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# AP<sup>®</sup> Psychology

## Sample Student Responses and Scoring Commentary Set 1

### **Inside:**

#### **Free-Response Question 1**

- ☒ **Scoring Guidelines**
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FRQ 1: Article Analysis Question (AAQ)

7 Points

General Considerations

1.

Answers must be cogent enough for the meaning to come through. Spelling and grammatical mistakes do not reduce a score, but spelling must be close enough so that the reader is convinced of the word.
2.

A student can earn points only if the student is clearly addressing the topic of the source material in their response.
3.

The response must apply the concept to the prompt. A definition alone will not earn the point, but a clear definition can support the application.
4.

Examples provided in the Scoring Guidelines for each of the points are not to be considered exhaustive.
5.

Within a question part, a response will not be penalized for incorrect information unless it directly contradicts correct information that otherwise would have earned the point(s). For example, if a student applies a concept by defining it in two contradictory ways (such as applying proactive interference as both interference from older and newer information), the point is not earned.

Reporting Category	Scoring Criteria	
Part A Research Method  (0–1 points)	<b>0 points</b> Does not accurately identify the research method used in the study	<b>1 point</b> Accurately identifies the research method used in the study
	Decision Rules and Scoring Notes	
	<b>Responses that do not earn this point:</b> <ul style="list-style-type: none"><li>The response does not accurately identify the research method used in the study.</li><li>The response includes no identification of the research method used in the study.</li></ul>	<b>Responses that earn this point:</b> <ul style="list-style-type: none"><li>The response accurately identifies the research method used in the study as an experiment.</li></ul>
	<b>Examples that do not earn this point:</b> <ul style="list-style-type: none"><li><i>“The researchers used a correlational study.”</i></li><li><i>“The researchers studied memory.”</i></li></ul>	<b>Examples that earn this point:</b> <ul style="list-style-type: none"><li><i>“The researchers used an experiment.”</i></li><li><i>“The researchers included a questionnaire in their experiment.”</i></li><li><i>“Since students were randomly assigned to groups, this was an experiment.”</i></li></ul>

Reporting Category	Scoring Criteria	
<b>Part B</b>  <b>Research Variable</b>   <b>(0–1 points)</b>	<b>0 points</b>  Does not state a measurable or quantifiable definition of the identified variable used in the study	<b>1 point</b>  States a measurable or quantifiable definition of the identified variable as used in the study
	<b>Decision Rules and Scoring Notes</b>	
	<b>Responses that do not earn this point:</b> <ul style="list-style-type: none"> <li>• The response states a definition of the identified variable in the study that is not measurable or quantifiable.</li> <li>• The response does not state a measurable or quantifiable definition of the identified variable as used in the study.</li> </ul>	<b>Responses that earn this point:</b> <ul style="list-style-type: none"> <li>• The response states that the operational definition of high misinformation is having 80% of the sentences in the narrative include incorrect information.</li> <li>• The response states that high misinformation is defined as having 32 misleading sentences.</li> </ul>
	<b>Examples that do not earn this point:</b> <ul style="list-style-type: none"> <li>• <i>“The researchers studied how much misinformation people can handle.”</i></li> <li>• <i>“The researchers gave more misinformation to one group than another.”</i></li> </ul>	<b>Examples that earn this point:</b> <ul style="list-style-type: none"> <li>• <i>“The researchers operationally defined high misinformation as 80% of the sentences in the narrative including incorrect information.”</i></li> <li>• <i>“The researchers defined high misinformation as a story having 32 misleading sentences in it.”</i></li> </ul>

