

# How Students Benefit by Attending Formal Review Sessions Before Taking Written Examinations

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## Introduction

The purpose of this investigation was to determine whether review sessions prior to written examinations affect university student performance on the examinations. It was hypothesized that students would benefit by attending formal review sessions before taking written examinations. A prospective investigational design was used to test the hypothesis.

An online review demonstrates the claimed-importance of preparatory programs before taking standardized examinations such as the GRE, SAT, or MCAT (1-4). 800score GRE Prep Software guarantees that one will achieve their highest possible score (1). GRE Comprehensive Success System claims that over 16,000 test takers passed the GRE because of their system (2). Secretsstudyguide guarantees to increase ones SAT test scores in a few hours of study (3). MCAT Practice Tests states that the most effective way to prepare for your test is to simply take their practice tests (4).

Although it makes intuitive sense, there is a paucity of controlled-research demonstrating the effectiveness of formal review before taking examinations in the university classroom.

## Methods

Forty-four sophomore or junior University of South Carolina Aiken students (mean age = 21, mean GPA = 2.75) were enrolled in a Human Physiology course. Four written examinations were required for the course. Prior to the first examination, no review session was offered. First examination scores were used as a baseline for each student.

Following examination one, optional review sessions were offered three days prior to examinations two, three, and four. The 75-minute sessions consisted of review games/contests, small group discussions, questions/answers, and general clarification of the material. Students who attended each of the three review sessions served as study group subjects (SGS). Students who did not attend the review sessions served as control group subjects (CGS). Students who attended one or two review sessions were excluded from the study.

For all subjects, the mean of examinations two, three, and four was calculated and compared to examination one. Subsequently, the results were analyzed and a paired t-test was used to compare the SGS with the CGS. The level of significance was established at  $p < 0.05$ .

## Results

Of the original 44 students, 18 served as SGS (attended all review sessions), 18 served as CGS (attended no review sessions), and eight were excluded (attended one or two review sessions). For SGS, the mean score on examination one was 67% and the mean score on examinations two, three, and four was 78%; the average improvement was +11%. For CGS, the mean score on examination one was 75% and the mean score on examinations two, three, and four was 78%; the average improvement was +3%. These results are summarized in Table 1. The average improvement for the SGS was significantly greater ( $p = 0.045$ ) than the average improvement for the CGS.

Table 1

	Exam 1	Exams 2-4	Improvement
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SGS	67%	78%	11%
CGS	75%	78%	3%

## Discussion

At the University of South Carolina Aiken, Human Physiology (AEXS 223) is a challenging basic science course that is prerequisite to sequence courses in the exercise and sports science curriculum such as electrocardiography and exercise physiology. Typically, students take the course in their sophomore or junior year. Many students repeat the course due to earning a low grade. A grade of "C or better" is required to move forward. The course consists of four major examinations and several minor quizzes. Since the examinations are so important to the grade, the instructor offered an additional, but optional, review session to the students. For this study, the review was only offered before examinations two, three, and four. Since the review was shown to be efficacious, it will be offered prior to all examinations beginning next semester.

It is interesting to note that the control group showed a slight improvement in examination scores following the first examination. This may have been due to examination style familiarity or other factors not investigated. The study group, who attended each review session, improved significantly more than the controls. The study group averaged 67% on examination one compared to 75% for the controls. This may have been a factor in their decision to seek additional review.

This investigation demonstrates the importance of a formal review session prior to major written examinations in a basic science course with extensive mechanistic information. The importance of attending review sessions will be emphasized to students of this curriculum, especially those who are more challenged in courses where difficult scientific material is being taught.

## References

HYPERLINK "<http://www.800score.com/gre-index.html>" <http://www.800score.com/gre-index.html>

HYPERLINK "<http://teachingsolutions.org/gre.html>" <http://teachingsolutions.org/gre.html>

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