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THE EFFECTS OF PREVIEWING TEST ITEMS:
IMPLICATIONS FOR PERFORMANCE AND ATTITUDES

by

COMILA SHAHANI

A THESIS SUBMITTED
IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE

MASTER OF ARTS

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Houston, Texas
May, 1986
The Effects of Previewing Test Items:
Implications for Performance and Attitudes

Comila Shahani

Abstract

The effects of test previews upon test performance and test attitudes were examined in this study. Subjects (n=117) received previews that were easier, more difficult than, (i.e., unrealistic) or the same difficulty level (i.e., realistic) as the test. In addition, the moderating effects of chronic self-esteem, verbal self-esteem, test anxiety, and prior verbal ability were examined with respect to the relationship between test previews and test performance/attitudes. There were no moderating effects of these variables on performance or attitudes. Reasons for the lack of moderating effects are set forth. In addition, practical implications of this study, as well as future research directions are discussed.
Acknowledgements

I would like to thank Dr. R. Dipboye as well as the members of my committee (Dr. W. Howell, Dr. D. Lane, and Dr. R. J. Harvey) for their help and support on this project. I would also like to thank my family for their continual emotional support.

I dedicate this thesis to my father, Mr. Indru Shahani and to Hugo Denning.
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The Effects of Previewing Test Items:  
Implications for Performance and Attitudes  

Introduction  

A test preview is typically thought of as a representative sample of items given before a test in order to familiarize examinees with the task that they will be facing. For example, students planning to take the GRE and the SAT are given a sample of the items they can expect to encounter. Despite their frequent use, however, there has been only limited research on the effects of the previews. The present research evaluated the effects of three types of previews of test content on performance of the test and attitudinal reactions to the test.

There are several ways in which a realistic preview could be beneficial. By reducing test anxiety and other sources of errors of measurement and by instructing the testee in strategies appropriate to the test content, a realistic preview might improve the reliability and validity of the test and elevate the level of performance of those receiving the preview. By reducing debilitating factors such as test anxiety and by increasing facilitating factors such as self-efficacy, realistic previews also may make tests more palatable to those taking them. Given increasing legal restrictions placed on standardized tests by the Equal Employment Opportunity Commission and item disclosure laws, it has become more important to engender positive attitudes towards test-taking experience.

These are only a few of the potential benefits of providing
realistic previews of test content. Unfortunately, as indicated earlier, there is little evidence to support the contention that a realistic preview, or any preview at all, has beneficial effects on test performance and attitudes of the testees. In particular, there is little evidence that a realistic preview is superior to other types of previews. If one operationalizes test previews in terms of level of difficulty, then there are three basic types of previews: (1) those that are easier than the test, (2) those that are more difficult than the test, and (3) those that are "realistic" in that they match the difficulty of the test. Although the usual practice is to provide "realistic" previews, there is theory and research to support the effectiveness of all three types. It may be that the nature of the previews need to be varied to fit individual characteristics of the testees. For example, perhaps students with low self-esteem should be encouraged to view the test as manageable and easy, whereas individuals with high self-esteem may benefit from a difficult preview that will moderate their over-confidence. The findings from this study may have implications for job previews. Perhaps high self-esteem employees benefit from previews that emphasise the demanding characteristics of the new job, whereas low self-esteem employees may benefit from an optimistic preview. I will now review the theoretical support for each position and then review the literature relevant to this topic.

**Easy Previews**

The prediction that easy test previews will be the most
facilitative of performance and positive attitudes can be derived from expectancy theories such as Rotter's Social Learning Theory (Rotter, 1954, 1966, 1967; Rotter & Hochreich, 1975), Expectancy-Valence Theory (Lawler & Suttle, 1973; Porter & Lawler, 1968; Vroom, 1964), and the self-efficacy theory (as derived from Bandura's Social Learning Theory, Bandura, 1977a, 1977b, 1982). According to these expectancy theories, the effort exerted on a task will depend upon an individual's self-efficacy or performance expectations, i.e., the belief that effort leads to performance. Increased effort usually produces higher performance accomplishments. These performance expectations are influenced by a number of different factors: verbal persuasion, emotional arousal, vicarious experiences, and performance accomplishments (Bandura, 1977, 1982). According to Bandura, previous experience with success would increase mastery or performance expectations, whereas experience with failure would decrease these expectations.

The above three expectancy theories suggest that persons should perform better on a task to the extent that they have received an easy preview. If the initial task exposure suggests that the task is very difficult (i.e., an experience of initial failure), it is likely that the individual experiences a decline in his effort-performance expectancy or self-efficacy. If the initial task exposure suggests that the task is very easy, then the effort-performance expectancy or self-efficacy is likely to show an increase. Thus, according to the easy preview theory, individuals who receive easy previews have higher perceived self-
efficacy and consequently exert more effort than individuals who receive more difficult previews. Consequently, individuals who receive easy previews should outperform those who receive more difficult previews regardless of the difficulty level of the subsequent task (see Figure 1).

**Difficult Previews**

The prediction that difficult previews lead to higher performance can be derived from a number of theories, one of which is Locke's Goal Setting Theory (Locke, 1968; Locke, Cartledge, & Knerr, 1970). The theory states that the setting of specific and difficult goals leads to higher performance than easy and generalized goals, assuming that these goals have been accepted by the individuals. The above theory suggests that to the extent that a preview induces the subject to set a more difficult goal, subjects should perform better. Thus, according to the difficult preview theory, difficult previews should lead to higher performance accomplishments than easy previews (see figure 2).

**Realistic Previews**

Some of the theoretical viewpoints that are consistent with the presentation of realistic previews are the cognitive dissonance theory (Festinger, 1957; Festinger & Aronson, 1960) and the realistic job preview theory (Wanous, 1973, 1975a, 1975b, 1978, 1980; Wanous, Stumpf, & Bedrosian, 1979). According to Festinger's cognitive dissonance theory (Festinger, 1957; Festinger & Aronson, 1960) a person will be most satisfied when the events in his environment are similar or equal to what he
Figure 1: Relationship Between Task Preview and Performance as Hypothesised by the Easy Preview Theories.
Figure 2  
Relationship Between Task Preview and Performance as Hypothesised by the Difficult Preview Theory.

![Graph showing relationship between task preview difficulty and performance](image)
expects. If the individual receives either less or more than he expects of some stimulus object, he should be less satisfied than if he receives the same amount that he expects. According to the realistic job preview theory (Reilly, Brown, Blood, & Malatesta, 1981; Wanous, 1973, 1975, 1980; Wanous, et. al, 1979), providing new applicants with an accurate description or preview of the job leads to increased satisfaction and decreased voluntary turnover. There are four factors that are suggested as causes for the effectiveness of realistic job previews and these same factors may account for the facilitative effects of realistic previews (Wanous, 1980). They are met expectations, honesty, self selection, and ability to cope. Individuals may have very unrealistic test expectations. The realistic preview may bring these expectations more in line with what the individual will actually encounter on the test. Those individuals whose expectations are met are more likely to be satisfied (Porter & Steers, 1973). The realistic preview may communicate an air of honesty to individuals, who may then feel greater freedom in their choice to do the test, which would in turn lead to greater commitment to their decision of doing the test. In addition, the realistic preview may increase individuals ability to cope with the test. If they are made aware of problems they will encounter on the test, they may prerehearse methods of dealing with them. The primary focus of research in this area has been the relationship between realistic previews and employee turnover (Ilgen & Seely, 1974; Reilly, Tenopyr, & Sperling, 1979;
Schneider, 1975; Wanous, 1973; 1975; 1980; Weitz, 1956). Only a few studies have tested the relationship between realistic previews and performance (Dean & Wanous, 1984; Gomersall & Myers, 1966). Thus the realistic preview theory would predict that performance would be higher and attitudes towards the test more positive, if the individual was presented with a preview that matched the difficulty level of the test to be performed (see Figure 3).

Research on the effects of test previews

As indicated earlier, there has been limited research testing the effects of the test previews. Two studies have been conducted investigating realistic previews. Alderman and Powers (1979) gave students who were registered for the SAT one of two forms of realistic test preview booklets. One of the previews was a short traditionally used realistic preview, the other was a similar but longer version. They found no performance difference between the two groups. In another study, Erffmeyer and Erffmeyer (1983) examined the effects of a realistic course preview. The preview was not found to differ from a traditional preview on expectations, attitudes, attrition, and performance. Neither of these studies compared the effects of a realistic preview with that of a non-realistic one.

In other research the effects of initial test difficulty or initial test expectancy upon performance has been the object of investigation. Studies have manipulated the subjects expectancies of success and failure (Arvey, 1972; Feather, 1965;
Figure 3
Relationship Between Task Preview and Performance as Hypothesized by the Realistic Preview Theory.
Ilgen, 1971; Janz, 1982; Linsenmeier & Brickman, 1978). In some cases, expectancies have been manipulated through varying the level of objective task difficulty (Campbell & Ilgen, 1976; Feather, 1963, 1966, 1969; Frankel & Snyder, 1978). In some studies subjects have either experienced initial success or initial failure (i.e., they received five easy or five difficult anagrams) (Feather, 1966; Ryckman & Rodda, 1972). The results of these studies demonstrated that subjects who experienced initial success performed better than subjects who experienced initial failure. Similarly, some studies have shown debilitating effects of difficult tasks on subjects performance on a new task (Hirotō, 1974; Hirotō & Seligman, 1975; Klein, Fencil-Morse, & Seligman, 1976; Krantz, Glass, & Snyder, 1974; Miller & Seligman, 1975; Roth & Kubal, 1975; Thornton & Jacobs, 1971).

Generally studies have shown that as subjects' expectancy of success increases, performance increases (Feather, 1966; Garland, 1984; Zajonc & Brickman, 1969). In addition, subjects with high success expectancies have been shown to persist longer at an insoluble task than subjects with a low success expectancy (Feather, 1963). Studies testing the expectancy-valence theory have shown that expectancy has a significant linear relationship to performance (Arvey, 1972; Lawler & Suttle, 1973; Porter & Lawler, 1968), with high performance expectancies leading to higher performance. In addition, perceptions of self-efficacy have been found to account for a significant amount of variance in future performance (Schunk, 1982). On the whole, the research provides
support for the expectancy theory and indicates that increases in
performance accompany increases in performance expectancies.