Reporting Category	Scoring Criteria	
<b>Part C</b>  <b>Statistic Interpretation</b>  <b>(0–1 points)</b>	<b>0 points</b>  Does not accurately describe what the identified statistic indicates in relation to the study	<b>1 point</b>  Accurately describes what the identified statistic indicates in relation to the study
	<b>Decision Rules and Scoring Notes</b>	
	<b>Responses that do not earn this point:</b> <ul style="list-style-type: none"> <li>• The response restates the means for the high misinformation group and/or low misinformation group without directly relating them to the study.</li> <li>• The response does not accurately describe the meaning of the difference in means between the correct responses of the high misinformation group and the low misinformation group.</li> <li>• The response provides a definition of any mean within the study but does not accurately describe its meaning in relation to the study.</li> </ul>	<b>Responses that earn this point:</b> <ul style="list-style-type: none"> <li>• The response accurately describes exposure to a higher percentage of misinformation being associated with a lower mean percentage of correct responses to questions about the video.</li> <li>• The response accurately describes participants in the high misinformation group as having recalled less correct information (i.e., mean = 63%) about the video than those in the low misinformation group (i.e., mean = 74%).</li> </ul>
	<b>Examples that do not earn this point:</b> <ul style="list-style-type: none"> <li>• <i>“The mean of the high misinformation group is 63%.”</i> [No explanation of what that means in the study.]</li> <li>• <i>“The differences in the means between the groups shows that the high misinformation group did not rely on the misinformation when the low misinformation group did.”</i></li> <li>• <i>“The mean is the average of the responses in the study.”</i></li> </ul>	<b>Examples that earn this point:</b> <ul style="list-style-type: none"> <li>• <i>“The high misinformation group got less correct responses than the low misinformation group.”</i></li> <li>• <i>“The group that got 80% misinformation relied on more misleading information than the group with 20% misinformation, since the mean averages of the high misinformation group was 63% compared to 74% for the low misinformation group.”</i></li> <li>• <i>“The low misinformation group scored 11% higher in their correct responses than did the high misinformation group.”</i></li> </ul>

Reporting Category	Scoring Criteria	
<b>Part D</b>  <b>Ethical Guidelines</b>  <b>(0–1 points)</b>	<b>0 points</b>  Does not accurately identify at least one ethical guideline applied by researchers in the study	<b>1 point</b>  Accurately identifies at least one ethical guideline applied by researchers in the study
	<b>Decision Rules and Scoring Notes</b>	
	<b>Responses that do not earn this point:</b> <ul style="list-style-type: none"> <li>• The response does not identify an ethical guideline applied by researchers in the study.</li> <li>• The response identifies an ethical guideline that researchers should have applied but was not mentioned in the study.</li> <li>• The response identifies an ethical guideline not applied by the researchers in the study.</li> <li>• The response identifies other features of the study that are not ethical guidelines.</li> </ul>	<b>Responses that earn this point:</b> <ul style="list-style-type: none"> <li>• The response identifies that the researchers obtained informed consent.</li> </ul>
	<b>Examples that do not earn this point:</b> <ul style="list-style-type: none"> <li>• <i>“It’s important to researchers to act ethically when conducting a study.”</i></li> <li>• <i>“The researchers should have debriefed participants at the end of the study.”</i></li> <li>• <i>“The researchers protected the confidentiality of the participants in the study.”</i></li> <li>• <i>“The researchers gave students course credit when they participated in the study, which is unethical.”</i></li> </ul>	<b>Examples that earn this point:</b> <ul style="list-style-type: none"> <li>• <i>“The researchers obtained informed consent from the participants.”</i></li> <li>• <i>“The article says that after the researchers obtained consent, the participants got to watch the video of the robbery.”</i></li> </ul>

