week, twice for weeks two and three, and again only once on the final week. The nature of the meals ingested also changed from predominantly high calorie / high fat meals to low calorie / low fat meals. (Your results should be much more specific and extensive than those noted here.)

Report:

The ABA report should consist of the following 4 sections. In addition, the report should be in APA format (4th edition) and **NOT EXCEED** a maximum of 10 pages in length.

1. *Introductory Narrative (Steps 1-4):*

This introduction should include the essentials of steps 1 through 4. What was the general reason for selecting the target behavior. What were the results of the general observation (step 1). Why was the specific target behavior selected (step 2)? What was the free operant level of the target behavior and how was it measured (step 3)? What were the results of the specific observation to determine the target behavior's antecedents and consequences?

2. *Procedure (Steps 5-8):*

What was the terminal behavior and why was this terminal behavior selected (step 5)? What reinforcers and punishers were identified (step 6)? What behavior modification technique was selected, and why (step 7)? What are the specifics of your behavior modification program (step 8)? The delineation of the behavior modification program should be explicit and detailed.

3. *Implementation Narrative (Step 9):*

This section should (1) explain the formative, on-going results of the behavior modification program, (2) describe how you are doing, feeling, and thinking during the program, (3) describe any changes in those with whom you interact during the program. This section should be the longest of the four sections.

4. *Evaluation (Step 10):*

The final section should describe the success and/or failure of the behavior modification program, and why. Describe the results of the behavior modification and your interpretation of these results (i.e., why was there success or why was there failure). If the program was not successful, what could be done to improve it?