

## Chief Reader Report on Student Responses: 2022 AP<sup>®</sup> Psychology Set 2 Free-Response Questions

• Number of Students Scored	292,501		
• Number of Readers	582		
• Score Distribution	Exam Score	N	%At
	5	49,768	17.0
	4	65,041	22.2
	3	55,857	19.1
	2	38,384	13.1
	1	83,451	28.5
• Global Mean	2.86		

The following comments on the 2022 free-response questions for AP<sup>®</sup> Psychology were written by the Chief Reader, Dr. Elliott Hammer, Xavier University. They give an overview of each free-response question and of how students performed on the question, including typical student errors. General comments regarding the skills and content that students frequently have the most problems with are included. Some suggestions for improving student preparation in these areas are also provided. Teachers are encouraged to attend a College Board workshop to learn strategies for improving student performance in specific areas.

## Question 1

**Topic:** Concept Application

**Max Score:** 7

**Mean Score:** 2.08

### ***What were the responses to this question expected to demonstrate?***

The responses to this question were expected to show an understanding of how specific psychological terminology applied to the scenario. The responses needed to address an understanding of the brain and nervous system, motivation concepts, social psychology terms, and sleep cycles. The responses needed to clearly demonstrate the ability to differentiate the selected term from other similar concepts.

### ***How well did the responses address the course content related to this question? How well did the responses integrate the skills required on this question?***

Responses demonstrated that students had a strong understanding of the function of the motor neuron. Most responses indicated an ability to differentiate between sleepwalking and dreaming within the sleep cycle.

### ***What common student misconceptions or gaps in knowledge were seen in the responses to this question?***

Commonly missed points in this question included optimal arousal theory, the function of the somatosensory cortex, out-group homogeneity bias, fundamental attribution error, group polarization, and an explanation of why someone is not likely dreaming while sleepwalking. Most responses confused terms with other similar concepts or did not go far enough in their application to indicate understanding.

<i>Common Misconceptions/Knowledge Gaps</i>	<i>Responses that Demonstrate Understanding</i>
<ul style="list-style-type: none"><li>• Optimal arousal theory was commonly described as needing a specific amount of arousal to be able to perform a task, or that being at an aroused state made the person more prone to being startled.</li></ul>	<ul style="list-style-type: none"><li>• Optimal arousal theory needed to indicate an intentional change in arousal level. “She watched a movie because she was bored and wanted to increase her arousal.”</li></ul>
<ul style="list-style-type: none"><li>• Somatosensory cortex was frequently misidentified as being the processing point for all senses, not just body senses. Responses often referred to Ruth’s fight-or-flight response, responding to the light, or the action of spilling the drink. Some incorrect responses included feeling the pain of the hot chocolate and processing the light. These did not score because processing the light is not a function of the somatosensory cortex.</li></ul>	<ul style="list-style-type: none"><li>• “Ruth felt the heat of the hot chocolate on her skin when she spilled her drink.”</li></ul>

<ul style="list-style-type: none"> <li>• Out-group homogeneity bias was often identified as a stereotype or the creature alone as the entire outgroup.</li> </ul>	<ul style="list-style-type: none"> <li>• “The villagers had previous experience with creatures, and thus included this creature into their out-group category of bad creatures who are evil.”</li> </ul>
<ul style="list-style-type: none"> <li>• Fundamental attribution error responses commonly and incorrectly referred to the creature’s appearance (big and scary) as a disposition/trait.</li> </ul>	<ul style="list-style-type: none"> <li>• “The villagers thought the creature knocked the villager over because the creature is mean, but they failed to consider that he tripped over a rock as he knocked the villager over while trying to escape.”</li> </ul>
<ul style="list-style-type: none"> <li>• Group polarization often referred to groupthink, as many responses indicated that one or few people in the group swayed the opinions of others. Most did not indicate that the villagers held their views prior to discussing with the other villagers.</li> </ul>	<ul style="list-style-type: none"> <li>• “Villagers held their beliefs that the creature was bad and then discussed those beliefs as a group. This resulted in a much more extreme view of the creature that involved chasing him out of the village with pitchforks and torches.”</li> </ul>
<ul style="list-style-type: none"> <li>• Responses incorrectly stated that Ruth wouldn’t be running from the creature because she knew it was friendly, mentioned that correlation does not equal causation, or discussed Freud’s theories of manifest and latent content in dreams.</li> </ul>	<ul style="list-style-type: none"> <li>• “Lynn was incorrect in her assumption that Ruth was dreaming about being chased by the creature while she was sleepwalking because sleepwalking and dreaming occur in different stages of sleep. She could not be doing both at the same time.”</li> </ul>

**Based on your experience at the AP<sup>®</sup> Reading with student responses, what advice would you offer teachers to help them improve the student performance on the exam?**

Spending time helping students find ways to differentiate between commonly confused concepts, or concepts that appear to have similar definitions would improve student performance on this particular question. Asking students to indicate how two concepts are similar and then how they are different could assist in clearly differentiating among concepts. Unit 9 in the Course and Exam Description (CED) has many concepts that are easy for students to confuse or think of as the same.

When teaching free-response question (FRQ) writing, encourage students to develop the response all the way until it fully answers the prompt. Many students have a strong response that stops just short of letting the reader know that the student is proficient in their understanding of the concept.