Although the findings generally appear to support the "easy
preview hypothesis", there have been studies that appear to
support a "difficult preview hypothesis". In a study by Campbell
& Ilgen (1976), subjects who had experience with difficult tasks
did better that subjects who had experience with easy tasks. In a
study by Linsenmeier & Brickman (1978), subjects who received
difficult practice problems were more satisfied with their
performance. There was also a beneficial effect with regard to
performance on the first part of the test. In line with these two
studies, it has been demonstrated that experience with hard
preliminary tasks leads to better performance on later tasks
(Mace, 1931; Heim, 1955; Douglas & Anisman, 1955).

A few studies have provided evidence in support of realistic
previews. Frankel & Snyder (1978) found that subjects who
received difficult prior tasks and difficult subsequent tasks
performed better and took less time than subjects who received
difficult prior tasks and moderately difficult subsequent tasks.
Thus, performance improved with a prior task of equal difficulty.
In a study by Feather (1965), subjects received instructions
regarding the level of difficulty of the task. When the
difficulty level of the task matched subjects' instructions,
performance was positively related to subjects initial success
expectancies. When the difficulty level of the task did not match
the instructions received, performance was not related to initial
success expectancies.

To conclude, it appears as though the most frequent finding is that subjects with high expectancies of success perform better than subjects with low performance expectancies. There is some evidence, however, that has provided exceptions to this generalization. It is clear that further research is warranted to fully examine the alternative predictions stated for the effects of test previews.

Rationale for the Study

The present study tested the effects of test previews upon performance and attitudes. There are four major ways in which this study improved upon past research.

a) To adequately test the contradictory predictions presented in Fig. 1, 2, and 3, it is necessary to provide a manipulation of both preview and test difficulty. Studies conducted so far have either manipulated the subject's initial performance expectancies or their success-failure experiences. However none of the studies have fully manipulated both the difficulty of the preview and the difficulty of the subsequent test. Providing a manipulation of both of these variables will allow an examination of whether previews have similar effects across all levels of task difficulty, or whether they interact in their effects on attitudes and performance. In this study there were easy, moderate, and difficult previews as well as easy, moderate, and difficult tests.

b) One unexplored issue with regard to test previews is the impact of individual difference variables on the preview-performance
relationship. The potential impact of four moderator variables were examined in this study, i.e., chronic and situational self-esteem, test anxiety, and prior verbal ability.

c) The test that was used in this experiment is a realistic one, similar to tests commonly used in standardized instruments such as the GRE and the SAT. In addition, this format is commonly used in classroom situations. Most research has used tasks such as anagrams, chess problems, creativity tasks, symbol discrimination tasks, rather than tasks more relevant to aptitude or achievement tests (Campbell & Ilgen, 1976; Feather, 1963, 1965, 1966, 1969; Frankel & Snyder, 1978; Garland, 1984; Ilgen, 1971; Janz, 1982; Linsenmeier & Brickman, 1978). The use of novel tasks may severely limit the generalizability of these findings to tests typically used in educational and organizational situations.

d) The research has largely ignored the issue of peoples' attitudinal reactions to the test as a result of the preview experience. In this study, subjects attitudes to the test will be examined as a function of the test preview, i.e. whether their perceptions of test bias, fairness, clarity and validity are affected by the type of preview that they receive.

**Moderating Effects of Self-Esteem**

The moderating effects of both chronic and situational (verbal) self-esteem on the relationship between test previews and performance were examined. Past research suggests that individuals with different self-esteem levels react differently to realistic and unrealistic previews. According to Cohen (1959)
people develop chronic self-esteem levels as a function of previous success and failure experiences, and these basic success or failure orientations influence the way in which they react to current success or failure experiences. High self-esteem subjects according to this view should be less receptive to negative experiences than low self-esteem individuals, whereas the high self-esteem subjects should be more receptive to positive experience than the low self-esteem subjects. A number of studies provided support for Cohen's model by showing that changes in self evaluation and performance following initial success or failure experiences tends to be consistent with individual's basic self conception (Leventhal & Perloe, 1962; Schrauger & Rosenberg, 1970; Silverman, 1964a; 1964b; Stotland & Hillmer, 1962; Stotland, Thorley, Thomas, Cohen, & Zander, 1957). Ryckman and Rodda (1972) tested this model and found that high self-esteem subjects lowered their confidence less than the low self-esteem subjects following initial failure, whereas low self-esteem subjects raised their confidence less than the high self-esteem subjects following initial success. However, this study did not assess the interaction between self-esteem, realism of the test preview, and performance. In a study by Brockner (1979) high and low self-esteem subjects received either success or failure feedback on a social insight task and then completed a concept formation task. He found that low self-esteem subjects performed worse in failure conditions than in success conditions, whereas high self-esteem persons performed equally well in success and
failure. Moreover, low self-esteem subjects performed worse than high self-esteem subjects in a failure but there were no differences between the two in the success situation. In a study by Raben & Klimoski (1973) high and low self-esteem individuals were either given favorable or unfavorable performance expectations. High self-esteem subjects performed better when they had low as opposed to high expectations. Low self-esteem subjects on the other hand performed better when they had high expectancies, though the relationship for low self-esteem subjects was not significant. In a study by Schalon (1957) half the group (high and low self-esteem subjects) was made to feel failure stress. It was seen that the low self-esteem subjects' improvement in performance was significantly affected by stress, whereas the high self-esteem subjects' performance was not.

Thus, it can be predicted that in a situation of stress (i.e. experience of initial failure and low performance expectancies) high chronic self-esteem individuals cope better with an academic task and are more satisfied with the task than are low chronic self-esteem individuals. From these findings the hypothesis was derived that chronic self-esteem would moderate the effects of preview difficulty on the performance of and attitudes towards the subsequent test. Specifically, it was hypothesised that the easy preview prediction (stated in figure 1) would be more likely to hold true for low chronic self-esteem persons, whereas the difficult preview prediction (stated in figure 2) would be more likely to hold true for high chronic self-esteem persons. In
other words, high self-esteem subjects will perform better and be more satisfied after receiving difficult or challenging previews, whereas low self-esteem subjects will profit and be more satisfied after receiving easy, non-challenging test previews.

The use of both situational and global self-esteem measures has been suggested (Shavelson & Bolus, 1982; Shavelson, Hubner, & Stanton, 1976; Tharenou, 1979). According to several reviewers, the predictions from the expectancy theory are more likely to be confirmed with measures of task, rather than global self-esteem (Tharenou, 1979; Wylie, 1974). In accordance with their suggestions, the moderating effects of situational (i.e. verbal) self-esteem on the relationship between test previews and test performance/attitudes were examined. Although there has been little research on which to base predictions, situational self-esteem was predicted to moderate the effects of test previews in a manner similar to the effects of chronic self-esteem.

**Moderating Effects of Test Anxiety**

A number of studies investigating classroom performance have shown an overall effect of test anxiety, where low test anxious students show better classroom performance than high test anxious students (Alpert & Haber, 1960; Carrier & Jewell, 1966; Caudry & Bradshaw, 1970; Jefferson, 1975; Marso, 1970; Lusk 1983). Several studies have reported that these differences in test performance are more likely to occur on difficult tasks and under threatening task instructions than on easy tasks and under non-threatening instructions (Daniels & Hewitt, 1978; Feather, 1965;

For example, a study by Sarason (1961) varied the instructions given to the subjects. Subjects were either told that the anagrams could be easily solved (personal threat condition) or that the anagrams would be of moderate difficulty (non-threat condition). In actuality the anagrams that were presented to the subjects were difficult ones. Low test anxious subjects did better than high test anxious subjects in the personal threat condition, whereas in the non-threat condition high anxiety subjects did better than low anxiety subjects. It was concluded that when a task is complex, subjects who are high in test anxiety will perform less well in this stressful situation than subjects low in test anxiety (Mandler & Sarason, 1952; Sarason, 1961; 1963).

On the basis of these findings it was hypothesised that the "easy preview" predictions would be shown to be true for the high anxious students more than for the low anxious students, whereas the "difficult preview" predictions would be shown to be more valid for low test anxious students. Specifically, high test anxious students should have more positive attitudes and better performance following an easy preview than after a difficult preview, whereas low test anxious students would have more positive attitudes and better performance after a difficult preview than after an easy preview.

**Moderating Effects of Prior Verbal Ability**
The study tested the effects of prior verbal ability on the relationship between the realism of the test preview and test performance. On the basis of common sense, it can be assumed that subjects with high verbal ability will outperform subjects with low verbal ability. According to a study by Linsenmeier & Brickman (1978) hard practice problems leads to better subsequent performance. This effect was stronger for subjects high in ability than for subjects low in ability. For students high in ability, hard practice problems led to higher performance throughout the test. It also was shown that good students took credit for successes and discounted failures on difficult tasks, whereas poorer students saw failure as relevant and successes as irrelevant even when the task was hard. Thus, it was predicted that subjects high in verbal ability would perform better when they received a difficult preview than when they received an easy preview. For subjects low in verbal ability this relationship was predicted to be less pronounced or even reversed.

To conclude, the effects of the test preview were examined by manipulating the difficulty level of the preview and the test. Measures of chronic self-esteem, verbal self-esteem, test anxiety, and prior verbal ability were obtained in order to examine the moderating effects of these variables on the relationship between test previews and performance and subjects' attitudes towards the test.

Method

Subjects
Forty-two Rice University undergraduates and 75 University of Houston undergraduates participated in this study for class credit. There were 64 females and 53 males. The majority of the subjects were Caucasians (n=75). There were 19 Blacks, 11 Hispanics, 7 Asians and 4 Orientals. One subject did not report his/her race.

**Design and Procedure**

The experiment was a 3 X 3 factorial design, with three levels of preview difficulty (easy, moderate and difficult) and three levels of test difficulty (easy, moderate, difficult). In addition, several continuous variables were measured.

In the first session (half an hour) subjects were asked to complete the Rosenberg self-esteem scale (Rosenberg, 1965), the verbal (situational) self-esteem scale, the Test anxiety scale and the SET verbal ability scale. In the second experimental session (an hour and a half) subjects were first given some information about the task that they would soon be facing. They were told that the task would be a multiple choice vocabulary test with each item on the test consisting of a word and five alternatives that would follow each word, one of which would correctly define it. Their task was to select the alternative that they thought correctly defined the word. Subjects were informed that their performance on the test would be determined by the number of items that they correctly defined.

