2026

AP® Psychology

Free-Response Questions

PSYCHOLOGY
SECTION II
TIME – 1 HOUR AND 10 MINUTES

Directions:

Section II has 2 questions and lasts 1 hour and 10 minutes.

You may pace yourself as you answer the questions in this section, or you may use these optional timing recommendations:

It is suggested that you spend about 25 minutes on the Article Analysis Question (AAQ), using the first 10 minutes to read the provided source and the remaining time to write your response.

It is suggested that you spend about 45 minutes on the Evidence-Based Question (EBQ), using the first 15 minutes to read the sources and the remaining time to write your response.

You may use scratch paper for notes and planning, but credit will only be given for responses entered in this application. Text you enter as an annotation will **not** be included as part of your answer. You can go back and forth between questions in this section until time expires. The clock will turn red when 5 minutes remain—**the proctor will not give you any time updates or warnings.**

Note: This exam was originally administered digitally. It is presented here in a format optimized for teacher and student use in the classroom.

Using the source provided, respond to all parts of the question.

1. Your response to the question should be provided in six parts: A, B, C, D, E, and F. Write the response to each part of the question in complete sentences. Use appropriate psychological terminology in your response.

A. Identify the research method used in the study.

B. State the operational definition of anxiety.

C. Describe what the statistically significant difference in the mean anxiety scores indicates for the Phone Absent group as compared to the Phone Present group.

D. Identify one ethical guideline described in the study. **Describe** one way the researchers in the study applied this ethical guideline.

E. Explain the extent to which the research findings may or may not be generalizable using specific and relevant evidence from the study.

F. Explain how at least one of the research findings supports or refutes the idea that the "fear of missing out" (FOMO) causes anxiety.

Introduction

In this study, the researchers examined whether the absence of cell phones contributes to anxiety in college students.

Participants

Participants consisted of 128 students taking a psychology course at a midsize private university in the United States. Self-reported demographic data are presented in Tables 1, 2, and 3.[1]

Table 1: Gender

Gender	Number of Participants	Percentage of Participants
Male	35	27.3
Female	93	72.7

Table 2: Year in College

Year in College	Number of Participants	Percentage of Participants
First-year students	50	39.1
Second-year students	57	44.5
Third-year students	12	9.4
Fourth-year students	9	7.0

Table 3: Race/Ethnicity

Race/Ethnicity	Number of Participants	Percentage of Participants
White	67	52.3
Asian	17	13.3
Hispanic/Latino	17	13.3
African American	15	11.7
Multiple Races or Other	12	9.4

Before the study began, a committee affiliated with the university but independent of the researcher, evaluated the research protocol to confirm that potential participants' rights and safety were protected. Upon arriving at the research site, participants were given detailed information about the purpose and procedures of the study. They agreed to take part after learning what their involvement would include and were told that they could withdraw from the study at any time without consequence.

Method

The researchers asked the participants in the study not to use their cell phones. The researchers wanted to investigate whether the participants would experience FOMO if they could not access their cell phones when they received a call during the study. In previous research, college students had often reported feeling increased anxiety when unable to answer a ringing cell phone, suggesting that responding to the call would have helped alleviate their "fear of missing out" (FOMO).

Researchers directed each participant to spend five minutes individually writing a paragraph about one of their personal flaws. After the five-minute writing period, a researcher would collect each participant's writing. The researcher would then say that they needed about 10 minutes to evaluate the participant's writing before conducting an interview with the participant.

Participants were randomly assigned to one of two groups:

- Group 1 (Phone Present) kept their cell phones on the table next to them during the study but were instructed not to use their phones until the study was complete. Researchers set group 1's phones to ring to indicate an incoming call, loud enough for participants to hear. The participants received a call two minutes into the 10-minute waiting period.

- Group 2 (Phone Absent) placed their phones in a locked box nearby during the study, and researchers set the participants' phones to ring to indicate an incoming call, loud enough for the participants to hear. The participants received a call two minutes into the waiting period, and although they could hear the phone ring, they could not access it because it was locked in the box.

