Chief Reader Report on Student Responses:

2024 AP® Psychology Set 1 Free-Response Questions

- Number of Students Scored 320,164
- Number of Readers 731
- Score Distribution

Exam Score	N	%At
5	61,321	19.2
4	73,921	23.1
3	62,384	19.5
2	37,826	11.8
1	84,712	26.5

- Global Mean 2.97

The following comments on the 2024 free-response questions for AP® Psychology were written by the Chief Reader, Dr. Elliott Hammer, Professor of Psychology at Xavier University of Louisiana. 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.

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Question 1

Task: Apply psychological concepts to a scenario described in the prompt
Topic: Concept Application
Max Score: 7
Mean Score: 3.65

What were the responses to this question expected to demonstrate?

Responses to this question were expected to demonstrate how specific psychological concepts applied to the scenario, which described the experience a young child had going to a science museum. The responses needed to demonstrate an understanding of Piaget's concept of assimilation, egocentrism, *avoidant* attachment, serial position effect, motor cortex, cognitive map, and cones in the retina.

How well did the responses address the course content related to this question? How well did the responses integrate the skill(s) required on this question?

Student responses demonstrated an ability to relate the terms and concepts to the scenario presented in the question. Most student responses showed that they had an exposure to the terms in their AP psychology courses with no single concept standing out as particularly challenging for students. Students demonstrated a strong understanding of biological concepts (motor cortex and cones of the retina), developmental psychology (assimilation, egocentrism, and avoidant attachment), and cognitive psychology (serial position effect and cognitive map).

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

Student responses generally showed that they had learned the concepts in the prompt. Student mistakes were from confusing a term with another concept, such as confusing egotism with egocentrism. Students also would go beyond the term in the prompt such as describing accommodation instead of assimilation. Students often parroted the term in their responses without demonstrating their knowledge of the meaning of the term.

Common Misconceptions/Knowledge Gaps	*Responses that Demonstrate Understanding*
• Responses often described accommodation instead of assimilation.	• "Gavin thought that since the marble has the same shape as a ball, then he could bounce it and it would act like a ball."
• Responses commonly misused the term egotistical (selfishness) in place of the Piaget concept of egocentrism (the inability to take someone else's perspective).	• "Gavin demonstrated egocentrism in the car by referring to his drawing as if his grandmother could see it, even though she could not while driving."
• Responses used the term avoidant as avoiding their parent instead of a lack of distress upon separation.	• "Gavin could have shown an avoidant attachment when he got separated from his parents by not caring, not getting upset, and continuing on just fine without them."

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• Responses parroted the term cognitive map rather than describe a mental picture or representation of a location from the scenario.	• "Gavin has been to the museum multiple times, so he a mental image of the museum, and knows where certain exhibits are located."

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

The AP Psychology Exam is changing to include two new question models for the 2025 Exam. This section provides advice related to comparable elements of the 2024 Exam that may be helpful for students preparing for the 2025 Exam.

Concept application is assessed in both new free-response question models. In the Article Analysis Question (AAQ), students will determine whether the results of the study support or refute the concept being studied in the article or a related concept. This part of the question challenges students to consider how what they have learned in AP Psychology is related to real-world research and how well the scientific processes of peer review or replication are advancing our understanding of psychological phenomena. In the Evidence-Based Question (EBQ), students will generate their own applications to the topic presented in the source materials. Students will be making a claim about a topic and then using the three provided summarized peer-reviewed sources to find evidence to support their claim. As they explain why they chose the evidence they did, they will be expected to connect their evidence to other related psychological concepts to explain how the evidence supports their claim. This question part allows students to think critically about psychological science and make important connections across topics in the course.

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

The AP Psychology Exam is changing to include two new question models for the 2025 Exam. This section provides advice related to comparable elements of the 2024 Exam that may be helpful for students preparing for the 2025 Exam.

To prepare for the 2025 AP Psychology Exam, teachers can access sample Article Analysis Questions (AAQ) and Evidence-Based Questions (EBQ) in AP Classroom. For Units 1 and 2, the question models are modified to help teachers scaffold the skills required for these questions, and Units 3 through 5 feature full AAQs and EBQs relevant to those units.