Subjects were then required to fill out the self-efficacy questionnaire, after which they were presented with the twenty
item initial vocabulary task (i.e. the task preview). Subjects were randomly assigned to difficult, moderate or easy test previews. Subjects were presented with a greater number of items than it would be possible to complete in the time period allotted.

Once the subjects completed the initial task, they received the answers to the test preview as well as different performance strategies to solve for the words. Hints were given to subjects on how to solve for vocabulary items in terms of breaking words into prefixes, suffixes and roots. It was presumed that this would make the preview more salient to the subjects. They were then made to fill out the self-efficacy scale again, in order to note changes in self-efficacy as a function of initial task preview difficulty.

Subjects were then presented with a 100 item vocabulary test. After this subjects were required to fill out a self-efficacy questionnaire, in order to determine whether the difficulty level of the subsequent task influenced self-efficacy. Finally, subjects were presented with a 16 item questionnaire designed to assess their attitudes and reactions to the preview and the task. At the conclusion of the experiment subjects were debriefed as to the hypotheses and procedure.

**Manipulations**

**Difficulty of the Preview and the Test**

A twenty item vocabulary test was used to provide a preview of the 100 item vocabulary test to follow. Subjects were randomly assigned to one of three levels of preview difficulty (difficult,
moderate, and easy) and one of three levels of test difficulty (difficult, moderate, and easy). The vocabulary words used in the preview and the test were selected from the Thorndike-Lorge (1944) word list according to their frequency of occurrence in the English language. Difficulty was operationalized as the average frequency of words as specified in the word list. A difficult task consisted of words that had a frequency range of four to ten per eighteen million, a moderately difficult task consisted of words that had a frequency range of one to five per million, and an easy task consisted of words that had a frequency of fifty and over per million. A pilot study was conducted in order to determine the objective and the perceived difficulty level of the individual items. Only those items for which the objective difficulty matched the perceived difficulty were retained in the experiment.

**Measures**

**Dependent Variables**

**Performance** The subject's performance on the 100 item task constituted the dependent measure in this study. The subsequent task varied in terms of difficulty, i.e. easy, moderate or difficult. Performance was operationalized as the number of words for which the subject chose the correct alternative.

**Attitudinal Reactions** On a seven point scale subjects rated the test on fairness, bias, validity, and clarity. Subjects ratings on these four variables were summed to form a composite measure of their attitudes towards the test (see Appendix A, Fig. 4, question 7).
Potential Moderator Variables

Chronic Self-Esteem  The Rosenberg self-esteem scale (RSE) (Rosenberg, 1965) was used to measure chronic self-esteem. This is a ten item questionnaire comprised of items like "On the whole, I am satisfied with myself." It is a four point Likert type scale with responses varying from strongly agree to strongly disagree. Scores can range from 10 to 40 with high scores indicating high self-esteem. Reliabilities for the RSE typically range from .76 to .86 (Rosenberg, 1965) (see Appendix A, Fig. 5).

Situational Self-Esteem  A ten item questionnaire which was adapted from the RSE was used in order to tap verbal self esteem. It consisted of items like "I feel that relative to other students at my school, my vocabulary is definitely below average. Like the RSE, it is a four point Likert type scale with responses varying from strongly agree to strongly disagree. Scores can range from 10 to 40, with higher scores indicating higher verbal self-esteem (see Appendix A, Fig. 6).

Test Anxiety  The test anxiety scale (Sarason, 1980) was used to measure the subjects test anxiety. It is a 37 item true-false scale with test retest reliabilities in the .80's. It contains items like, "If I were to take an intelligence test, I would worry a great deal before taking it" (see Appendix A, Fig. 7)

Prior Verbal Ability  An initial measure of the subjects verbal ability was measured by asking them to perform the SET verbal ability test which consists of fifty items (Bennet, & Gelink, 1953). Reliabilities for this test range in the .80's.
Subjects had five minutes to answer this test (see Appendix A, Fig. 8).

Ancillary Variables

Self-Efficacy In this study self-efficacy was measured using the self-efficacy scale developed by Locke, Frederick, Bobko, and Lee (1984). They developed two self-efficacy measures which were based on the dimensions of self-efficacy as conceptualized by Bandura (see Appendix A, Fig. 9).

1. Magnitude: this was measured as the total number of yes' in response to the statement "I can solve x items on this test.", where subjects were made to respond to this statement over all ranges of x values (x ranged from a very easy performance level to a more difficult performance level). Subjects scores on this scale could range from 0 to 10.

2. Strength: the total certainty for the responses made to the statement, "I can solve x items on this test". Certainty ranged from 0 to 100 percent. Subjects scores in this scale could range from 0 to 1000.

Perceived Difficulty Subjects were asked to rate the difficulty level of the test preview and the test on a nine point scale ranging from not very difficult to very difficult (see Appendix A, question 14 and 15, Figure 4).

Performance Estimates Subjects were asked to estimate the number of items correctly answered, the percentage of people they thought did better than them, and their estimate of success on the test (see Appendix A, question 1-3, Figure 4).
Satisfaction  Subjects were asked to rate their satisfaction with their performance on the test on a nine point scale ranging from very dissatisfied to very satisfied (see Appendix A, question 4, Figure 4).

Ratings of Importance  Subjects evaluated how important a good vocabulary and verbal ability were to them (see Appendix A, question 5-6, Figure 4).

Causal Attributions  Subjects made causal attributions for their performance (i.e. luck, effort, ability, task difficulty) as well as rated the extent to which performance was a function of stable factors, that were within their control and a result of factors within them (see Appendix A, question 8-14, 16, Figure 4).

Results

Reliability

Cronbach's internal consistency coefficients were used to measure the reliabilities of the scales used in this study. The Rosenberg self-esteem scale had a coefficient of .85, the verbal self-esteem scale had a coefficient of .85, and the Sarason test anxiety scale had a coefficient of .83. Finally the composite attitudinal measure had a coefficient alpha of .70. The scales demonstrated high internal consistency coefficients though the attitudinal measure had a lower coefficient alpha than the other scales. Since the SET verbal ability test was speeded, it was inappropriate to compute internal consistency coefficients on it.

Manipulation Checks

Subjects' performance means on the preview were obtained in
the three preview conditions (see Table 1). As seen in Table 1, subjects who received easy previews had higher preview performance than subjects who received moderately difficult previews, who in turn had higher performance than subjects who received difficult previews.

Subjects' performance means on the test were obtained for the three test difficulty conditions. As seen in Table 2, subjects who received easy tests performed better on the test than subjects who received moderately difficult tests, who in turn performed better than subjects who received difficult tests.

**Descriptive Statistics**

Means, standard deviations, and range of observations were obtained for the four moderator variables, test performance and test attitudes (see Table 3). In addition, the intercorrelations among all the variables was computed (see Table 4).

**Tests of Hypotheses for Performance**

**Effects of Verbal Ability**

Hierarchical regression analyses were performed in which the dependent variables were regressed on the independent variables and all the product terms. In each analysis, the dependent variable was regressed on one of the moderator variables, preview difficulty, test difficulty and their product terms. If the three way interaction term failed to contribute significantly to the prediction of the dependent variable, it was removed from the regression equation, and the two-way interaction terms were examined. If the two-way interaction terms failed to contribute
### Table 1
Performance Means on the Preview in the Three Preview Conditions

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### Table 2
Performance Means on the Test in the Three Test Conditions

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Table 3

Means, Standard Deviations and Range of values for the Moderator Variables and the two Major Dependent Variables

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<tr>
<td>18</td>
<td>1.00**</td>
<td>-0.06</td>
<td>1.00**</td>
<td>-0.02</td>
<td>-0.08</td>
<td>1.00**</td>
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<tr>
<td>19</td>
<td></td>
<td>.10</td>
<td>-0.25**</td>
<td>.08</td>
<td>1.00**</td>
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<tr>
<td>21</td>
<td>-0.08</td>
<td>-0.03</td>
<td>-0.01</td>
<td>.11</td>
<td>1.00**</td>
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<td>22</td>
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<td>.02</td>
<td>.16</td>
<td>-0.06</td>
<td>-0.24**</td>
<td>-0.20**</td>
<td>1.00**</td>
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</tr>
</tbody>
</table>

Note

** = p < .01, * = p = .05
1 = preview difficulty  2 = test difficulty
3 = self-efficacy  4 = preview performance
5 = test performance  6 = estimated number of items correct
7 = estimated percentile rank
8 = estimate of success on test
9 = satisfaction with test
10 = rating of importance of doing well and having a good vocabulary
11 = test attitude
12 = performance attribution (internal, neutral, external)
13 = extent to which performance seen under Ss control
14 = extent to which performance seen as due to stable factors
15 = extent to which performance seen as due to factors within S
16 = extent to which performance seen as due to effort
17 = extent to which performance seen as due to luck
18 = perceived test difficulty  22 = test anxiety
19 = perceived preview difficulty  23 = chronic self-esteem
20 = estimate of ability possessed  24 = situational self-esteem
21 = verbal ability
significantly to the prediction of the dependent variable, they were removed from the regression equation and the linear effects of the independent variables was examined. Preview difficulty and test difficulty variables were coded as 1, 2, 3 with 1 representing easy, 2 representing moderately difficult and 3 representing difficult (Pedhazur, 1982).

There was a significant verbal ability X test difficulty interaction (F (1,109)=12.45, p=.0006) found in analysis of test performance. In order to interpret this interaction, performance was regressed on prior verbal ability for each level of test difficulty. As seen in Table 5, verbal ability was positively related to performance in all three test difficulty conditions. However, the relationship between performance and prior verbal ability was more pronounced in the easy and moderate test difficulty conditions, and less pronounced in the difficult test conditions.

Despite random assignment of subjects to the different experimental conditions, there was some evidence that verbal ability was confounded with the dependent variable. Verbal ability was significantly related to both test performance (F (1,111)=103.48, p=.0001) and preview performance (F (1,111)=73.44, p=.0001). Verbal ability also had a significant main effect on all three self-efficacy measures (p=.0001). In light of these findings, it was decided to treat verbal ability as a covariate in all subsequent analyses.