**What resources would you recommend to teachers to better prepare their students for the content and skill(s) required on this question?**

- Teachers can help prepare students for this question by giving students opportunities to practice with free-response questions found in AP Classroom that require concept application. Teachers should remind students repeatedly that definitions alone do not earn points. Rather, students need to provide the relevant application of the concept to the scenario. AP Daily videos often highlight these types of questions to model the skill for students.
- Teachers can also use past AP Exam student samples and scoring guidelines to show students how actual free-response questions are scored. Teachers may have students use a scoring guideline to

score a sample on their own, and then work with a partner to compare their scoring decisions and come to a consensus. Teachers can then lead a class discussion about what wording scored and what did not to help students learn how to write more successful responses to free-response questions.

## Question 2

**Topic:** Research Design

**Max Score:** 7

**Mean Score:** 4.03

### ***What were the responses to this question expected to demonstrate?***

The responses to this question were expected to demonstrate an understanding of various characteristics of a nonexperimental research study and to show how specific psychological terminology applied to the scenario. The responses needed to demonstrate understanding of the concepts of hypothesis, operational definition, generalizability of a study to the general population, and identification of the type of relationship represented on a scatterplot. Additionally, the responses needed to demonstrate knowledge of specific concepts related to the human eye (cones of the retina) and cognition (mere-exposure effect and prototype).

### ***How well did the responses address the course content related to this question? How well did the responses integrate the skills required on this question?***

Responses demonstrated understanding of research design, statistics, eye anatomy, and cognition when students accurately applied these concepts to the scenario described in the prompt. Responses earned points by clearly applying concepts of hypothesis, operational definition, negative correlation, and generalizing the results of a study to the general population; responses also earned points by clearly applying conceptual concepts of cones in the retina, mere-exposure effect, and prototype.

### ***What common student misconceptions or gaps in knowledge were seen in the responses to this question?***

Commonly missed points in the research design part of this question included the misidentification of the operational definition used, as responses often referred to the rating without referring to the scale or score from 1 to 10. In addition, students frequently misidentified the relationship found between the variables of interest in the study, as responses often incorrectly referred to the negative relationship shown on the scatterplot as a positive or zero correlation. Furthermore, responses regularly failed to note that the results of the study could not be generalized because the sample was not representative of the general population. In terms of the conceptual concepts in the question, responses often failed to use the correct application of the mere-exposure effect and prototype.

<i>Common Misconceptions/Knowledge Gaps</i>	<i>Responses that Demonstrate Understanding</i>
<ul style="list-style-type: none"><li>The operational definition was often misidentified as the survey or rating without the score or scale.</li></ul>	<ul style="list-style-type: none"><li>“The operational definition of quality was a score on the rating scale, where 1 represented lowest quality and 10 represented highest quality.”</li></ul>
<ul style="list-style-type: none"><li>The negative correlation was often incorrectly identified as a positive or zero correlation.</li></ul>	<ul style="list-style-type: none"><li>“The type of relationship found between shirt price and perceived quality was a negative correlation.”</li></ul>

<ul style="list-style-type: none"> <li>• Responses often incorrectly stated that the results could not be generalized to the general population because the study was not a true experiment.</li> </ul>	<ul style="list-style-type: none"> <li>• “The results could not be generalized to the larger population because the study sample consisted of only people who could access the internet.”</li> </ul>
<ul style="list-style-type: none"> <li>• Responses often described mere-exposure effect as being exposed once to a shirt and that exposure immediately affecting people’s liking.</li> </ul>	<ul style="list-style-type: none"> <li>• “Because participants saw the same shirts over and over again on the web, they eventually started to like them more and rated them as of higher quality.”</li> </ul>
<ul style="list-style-type: none"> <li>• Responses often described prototypes as the first version of the floral shirt designs.</li> </ul>	<ul style="list-style-type: none"> <li>• “A prototype is a person’s ideal example of what a floral shirt should look like and they will use this to compare their prototype to the shirts they see on the web to determine the quality of the shirts.”</li> </ul>

***Based on your experience at the AP® Reading with student responses, what advice would you offer teachers to help them improve the student performance on the exam?***

To help students respond more accurately, teachers could emphasize characteristics of nonexperimental methods in contrast to experimental methods, specifically emphasizing the importance of representational samples and clear operational definitions. Teachers could also stress to students the importance of responding specifically to the prompt with a complete description of each concept in context, so the application of the response is clear.

***What resources would you recommend to teachers to better prepare their students for the content and skill(s) required on this question?***

Teachers can utilize several resources to help students prepare for the content and skills required:

- AP Classroom FRQs—FRQs from past exams that have been adapted to work for scaffolded course planning are available in AP Classroom. Using these as practice or with assessments can help students master skills they need for exam day.
- AP Daily Videos—The teachers featured in AP Daily videos are all experienced AP Psychology teachers, and they incorporate tips and practice for FRQs into videos in the series.
- Teachers should focus student practice on content-relevant research scenarios. Students should be expected to apply knowledge of research design and data interpretation to research scenarios in each unit of study. This type of practice builds the skills needed to be successful on this type of FRQ.