Reporting Category	Scoring Criteria	
<b>Part E</b>  <b>Generalizability</b>  <b>(0–1 points)</b>	<b>0 points</b>  Does not propose a claim regarding the generalizability of the study to a population (general or specific)  <b>OR</b>  Does not use specific and relevant evidence that references participant variables that would impact the generalizability of the study	<b>1 point</b>  Explains the extent to which the study is generalizable using specific and relevant evidence referencing participant variables from the study
	<b>Decision Rules and Scoring Notes</b>	
	<b>Responses that do not earn this point:</b> <ul style="list-style-type: none"> <li>• The response proposes no claim regarding the generalizability of the conclusion of the study.</li> <li>• The response proposes a claim regarding the generalizability of the conclusion of the study but makes no reference to a population (general or specific).</li> <li>• The response uses evidence that does not apply to the generalizability of the conclusion of the study (e.g., reliability, validity, sample size).</li> </ul>	<b>Responses that earn this point:</b> <ul style="list-style-type: none"> <li>• The response proposes a claim about generalizability that references a population (the “larger population” or a population relevant to the study’s participants) to explain the extent of the generalizability of the study.</li> <li>• The response proposes that the study is or is not generalizable to the population relevant to the study because of specific and relevant evidence derived from the participant information from the study.</li> </ul>
	<b>Examples that do not earn this point:</b> <ul style="list-style-type: none"> <li>• “The study used both men and women.” [The response does not propose a claim about generalizability.]</li> <li>• “The study is generalizable.”</li> <li>• “The study is generalizable to the larger population.”</li> <li>• “The study is generalizable because the sample was large.”</li> </ul>	<b>Examples that earn this point:</b> <ul style="list-style-type: none"> <li>• “The study is generalizable to a larger population because the participant sample was diverse.”</li> <li>• “The study is not generalizable because they only used university students in their study.”</li> </ul>
	<b>Additional Note:</b> <ul style="list-style-type: none"> <li>• If students assert the study is “partly” generalizable or asserts the study is both generalizable and not generalizable, their evidence must support their assertion by showing ways the study is generalizable and is not generalizable to earn the point.</li> </ul>	

Reporting Category	Scoring Criteria		
<b>Part F</b> <b>Argumentation</b>  <b>(0–2 points)</b>	<b>0 points</b> <p>Does not accurately explain how the results of the study support or refute the psychological concept or hypothesis presented in the question.</p>	<b>1 point</b> <p>Uses the results of the study but does not explain how the psychological concept or hypothesis is supported or refuted.</p> <p><b>OR</b></p> <p>Explains that the psychological concept or hypothesis is supported or refuted but does not use any results from the study.</p>	<b>2 points</b> <p>Uses a specific result from the study to explain how the results support or refute the psychological concept or hypothesis presented in the question. The results are accurately interpreted.</p>
	<b>Decision Rules and Scoring Notes</b>		
	<b>Responses that earn 0 points:</b> <ul style="list-style-type: none"> <li>The response does not explain how at least one of the research findings supports or refutes the misinformation effect.</li> <li>The response does not accurately explain how at least one of the research findings supports or refutes the misinformation effect.</li> </ul>	<b>Responses that earn 1 point:</b> <ul style="list-style-type: none"> <li>The response proposes that the evidence alone is sufficient to demonstrate the misinformation effect without additional explanation.</li> <li>The response uses at least one of the research findings to explain the misinformation effect. However, the interpretation of the results of the study includes some inaccuracies.</li> </ul>	<b>Responses that earn 2 points:</b> <ul style="list-style-type: none"> <li>The response uses at least one of the research findings to accurately explain the misinformation effect. The results of the study are accurately interpreted.</li> </ul>
	<b>Examples that earn 0 points:</b> <ul style="list-style-type: none"> <li><i>“The study shows that the misinformation effect happens in the study.”</i></li> <li><i>“Since each group got 7% incorrect on the questionnaire, the misinformation effect is refuted.”</i> [Does not accurately support or refute misinformation effect.]</li> <li><i>“The study shows that people are susceptible to misinformation.”</i></li> </ul>	<b>Examples that earn 1 point:</b> <ul style="list-style-type: none"> <li><i>“The high misinformation group answered more questions using misleading information.”</i> [Evidence only.]</li> <li><i>“This study supports the misinformation effect, which is when people remember incorrect information that is presented to them.”</i> [Explanation without evidence.]</li> </ul>	<b>Examples that earn 2 points:</b> <ul style="list-style-type: none"> <li><i>“The study showed that the misinformation effect is supported because the data shows that participants in the high misinformation group were more likely to use the misleading information when answering questions (30%) than those in the low misinformation group (19%).”</i></li> <li><i>“This study provides evidence for the misinformation effect because it shows that when participants were exposed to a high level of misinformation, they were more likely to incorporate misleading information into their memories.”</i></li> <li><i>“One of the research findings that refutes the misinformation effect is that the participants performed best if they had distrusted the accuracy of the summary. The more that they were presented with misinformation, the more distrustful that they were, which meant that they had resisted more information in comparison to those who didn’t receive as much misinformation.”</i></li> </ul>

**Part A: Research Method**

The research method used in this study was an experiment because the participants were "randomly assigned".

