

1957

Pre-Test and Post-Test Estimates of Level of Performance on an Achievement Test

Donald H. Kausler

University of Arkansas, Fayetteville

Follow this and additional works at: <http://scholarworks.uark.edu/jaas>

 Part of the [Educational Assessment, Evaluation, and Research Commons](#), and the [Higher Education Commons](#)

Recommended Citation

Kausler, Donald H. (1957) "Pre-Test and Post-Test Estimates of Level of Performance on an Achievement Test," *Journal of the Arkansas Academy of Science*: Vol. 10 , Article 7.

Available at: <http://scholarworks.uark.edu/jaas/vol10/iss1/7>

This article is available for use under the Creative Commons license: Attribution-NoDerivatives 4.0 International (CC BY-ND 4.0). Users are able to read, download, copy, print, distribute, search, link to the full texts of these articles, or use them for any other lawful purpose, without asking prior permission from the publisher or the author.

This Article is brought to you for free and open access by ScholarWorks@UARK. It has been accepted for inclusion in Journal of the Arkansas Academy of Science by an authorized editor of ScholarWorks@UARK. For more information, please contact scholar@uark.edu, ccmiddle@uark.edu.

PRE-TEST AND POST-TEST ESTIMATES OF LEVEL OF
PERFORMANCE ON AN ACHIEVEMENT TEST

Donald H. Kausler
University of Arkansas

When students take a subject-matter test in a college course, an experimenter is provided with an excellent opportunity for studying level of aspiration and its derivatives. A number of experimenters have investigated goal-setting behavior and achievement judgment following the test in such a classroom laboratory. The usual procedure is to have the subjects (students) estimate their performance before beginning the test (level of aspiration) and again after completing the test (achievement judgment).

In the present study, the subjects were required to estimate the class average both before and after taking the test, in addition to estimating their own personal performance. Thus each subject's estimate of his own performance could be investigated in terms of the direction and magnitude of deviation from the average as estimated by him.

A number of problems were investigated in this study. This paper is concerned with two of these problems. They are:

1. The nature of the deviation score between estimates of class average and personal performance in the pre-test situation as compared to the post-test situation.
2. The correlation between pre-test estimates and post-test estimates for both the average score and personal score.

PROCEDURE

The subjects were 42 students, both male and female, in the experimenter's Psychology of Adolescence class. The data for nine other students had to be discarded for failure to follow instructions.

The test used was the second regular course examination during the semester. Before the tests

ARKANSAS ACADEMY OF SCIENCE

were passed out, the experimenter read the following instructions:

"There are 70 questions on this test. The test is similar in nature to your previous test and should be approximately as difficult as your last test. Estimate what you think the class average will be on this test. Write this figure on the back of your test paper. Now estimate what you think your own grade on the test will be. Write this figure on the back of your test paper."

Following the test, these instructions were read:

"Having taken the test, estimate once more what you think the class average will be and what you think your own grade will be. Write these figures on the back of your test paper."

RESULTS AND CONCLUSIONS

Problem 1. The means and standard deviations were determined for each of the four estimates, and their values are presented in the table below. The estimates are abbreviated a Xpre and Xpost for the personal estimates and Apre and Apost for the class average estimates.

SUMMARY DATA FOR PERFORMANCE ESTIMATES

	Apre	Xpre	Apost	Xpost
M.	51.74	54.24	51.71	53.14
S. D.	5.53	6.09	6.25	7.12

The difference between Xpre and Apre and the difference between Xpost and Apost were analyzed for significance by means of the t test (using the difference method since the scores are correlated). These differences are 2.50 and 1.43 and yield t 's of 2.50 (significant at the .05 level) and 1.06 (not significant at the .05 level), respectively. The formula for t is

$$t = \frac{M_1 - M_2}{\text{Standard error of the difference}}$$

PRE-TEST AND POST-TEST ESTIMATES

The hypothesis is suggested for further study that pre-test estimates of performance are more optimistic and more likely to exceed the reference point of average performance than are post-test estimates of performance.

Problem 2. The correlation coefficient between A_{pre} and A_{post} was found to be .91. The correlation coefficient between X_{pre} and X_{post} was found to be .76. Both coefficients are significant at the .01 level. The high relationship between the pre-test and post-test estimates suggests the hypothesis that a common expectancy set operates to influence all of the estimates and that this set is relatively unaffected by actual achievement on the test. Additional evidence for this hypothesis is found in the low correlation (.31) between X_{post} and actual grade on the test.