

CHAPTER 15

PSYCHOLOGICAL TESTS

Chapter at a Glance

SECTION 1: Psychology and Testing

- Psychological tests assess abilities, feelings, attitudes, and behavior.
- For a psychological test to be useful and accurate, it has to be standardized, reliable, valid, and have norms for scoring.
- Computers can be used to administer tests and help students prepare for tests.

SECTION 2: Measuring Achievement, Abilities, and Interests

- Three major kinds of tests measure achievement, aptitudes, and interests.
- Achievement tests measure people's skills and knowledge in specific academic areas.
- Aptitude tests measure a specific set of skills.
- Vocational aptitude tests help people figure out what their interests are.

SECTION 3: Personality Tests

- Objective tests present test takers with a standardized group of test items in the form of a questionnaire.
- Projective tests have no clearly specified answers and use an open-ended format.

SECTION 4: Taking Tests

- Students can follow some general tips to improve their performance on tests.
- Multiple-choice questions are common on standardized tests such as the SATs.
- There are ways for students to reduce test anxiety.

strong, moderate, or weak. The stronger one's preference, the more one will exhibit the characteristics of a dimension.

Each preference is characterized by a particular way of seeing situations and other people. For example, extroverted people enjoy interacting with others, while introverted people prefer solitary activities. So extroverted people are more likely to enjoy jobs such as police work, sales, teaching, and other occupations that involve constant, daily contact with other people. Introverted people, on the other hand, are more likely to prefer jobs such as research, writing, and various forms of art that allow them to work individually on projects.

Intuitive people value creativity, while sensation-oriented people prefer practicality. Thinking people prefer to be logical and analytical when making decisions, while the decision-making process for feeling people relies more on interpersonal involvement and subjective values. Judgers typically prefer an environment that is ordered and structured, while perceivers tend to be more flexible and spontaneous.

The total possible combinations add up to 16 types, such as INTJ, ISFP, ESTJ, ENFP, and so on. In theory, each person is one of those 16 types. According to people who support the MBTI's results, how an individual sees the world and how he or she behaves can be predicted on the basis of the person's personality type.

The MBTI is just one kind of psychological test. There are many others that you will undoubtedly encounter in life and that you will learn more about in this chapter.

What do you think?

1. What are the four dimensions that MBTI measures?
2. How might being labeled as having a certain type of personality affect you on the job?

Psychology and Testing

Before You Read

Main Idea

Psychological tests include achievement tests, aptitude tests, interest tests, and personality tests.

Reading Focus

1. What are some uses of psychological tests?
2. What are four important features of a psychological test?
3. How can computers be used in testing?

Vocabulary

behavior-rating scales
self-reports
standardized test
validity scales
norms
norm group

TAKING NOTES

Use a graphic organizer like this one to take notes on the four kinds of psychological tests discussed in this section.

1. Achievement:
2. Aptitude:
3. Interest:
4. Personality:

YOUR Skill AND You

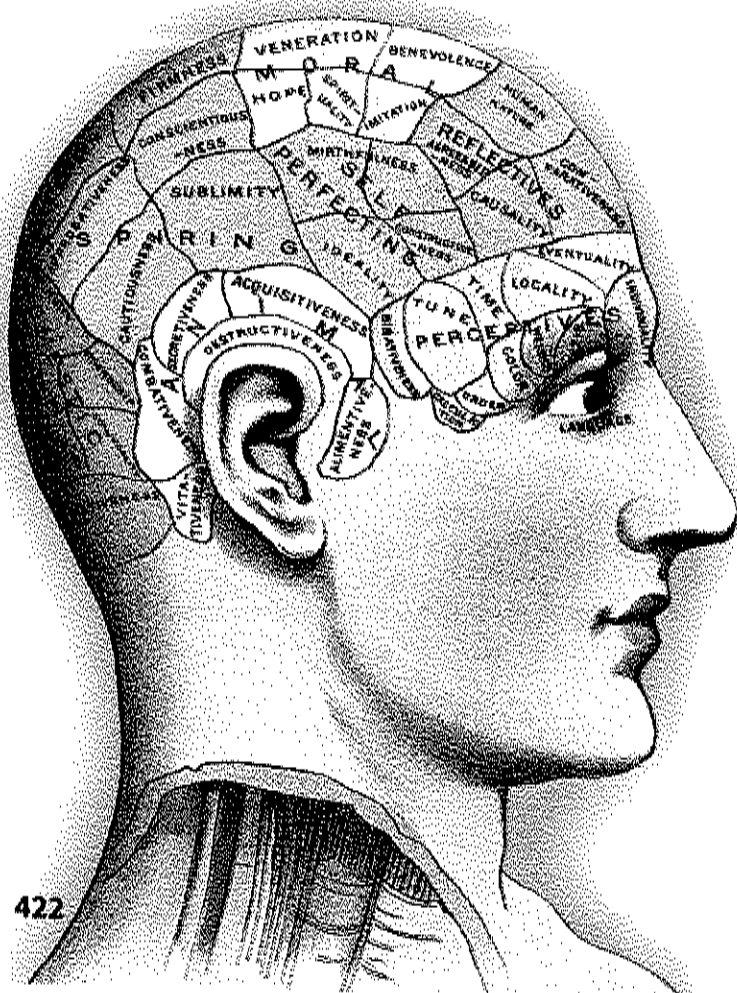
PSYCHOLOGY CLOSE UP

Do the bumps on your head say something about what is in your brain?