Effects of Chronic Self-Esteem
Table 5
The Regression of Test Performance on Verbal Ability Within Each of the Three Test Difficulty Conditions

<table>
<thead>
<tr>
<th>TEST</th>
<th>EASY</th>
<th>MODERATE</th>
<th>DIFFICULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE</td>
<td>1.3</td>
<td>1.43</td>
<td>.38</td>
</tr>
</tbody>
</table>
Using procedures discussed by Pedhazur (1982), verbal ability (covariate) was entered into the regression equation first, followed by chronic self-esteem, preview difficulty and test difficulty. The linear terms were followed by the two way interaction terms, which were followed by the interaction terms that included the covariate. The increment due to the interaction terms that contained the covariate were first tested for significance. If these interaction terms did not predict a significant amount of variance in test performance, they were removed from the regression equation and the two-way interaction terms were examined. If these did not predict a significant amount of variance in test performance, they were removed from the equation and the linear effects of the independent variables were examined.

Since the interactions of the covariate with the independent variables did not explain a significant amount of variance in test performance, they were removed from the regression equation. There were no moderating effects or main effects for chronic self-esteem on test performance, after covarying out verbal ability.

**Effects of Situational Self-Esteem**

The analysis of covariance was repeated, substituting situational self-esteem in place of chronic self-esteem. The interactions of the covariate with the independent variables were significant ($F(7,101)=3.5, p<.01$). An inspection of these interaction terms revealed the significant two-way verbal ability
X test difficulty interaction. Since none of the other interaction terms that included the covariate were significant at the .05 level, they were removed from the regression equation and the two-way interaction terms of situational self-esteem, preview difficulty and test difficulty were examined. Since these did not explain significant amounts of variance in test performance they were removed from the regression equation, and the linear effects of the independent variables on test performance were examined. Situational self-esteem had no moderating or main effects on test performance.

**Effects of Test Anxiety**

Test anxiety was now entered into the regression equation in place of situational self-esteem and the analysis of covariance was repeated. The interactions of the covariate with the independent variables were significant ($F(7,100)=2.14$, $p<.05$). An examination of these interaction terms revealed a significant two-way verbal ability X test difficulty interaction. Since none of the other interaction terms that included the covariate were significant at the .05 level, they were removed from the regression equation. An inspection of the two-way interaction terms revealed no moderating effects of test anxiety on the preview-performance relationship. However, test anxiety had a significant main effect on test performance ($F(1, 110)=12.35$, $p=.0006$, $b=-.35$). Subjects who were high in test anxiety did worse than subjects low in test anxiety.

**Tests of Hypotheses for Attitudes Towards the Test**
Effects of Verbal Ability

Test attitudes was regressed on verbal ability, preview difficulty, test difficulty and their interaction terms. None of the interaction terms explained a significant amount of variance. There were no main effects of verbal ability or preview difficulty on test attitudes. There was a main effect of test difficulty on test attitudes \( F(1,109)=20.67, p=.0001, b=-2.32 \). As the level of test difficulty increased, attitudes towards the test became more unfavorable.

Effects of Chronic Self-Esteem

The analysis of covariance framework was used in examining the moderating effects of chronic self-esteem on test attitudes. Analysis of covariance was conducted using the same procedures as in the analysis of test performance. The interactions of the covariate with the independent variables did not explain a significant amount of variance in test attitudes. There was a marginally significant main effect for chronic self-esteem on test attitudes \( F(1,108)=3.76, p=.06, b=.17 \). High self-esteem subjects were more favorable to the test than low self-esteem subjects.

Effects of Situational Self-Esteem

The analysis of covariance was repeated using situational self-esteem as the moderator variable. The interaction terms including the covariate were not significant. There were no moderating or main effects of situational self-esteem on test attitudes.
Effects of Test Anxiety

When test anxiety was used as a moderator variable in explaining test anxiety, the interaction terms including the covariate were not significant. In addition, there were no moderating or main effects of test anxiety on test attitudes.

Ancillary Analyses

There were no moderating effects of chronic self-esteem, situational self-esteem, or test anxiety on test performance and attitudes. However test anxiety had a main effect on test performance, and chronic self-esteem had a marginal main effect on test attitudes. In order to enable interpretation of the above findings a number of ancillary analyses were conducted.

Self-Efficacy

Self-efficacy was measured at three different times during the course of the experiment. Each of the three self-efficacy measures was regressed on verbal ability, preview difficulty, test difficulty and their interaction terms.

Self-Efficacy-1. There were no significant interactions of verbal ability, preview difficulty, and test difficulty in determining self-efficacy at the start of the experiment. However, there was a significant main effect of verbal ability on self-efficacy ($F(1,112)=39.84$, $p=.0001$, $b=.08$). Subjects with higher verbal ability had higher self-efficacy than subjects with lower verbal ability.

Self-Efficacy-2. There were no significant interactions of verbal ability, preview difficulty, and test difficulty in
determining self-efficacy measured after the preview. There was a main effect of verbal ability on self-efficacy-2 (F (1,112)=26.04, p=.0001, b=.09). Subjects with higher verbal ability had higher self-efficacy. Preview difficulty had a significant main effect on self-efficacy-2 (F (1,112)=12.64, p=.0001, b=-.86). As preview difficulty increased, estimates of self-efficacy decreased.

**Self-Efficacy-3.** There were no significant verbal ability, preview difficulty, and test difficulty interaction on self-efficacy measured after the test. Verbal ability had a main effect on self-efficacy-3 (F (1,109)=17.2, p=.0001, b=.07). As verbal ability increased, self-efficacy increased. Test difficulty had a main effect on self-efficacy (F (1,109)=32.7, p=.0001, b=-1.38). Increases in test difficulty led to decreases in self-efficacy.

**Causal Attributions**

Causal attributions was regressed on verbal ability, preview difficulty, and test difficulty. There were no significant interactions or main effects of verbal ability, preview difficulty, or test difficulty in determining causal attributions for performance.

There was a significant two-way chronic self-esteem X preview difficulty interaction on the attributions made for performance, (F (1,101)=4.33, p=.04). To facilitate interpretation, three regression analyses were conducted, regressing causal attributions on chronic self-esteem for the three preview difficulty conditions (see Table 6, Figure 10).
Table 6

The Regression of Causal Attributions on Chronic Self-Esteem Within Each of the 3 Preview Difficulty Conditions

<table>
<thead>
<tr>
<th>PREVIEW</th>
<th>EASY</th>
<th>MODERATE</th>
<th>DIFFICULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE</td>
<td>-.04</td>
<td>.006</td>
<td>.04</td>
</tr>
</tbody>
</table>
Figure 10

The Relationship Between Causal Attributions and Chronic Self-Esteem in the Three Preview Difficulty Conditions

Note. On the Y axis, 1 represents internal attributions, 2 represents neutral attributions, and 3 represents external attributions.

EASY PREVIEW: \( Y = 2.96 - .04X \)

MODERATE PREVIEW: \( Y = 1.46 + .006X \)

DIFFICULT PREVIEW: \( Y = .31 + .04X \)
In the easy preview condition, high self-esteem subjects made more internal attributions for performance whereas low self-esteem subjects made more external and neutral attributions. For moderate or difficult previews, high self-esteem subjects made more external and neutral performance attributions and low self-esteem subjects made more internal attributions.

There were no effects of situational self-esteem or test anxiety in explaining causal attributions.

**Other Attitudinal Measures**

Four regression analyses were conducted for each of the ancillary attitudinal variables. First, each variable was regressed on verbal ability, preview difficulty, and test difficulty. After that three regression analyses were conducted for each variable examining the effects of chronic self-esteem, situational self-esteem, and test anxiety.

**Estimate of the Number of Items Correctly Solved.** In the first regression analysis, there were main effect of verbal ability ($F(1,112)=35.12$, $p=.0001$, $b=.86$) and test difficulty ($F(1,112)=149.44$, $p=.0001$, $b=-25.25$). Subjects with higher verbal ability had a higher estimate of the number of items correctly solved than subjects with lower verbal ability. As test difficulty increased, subjects estimates of the number of items correctly solved decreased.

There were no effects of chronic self-esteem, situational self-esteem, or test anxiety on the estimate of number of items correctly solved.
Estimate of Subjects Percentile Rankings. There was a main effect of verbal ability ($F(1,112)=21.34$, $p=.0001$, $b=-.82$) and of test difficulty ($F(1,112)=10.54$, $p=.002$, $b=8.13$) on subjects percentile rank estimates. Subjects with higher verbal ability estimated a higher percentile ranking than subjects with lower verbal ability. As the test difficulty increased, subjects estimates of their percentile ranking decreased.

There was a main effect of chronic self-esteem on subjects estimate of their percentile ranking ($F(1,111)=11.94$, $p=.0008$, $b=-1.48$). As self-esteem increased, the estimate of the percentage of people who would do better than the subject decreased. An additional analysis was conducted to determine whether chronic self-esteem would interact with the actual percentile ranking of the subjects to determine the perceived percentile rank. There was a significant two-way chronic self-esteem $\times$ actual percentile ranking in determining perceived percentile ($F(1,108)=5.23$, $p=.02$). To facilitate interpretation, chronic self-esteem was divided at the median into high and low self-esteem subjects and the relationship between actual and perceived percentile ranking was observed for the two self-esteem groups (See Table 7, Figure 11). The relationship between actual and perceived percentile for both the self-esteem groups was negative. As subjects actual percentile ranking increased, the number of people the subject estimated did better decreased. The relationship was stronger for low self-esteem subjects. It appears that the low self-esteem subjects are slightly more
Table 7

The Regression of Perceived Percentile on Actual Percentile for low and High Chronic Self-Esteem

<table>
<thead>
<tr>
<th>CHRONIC SELF-ESTEEM</th>
<th>LOW</th>
<th>HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE</td>
<td>-.35</td>
<td>-.31</td>
</tr>
</tbody>
</table>

Note. Chronic self-esteem was split as the median and subjects were categorized into high and low self-esteem subjects. This was done in order to facilitate data interpretation.
Figure 11

The Relationship Between Perceived Percentile and Actual Percentile for Low and High Chronic Self-Esteem

[Graph showing the relationship between perceived and actual percentiles for low and high self-esteem]

Note:
LOW SELF-ESTEEM: Y = 83.22 - .35X
HIGH SELF-ESTEEM: Y = 49.27 - .31X
accurate than high self-esteem subjects in estimating their percentile ranking.

