

News

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* * *Test anxiety research shows understanding of material improves test performance even under stress.

DALLAS--Lots of students experience test anxiety, and most people assume it's the student's problem. But research findings at The University of Texas Health Science Center at Dallas suggest that teachers can use techniques that will alleviate that condition.

In two recent studies of test anxiety, the most significant factor in test performance was how well the student understood material when it was presented.

"This suggests that instructional techniques that cause the student to process the information at the time he or she receives it will reduce the negative effects associated with test anxiety," says Dr. John Hedl Jr., chairman of the Department of Allied Health Education at UTHSCD.

Hedl presented the results of these studies April 13 at the national meeting of the American Educational Research Association in Los Angeles. His co-author on the paper is Dr. James Bartlett, associate professor of psychology at The University of Texas at Dallas.

Studies were based on a situation in which the teacher read a list of sentences to the research subjects, psychology students at Southern Methodist University. Students were then tested over what they had heard.

One group was in a stressful situation created by the test instructions, which emphasized that the test was an intelligence test and the students were in competition with each other.

The non-stress group received instructions that emphasized that the students were testing the sentence techniques for the researchers.

As Hedl and Bartlett predicted, the stress instructions led to more worry in the students with high test anxiety. But the worry did not affect their performance on the recall test.

In the first of two experiments, students were read 34 sentences. On their answer sheets they were given one of three tasks to perform on each sentence: circle the number of words in the sentence, rate the sentence as either pleasant or unpleasant, or write a word or phrase related to the sentence.

"The general raised his glass in the air," was expected to produce the inference word "toast."

After the list was completed, students were given five minutes to write all the sentences they could remember (free recall). They were then given a "cued recall" test with two types of cues, inference ("toast") and subject of the sentence ("general").

In analyzing this study, researchers felt that maybe the sentences were too easy to adequately test the effect of worry on initial understanding of the sentences. So they designed a second study with harder sentences to "process" mentally and with greater time pressure.

In this study, students had to work at comprehending such sentences as:

"The house turned to water as the fire got too hot."

"The haystack was important because the cloth ripped."

Correct inference words would be "igloo" and "parachute."

Hedl says both studies indicate that students need interactions with teachers' lectures. His ultimate research goal is to help teachers help their students.

One of his own techniques as a teacher of teachers is to require projects in which students must apply the information they have been given. In his Educational Psychology course, he assigned the nutrition students to develop their own personal weight reduction programs using behavioral modification principles. If they can apply information they have received, he knows they understand it.

His most recent research indicated that students who would be successful in solving the assigned problem would also perform well on a test even under stress.

A related research study on the effects of humor on test anxiety and performance was also presented by Hedl at the AERA meeting. Researchers found that under stress, humor within the test resulted in less worry and higher performance. In the non-stress situation, humor resulted in lower performance and, contrary to expectations, more worry. Variations in worry occurred only with the high test-anxious students.

This test consisted of difficult anagrams to solve. The one given to the humor group contained a cartoon to be rated for funniness after every two anagrams.

Co-authors on the humor paper are Jackie L. Hedl, Dallas Independent School District, and Dr. Donald B. Weaver, UTD.

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TEAR SHEETS APPRECIATED