
AP Psychology

Sample Student Responses and Scoring Commentary

Inside:

- ✓ Free Response Question 1
- ✓ Scoring Guideline
- ✓ Student Samples
- ✓ Scoring Commentary

AP[®] PSYCHOLOGY

2017 SCORING GUIDELINES

Question 1

Part A

Explain how each of the following plays a role in eating behavior:

- Drive-reduction theory
- External cues
- Dopamine and the reward center
- Observational learning

Part B

A study was conducted to investigate the role of framing on concern for healthy eating. Each participant (N=100) was randomly assigned to one of two conditions. In the first condition the participants read an article indicating that obesity is a disease. Participants in the second condition read an article indicating that obesity is the result of personal behaviors and decisions.

Participants were then asked to indicate how important it would be for them to eat a healthy diet. Scores ranged from 1 (not very important) to 9 (very important). The results are presented in the table below.

Group	Mean Score-Concern for Healthy Eating	Standard Deviation
Disease	3.4	1.4
Behavior	6.1	1.2

- Operationally define the dependent variable.
- What makes the study experimental rather than correlational?
- What is the most appropriate conclusion the researchers can draw about the relationship between the variables in the study?

General Considerations

1. Answers must be presented in sentences, and sentences must be cogent enough for the student's meaning to come through. Spelling and grammatical mistakes do not reduce a student's score, but spelling must be close enough that the reader is convinced of the word.
2. Do not score students' notes made on the question section of the booklet. Score only what has been written in the blanks provided in the booklet.
3. Definitions alone will not score, but they may be used to enhance the application.
4. Within a point, a student will not be penalized for misinformation unless it directly contradicts correct information that would otherwise have scored a point. A correct application with incorrect definition is not considered a direct contradiction and should score the point.
5. Rubric examples provided for each point are not to be considered exhaustive.
6. A student can score points only if the student clearly conveys what part of the question is being answered. It is possible to infer the part of the question being answered if it is consistent with the order of the question.
7. Responses that simply parrot or repeat the terms from the question will not score.

AP[®] PSYCHOLOGY

2017 SCORING GUIDELINES

Question 1 (continued)

Part A

Note: For all of part A responses should explain how each item plays a role in eating-related behaviors and not in wants, desires, or intentions.

Point 1

Drive-reduction theory:

Responses should explain that a physiological need creates a psychological drive of hunger that affects eating behavior.

- Score: references to a drop in blood glucose, stomach contractions, being out of homeostasis, or other physiological responses as description of physiological need for food.
- Score: “motivated to eat” as satisfying both the drive and eating behavior requirements.
- DO NOT score “drive” or “driven” alone.

Note: Responses may describe that a lack of physiological need, creating a lack of psychological drive of hunger, reduces eating behavior.

Point 2

External cues:

Responses should explain how the presence of food or a stimulus associated with food, as experienced through specific sensory input, will affect eating behavior.

- Score: descriptions of food-related events as specific stimuli.
- Do NOT score references to thoughts or internal processes without a specific external sensory experience.
- Do NOT score references to circadian rhythm or passage of time without description of external sensory experience.

Note: There must be a specific short-term physical stimulus affecting eating behavior.

Point 3

Dopamine and the reward center:

Responses should explain how the act of eating, along with the release of dopamine, results in a positive feeling.

- Score: responses describing eating behavior, followed by dopamine release and experience of pleasure.
- Score: responses describing dopamine release, followed by pleasure affecting eating behavior.

Point 4

Observational learning:

Responses should explain that if people see a behavior related to eating, then they learn and exhibit that same behavior.

AP[®] PSYCHOLOGY

2017 SCORING GUIDELINES

Question 1 (continued)

Part B

Point 5

Operationally define the dependent variable:

Responses should explain that the dependent variable is measured as the score or rating from 1 (not very important) to 9 (very important) of how important it is to have a healthy diet.

- Score: “score,” “rating,” or “1–9” as measures of the dependent variable.
- Do NOT score general references to measurement, response, answers, or opinion.

Point 6

What makes this study experimental rather than correlational?

Responses should explain that this study is experimental either because participants were randomly assigned to one of two conditions, or because there is manipulation of a variable.

- Do NOT score references to cause and effect alone.

Note: If response discusses manipulation without mentioning manipulation, then it must describe how the conditions are different.

Point 7

What is the most appropriate conclusion the researchers can draw about the relationship between the variables?

Responses should explain that variations in the study’s independent variable cause variations in the study’s dependent variable.

Responses should include three essential elements: reference to the study’s independent variable, reference to the study’s dependent variable, and connection with causal language.

- Score: “Reading that obesity is the result of personal behavior makes people have more concern with healthy eating than if they read that obesity is a disease.”
- Score: “If, then” statements as examples of causal language.
- Do NOT score general mention of independent and dependent variables without reference to the study.
- Do NOT score references to correlation.
- Do NOT score a simple summary of the results as a conclusion.
- Do NOT score mere comparison between groups without a causal statement.