Situational self-esteem also had a main effect on subjects perceived percentile ranking (F (1,111)=19.7, p=.0001, b=-2.02). As situational self-esteem increased, the percentage of people that the subject estimated did better than him decreased.

Test anxiety also had a main effect on subjects perceived percentile ranking (F (1,110)=8.86, p=.004, b=.78). As test anxiety increased, subjects estimates of the percentage of people who did better than them also increased.

**Estimates of Test Success.** There was a significant two-way verbal ability X test difficulty interaction in terms of subjects estimates of test success (F (1,109)=7.63, p=.007) (see Table 8). There was a positive relationship between verbal ability and success estimates on all three levels of test difficulty. As verbal ability increased, estimates of success on the test increased. However, this relationship was stronger in the easy and moderate test difficulty conditions.

Chronic self-esteem did not have any effects on success estimates.

The interactions of the covariate with situational self-esteem, preview difficulty, and test difficulty were significant (F (7, 101)=2.43, p<.05). Since an examination of these interactions did not reveal any significant interaction of the covariate with situational self-esteem, these interaction terms were removed from the regression equation. Situational self-
Table 8

The Regression of Estimated Success on Verbal Ability Within Each of the Three Test Difficulty Conditions

<table>
<thead>
<tr>
<th>TEST</th>
<th>EASY</th>
<th>MODERATE</th>
<th>DIFFICULT</th>
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</thead>
<tbody>
<tr>
<td>SLOPE</td>
<td>.09</td>
<td>.07</td>
<td>.006</td>
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</table>
Esteem had a significant main effect on subjects' success estimates (F (1, 111) = 8.66, p = .004, b = .10). As self-esteem increased, estimates of test success increased.

There was a main effect of test anxiety on subjects success estimates (F (1, 110) = 4.11, p = .05, b = -.03). As test anxiety increased, estimates of test success decreased.

Estimates of Test Satisfaction. There were main effects of verbal ability (F (1, 112) = 22.71, p = .0001, b = .07), and test difficulty (F (1, 112) = 77.85, p = .0001, b = -1.8) on test satisfaction. Subjects who had higher verbal ability were more satisfied with the test than subjects with lower verbal ability. As test difficulty increased, satisfaction with the test decreased.

There was a significant two-way chronic self-esteem X test difficulty interaction (F (1, 108) = 4.76, p = .03) (see Table 9, Figure 12). For all three levels of test difficulty, there was a positive relationship between chronic self-esteem and satisfaction with test performance. This relationship was stronger for difficult than easy test situations.

There was a main effect of situational self-esteem on test satisfaction (F (1, 111) = 5.07, p = .03, b = .10). Subjects who had higher situational self-esteem were more satisfied with the test than subjects who had low situational self-esteem.

There were no effects of test anxiety on test satisfaction.

Ratings of Importance. There was a significant preview difficulty X test difficulty interaction on ratings of importance (F (1, 109) = 5.68, p = .02) (see Table 10, Figure 13). When subjects
Table 9

The Regression of Test Satisfaction on Chronic Self-Esteem Within Each of the Three Test Difficulty Conditions

<table>
<thead>
<tr>
<th>TEST</th>
<th>EASY</th>
<th>MODERATE</th>
<th>DIFFICULT</th>
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</thead>
<tbody>
<tr>
<td>SLOPE</td>
<td>.03</td>
<td>.07</td>
<td>.12</td>
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</table>
The Relationship Between Test Satisfaction and Chronic Self-Esteem in the Three Test Difficulty Conditions

Note: Chronic Self-Esteem
EASY TEST: \( y = 6.01 + 0.03x \)
MODERATE TEST: \( y = 1.51 + 0.07x \)
DIFFICULT TEST: \( y = -0.62 - 0.12x \)
Table 10

The Regression of Importance Ratings on Preview Difficulty Within Each of the Three Test Difficulty Conditions

<table>
<thead>
<tr>
<th>TEST</th>
<th>EASY</th>
<th>MODERATE</th>
<th>DIFFICULT</th>
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<tbody>
<tr>
<td>SLOPE</td>
<td>.73</td>
<td>.19</td>
<td>-1.07</td>
</tr>
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</table>
Figure 13

The Relationship Between Importance Ratings and Preview Difficulty in the Three Test Difficulty Conditions

Note:

EASY TEST: $y = 12.12 + .73x$

MODERATE TEST: $y = 11.35 + .19x$

DIFFICULT TEST: $y = 12.97 - 1.07x$
received an easy or moderately difficult test, the importance of possessing a good vocabulary and doing well on the test were rated higher, as the preview difficulty increased. When subjects received a difficult test importance ratings declined as preview difficulty increased.

Chronic self-esteem had no significant effects on importance ratings.

Situational self-esteem had a main effect on importance ratings \( (F(1,111)=7.51, p=.0007, b=.18) \). Subjects who had higher situational self-esteem had higher importance ratings than subjects with low situational self-esteem.

There was a significant two-way test anxiety X test difficulty interaction \( (F(1,107)=7.74, p=.006) \) (see Table 11, Figure 14). When subjects received an easy test, high test anxious subjects had lower importance ratings than low test anxious subjects. When subjects received a difficult test, high test anxious subjects had higher importance ratings than low test anxious subjects.

**Estimate of Extent to Which Performance Under Ss Control.**

Test difficulty had a significant main effect on subjects' perceived control \( (F(1,112)=8.25, p=.005, b=.5) \). Subjects rated their performance as being due to factors out of their control to a greater extent when they received a difficult test.

Chronic self-esteem had a significant main effect on perceived control \( (F(1,111)=10.3, p=.002, b=.09) \). High self-esteem subjects estimated that performance was under their control
Table 11

The Regression of Importance Ratings on Test Anxiety Within Each of the Three Test Difficulty Conditions

<table>
<thead>
<tr>
<th>TEST</th>
<th>EASY</th>
<th>MODERATE</th>
<th>DIFFICULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE</td>
<td>-.04</td>
<td>.01</td>
<td>.18</td>
</tr>
</tbody>
</table>
Figure 14

The Relationship Between Importance Ratings and Test Anxiety in the Three Test Difficulty Conditions

Note:
EASY TEST: $Y = 14.47 - .04X$
MODERATE TEST: $Y = 11.69 + .01X$
DIFFICULT TEST: $Y = 9.00 + .18X$
to a greater extent than did low self-esteem subjects.

Situational self-esteem had no effects on perceived control over performance.

The interactions of the covariate with test anxiety, preview difficulty, and test difficulty were significant ($F(7, 100) = 2.12$, $p < .05$). An inspection of these interactions revealed no significant interactions of test anxiety, preview or test difficulty, so these interaction terms were removed from the regression equation. Test anxiety had a significant main effect on perceived control ($F(1, 110) = 4.75$, $p = .03$, $b = -.04$). High test anxious subjects perceived themselves as having less control over their performance than low test anxious subjects.

**Perceived Ability.** There was a main effect of test difficulty on subjects perceived ability ($F(1, 112) = 12.66$, $p = .0005$, $b = -.76$). As test difficulty increased, subjects decreased their estimates of the amount of verbal ability they possessed.

There were significant main effects of both chronic self-esteem ($F(1, 111) = 7.25$, $p = .008$, $b = .10$), and situational self-esteem ($F(1, 111) = 20.42$, $p = .0001$, $b = .17$). As self-esteem increased, subjects perceptions of their verbal ability increased.

There was a significant two-way test anxiety X preview difficulty interaction ($F(1, 107) = 5.71$, $p = .02$) (see Table 12, Figure 15). For easy and moderately difficult previews, as test anxiety increased, perceptions of verbal ability decreased. For difficult previews, as test anxiety increased, perceptions of
Table 12

The Regression of Perceived Ability on Test Anxiety Within the Three Preview Difficulty Conditions

<table>
<thead>
<tr>
<th>PREVIEW</th>
<th>EASY</th>
<th>MODERATE</th>
<th>DIFFICULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE</td>
<td>-.16</td>
<td>-.04</td>
<td>.03</td>
</tr>
</tbody>
</table>
Figure 15

The Relationship Between Perceived Ability and Test Anxiety in the Three Preview Difficulty Conditions

Note:
EASY PREVIEW: \( y = 7.16 - .16x \)
MODERATE PREVIEW: \( y = 6.05 - .04x \)
DIFFICULT PREVIEW: \( y = 4.3 - .03x \)
ability possessed increased.

Perceived Test Difficulty. A main effect of test difficulty (F (1, 112) = 160.36, p = .0001, b = 2.37) revealed that difficult tests were perceived as being more difficult than easy tests.

There were no effects of chronic or situational self-esteem on perceived test difficulty.

There was a main effect of test anxiety on perceived test difficulty (F (1, 110) = 6.61, p = .01, b = .04). As test anxiety increased, the test was perceived as being more difficult.

Perceived Preview Difficulty. There were significant two-way preview difficulty X test difficulty (F (1, 108) = 6.2, p = .01), and verbal ability X test difficulty (F (1, 108, 13.92, p = .0003), interactions on perceived preview difficulty (See Table 13). Subjects perceived the preview as being more difficult when it was actually more difficult. This relationship was weaker in the difficult test condition. When subjects received easy or moderate tests, subjects viewed the preview as being more difficult as verbal ability increased. When subjects received difficult tests, subjects viewed the preview as being more difficult as verbal ability decreased.

There were no effects for chronic self-esteem, situational self-esteem, or test anxiety on perceptions of preview difficulty.