Phrenology is the study of the skull, its shape and its bumps. This field was based on the mistaken belief that the bumps and protuberances of the skull somehow reveal character and mental capacity. Many people thought that the shape and bumps of one's skull correlate with parts of the brain believed to control various personality traits.

Franz Joseph Gall (1758–1828) argued that each mental ability is based in a specific part of the brain. He thought that the size of the specific brain region mirrored the importance of the ability in a particular person. Further, he said that this importance or prominence was reflected on the surface of the skull. Some of the specific traits that Gall and his followers looked for included so-called “criminal” traits. They identified specific areas of the skull as associated with, for example, combativeness and cautiousness.

Phrenology remained popular into the 20th century, although it had no scientific validity. Modern science has totally discredited Gall's theories. Now there are more reliable and scientific tests to assess various aspects of our minds and personalities. ■



Uses of Psychological Tests

There are many different kinds of psychological tests. You have already learned about one kind of psychological test: intelligence tests. The psychological tests discussed in this chapter include achievement tests, aptitude tests, interest tests, and personality tests.

Tests to determine how much students have learned are called achievement tests. Tests for special aptitudes and interests are sometimes given to an individual to determine whether he or she is suited for certain occupations. There are also tests that identify the psychological traits that make up a person's personality. Therefore, tests that measure psychological traits are also known as personality tests. Personality tests measure almost every known personality trait. Some tests measure a dozen or more traits at one time. The Myers-Briggs Type Indicator is an example.

Psychological tests assess abilities, feelings, attitudes, and behaviors. The responses a person gives on test items can help psychologists to predict a person's future behavior, as well as possible career choices.

Psychological tests are hardly a new invention. It appears that over 2,500 years ago, during the golden age of Greece, people were selected for government service on the basis of psychological tests. Those early tests measured physical as well as mental abilities. Evidence also suggests that psychological tests were used to select civil-service employees some 2,000 years ago in China. The Chinese tests measured verbal and mathematical abilities as well as knowledge of law and geography.

Modern researchers have been using various types of psychological tests for about 100 years. Francis Galton, James Cattell, Alfred Binet, and other early psychologists began constructing modern psychological tests in the late 1800s.

Psychological tests can be used to help people make important decisions. Tests can help indicate whether a person is suited for a particular class in school or for medication to reduce agitation. Intelligence tests are often used to indicate whether children are likely to profit from special kinds of educational experiences. Transformed score tests

such as the SAT can help determine whether students are likely to succeed in college. As part of their admissions process, college admissions personnel also often ask high school teachers and guidance counselors to rate applicants on scales that measure such traits as willingness to work hard and cooperativeness.

More specialized tests are used to measure students' prospects for success in graduate schools such as business, law, and medical schools. Many graduate schools use the Graduate Record Examination (GRE). Similarly, medical schools use the Medical College Admission Test (MCAT).

Some psychological tests measure behavior directly. For example, **behavior-rating scales** are used to measure behavior in such places as classrooms and hospitals. With behavior-rating scales, trained observers may check off each occurrence of a specific behavior within a certain amount of time, say, 15 minutes. For example, an observer might count how many times a person gestures while talking to someone else. This might be a measure of how outgoing the person is.

Behavior-rating scales are growing in popularity today, particularly for use with children. However, most psychological tests rely on people's **self-reports** about their attitudes, feelings, and behavior—that is, what people say about themselves.

Reading Check **Analyze** What are behavior-rating scales used for?

Features of Psychological Tests

Psychological tests are sometimes frightening for the test takers and sometimes misleading for the evaluators. Tests such as the SAT can be particularly scary because the results on a test taken on one day can seem nearly as important as the grades earned over several years. The results can be misleading because a person may be ill or distracted on the day of the test and not perform as well as he or she might on another day.

For a psychological test to be useful and reasonably accurate, it has to have certain features, or characteristics. It has to be standardized, it has to show reliability and validity, and it has to have norms for scoring.

ACADEMIC VOCABULARY

scales standards of measurement or judgment; criteria

CASE STUDY CONNECTION

Work and Personality The fact that the Myers-Briggs Type Indicator measures so many traits is one of the reasons it has been so extensively used in fitting people to jobs.

Standardization A **standardized test** is one that is administered and scored the same way every time. Psychologists and educators are trained in how to administer and score standardized tests accurately. For example, the two most widely used intelligence tests, the Stanford-Binet and Wechsler, are given individually. Test administrators are trained to ask the same questions in the same way. They also receive training in how to score the tests and interpret those scores.

Of course, some experts question the validity of IQ tests as general measures of intelligence. They believe that most IQ tests measure only analytical ability and that there are other abilities, such as creativity and practical skills, that the tests do not measure.

Other tests such as the SAT are given to thousands of students at a time. All students receive the same instructions, and computers grade the answers. Essay questions on a standardized test are not graded by a computer. However, instructions for administrators on how to score essay questions are very clear and precise. This clarity and precision help to ensure that the same criteria will be used to score essay questions. This is true regardless of who is doing the scoring, or where or when the scoring is being done.