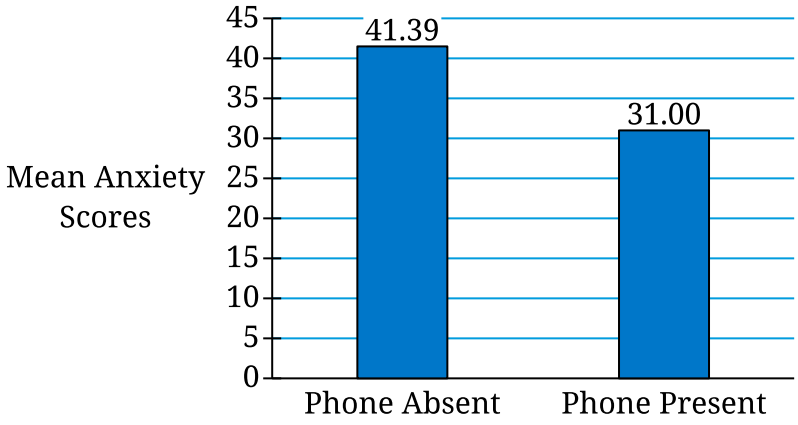
At the end of the 10-minute waiting period, participants completed a 20-question survey, rating statements such as "I am tense" or "I am worried" on a 4-point Likert scale, in which higher scores indicated higher anxiety.

After each participant completed the anxiety survey, a researcher gave them back their paragraph. Once the study was complete, the researcher disclosed that no one actually evaluated the paragraph and explained why deception was necessary in this research study.

Results and Discussion

Participants in the Phone Absent group reported experiencing higher anxiety when the phones rang than those in the Phone Present group did even though both groups did not answer the phone calls. The differences in anxiety scores were statistically significant. The graph presents the mean anxiety scores.

Mean Anxiety Scores for Students With Cell Phones Absent or Present



Participants in the Phone Absent group reported significantly higher mean anxiety scores than those in the Phone Present group.

The researchers noted that this difference may reflect participants' attachment to their devices being physically restricted, rather than anxiety about the missed phone call itself. No other measured differences between the groups were statistically significant.

The researchers also suggested that being unable to check or respond to a missed call may trigger a form of "fear of missing out" (FOMO), as participants anticipate missing an important communication or social connection.

Mannion, K. H., & Nolan, S. A. (2020). The effect of smartphones on anxiety: An attachment issue or fear of missing out? *Cogent Psychology*, *7*(1), 1869378.

1: Language referencing racial, ethnic, and social identities (e.g., racial, ethnic, gender) may be outdated or fail to reflect the complexities of identity that participants represent.

FOMO: fear of missing out, or the fear of not being included in an interesting or enjoyable activity in which others are participating

This question has three parts: Part A, Part B, and Part C. Use the three sources provided to answer all parts of the question.

For Part B and Part C, you must cite the source that you used to answer the question. You can do this in two different ways:

- Parenthetical Citation:
  For example: "...(Source 1)."
- Embedded Citation:
  For example: "According to Source 1..."

Write the response to each part of the question in complete sentences. Use appropriate psychological terminology.

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2. Using the sources provided, develop and justify an argument about what strengthens a person's ability to retrieve recently learned information.

A. Propose a specific and defensible claim based in psychological science that responds to the question.

B.

i. **Support** your claim using at least one piece of specific and relevant evidence from one of the sources.

ii. **Explain** how the evidence from Part B(i) supports your claim using a psychological perspective, theory, concept, or research finding learned in AP Psychology.

C.

i. **Support** your claim using an additional piece of specific and relevant evidence from a different source than the one that was used in Part B(i).

ii. **Explain** how the evidence from Part C(i) supports your claim using a different psychological perspective, theory, concept, or research finding learned in AP Psychology than the one that was used in Part B(ii).

Source 1

Introduction

In this study, researchers compared the effectiveness of two instructional approaches to teach medical students new surgical techniques.

Participants

At the beginning of the study, participants completed a brief survey that included questions on demographic information, hand dominance, and scope of previous learning on suturing. Medical students working at a hospital in Singapore with no prior exposure to surgical training were recruited for the study. The average age of the participants was 22.5 years. Twenty-one of the participants were men, and 18 were women. Most were right-hand dominant (35; 4 were left-hand dominant). No other race/ethnicity data were reported outside of national origin.[1]

Method

Researchers developed an eight-hour surgical suturing course for the study. In the course, a single instructor taught participants how to handle surgical instruments and how to do sutures using a microscope. Researchers randomly assigned the participants to one of two groups to take the course. Group 1 completed the course in a single eight-hour session. Group 2 attended two-hour weekly sessions for four weeks.