Estimate of Effort Exerted. There was a significant two-way preview difficulty X test difficulty interaction (F (1, 109) = 4.89, p = .03) on estimate of effort exerted (see Table 14, Figure 16). When subjects received an easy or a moderately difficult test,
Table 13

The Regression of Perceived Preview Difficulty on Actual Preview Difficulty and Verbal Ability Within the Three Test Difficulty Conditions

<table>
<thead>
<tr>
<th>TEST</th>
<th>EASY</th>
<th>MODERATE</th>
<th>DIFFICULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preview Difficulty</td>
<td>SLOPE</td>
<td>2.76</td>
<td>2.6</td>
</tr>
<tr>
<td>Verbal Ability</td>
<td>SLOPE</td>
<td>0.06</td>
<td>0.002</td>
</tr>
</tbody>
</table>
Table 14

The Regression of Estimates of Effort Exerted on Preview Difficulty Within Each of the Three Test Difficulty Conditions

<table>
<thead>
<tr>
<th>TEST</th>
<th>EASY</th>
<th>MODERATE</th>
<th>DIFFICULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE</td>
<td>.54</td>
<td>.35</td>
<td>-.14</td>
</tr>
</tbody>
</table>
Figure 1f

The Relationship Between Estimates of Effort Exerted and Preview Difficulty in the Three Test Difficulty Conditions

Note:

EASY TEST: \( y = 5.59 + 0.54x \)

MODERATE TEST: \( y = 5.53 + 0.35x \)

DIFFICULT TEST: \( y = 6.18 - 0.14x \)
they reported exerting greater effort when they received a
difficult, rather than an easy preview. The reverse relationship
was observed when subjects received a difficult test.

There were no effects of chronic self-esteem, situational
self-esteem, or test anxiety on estimates of the amount of effort
exerted.

**Estimate of the Extent to Which Performance is due to Stable
Factors.** There was a significant three-way verbal ability X
preview difficulty X test difficulty interaction on subjects
perceptions of the extent to which their performance was due to
stable factors ($F(1,107)=4.28$, $p=.04$).

There were no effects for chronic self-esteem or situational
self-esteem for estimates of the extent to which performance was
due to stable factors.

There was a significant two-way test anxiety X preview
difficulty interaction on perceptions of the extent to which
performance was due to stable factors ($F(1,106)=4.37$, $p=.04$)
(see Table 15, Figure 17). When subjects received an easy
preview, as test anxiety increased, performance was seen as being
causally caused by unstable factors. The reverse relationship was seen
when subjects received difficult previews.

**Discussion**

This study investigated the effects of the test preview by
manipulating the difficulty levels of the preview and the test.
Self-efficacy estimates were obtained through the course of the
experiment. The moderating effects of chronic self-esteem,
Table 15

The Regression of the Extent to Which Performance was due to Stable Factors on Test Anxiety Within the Three Preview Difficulty Conditions

<table>
<thead>
<tr>
<th>PREVIEW</th>
<th>EASY</th>
<th>MODERATE</th>
<th>DIFFICULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE</td>
<td>-.07</td>
<td>-.02</td>
<td>.03</td>
</tr>
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</table>
The Relationship Between Estimate of the Extent to Which Performance was due to Stable Factors and Test Anxiety in the Three Preview Difficulty Conditions.

Note:
- EASY PREVIEW: $y = 6.65 - .07x$
- MODERATE PREVIEW: $y = 4.85 - .02x$
- DIFFICULT PREVIEW: $y = 4.86 + .03x$
situational self-esteem, test anxiety, and verbal ability on the relationship between test previews and test performance and attitudes were examined. These variables were not found to moderate the effects of previews on attitudes and performance. I will first discuss results of tests of hypotheses and then will discuss the findings for several ancillary analyses.

Tests of the Hypotheses

Chronic self-esteem, situational self-esteem, and test anxiety did not moderate the relationship between test previews and test performance and attitudes as was hypothesized. Neither were there any main effects found for the preview on performance, or attitudes towards the test. The failure of this study to find effects for the preview might be due to a number of different reasons. One obvious conclusion is that previews in fact do not affect attitudes and test performance in the manner predicted. In support of this contention, there have been numerous studies examining the effects of coaching on student performance or SAT scores (Alderman & Powers, 1980; Dear, 1958; Dyer, 1953; Evans & Pike, 1973; French, 1955; Messick & Jungeblut, 1981; Whitla, 1962). Research has generally shown very small gains in performance as a function of coaching. If we consider coaching a protracted form of test preview, the lack of effects found in the present study are consistent with previous research examining coaching effects.

Until additional findings are presented that show support for the hypotheses, I must conclude that they are in fact invalid. It
is instructive, however, to speculate on possible limitations in
the design of this study that may explain the failure to support
the hypotheses and that provide avenues for future research. An
examination of the effects of verbal ability, test difficulty, and
preview difficulty on the measures of self-efficacy obtained
through the course of the experiment, revealed main effects of
verbal ability on all three self-efficacy measures. Subjects who
had high verbal ability had higher self-efficacy than subjects
with lower verbal ability. Subjects who received difficult
previews had lower self-efficacy than subjects who received easy
previews. In addition, subjects who received difficult tests had
lower self-efficacy than subjects who received easy tests.
Although test previews influenced self-efficacy, these effects
were short-lived and did not carry through to the end of the task
when test difficulty countered preview difficulty. The test
difficulty simply overwhelmed the preview-efficacy effects. These
findings suggest that the preview manipulation in this study was
not strong enough. Moreover, the preview may have been too
narrow. The preview was only manipulated in terms of item
difficulty. Future research should provide previews in terms of
other dimensions, such as item content or item format.

The experiment was conducted using undergraduate college
students. In terms of generalizing about the effects of previews
on examinations like the GRE, SAT, or regular classroom
examinations, this subject sample is probably sufficient.
However, if we want to generalize these results to the effects of
previews in organizations, one may run into problems. To the extent that the employee sample differs from the student sample on variables such as age, education, and work experience, these findings may not generalize. Of course, this is an empirical issue that can only be dealt with through additional research.

Another possible limiting factor, is that there were no important consequences of subjects performance on the test. Thus subjects may not have been very ego-involved with the task. In support of this, the mean rating of importance of doing well on the task was 4.5, indicating that subjects only saw it as moderately important to do well on the test. In a situation, in which a test performance determines whether one is hired or admitted to a school, previews may influence performance and attitudes to a much greater extent or to a much smaller extent. This is an issue that needs further research.

Another possible limitation on external validity is that these results may not generalize to other measures of chronic self-esteem. A study conducted by Dipboye, Phillips, and Shahani (unpublished) showed a lack of convergence among different self-esteem measures.

Evidence of Preview Effects

Although preview effects were not found for the primary dependent measures, previews did influence several of the ancillary variables. These variables were included for exploratory purposes. Although they suggest some directions for future research, these findings should be interpreted with
caution.

The chronic self-esteem X test preview moderating effect found for causal attributions was in a direction consistent with previous research. In the easy preview condition, it was seen that high self-esteem individuals made more internal attributions for performance and low self-esteem individuals made more external or neutral attributions. For moderate or difficult previews, high self-esteem subjects made more external or neutral performance attributions whereas low self-esteem individuals made more internal attributions. These findings are consistent with those of several previous studies (Adler, 1980; Feather, 1969; Fitch, 1970; Girdo, Dotzenroth, & Stein, 1981; Shrauger, 1972; Shrauger, & Rosenberg, 1970; Stotland, Thorley, Thomas, Cohen, & Zander, 1957). The effect of preview on causal attributions suggest a primacy effect in which early success or failure set up causal attributions for later performance (Jones, Rock, Shaver, Goethals, & Ward, 1968).

Test anxiety moderated the effects of previews on causal attributions in a manner similar to the effects observed for chronic self-esteem. There was a significant test anxiety X preview difficulty interaction for subjects attributions of performance to stable factors. When subjects received an easy preview, high test anxious subjects were more likely than low test anxious subjects to rate performance as being due to unstable rather than stable factors. For difficult previews, high test anxious subjects saw performance as being due to stable factors
rather than unstable factors more than did low test anxious subjects. As in the chronic self-esteem X preview difficulty interaction for causal attributions, it seems as though the preview sets up a primacy effect that carries over to performance attributions on a later task. Additionally, with an easy preview, low test anxious subjects were more likely to claim a high level of ability than high test anxious subjects. However this relationship was less strong for moderately difficult or difficult previews. One possibility is that these previews were too difficult even for the low test anxious subjects, and therefore these difficult previews had a similar impact on both high and low test anxious subjects. High test anxious subjects rated themselves as having more ability after receiving a difficult preview, whereas low test anxious subjects rated themselves as having more ability after receiving an easy preview.

There were significant two-way preview difficulty X test difficulty interactions found in several of the other ancillary analyses. In each case, subjects appeared to rate the importance of succeeding higher and estimated that they had exerted more effort when the preview was "unrealistic". Subjects who received moderately difficult or easy tests reported it as more important to do well when the preview was difficult than when the preview was easy or moderately difficult. In the difficult test condition, subjects rated it as more important to do well when the preview was easy rather than difficult. Thus, subjects rated it as least important to do well when they received a realistic
preview. A discrepancy between difficulty of the preview and
difficulty of the test led to increases in the ratings of
importance of doing well on the test. Subjects also reported more
effort exerted on the easy test when the preview was difficult
rather than when it was easy. On the other hand, when subjects
received a difficult test, they reported having exerted more
effort if they had received an easy rather than a difficult
preview.

If these findings are considered as a whole, it appears that
when subjects receive unrealistic previews they are more likely to
be motivated to perform the task than when they receive realistic
previews. It may be that the task is seen as more novel,
challenging and stimulating when the preview is unrealistic than
when it is realistic. These findings suggest that previews may
affect performance in the manner predicted by the unrealistic
preview position. These effects were not found in the present
experiment probably because the vocabulary task had a very high
ability component, and was not subject to motivational influences.
However, these findings suggest that previews might have an effect
on tasks that have a strong motivational component. For these
tasks, factors like effort exerted, importance ratings, and causal
attributions would be expected to influence performance.

Effects of The Moderator Variables

Although they did not moderate the effects of previews as
hypothesised, other effects were found for several of the
individual difference measures.
Effects of Verbal Ability

There was a positive relationship between verbal ability and estimates of success on the test as well as performance on the test for all three levels of test difficulty. Subjects who were higher in verbal ability had higher estimates of success than subjects lower in verbal ability. This relationship was stronger in the easy and moderately difficult test conditions. This is in line with what one would expect, since subjects higher in verbal ability actually did better than subjects lower in verbal ability. However, in the difficult test, there was not much relationship between verbal ability and performance, since the items were extremely difficult, even for someone with high verbal skills. High verbal ability subjects were more satisfied with their performance than subjects low in verbal ability. High verbal ability subjects reported solving a greater number of items correctly than low verbal ability subjects. In addition, high verbal ability subjects estimated a higher percentile ranking than low verbal ability subjects. These findings are not particularly surprising, since high verbal ability subjects did in fact perform better than low ability subjects. It is expected that high verbal ability subjects will be more satisfied with their performance than low ability subjects.