Reliability and Validity You learned earlier that the *reliability* of a measure is its consistency. That is, an individual's score on a test should be the same or very nearly the same

every time the individual takes that test. Test-retest reliability is demonstrated when a person receives similar scores on the same test taken on different occasions. *Validity* refers to the extent to which a test measures what it is intended to measure and predicts what it is intended to predict.

Test results can be distorted when people answer in ways they think will please the interviewer. People have also been known to exaggerate their problems on personality tests as a way to get attention.

In addition, people may answer in the way they think is "correct," even if there are no objectively right or wrong answers. To avoid such distortion, some psychological tests have validity scales built into them.

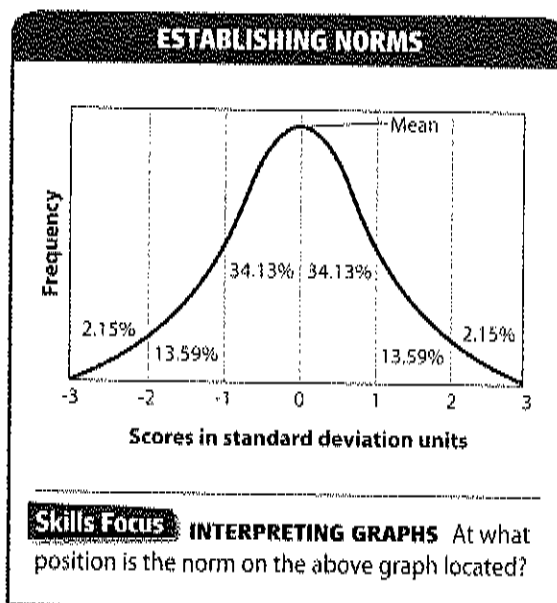
Validity scales involve questions that, if answered in a certain way, let the psychologist know that the test taker is not answering the questions honestly. Validity scales thus depend on the answers to a variety of interlinking questions.

For example, there may be several test items on which a psychologist would expect to see a pattern of similar answers. If no such pattern is found, those answers, taken together, may indicate that the test taker is not answering questions honestly. Validity scales are often helpful, as in identifying substance abuse. However, they are not foolproof.

Most tests you take in your classes are not psychological tests, and most are not constructed scientifically. Still, these tests should also be reliable and valid. Generally speaking, the longer a test is, the more valid it is. Would you rather have your grade on a math test depend on solving just one problem, or would you prefer it to be based on your solutions to 10 or 20 problems?

Some students believe that the scores they receive on tests taken in class are often not a valid measure of what they know. They argue that the tests do not really measure what they have learned because their nervousness interferes with their ability to perform well.

Norms Psychological tests are usually scored by comparing an individual's score to the norm. **Norms** are established standards of performance. They are designed to tell test administrators which scores are average, high, or low.



Norms for a test are usually established by administering the test to a large group of people who are similar to those for whom the test is intended. This group of test takers is called the **norm group**.

Imagine you are asked to create a psychological test for elementary school students. The tests would need to ask questions appropriate to the age of the children.

You would establish the norm by administering the test to thousands of elementary school students of the same age or grade level. This would be your norm group. The average score of the norm group would become the norm for that test. The scores of all other children taking the test in the future would be compared to that established norm.

Reading Check Summarize What is a standardized test?

Computers and Testing

Computers can be used to administer tests and to help students prepare for tests such as the SAT and the ACT. Many test preparation programs are now available from a variety of reputable sources. Some offer detailed tutorials; others offer customized study plans. Most contain hundreds of practice questions that familiarize students with a particular test and help reduce test anxiety. In addition,

such programs are upbeat and fun, making test preparation an enjoyable experience for students.

Computers have been testing people for more than 30 years. One computer program currently in use for this purpose is CASPER, which stands for Computerized Assessment System for Psychotherapy Evaluation and Research.

A CASPER interview lasts about 30 minutes. The interview explores a wide variety of topics, including family relationships, social activities, overall life satisfaction, and specific behavior patterns that may be suggestive of physical and psychological disorders. The test results obtained in a CASPER interview are provided to the client and therapist. Questions and responses are displayed on a monitor. To answer a question, the test taker presses a number on the keyboard. CASPER follows up with more questions.

How well do people respond to being tested by a computer? Research shows that people find the computer program user-friendly. In addition, standardization seems to be easier and more consistent with a computer. Computers can be programmed to ask specific questions in a prescribed sequence.

Reading Check Summarize What is one advantage of computer testing?

SECTION 1 Assessment

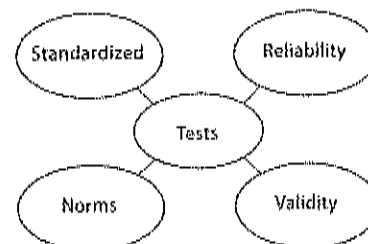
Reviewing Main Ideas and Vocabulary

1. **Recall** What do most psychological tests rely heavily upon for information about people's attitudes, feelings, and behavior?
2. **Define** What are norms?
3. **Identify** How might computers help students with test preparation?

Thinking Critically

4. **Explain** What does the concept of validity in a test specifically refer to?
5. **Categorize** What do psychological tests assess?