**Part B: Research Variable**

The operational definition of high misinformation as it was used in the study is 80% misleading information, or 32 out of 40 sentences.

**Part C: Statistic Interpretation**

The mean for the percentage of correct responses in the high misinformation group was lower than that of the low misinformation group. This means that the group that had more misinformation were worse off and unable to answer questions as accurately as the group that had far less misinformation.

**Part D: Ethical Guidelines**

One ethical guideline applied by researchers was that the researchers were granted consent from all participants.

**Part E: Generalizability**

The research findings are not generalizable to Asian or Asian Americans, because they only made up 4% of the study.

**Part F: Argumentation**

These findings support the misinformation effect because the chart demonstrates that those exposed to high amounts of misinformation got the least amount of questions correct out of all three groups.



**Part A: Research Method**

Correlational study.

**Part B: Research Variable**

Percentage of correct, misled, and incorrect responses for the high misinformation group.

**Part C: Statistic Interpretation**

The mean for the percentage of correct responses between the high misinformation group and the low indicates the average of these 2 percentages.

**Part D: Ethical Guidelines**

The participants had informed consent.

**Part E: Generalizability**

The research findings may be generalizable because there were different races and ethnicities being assessed. 65% were Hispanic/Latino, 15% were Black/African American, 11% White, 4% Asian, and 5% other, showing a great diversity. This means that these findings can be applicable to many races/ethnicities.

**Part F: Argumentation**

The misinformation effect is that information presented after the memory can alter your perception of that memory. The research finding supports this as the group that had the lowest level of misinformation had the highest percentage of correct responses. The correct responses indicated how accurately the participants could recall the video.

**Part A: Research Method**

case study

**Part B: Research Variable**

the operational definition of high misinformation in the study is 32 of 40 sentences (80% misleading information)

**Part C: Statistic Interpretation**

for the percentage of correct responses for the high misinformation group the mean indicates that participants who were given higher levels of misinformation were more likely to be distrustful, while those for the low misinformation group the mean indicates that whoever reported being distrustful of the summary resisted more misinformation than others who did not.

**Part D: Ethical Guidelines**

confidentiality

**Part E: Generalizability**

it can not be generalizable because only a total of 127 students were being studied, the total is not large enough for it to become generalizable.

**Part F: Argumentation**

the finding that participants performed best if they distrusted the accuracy of the summary supports the misinformation effect, supports the misinformation effect because those who reported being distrustful of the summary resisted more misinformation than others who did not.

## Question 1

**Note:** Student samples are quoted verbatim and may contain spelling and grammatical errors.

### Overview

**NEW for 2025:** The question overviews can be found in the *Chief Reader Report on Student Responses on AP Central*.

### Sample: 1A

**AAQ A Research Method Score: 1**

**AAQ B Research Variable Score: 1**

**AAQ C Statistic Interpretation Score: 1**

**AAQ D Ethical Guidelines Score: 1**

**AAQ E Generalizability Score: 1**

**AAQ F Argumentation Score: 2**

**Total Score: 7**

### Part A: Research Method (0–1 points): 1

The response earned the point because the research method is accurately identified as an experiment.

### Part B: Research Variable (0–1 points): 1

The response earned the point because a measurable or quantifiable definition of high misinformation is stated as the number of misleading sentences provided (“80% misleading information, or 32 out of 40 sentences.”).

### Part C: Statistic Interpretation (0–1 points): 1

The response earned the point because it accurately describes that the mean indicates that the percentage of correct responses between the high misinformation group was smaller than the average for the low misinformation group (“the high misinformation group was lower than that of the low misinformation group.”).

### Part D: Ethical Guidelines (0–1 points): 1

The response earned the point because the ethical guideline applied by researchers is accurately identified as “consent.”

### Part E: Generalizability (0–1 points): 1

The response earned the point because the claim concerning the generalizability of the study references specific and relevant evidence derived from the study’s participants, noting that the results may not generalize to “Asian or Asian Americans, because they only made up 4% of the study.”