Effects of Test Anxiety

Test anxiety had a significant negative relationship with test performance that was independent of the effects of verbal ability. Subjects high in test anxiety had lower performance than
subjects low in test anxiety. This has been demonstrated in some previous research (Lusk, 1953). In this study, the test anxiety main effects on performance were independent of verbal ability, since verbal ability was covaried out in the analysis. The test anxiety findings in this study are inconsistent with some past research that have found interactions of test anxiety with test difficulty in determining test performance (Daniels & Hewitt, 1978; Feather, 1965; Mandler & Sarason, 1952; Sarason, 1961; 1963). In this study, low test anxious students performed better than high test anxious students, across all levels of test difficulty. It might be that the test situation in this study was anxiety provoking, leading to differences in performance even on the easy test. The anxiety provoking situation may have lead the high test anxious subjects to focus on the negative aspects of the test. In addition, the anxiety provoking situation may have led to the use of inadequate test taking strategies for the high test anxious subjects. If this was the case, these results would not be inconsistent with previous research examining the effects of test anxiety on performance (Bruch, 1981; Galassi, Fierson, & Shares, 1981; Kirkland & Hollandsworth, 1979). Unfortunately, no information on test strategies used by the subjects was obtained.

Test anxiety also had significant main effects on four attitudinal variables. Low test anxious subjects saw themselves as having greater control over their performance and as being more successful than did high test anxious subjects. In addition, low test anxious subjects estimated a higher percentile rank than high
test anxious subjects. High test anxious subjects saw the test as being more difficult than low test anxious subjects and rated themselves as less successful than low test anxious subjects. None of the effects are surprising given that low test anxiety subjects in fact performed better than high test anxiety subjects.

**Effects of Self-Esteem**

The effects found for chronic self-esteem and situational self-esteem were less obvious than those found for test anxiety, considering that there were no effects for self-esteem on performance. High chronic self-esteem subjects tended to be more favorable towards the test than low self-esteem subjects, although the effects were only marginal. In interpreting this effect, it is important to note that low self-esteem subjects believed that they had performed more poorly than high self-esteem subjects, even though low and high self-esteem subjects did not differ in their actual performance. Consequently, as an attempt to defend against a further loss of self-esteem, low self-esteem subjects may have derogated the test. This interpretation is generally consistent with the theory that there is a general need for self-esteem and low self-esteem subjects, being relatively deprived with regard to this need, react more defensively to threats to their self-esteem. Another possible interpretation is that self-esteem simply reflects a general rating bias—with low self-esteem persons tending to rate themselves and external events and objects more negatively than high self-esteem subjects. Although this interpretation cannot be ruled out entirely, it seems unlikely
given that self-esteem and the dependent measures were measured in separate sessions. In addition, lower ratings were found for some but not all measures, indicating that it was not a simple halo effect.

High chronic self-esteem subjects were also more likely than low self-esteem subjects to assume that performance was under their control and that they had the requisite abilities to do well on the test. High self-esteem subjects' estimate of the percentage of people who did better than them was smaller than the percentage estimated by low self-esteem subjects. The interaction of chronic self-esteem with actual percentile ranking on perceived percentile ranking revealed that as subjects actual percentile rank decreased, subjects estimates of the percentage of people who would do better than them increased. This relationship was a little stronger for low self-esteem subjects, indicating that low self-esteem subjects might be slightly more accurate in determining their percentile rank than high self-esteem subjects. High self-esteem subjects may be over-confident and therefore even in situations where they have not performed very well, they may be likely to believe that they have performed well. Low self-esteem subjects on the other hand, may be slightly more realistic about their performance in situations of success and failure. Chronic self-esteem also interacted with test difficulty in determining subjects satisfaction with their test performance. For all three tests, high self-esteem subjects were more satisfied with their test performance than low self-esteem subjects. However, this
relationship was stronger for difficult than easy tests. Previous research has suggested that high self-esteem subjects perform better and are more satisfied with their performance than low self-esteem subjects, when the task is stressful or difficult (Brockner, 1979; Raben & Klimoski, 1973; Schalon, 1967). Though there were no differences in performance, the findings for test satisfaction seem to be consistent with previous research. High self-esteem subjects seem to be more satisfied when they receive a difficult or challenging test, whereas low self-esteem subjects are more satisfied when they receive the reassurance of an easy test.

Similar to the effects found for chronic self-esteem, high situational self-esteem subjects were more satisfied with their performance than low self-esteem subjects. High self-esteem subjects rated themselves as being more successful and having a lower percentage of people doing better than them than low self-esteem subjects. They also saw themselves as having greater ability to perform on the test than low self-esteem subjects. High self-esteem subjects rated it as more important to possess a good vocabulary and do well on the test than low self-esteem subjects. These results were surprising, given that there were no main effects of situational self-esteem on performance. In addition, in spite of the relatively high correlation between verbal ability and situational self-esteem ($r=.49$, $p=.0001$), situational self-esteem had effects independent of verbal ability.

**Effects of Test difficulty**
One of the strongest findings was a main effects of test difficulty on test attitudes. As tests became more difficult, subjects' attitudes towards the test became more unfavorable, i.e., subjects who received difficult tests perceived the test to be more biased, unfair, unclear, and invalid than subjects who received easy tests. These findings are not very surprising, given that the difficult test was extremely and unreasonably hard. What was surprising was that subjects rated the easy tests so highly. The test was conducted so that even subjects with extremely poor vocabularies could do extremely well. Thus, it is clear that subjects were extremely self-serving in their attitudes and reactions to the test. Both high and low self-esteem subjects derogated the difficult test more than they derogated the easy test. Subjects' estimates of satisfaction with performance also decreased, with an increase in the level of test difficulty. As the test difficulty increased, subjects decreased their estimates of the extent to which their test performance was under their control. They also decreased their estimates of the importance of possessing a good vocabulary and their attributions of the amount of ability they possessed to do well on the test. These findings are consistent with other research showing self-serving biases in causal attributions (Feather, & Simon, 1971; Levine, 1974; Miller, & Ross, 1975) and evaluations of tests (Hamilton, 1969; Johnson, 1966; Steiner, 1968).

**Future Research Directions**

There are several possible directions for future research
suggested by the limitations cited above. Another important
direction for future research would be to examine more carefully
the extent to which self-efficacy mediates effects of preview
difficulty and self-esteem in this study. One possible approach is
to provide independent manipulations of task strategy previews and
task difficulty previews.

The task in this experiment had a very high ability
component. Future studies should look at the effects of previews
on tasks with a lower ability component. This task may allow
motivational factors to have a greater impact on performance. It
was evident that the preview manipulation in this study did not
carry through to the end of the experiment. Future studies may need
stronger preview manipulation to allow a thorough examination of
preview effects.

Kirsch (1985) has recently raised issues regarding the extent
to which perceived environmental contingencies (for example,
incentives) affect self-efficacy. Neither Rotter's social
learning theory (Rotter, 1954) nor Bandura's social learning
theory (Bandura, 1977) take perceived environmental contingencies
into account. Subjects were found to increase expectancy of
success (self-efficacy) as a function of hypothetical incentives
(Kirsch, 1982). He concluded that people consider their levels of
motivation to perform (in this case, as affected by an incentive)
when asked to estimate the probability that they will be
successful at a task. In future studies, self-efficacy and
motivation should be varied independently in previews to determine
if self-efficacy and motivation interact to influence performance as Kirsch suggests.

Future research should also obtain a direct measure of both self-efficacy and the goals that subjects set after the previews and examine the relative effects of these two variables on performance.

**Practical Implications**

The multiple choice test used in this experiment, is a test commonly used in the educational system. Exams, such as the GRE, and the SAT do present realistic previews to students. In addition, a number of theorists have advocated presenting new employees with realistic job previews (Reilly et. al, 1981; Wanous, 1973; 1975; 1980; Wanous, et. al. 1979) which would lead to increased satisfaction and decreased turnover. The present findings provide little substantial support for the use of realistic previews and even suggest that unrealistic previews may be more motivating. Of course, there may be other compelling reasons to provide realistic previews, such as ethical standards respecting the right of an examinee "To know".

**Conclusions**

The present study has raised more questions than it has answered. This is not surprising given that the effects of test previews is a new area of research and this was one of the first experiments conducted. Given the important practical and theoretical implications of the topic, however, it is hoped that much more research will follow.
References


Ilgen, D. R. (1971). Satisfaction with performance as a function
of the initial level of expected performance and the deviation from expectations. Organisation Behavior and Human Performance, 6, 345-361.


Youngberg, C. F. (1963). An experimental study of job satisfaction and turnover in relation to job expectancies and


Appendix A
Figure 4
The Reactions Questionnaire

1. How many items would you estimate that you correctly answered on this test? ____________

2. What percentage of people taking this same exam would you estimate did better than you? Provide a percentage between 0 and 100%. ____________

3. In general, how successful were you on this test? Circle one point on the scale below.
   1----2----3----4----5----6----7----8----9
   not at all       moderately       very
   successful      successful        successful

4. In general, how satisfied are you with your performance on this test?
   1----2----3----4----5----6----7----8----9
   very            moderately       very
   dissatisfied    satisfied        satisfied

5. How important was it that you did well on this test?
   1----2----3----4----5----6----7----8----9
   not very         moderately       very
   important        important        important

6. How important to you is having a good vocabulary?
   1----2----3----4----5----6----7----8----9
   not very         moderately       very
   important        important        important

7. How would you evaluate the test that you took? Circle one point on each of the following scales that expresses your feelings about the test.

   BIASED 1--2--3--4--5--6--7 UNBIASED
   UNFAIR 1--2--3--4--5--6--7 FAIR
   CONFUSING 1--2--3--4--5--6--7 CLEAR
   POOR TEST 1--2--3--4--5--6--7 GOOD TEST
   OF VERBAL ABILITY OF VERBAL ABILITY

8. Why did you perform the way you did on the test? Briefly list some of the major causes of your performance as you see it.
   1.
   2.
   3.
   4.
   5.