6. **Analyze** Using your notes and a graphic organizer, explain standardization, norms, reliability, and validity in tests.



FOCUS ON WRITING

7. **Persuasive** Write a speech in which you argue either for or against the use of tests to identify personality types. Read your speech to the class.

Measuring Achievement, Abilities, and Interests

Before You Read

Main Idea

Achievement tests and aptitude tests are both commonly administered to students in high school.

Reading Focus

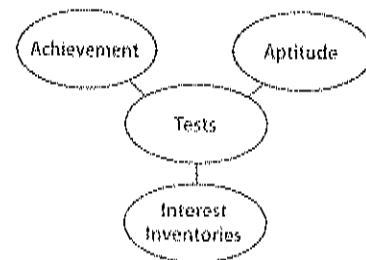
1. What do achievement tests measure?
2. What do aptitude tests measure?
3. How do people distinguish between achievement and aptitude?
4. What are two vocational interest inventories?

Vocabulary

achievement tests
aptitude tests
vocational interest inventories
forced-choice format



Use a graphic organizer like this one to take notes on different kinds of tests.



Tinker, Tailor, Soldier, Spaceman

PSYCHOLOGY CLOSE UP

What do you want to be when you grow up? When you were younger, did you ever walk down the street with your parents only to be stopped by a kindly neighbor and asked what you wanted to be when you were older? Most children develop a standard response to such questions, usually born of a genuine interest in doing something exciting some day, such as flying to distant planets, putting out fires, rounding up stray cattle, helping sick people, or fighting the nation's enemies. And childhood play—with its costumes of astronauts, cowboys, fashion designers, firefighters, nurses, and so forth—only makes more real the childhood dreams of an exciting, satisfying, and challenging career.

And yet, even though most children don't dream of being an accountant or an insurance analyst, those jobs are much closer to the reality of most people's lives than are the jobs of cowpoke or action hero. Somewhere along the line, most people learn that childhood dreams and aspirations must be adapted to measured aptitudes, abilities, and interests. For most of us, we begin to get this dose of reality in school, where we are measured and tested in a number of ways to determine our interests and abilities.



Achievement Tests

Achievement tests, aptitude tests, and tests of interests are all closely related. Most of the tests that you have taken in your classes at school have probably been achievement tests. There are also tests that measure people's abilities, or aptitudes. Still other tests help people identify their interests. Students have been taking achievement tests for many years. When a student is having difficulty deciding on a college major, a teacher or guidance counselor can focus on testing a student's abilities and interests.

Achievement tests measure people's skills and the knowledge they have in specific academic areas. A history test is an example of an achievement test. Throughout elementary and middle school, most students' basic skills are tested every year. They are tested in science, reading, math, and many other subject areas.

In high school, most students are tested repeatedly on their achievements in each of their courses. Factors such as intelligence and motivation play a role in achievement, but so does learning. For example, it should come as no surprise that students taking Spanish will have higher scores on a Spanish achievement test than students who are not taking Spanish, even though the students who haven't studied Spanish may be equal in intelligence and motivation.

College students who wish to go to graduate school may be required to take standardized achievement tests in their major field of study—Spanish, political science, math, or psychology, for example. The tests are designed to determine whether the students have enough knowledge in the specific area to succeed in graduate school.

Reading Check Summarize What are some examples of achievement tests?

Aptitude Tests

Achievement tests measure a narrow range of skills. Intelligence tests, on the other hand, measure overall learning ability. Aptitude tests fall somewhere in between. Aptitude tests measure more specific abilities or skills than intelligence tests but broader abilities or skills than achievement tests. **Aptitude tests**

are generally used to determine whether a person is likely to do well in a given field of work or study.

The SAT is a general aptitude test. It is used to predict how well students are likely to do in college. The Law School Admission Test and the Medical College Admission Test are more specialized. These tests use percentile grade equivalent scores—the percent of scores at or below any given score—to predict how well students will do in law school and medical school, respectively. For example, success in medical school depends heavily on the ability to understand chemistry and biology. Therefore, the MCAT has many questions relating to these and related subjects.

Of course, aptitude is not the only factor that influences achievement in school. Some people score high on tests such as the SAT but earn comparatively low grades in college, while others with lower SAT scores may earn relatively higher grades in college. Other factors besides aptitude important for success in school include having a positive attitude toward school and placing a high value on education. It is also important to possess certain personality traits such as perseverance and optimism in order to succeed in school.

Reading Check Identify Supporting Details What is an example of an aptitude test?

Distinguishing Between Achievement and Aptitude

Sometimes it is difficult to distinguish between an achievement test and an aptitude test. Aptitude tests are intended to measure potential for learning in a specific area. An aptitude test is usually given to a person before that person has had any training in the specific area. It is used to predict how well the person will do in that particular area after receiving training.

However, current abilities and future success are often based on past achievements. For example, the SAT is intended to measure the ability to do well in college, but it is given in specific languages. Therefore, the ability to do well on the SAT depends on achievements in English or the language in which the individual takes the test.

ACADEMIC VOCABULARY

percentile one of a set of points on a scale arrived at by dividing a group into parts in order of magnitude

Choosing a Career

One of the most important tasks of the teen years is thinking about what sort of career you would like to have when you are out of school and an adult. Take a survey in your class to find out the top job choices of your classmates.