Teachers can also have students read summaries of research and identify elements of the research design and interpret data as practice. Additionally, teachers can have students take research articles and write their own summaries to help them distill the key elements of research and data into more student-friendly language. Teachers can use current or enduring topics of interest to students and have students propose claims about those topics and find relevant evidence that supports their claims. Students can then discuss how their evidence supports their claims in written or oral responses individually or as a class.

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Question 2

Task: Apply research design concepts to a scenario described in the prompt
Topic: Research Design
Max Score: 7
Mean Score: 3.32

What were the responses to this question expected to demonstrate?

Responses to this question were expected to demonstrate an understanding of various characteristics of psychological research and to show how specific psychological terminology applied to the scenario, which described a study examining the effects of different-colored paper on students' ability to remember information from a detailed course syllabus. The responses needed to demonstrate an understanding of the operational definition of the dependent variable, the experimental group, random assignment's role in an experiment, and whether the data presented support the hypothesis. Additionally, responses were expected to apply context-dependent memory, the Yerkes-Dodson law, and the Big Five trait of conscientiousness.

How well did the responses address the course content related to this question? How well did the responses integrate the skill(s) required on this question?

Responses varied considerably in how effectively they demonstrated research skills and knowledge of the concepts. In general, responses tended to demonstrate the ability to identify the experimental group from the prompt description and to evaluate whether the results shown in a graph supported the state hypothesis. Responses were less likely to correctly identify the operational definition from the prompt or to accurately differentiate random assignment from other characteristics of the research method in identifying a true experimental design. Some responses indicated a clear understanding of context-dependent memory, the Yerkes-Dodson law, and the personality trait of low conscientiousness and to apply those concepts to performance on a quiz, whereas other responses indicated an incomplete understanding of one or more concepts, such as indicating a general understanding of context but not fully applying the concept of context-dependent learning to the prompt.

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

Common Misconceptions/Knowledge Gaps	*Responses that Demonstrate Understanding*
• Many responses identified the dependent variable but either did not provide the operational definition of it or provided an operational definition that was not the one used in the prompt.	• "The operational definition of the dependent variable in this experiment is the number of correct answers on the ten-question quiz asking about information found on the course description."
• Responses sometimes identified the entire sample as the experimental group instead of the individuals who received the yellow paper condition or identified the control group (those who received white paper) as the experimental group.	• "Experimental group: the group of students in Professor Gonzalez's class who received yellow paper for their detailed course description."
• In describing what made the design a true experiment, some responses incorrectly referred to or described a random sampling procedure rather than random assignment or identified other aspects of the method, such as having a hypothesis or calculating statistics, in addition to indicating random assignment.	• "The procedure Professor Gonzalez used to make this study a true study is when he used random assignment to assign the students into groups."
• Applications of context-dependent memory to the prompt sometimes referred to context but did not describe an external element that matched or did not match when the information was learned and recalled.	• "This relates to a student's performance because if the student memorized the information in the same location and context in which the quiz was given then that student would have a better chance at remembering that given information contributing to a better performance."
• Responses concerning the Yerkes-Dodson law sometimes incorrectly described the relationship between arousal and performance as increased arousal being related to better performance rather than indicating too much or too little arousal being associated with poorer performance.	• "Some students might have been stressed the right amount where they scored the best results, while others were stressing too much or too little, which would cause poor test results."
• Some applications of the low conscientiousness trait referred to being aware of surroundings or having a sense of morality rather than trait descriptors such as being unorganized or irresponsible.	• "Conscientiousness is how responsible and organized an individual is. If an individual has a low level of the big five trait of conscientiousness, then he would have a worse performance on the exam."

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

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The Article Analysis Question (AAQ) for the 2025 Exam will require students to identify and explain elements of research and data interpretation. Have students practice analyzing research scenarios and identifying key features of each type of research design, e.g., random assignment to conditions and manipulation of an independent variable define a true experiment as compared to other research methods. Students can practice developing operational definitions of variables as a way of understanding the distinction between identifying and operationally defining a variable. Help students grasp the distinct purposes of random sampling and random assignment by using exercises in which students choose a sample (randomly picking from a bowl of different colored candies) and compare the sample to the population, as well as practicing random assignment by separating the candies randomly into two groups. Students could analyze scenarios using concepts such as context-dependent learning and the Yerkes Dodson law to identify ways to improve academic performance. Teachers can also have students discuss how the results of the study support or refute what students have learned about the topic of the research.

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

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