9. To what extent do you think that your score on the test was
the result of things that you can't control versus things that you can control.

1-----2-----3-----4-----5-----6-----7-----8-----9
Totally the some of Totally the
result of things both result of things
I can't control I can control

10. To what extent do you think your scores on this test was
cased by things that are stable (do not change) versus things
that are unstable (changing)?

1-----2-----3-----4-----5-----6-----7-----8-----9
Totally the some of Totally the
result of things both result of things
that are unstable that are stable

11. To what extent do you think that your scores on the test was
cased by things in you (such as your ability, effort) versus
things that are outside you (the test, luck etc.)?

1-----2-----3-----4-----5-----6-----7-----8-----9
Totally the some of Totally the
result of things both result of things
outside me in me

12. How hard did you try to do well on this test?

1-----2-----3-----4-----5-----6-----7-----8-----9
not very moderately very
hard hard

13. How lucky were you in picking the correct answers for the
test?

1-----2-----3-----4-----5-----6-----7-----8-----9
not very moderately very
lucky lucky

14. How difficult was the test?

1-----2-----3-----4-----5-----6-----7-----8-----9
not very moderately very
difficult difficult
difficult

15. How difficult was the sample test that you received?

1-----2-----3-----4-----5-----6-----7-----8-----9
not very moderately very
difficult difficult
difficult

16. How much ability do you have to do well on a test such as
this?

1-----2-----3-----4-----5-----6-----7-----8-----9
not very moderate amount very high
much ability of ability level of ability
Figure 5
The Rosenberg Self-Esteem Scale

This scale consists of ten items. Each item is followed by a four point response scale. Check one of the four points on the scale for each item.

1. I feel that I am a person of worth, at least on an equal plane with others.
   1. _____ strongly agree
   2. _____ agree
   3. _____ disagree
   4. _____ strongly disagree

2. I feel that I have a number of good qualities.
   1. _____ strongly agree
   2. _____ agree
   3. _____ disagree
   4. _____ strongly disagree

3. All in all, I am inclined to feel that I am a failure.
   1. _____ strongly agree
   2. _____ agree
   3. _____ disagree
   4. _____ strongly disagree

4. I am able to do things as well as most other people.
   1. _____ strongly agree
   2. _____ agree
   3. _____ disagree
   4. _____ strongly disagree

5. I feel that I do not have much to be proud of.
   1. _____ strongly agree
   2. _____ agree
   3. _____ disagree
   4. _____ strongly disagree

6. I take a positive attitude towards myself.
   1. _____ strongly agree
   2. _____ agree
   3. _____ disagree
   4. _____ strongly disagree

7. On the whole I am satisfied with myself.
   1. _____ strongly agree
   2. _____ agree
   3. _____ disagree
   4. _____ strongly disagree

8. I wish I could have more respect for myself.
1. ______ strongly agree
2. ______ agree
3. ______ disagree
4. ______ strongly disagree

9. I certainly feel useless at times.
1. ______ strongly agree
2. ______ agree
3. ______ disagree
4. ______ strongly disagree

10. At times I think that I am no good at all.
1. ______ strongly agree
2. ______ agree
3. ______ disagree
4. ______ strongly disagree
Figure 6
The Verbal Self-Esteem Scale

This scale consists of ten items. Each item is followed by a four point response scale. Check one of the four points on the scale for each item.

1. I feel that I have a good vocabulary, at least on an equal plane with others.
   1. _____ strongly agree
   2. _____ agree
   3. _____ disagree
   4. _____ strongly disagree

2. I feel that relative to other students at my school, my vocabulary is definitely below average.
   1. _____ strongly agree
   2. _____ agree
   3. _____ disagree
   4. _____ strongly disagree

3. I am inclined to believe that my vocabulary is one of my major weaknesses.
   1. _____ strongly agree
   2. _____ agree
   3. _____ disagree
   4. _____ strongly disagree

4. I can often figure out the meaning of words I do not know.
   1. _____ strongly agree
   2. _____ agree
   3. _____ disagree
   4. _____ strongly disagree

5. When writing a paper I often have a hard time finding the right words to use.
   1. _____ strongly agree
   2. _____ agree
   3. _____ disagree
   4. _____ strongly disagree

6. I am not very good at taking vocabulary tests.
   1. _____ strongly agree
   2. _____ agree
   3. _____ disagree
   4. _____ strongly disagree

7. On the whole I am satisfied with my vocabulary skills.
   1. _____ strongly agree
   2. _____ agree
   3. _____ disagree
   4. _____ strongly disagree
8. I wish I had a stronger vocabulary.
   1. ______ strongly agree
   2. ______ agree
   3. ______ disagree
   4. ______ strongly disagree

9. I feel that I have much to be proud of with respect to my vocabulary skills.
   1. ______ strongly agree
   2. ______ agree
   3. ______ disagree
   4. ______ strongly disagree

10. My vocabulary is so good that I seldom have to use a dictionary.
    1. ______ strongly agree
    2. ______ agree
    3. ______ disagree
    4. ______ strongly disagree
Figure 7

The Sarason Test Anxiety Scale

This scale consists of 37 items. For each item either circle a true or a false.

1. While taking an important exam I find myself thinking of how much brighter the other students are than I am.  TRUE/FALSE

2. If I were to take an intelligence test I would worry a great deal before taking it.  TRUE/FALSE

3. If I knew I was going to take an intelligence test I would feel confident and relaxed, beforehand.  TRUE/FALSE

4. While taking an important examination I perspire a great deal.  TRUE/FALSE

5. During course examinations I find myself thinking of things unrelated to the actual course material.  TRUE/FALSE

6. I get to feel very panicky when I have to take a surprise exam.  TRUE/FALSE

7. During tests I find myself thinking of the consequences of failing.  TRUE/FALSE

8. After important test I am frequently so tense that my stomach gets upset.  TRUE/FALSE

9. I freeze up on things like intelligence tests and final exams.  TRUE/FALSE

10. Getting a good grade on one test does not seem to increase my confidence on the second.  TRUE/FALSE

11. I sometimes feel my heart beating very fast during important tests.  TRUE/FALSE

12. After taking a test I always feel I could have done better than I actually did.  TRUE/FALSE

13. I usually get depressed after taking a test.  TRUE/FALSE

14. I have an uneasy, upset feeling before taking a final exam.  TRUE/FALSE

15. When taking a test my emotional feelings do not interfere with my performance.  TRUE/FALSE

16. During a course examination I frequently get so nervous that I forget facts I really know.  TRUE/FALSE
17. I seem to defeat myself while working on important tests. TRUE/FALSE

18. The harder I work at taking a test or studying for one, the more confused I get. TRUE/FALSE

19. As soon as an exam is over I try to stop worrying about it, but I just can't. TRUE/FALSE

20. During exams I sometimes wonder if I'll ever get through college. TRUE/FALSE

21. I would rather write a paper than take an examination for my grade in a course. TRUE/FALSE

22. I wish examinations did not bother me so much. TRUE/FALSE

23. I think I could do much better on tests if I could take them alone and not feel pressured by a time limit. TRUE/FALSE

24. Thinking about the grade I may get in a course interferes with my studying and my performance on tests. TRUE/FALSE

25. If examinations could be done away with I think I would actually learn more. TRUE/FALSE

26. On exams I take the attitude "If I don't know it now there's no point in worrying about it." TRUE/FALSE

27. I really don't see why some people get so upset about tests. TRUE/FALSE

28. Thoughts of doing poorly interfere with my performance on tests. TRUE/FALSE

29. I don't study any harder for final exams than for the rest of my course work. TRUE/FALSE

30. Even when I'm well prepared for a test, I feel very anxious about it. TRUE/FALSE

31. I don't enjoy eating before an important test. TRUE/FALSE

32. Before an important exam I find my hands or arm trembling. TRUE/FALSE

33. I seldom feel the need for "cramming" before an exam. TRUE/FALSE

34. The university ought to recognize that some students are more nervous than others about tests and this affects their
performance. TRUE/FALSE

35. It seems to me that examination periods ought not to be made the tense situations which they are. TRUE/FALSE

36. I start feeling very uneasy just before getting a test paper back. TRUE/FALSE

37. I dread courses where the professor has the habit of giving "pop" quizzes. TRUE/FALSE
Figure 8
The SET Verbal Ability Questionnaire

This is a test of word meaning. For each word in the left-hand column choose from among the numbered words to the right the one which means the same or most nearly the same. Write the number of the word you choose on the line at the right.

22. METICULOUS 1. Infested 2. Tender 3. Casual 4. Precise
<table>
<thead>
<tr>
<th></th>
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<th></th>
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<tbody>
<tr>
<td>AUGMENT</td>
<td></td>
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Figure 9
Self-efficacy Scale Given Before the Test

You will be given a vocabulary scale consisting of 100 items. Indicate on the following scale the number of items you think you can solve. Please also state your chance of getting these items correct on a scale from 0 to 100%. Answer for each level that you think you can solve eg. if you think that you can solve 10 items, circle yes for that level. If you think that you can solve 20 items circle yes for that level too. For all the different levels that you have circled yes state your chances for getting that many number of items correct on a scale from 0-100%.

<table>
<thead>
<tr>
<th>Col A</th>
<th>Col B</th>
</tr>
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<tbody>
<tr>
<td>Yes/no</td>
<td>0-100 %</td>
</tr>
<tr>
<td>How many of these items can you solve?</td>
<td>What are your chances of getting these items right?</td>
</tr>
</tbody>
</table>

1. I can solve 10 items in 20 mins.  yes/no
2. I can solve 20 items in 20 mins.  yes/no
3. I can solve 30 items in 20 mins.  yes/no
4. I can solve 40 items in 20 mins.  yes/no
5. I can solve 50 items in 20 mins.  yes/no
6. I can solve 60 items in 20 mins.  yes/no
7. I can solve 70 items in 20 mins.  yes/no
8. I can solve 80 items in 20 mins.  yes/no
9. I can solve 90 items in 20 mins.  yes/no
10. I can solve 100 items in 20 mins. yes/no