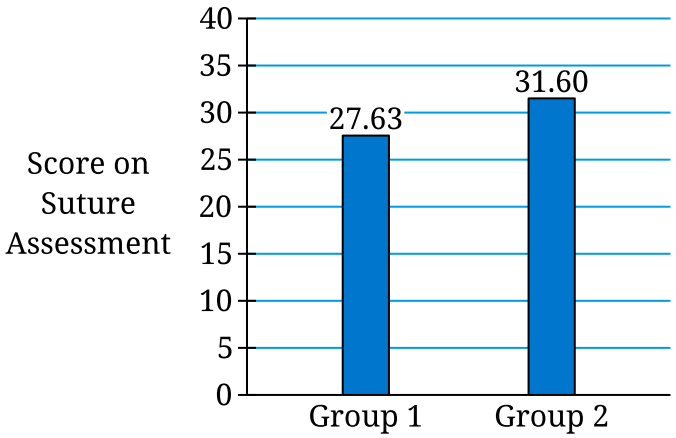
The first two hours of the course required participants to watch an introductory video that familiarized them with the instruments and suturing techniques. The next six hours of the course required participants to do hands-on practice, making uniformly spaced sutures of standard size.

Researchers assessed participants on the accuracy and precision of their suture placements at one week after each of the groups completed the trainings and again at one month after completion. A computer program analyzed and compared a suture strip completed by a participant at the one-month post-training point to the same participant's initial suture strip completed one week after training started to gather each data point. The computer program assessed the strips based on uniformity, optimal suture density, and proper alignment of the sutures, with a maximum total score of 35 points.

Results and Discussion

One month after the completion by each group of their training sessions, the total score was higher in group 2, whose participants had attended multiple sessions of the course, compared to group 1, whose participants had completed the course in one session. The total mean score for group 2 was 31.60 (standard deviation = 3.38) compared to a total mean score of 27.63 (standard deviation = 6.47) for group 1. The difference in mean scores between the two groups was statistically significant. The graph depicts the results of the study.

Total Scores on Suture Assessment One Month Post-Completion of Training



Teo, W. Z. W., Dong, X., Yusoff, S. K. B. M., De, S. D., & Chong, A. K. S. (2021). Randomized controlled trial comparing the effectiveness of mass and spaced learning in microsurgical procedures using computer aided assessment. *Scientific Reports*, *11*, Article 2810.

1: Language referencing racial, ethnic, or gender identities may be outdated or fail to reflect the complexities of identity that participants represent.

suturing: using thread (a "suture") to stitch an incision or wound closed

Source 2

Introduction

In this study, researchers investigated whether long-term retention of information from text-based learning materials is improved by reading or rereading smaller portions of the materials over time rather than all at the same time.

Participants

Ninety-seven seventh graders in Germany (52 boys and 45 girls[1]) with a mean age of 12.32 years participated in the study. Researchers did not report any other race/ethnicity data outside of national origin.

Method

Researchers gave participants four text-based articles to read, two about biology and two about physics. They randomly assigned the students to one of two groups. Group 1 read all four articles in one session. Group 2 read two articles (one biology article and one physics article) in an initial session and two articles (one biology article and one physics article) in another session a week later.

To measure what the participants had learned, researchers administered two tests to the participants in group 1 and group 2. The first test was administered immediately after group 1 finished reading all the articles and group 2 finished reading two of the articles. The second test was administered one week later to both groups, after group 2 had completed both of the reading sessions. Each test contained eight short-answer questions and seven multiple-choice questions. The questions were based on the information provided in the articles and were scored out of 15 points.

Results and Discussion

The mean test results for both groups are listed in Table 1 and Table 2.

Table 1: Test Results After Immediate Testing

Learning Outcome	Biology Articles		Physics Articles	
	Mean	Standard Deviation	Mean	Standard Deviation
Group 1	5.95	3.19	4.76	2.92
Group 2	4.37	2.47	2.93	2.93

Table 2: Test Results After Delayed Testing

Learning Outcome	Biology Articles		Physics Articles	
	Mean	Standard Deviation	Mean	Standard Deviation
Group 1	4.59	2.78	3.63	2.05
Group 2	4.07	2.02	3.14	1.73

The results in the tables show that the group 1 participants, who read all four articles in one session, did better on the tests than the group 2 participants, who read the articles in two sessions. The group 1 participants scored higher for both subjects at the immediate test administration and at the one-week delay.