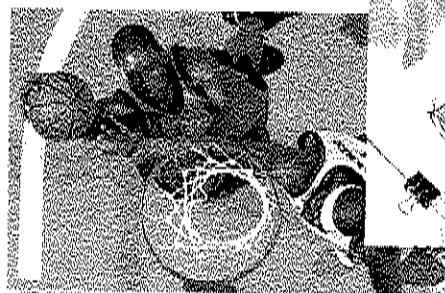
PROCEDURE

1. List your top five career choices.
2. Discuss with other students their top five choices.
3. Discuss what skills and talents are required for frequently-listed jobs.

ANALYSIS

1. Is it realistic for most students to expect to have a career in the top choices listed? Discuss.
2. Can everyone hope to be an astronaut or an NBA star? Discuss.
3. Discuss realistic plans to reach achievable goals.

Quick Lab



Moreover, the SAT consists of verbal and quantitative parts. The verbal sections rely heavily on vocabulary—that is, knowledge of the meanings of words. The quantitative part relies heavily on mathematical knowledge. Skill in these areas—knowledge of vocabulary and mathematics—depends on the amount one has learned or achieved. Thus, the test does not simply measure aptitude.

However, because performance on the SAT does not depend on one specific course, the SAT used to be called the *Scholastic Aptitude Test*. To emphasize the role that achievement plays, the test was briefly renamed the *Scholastic Assessment Test*. Now, it is known simply as the SAT.

It may be that there is no such thing as a “pure” aptitude test. All aptitude tests rely on some kind of prior achievement.

Reading Check Summarize What two areas of knowledge does the SAT rely heavily upon?

Vocational Interest Inventories

People usually perform better in jobs that interest them. This is probably due to the fact that people tend to pay more attention and thus absorb more information if something has captured their attention. Moreover, people who share interests with those who are successful in a given job are more likely to succeed in that job.

Thus, many psychologists and educators use **vocational interest inventories** to help people determine whether their interests are similar to those of people in various lines of work. Two widely used interest inventories are the Kuder™ Preference Records and the Strong-Campbell Interest Inventory.

Kuder® Career Search A counselor may give a student a test called a Kuder Career Search. This test has a **forced-choice format**, which means that the test taker is forced to choose one of the answers, even if none of them seems to fit his or her interests precisely. For example, test takers are asked to indicate which of a group of activities they like most and which they like least. They are not allowed to answer “none of the above.”

The Kuder asks test takers to choose between activities such as the following:

- a. hiking in the forest
- b. giving someone advice
- c. playing a musical instrument

The results are scored to show how much the person appears to be interested in areas such as science, music, art, literature, and outdoor work.

Campbell™ Interest and Skill Survey (CISS®) People taking a Kuder test can see where their interests lie and which areas they might want to look into for employment opportunities.

Obviously, a person who repeatedly indicates a preference for music-related activities is showing a definite interest in music. The CISS is not as obvious or direct as the Kuder Career Search. The CISS includes many different kinds of items.

The CISS compares the test taker's interests with the interests of people who enjoy and are successful in various kinds of work. For example, if most successful accountants enjoy reading and solving puzzles, then a test taker who indicates these same preferences might also be a successful accountant. Therefore, the content of the test questions themselves may not be as important as the combination of interests the test taker shares with people who are employed in certain occupations such as accounting or working with numbers.

Evaluation of Interest Inventories Interest inventories are of great value to students who do not have specific career goals. There are over 20,000 different occupations in the United States, and the task of trying to select one can be overwhelming to people who are unclear about their interests. Interest inventories can help point people in a direction they might find fulfilling.

On the other hand, interest in an area does not necessarily mean that one has the ability, or aptitude, to succeed in that area. Therefore, it is usually desirable to make vocational

choices on the basis of one's abilities as well as one's interests.

No important life decisions should be made on the basis of a single psychological test. Tests provide only one source of information about an individual, and no test is perfectly reliable. Teachers' and counselors' personal knowledge of an individual should also be taken into account. People may also believe that the results of a single test may not be an accurate reflection of who they are.

Most students are usually pleased with the outcome of their interest tests because the scores often seem to fit their own images of themselves. If the test results seem wrong to them, it would be unwise to follow the directions suggested by the test results. For example, suppose the test showed that a particular student likes outdoor activities, which suggests a career that includes working outdoors. An individual may enjoy hiking and boating *occasionally* but also know that he or she would dislike having to work outside all day and every day. He or she would have to carefully consider the test results in light of what he or she knows about himself or herself. Taking additional interest tests might provide a clearer picture of the kind of career he or she would enjoy.

Reading Check Summarize What is a forced-choice format?

SECTION 2 Assessment

Reviewing Main Ideas and Vocabulary

- 1. Define** What kind of test is the SAT?
- 2. Recall** How is the Kuder Career Search test structured?
- 3. Describe** Why was the SAT recently renamed?

Thinking Critically

- 4. Compare and Contrast** What is the difference between an achievement test and an aptitude test?
- 5. Analyze** What is the purpose of vocational interest inventories?

- 6. Summarize** Using your notes and a graphic organizer like the one below, summarize the ways in which achievement tests, aptitude tests, and interest inventories are used.