Drive-reduction theory states that we are motivated to reduce a drive or a physical need. With eating behavior, we are motivated to eat because ~~you~~ we are hungry. By eating, we reduce the drive of hunger. Since we satisfied our hunger, we stop eating.

External cues are environmental situations that give a cue to behave appropriately. External cues influence eating behavior because it can cause you to eat. If all your friends are eating, you will likely eat also, because it is the appropriate time to.

Dopamine is a neurotransmitter that affects pleasure, ~~and~~ by eating delicious food, dopamine is released, stimulating pleasure. Since you feel happy and satisfied by eating, it reinforces you to eat more.

Observational learning is learning behaviors by watching others behave. Observational learning affects eating behavior because you can learn to eat specific foods or have a certain diet. If you watch your parents eat a small bowl of food for dinner, you will learn to eat smaller proportions.

GO ON TO THE NEXT PAGE.

Question 1 is reprinted for your convenience.

1. Part A

Explain how each of the following plays a role in eating behavior.

- Drive-reduction theory
- External cues
- Dopamine and the reward center
- Observational learning

Part B

A study was conducted to investigate the role of framing on concern for healthy eating. Each participant ($N = 100$) was randomly assigned to one of two conditions. In the first condition, the participants read an article indicating that obesity is a disease. Participants in the second condition read an article indicating that obesity is the result of personal behaviors and decisions.

Participants were then asked to indicate how important it would be for them to eat a healthy diet. Scores ranged from 1 (not very important) to 9 (very important). The results are presented in the table below.

Group	Mean Score—Concern for Healthy Eating	Standard Deviation
Disease	3.4	1.4
Behavior	6.1	1.2

- Operationally define the dependent variable.
- What makes the study experimental rather than correlational?
- What is the most appropriate conclusion the researchers can draw about the relationship between the variables in the study?

operation definitions are definitions of terms that cannot be measured or replicated. By operationally defining these terms, we can replicate the experiment. In this case, the dependent variable, is concern for healthy diet. An operational definition would be asking if they should eat more vegetables, or add more into ~~their~~ their diet ~~so that~~. This would show if eating healthier would prevent Obesity.

An experimental study manipulates a factor to determine its effect on another variable.

~~A correlational study~~ This study is experimental because it is manipulating the independent variable, framing, to see how it affects concern for healthy eating. This study would not be correlational because correlational do not prove causation. Correlations only determine relationships, such as being directly related. Also in an experimental study, there are two groups, the control and experimental group.

The researchers can conclude that framing does affect the concern for healthy eating because the group ~~with~~ who read obesity was ~~obese~~ did not believe eating healthier would prevent obesity a disease, did not believe eating healthier was important since it would not prevent diseases. The group ~~As~~ opposite to the group who read obesity is caused by behaviors. They believed eating ~~was~~ healthier was more important because an article told them that eating ~~un~~ unhealthy causes obesity.

GO ON TO THE NEXT PAGE.

Drive - Reduction Theory is a theory where we are motivated ^{1B} to accomplish or fill a need. This plays a role in eating behavior because when we eat, we eat until we are full or just about close to fullness. ^{1 of 3}

External cues are outer events that we associate with something, in particular. This plays a role in eating behavior because we may not feel hungry at the time but if we see cues, we'll know something's up. For example, when it gets dark out we have dinner. The external cue would be getting dark out.

Dopamine and the reward center is a fluid in the body that if ~~be~~ really high could symbolize love and if really low could symbolize depression or schizophrenia. The reward center is the stuff we gain from eating. For example, if I eat a food that's high in sugars, I'm going to gain energy.

Observational Learning: the act of learning from watching how others do a task. This relates to eating behavior because we eat some foods a certain way because of how we see others eat them. For example, we peel bananas because we watch others before us do it.

• The dependent variable of this study is the scores of how important it is for the participants to eat healthy or not.

GO ON TO THE NEXT PAGE.

Question 1 is reprinted for your convenience.

1. Part A

Explain how each of the following plays a role in eating behavior.

- Drive-reduction theory
- External cues
- Dopamine and the reward center
- Observational learning

Part B

A study was conducted to investigate the role of framing on concern for healthy eating. Each participant ($N = 100$) was randomly assigned to one of two conditions. In the first condition, the participants read an article indicating that obesity is a disease. Participants in the second condition read an article indicating that obesity is the result of personal behaviors and decisions.

Participants were then asked to indicate how important it would be for them to eat a healthy diet. Scores ranged from 1 (not very important) to 9 (very important). The results are presented in the table below.

Group	Mean Score—Concern for Healthy Eating	Standard Deviation
Disease	3.4	1.4
Behavior	6.1	1.2

- Operationally define the dependent variable.
- What makes the study experimental rather than correlational?
- What is the most appropriate conclusion the researchers can draw about the relationship between the variables in the study?