The group 1 participants scored higher than the group 2 participants for both subjects at the immediate and the one-week delay test administrations. However, the group 1 participants did worse on the tests in both subjects at the one-week delay test administration than they did at the immediate administration. The group 2 participants did better on the physics tests at the one-week delay test administration than they did at the immediate administration. The difference in scores between the two groups was statistically significant immediately after learning but was not statistically significant after one week.

Greving, C. E., & Richter, T. (2021). Beyond the distributed practice effect: Is distributed learning also effective for learning with non-repeated text materials? *Frontiers in Psychology*, *12*.

1: Language referencing racial, ethnic, or gender identities may be outdated or fail to reflect the complexities of identity that participants represent.

Source 3

Introduction

In this study, researchers attempted to establish whether information delivery spread out over time or information delivery all at one time would lead to better retention of information.

Participants

Four hundred forty students from an urban secondary school in England between the ages of 13 and 15 participated in the study. Researchers did not report on the race/ethnicity or gender identities of the participants in the study.

Method

Participants were randomly assigned to one of two groups:

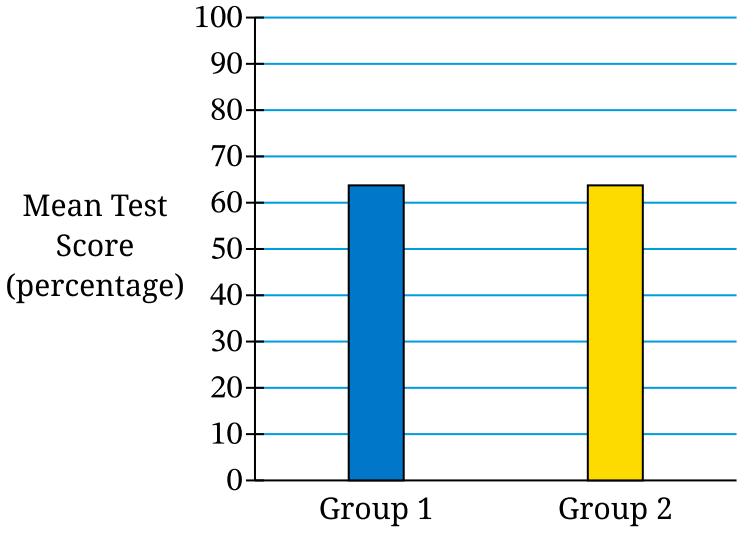
- Participants in group 1 received 23 hours of instruction in a biology course in multiple sessions over four months.
- Participants in group 2 received only 1 hour of instruction in the same biology course. The 1 hour of instruction was divided into 20-minute learning periods with 10-minute distracter sessions in between the learning periods. Instruction during the learning periods was rapid and intense to make sure all the content from the course was included. The distracter sessions involved physical activity, such as juggling or making clay models, to make sure that students were not mentally rehearsing material between the learning periods.

After completing the biology course, all participants took a national test that assessed how much of the material they remembered. Group 1 took the test after completing the course. Group 2 participants took this test five days after completing their one-hour instructional session.

Results and Discussion

The mean national test scores for the group 1 participants, who received biology instruction over 23 hours, and the group 2 participants, who received biology instruction over 1 hour, are presented in the graph.

Mean Test Scores for Students After Biology Instruction



Group 2's test scores were not significantly different from group 1's test scores. The mean test score for group 2 (65%) was about 1 percent higher than the mean test score for group 1 (64%). The data suggest that 1 hour of instruction divided into short but intense 20-minute sessions and 23 hours of instruction spread out over four months lead to similar levels of learning and retention. Researchers concluded that group 2 learned the course materials as effectively as group 1 but that group 2's learning occurred significantly faster.

Kelley, P., & Whatson, T. (2013). Making long-term memories in minutes: a spaced learning pattern from memory research in education. *Frontiers in Human Neuroscience, 7*, Article 589.

STOP

END OF EXAM