### Part F: Argumentation (0–2 points): 2

The response earned the first point because it accurately uses a specific research finding to explain how the source supports the misinformation effect (“These findings support the misinformation effect because the chart demonstrates that those exposed to high amounts of misinformation got the least amount of questions correct out of all three groups.”). The response earned the second point because the evidence presented accurately demonstrates support for the misinformation effect by noting the relationship between the amount of misinformation the participants received (“high amounts”) and the number of responses they got correct (“the least amount”).

**Question 1 (continued)****Sample: 1B****AAQ A Research Method Score: 0****AAQ B Research Variable Score: 0****AAQ C Statistic Interpretation Score: 0****AAQ D Ethical Guidelines Score: 1****AAQ E Generalizability Score: 1****AAQ F Argumentation Score: 2****Total Score: 4****Point A: Research Method (0–1 points): 0**

The response did not earn the point because the research method is inaccurately identified as a correlational study instead of an experiment.

**Point B: Research Variable (0–1 points): 0**

The response did not earn the point because a measurable or quantifiable definition of high misinformation in this study is not stated.

**Part C: Statistic Interpretation (0–1 points): 0**

The response did not earn the point because it does not accurately describe what the mean indicates about the percentage of correct responses between the high misinformation and the low misinformation group.

**Part D: Ethical Guidelines (0–1 points): 1**

The response earned the point because the ethical guideline applied by researchers is accurately identified as “informed consent.”

**Part E: Generalizability (0–1 points): 1**

The response earned the point because the claim concerning the generalizability of the study references specific and relevant evidence derived from the study’s participants, focusing on the different races/ethnicities included in the sample (“65% were Hispanic/Latino, 15% were Black/African American, 11% White, 4% Asian, and 5% other, showing a great diversity. This means that these findings can be applicable to many races/ethnicities.”).

**Part F: Argumentation (0–2 points): 2**

The response earned the first point by providing one specific research finding (“the group that had the lowest level of misinformation had the highest percentage of correct responses”). The response earns the second point because it accurately explains how the evidence supports the misinformation effect (“The misinformation effect is that information presented after the memory can alter your perception of that memory”).

**Question 1 (continued)****Sample: 1C****AAQ A Research Method Score: 0****AAQ B Research Variable Score: 1****AAQ C Statistic Interpretation Score: 0****AAQ D Ethical Guidelines Score: 0****AAQ E Generalizability Score: 0****AAQ F Argumentation Score: 1****Total Score: 2****Part A: Research Method (0–1 points): 0**

The response did not earn the point because the research method is inaccurately identified as a “case study” instead of an experiment.

**Part B: Research Variable (0–1 points): 1**

The response earned the point because a measurable or quantifiable definition of high misinformation is stated as “32 of 40 sentences (80% misleading information).”

**Part C: Statistic Interpretation (0–1 points): 0**

The response did not earn the point because it does not accurately describe what the mean indicates about the percentage of correct responses between the high misinformation and the low misinformation group, including that the mean was smaller in the high misinformation condition. The response describes the general results of the study and not specifically what the difference in means indicates.

**Part D: Ethical Guidelines (0–1 points): 0**

The response did not earn the point because the ethical guideline applied by researchers is not accurately identified (“confidentiality”). Confidentiality is not explicitly stated as an applied ethical guideline in the source.

**Part E: Generalizability (0–1 points): 0**

The response did not earn the point because the claim concerning the generalizability of the study makes no reference to a population, instead focusing on the sample size (“it can not be generalizable because only a total of 127 students were being studied”). A study can have a large sample but not a representative sample. The representativeness of the sample, not the sample size, helps determine the generalizability of the results.

**Part F: Argumentation (0–2 points): 1**

The response earned the first point because a specific result from the study is provided (“participants performed best if they distrusted the accuracy of the summary”). The response did not earn the second point because the interpretation of the research finding does not accurately represent the misinformation effect. The misinformation effect is not related to the perception of trustworthiness of the source. The misinformation effect focuses on how well accurate information can be recalled after being presented with misinformation.