Tests	
Achievement	
Aptitude	
Interest Inventories	

FOCUS ON WRITING

- 7. Descriptive** In a paragraph, explain what you wanted to grow up to be when you were a child. Assess whether your career goals have changed as you have grown older.

Implicit Attitude Tests

Implicit attitude (or association) tests (IATs) are on the cutting edge of current psychological research. These tests measure not what people explicitly (clearly) say they believe about race and gender, but rather what their actions reveal them to implicitly, or unconsciously, believe. In other words, you might have prejudices you don't even know about.

In an article titled "Our Racist, Sexist Selves" that appeared in the *New York Times* on April 6, 2008, columnist Nicholas D. Kristof describes some of these implicit attitude tests. Kristof mentions a number of universities that offer online psychological tests. These implicit attitude tests reveal that many people have unstated and unacknowledged prejudices based on race and gender.

The University of Chicago, for example, has a test that measures implicit attitudes about race. In one test, the test taker comes face to face with white men and black men, some of whom are holding objects that could be cell phones or guns. The

idea of the test is to shoot the gunmen but not the others. Test results reveal that both white and black test takers are quicker to shoot the black men than they are the white men.

Harvard also offers online psychological tests that test implicit attitudes on race. The results of these tests reveal the discrepancy between what people believe or think about themselves and their unconscious association of white with good and black with evil (Banaji, et al.).

Project Implicit is a joint project of Harvard, the University of Virginia, and Washington University. The project involves a large-scale study of implicit preferences. Project Implicit's

Implied Association Test attempts to demonstrate differences between explicit attitudes or beliefs on a subject and implicit or unconscious beliefs (Banaji, Nosek, and Greenwald, 2006). The topics explored by Project Implicit include disabilities, religion, body weight, and age.

Gender is another problematic arena of unconscious, unstated biases. Kristof points out that implicit attitude tests reveal that most people have biases not only against people of other races but also against women in positions of power and authority. In fact, some scholars think that prejudice based on race may be easier to overcome than prejudice based on gender (Eagly et al.).

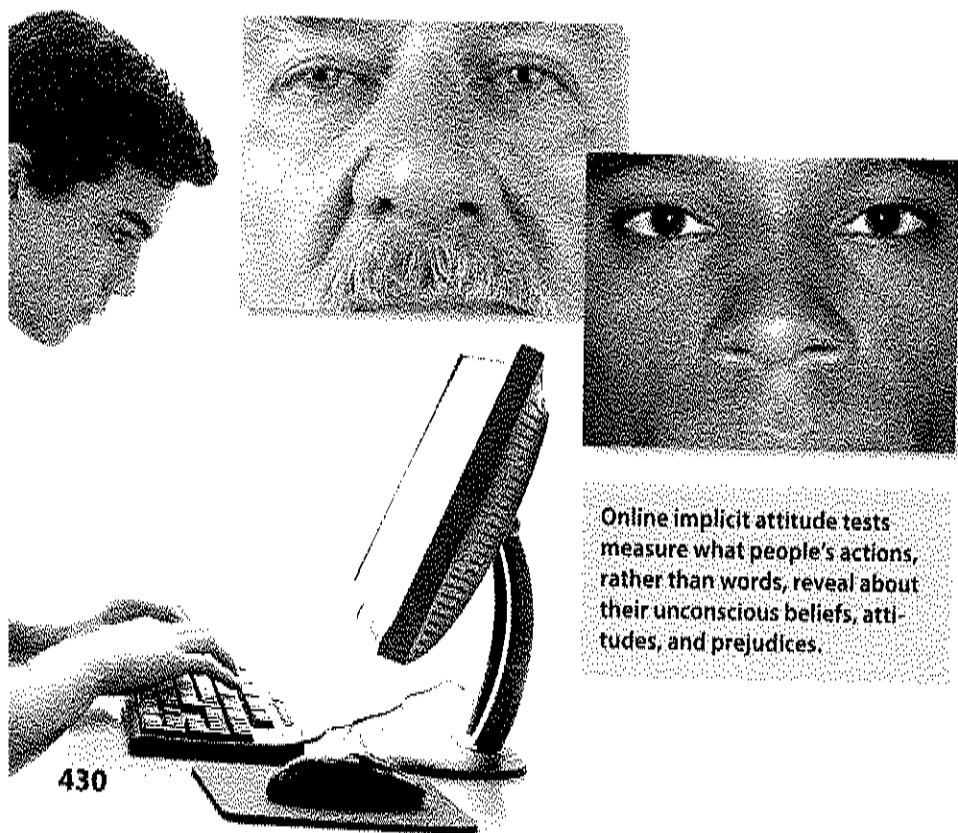
Another area where implicit and explicit attitudes come into play is that of obesity. Most people explicitly claim not to be prejudiced when it comes to body type. But tests reveal a common prejudice against obesity shared by many people.

However, some recent research studies suggest that implicit attitude tests must be used with caution. One study has suggested that test taker performance on IATs can be affected if the participant thinks the test results will be made public.

Thus, one cautionary concern is what an IAT is really measuring. Another concern is the honesty of people's responses.

Thinking Critically

1. **Explain** What do implicit attitude tests measure?
2. **Discuss** What are some ways implicit biases might be overcome?