• The study is experimental because the researchers are attempting to change the participants' decisions before they score themselves. It would be correlational if the participants weren't asked to read something.

• Researchers can conclude that if I'm told that obesity comes from MY decisions and behavior then I will believe that I can help protect myself from that by eating healthy. However, if I'm told that it's a disease then I'm going to think that there is nothing I can

ADDITIONAL ANSWER PAGE FOR QUESTION 1

ok to help fix it so I might as well
eat whatever I please.

GO ON TO THE NEXT PAGE.

PART A:

- Drive-reduction theory - this theory states that people are driven to do certain actions based on the events that may occur when they complete the action.
- External cues - based on a social situation, setting, or other external forces a person decides what the most appropriate behavior would be.
- Dopamine + the reward center - a person is more likely to repeat behaviors if it causes a release of dopamine or triggers the reward center in the brain.
- Observational learning - people learn how to behave in certain situations based on what they see and how others behave.

PART B:

In this study, each participant got an article on obesity and whether it was a behavior or a disease. The dependent variable in this study is which article a person got. Because the participants were given the articles randomly, that makes this study experimental not correlational. There was no correlation between what the people's health background was (obesity or not) and which article they got. The most appropriate conclusion to be drawn would be if people believe obesity is a behavior they are more likely to think a healthy

GO ON TO THE NEXT PAGE.

1e
2 of 2

Question 1 is reprinted for your convenience.

1. Part A

Explain how each of the following plays a role in eating behavior.

- Drive-reduction theory
- External cues
- Dopamine and the reward center
- Observational learning

Part B

A study was conducted to investigate the role of framing on concern for healthy eating. Each participant ($N = 100$) was randomly assigned to one of two conditions. In the first condition, the participants read an article indicating that obesity is a disease. Participants in the second condition read an article indicating that obesity is the result of personal behaviors and decisions.

Participants were then asked to indicate how important it would be for them to eat a healthy diet. Scores ranged from 1 (not very important) to 9 (very important). The results are presented in the table below.

Group	Mean Score—Concern for Healthy Eating	Standard Deviation
Disease	3.4	1.4
Behavior	6.1	1.2

- Operationally define the dependent variable.
- What makes the study experimental rather than correlational?
- What is the most appropriate conclusion the researchers can draw about the relationship between the variables in the study?

diet is important because they believe they can change the outcome if they change the behavior. However, if people believe obesity is a disease they might not think healthy eating is as important because they might not be able to prevent the disease.

Unauthorized copying or reuse of any part of this page is illegal.

GO ON TO THE NEXT PAGE.

AP[®] PSYCHOLOGY

2017 SCORING COMMENTARY

Question 1

Overview

This question required students to respond to two parts. Part A required students to show understanding of drive-reduction theory, external cues, dopamine and the reward center, and observational learning, by explaining how these concepts each play a role in eating behavior. Part B required students to respond to three aspects of a study investigating the role of framing on concern for healthy eating. The students must operationally define the study's dependent variable, explain what makes the study experimental, rather than correlational, and identify the most appropriate conclusion of the study.

Sample: 1A

Score: 6

The response earned point 1 because it discusses a physical need, a psychological drive for hunger, and eating behavior. The response earned point 2 because it describes the external cue of seeing friends eat, followed by eating behavior. The response earned point 3 because it indicates a release of dopamine, a feeling of pleasure, and eating behavior. The response earned point 4 because it describes watching parents eat small portions of food and later learning to eat small portions as well. The response did not earn point 5 because it does not discuss a score, a rating, or a 1–9 scale as measurement of the dependent variable. The response earned point 6 because it discusses a manipulation of the independent variable. The response earned point 7 because it states that framing affects concern for healthy eating, and it describes the study's independent variable and dependent variable.

Sample: 1B

Score: 4

The response did not earn point 1 because there is no indication of a physiological need creating a psychological drive of hunger. The response earned point 2 because it describes a sensory stimulus of darkness, followed by eating behavior. The response did not earn point 3 because it does not describe a release of dopamine resulting in a positive feeling, which is connected to eating behavior. The response earned point 4 because it explains the learning of a behavior by watching others “do a task.” The response earned point 5 because it indicates scores as a measure of the dependent variable. The response did not earn point 6 because there is no discussion of random assignment or the manipulation of a variable. The response earned point 7 because it describes a causal relationship between the study's independent and dependent variable using an “if-then” statement.

Sample: 1C

Score: 2

The response did not earn point 1 because there is no discussion of a physiological need or eating behavior. The response did not earn point 2 because there is no discussion of a food-related stimulus or eating behavior. The response did not earn point 3 because it does not describe eating behavior. The response did not earn point 4 because there is no description of eating behavior. The response did not earn point 5 because there is no mention of a score, a rating, or a 1–9 scale as a measure of the dependent variable. The response earned point 6 because it identifies the random assignment of participants in the study. The response earned point 7 because it gives an “if-then” statement as a causal connection between the study's independent variable and dependent variable.