Online implicit attitude tests measure what people's actions, rather than words, reveal about their unconscious beliefs, attitudes, and prejudices.

Personality Tests

Before You Read

Main Idea

Objective tests and projective tests can help to describe and measure various aspects of personality.

Reading Focus

1. What are objective tests?
2. How would you describe projective tests?

Vocabulary

objective tests
projective tests
open-ended format

TAKING NOTES

Use a graphic organizer like this one to take notes about objective tests.

MMPI-2	CPI

SENSE OF HUMORS



Black Bile



Yellow Bile



Blood



Phlegm

These early paintings illustrate the idea of four personality types based on four humors (bodily fluids).

PSYCHOLOGY CLOSE UP

Why are people the way they are?

The Greek physician Hippocrates (460–c. 375 B.C.) developed the idea of four personality types based on four humors or bodily fluids: black bile (melancholic, sad), yellow bile (choleric, angry), blood (sanguine, active, energetic), and phlegm (phlegmatic, listless). Galen (A.D. 129–200), companion and physician to the Roman emperor Marcus Aurelius and personal physician to the emperor Commodus, was also the chief physician to the gladiators. Living about 600 years after Hippocrates, he refined the theory of humors. Galen wrote about 300 works, of which roughly half survive. His authority was widespread and practically absolute. His ideas spread throughout western Europe, as well as to the Byzantine Empire and Arabia.

The ideas of Hippocrates and Galen about humors as the basis of personality types prevailed for almost 2,000 years. It wasn't until centuries later, when the scientific method became accepted as the best way to assess information, that new experiments and studies eventually discredited the theory of humors as an explanation for personality types. ■

Objective Tests

An individual's personality consists of his or her characteristics, habits, preferences, and moods. Psychologists use personality tests to describe and measure various aspects of people's personalities. Sometimes, they also use personality tests to help diagnose psychological problems and disorders. There are two kinds of personality tests: objective tests and projective tests.

Objective tests present test takers with a standardized group of test items in the form of a questionnaire. The Minnesota Multiphasic Personality Inventory® (MMPI®) and the California Psychological Inventory™ (CPI™), discussed on the following pages, are examples of objective personality tests.

In terms of format, test takers are limited to a specific choice of answers—true or false, for example. Sometimes test takers are asked to select the preferred answer from groups of three. In either case, though, the test takers must choose from a list of answers provided for them.

Minnesota Multiphasic Personality Inventory The MMPI is the psychological test most widely used in clinical work and in research that requires measurement of personality traits. First developed in the late 1930s, the MMPI was intended for use by clinical and counseling psychologists to help diagnose psychological problems in people. A revised version of the test was released in 2008.

The MMPI-2 contains 567 items presented in a true-false format. Psychologists can score the MMPI-2 by hand, but they usually score it by computer. Computers generate reports by comparing the individual's score to group norms stored in the computer's memory. While the computer is certainly an objective (unbiased) scorer, most psychologists believe that the scores should be supplemented and confirmed by interviews and observation.

The MMPI-2 is organized into ten clinical scales, up to eight validity scales, and numerous subscales. The clinical scales reveal psychological problems. They also indicate whether people have stereotypical masculine or feminine interests and whether they are outgoing or shy.

To create the clinical scales of the MMPI-2, the designers interviewed people who had already been diagnosed with various psychological disorders. A test-item bank of several hundred items was assembled. It was based upon questions that are frequently asked in clinical interviews. Here are some of the true-false items:

My father was a good man. **TF**

I am seldom troubled by headaches. **TF**

I have never done anything dangerous for the thrill of it. **TF**

I work under a great deal of tension. **TF**

People with various psychological disorders, such as depression or schizophrenia, will answer certain questions in predictable ways. For example, a person suffering from depression might answer “true” to such questions as

“I often feel sad for no reason” or “Sometimes I think life simply isn't worth living.”

These test items are then placed on scales to measure the presence of psychological disorders. A person taking the test may answer the questions in ways that are similar to the responses of people who are known to have a particular psychological disorder. If that is the case, then the psychologist administering the test is alerted to the possible presence of that disorder in the person.

The validity scales are designed to detect distorted answers, misunderstood items, or an uncooperative test taker. Some of the abbreviations include L for lie, F for infrequency, and K for correction. For example, people with high “T” scores may answer questions in a way that makes them seem excessively moral or well behaved. Such people might answer the item “I never get angry” with “true.” People with high “F” scores, which measure infrequency, have a tendency to exaggerate complaints, or they may be trying to get attention by giving seemingly bizarre answers.

However, there are questions concerning the usefulness of the validity scales. For example, people with serious psychological disorders may indeed see the world in an unusual way. Therefore, if they obtain high F-scale scores, it may be because of their problems and not because they are exaggerating their situation.

California Psychological Inventory Because the MMPI-2 was designed to diagnose and classify psychological disorders, some psychologists prefer not to use it to measure the personality traits of “normal” clients. Many of these psychologists instead use the California Psychological Inventory, or CPI. The format of the CPI is similar to that of the MMPI-2, but it is designed to measure 15 “normal” personality traits, such as dominance, sociability, responsibility, and tolerance.

In many ways, the CPI is a more valid instrument than the MMPI-2, even though it is not as widely used. The norm group for the CPI is much larger than that for the MMPI-2, and greater care was taken in controlling for factors such as age, socioeconomic status, and geographic location.

Furthermore, the CPI has a much higher test-retest reliability than the MMPI-2.

**ACADEMIC
VOCABULARY**
socioeconomic
involving both
social and
economic factors

CLINICAL SCALES OF THE REVISED MMPI-2

The MMPI-2 is the most widely used psychological test in clinical work. Although originally intended for use by psychologists to diagnose psychological disorders, it has now become the most widely used instrument of personality measurement in psychological research. This list describes some of the specific disorders the MMPI-2 typically assesses.

Scale	Abbreviation	Possible Interpretations
Hypochondriasis	Hs	Has bodily concerns and complaints
Depression	D	Is depressed, guilty; has feelings of guilt and helplessness
Conversion hysteria	Hy	Reacts to stress by developing physical symptoms; lacks insight
Psychopathic deviate	Pd	Is immoral, in conflict with the law; has stormy relationships
Masculinity-Femininity	Mf	Has interests and behavior patterns considered stereotypical of the other gender
Paranoia	Pa	Is suspicious and resentful, highly cynical about human nature
Psychasthenia	Pt	Is anxious, worried, high-strung
Schizophrenia	Sc	Is confused, disorganized, disoriented; has bizarre ideas
Hypomania	Ma	Is energetic, restless, active, easily bored
Social introversion	Si	Is introverted, timid, shy; lacks self-confidence

It seems to be a better predictor of such things as school and job success, leadership, and reactions to stress.

Reading Check Find the Main Idea What are two examples of objective tests?

Projective Tests

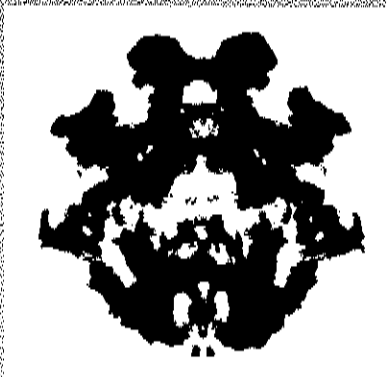
Projective tests, unlike objective tests, have no clearly specified answers. Such tests use an **open-ended format** to gauge people's characteristics. People are presented with ambiguous stimuli such as inkblots, drawings of vague shapes, or pictures of people engaged in various activities. The test takers are then asked to report what the stimuli represent to them. They might also be asked to tell stories about the stimuli. Since the inkblots or drawings are open to interpretation, experts think that people's interpretations reveal something about their personalities. The Rorschach (RAWR-shahk) inkblot test and the Thematic Apperception Test (TAT) are two examples of widely used projective tests.

Rorschach Inkblot Test Have you heard of a personality test that asks people to tell what a drawing or an inkblot looks like? There are actually a number of such personality tests. The Rorschach inkblot test is the best known of them. The Rorschach test is named after its originator, Swiss psychiatrist Hermann Rorschach (1884–1922).

It is an interesting side note that when Rorschach was an adolescent, his nickname was Klex, which means “inkblot” in German. Look at the Rorschach inkblot shown on page 434. If you were taking the test, a psychologist would hand you a card with the inkblot and ask you what it looks like.

Because the Rorschach is a projective test, there is no list of clearly defined answers from which to choose. Instead, test takers provide their own responses to each inkblot. However, some answers are more in keeping with the features of the blot than others. An inkblot could be a bat or a flying insect, an animal with a pointed face, a jack-o'-lantern, or many other things.

Rorschach Inkblot Test



In the Rorschach inkblot Test, people react to what they see. They project their interpretations onto an image that is presented to them. While there is no correct answer to a Rorschach inkblot test, certain answers are more in keeping than others with the features of the blot.

RORSCHACH'S PARENTS



Rorschach's parents are so fixed on the test that they interpret everything—even spilled milk—as significant.

Answers such as “my mother’s face” or “the devil in flames” are not readily suggested by the features of the inkblot. Therefore, a pattern of responses such as these is much more likely than other patterns to suggest the possible presence of a personality disorder in the test taker.

Many attempts have been made to standardize the Rorschach. People’s responses to the cards are usually interpreted according to factors such as location, determinants, content, and form level.

- **Location** is the part of the blot to which the person responds. Does he or she respond to the whole card or to a detail?
- **Determinants** include features of the blot such as shading, texture, or color. People who are highly influenced by the texture and color are thought to be more emotional than those who do not focus on these aspects of the blot. Answers that incorporate many features of the blot are thought to reflect high intelligence.
- **Content** refers to the precise object the test taker reports seeing. Is he or she seeing a bat, a jack-o'-lantern, or a human figure?
- **Form level** indicates whether the answer is in keeping with the actual shape of the blot. Generally speaking, answers that fit the shape of the blot suggest that the individual sees the world the way most people do. (Some psychological disorders, such as schizophrenia, are characterized by bizarre perceptions.)

Supporters of the Rorschach test claim that it provides useful information that might not be obtained elsewhere. However, some researchers raise serious questions about the reliability, accuracy, and validity of the Rorschach test. Because no two professionals interpret Rorschach responses in quite the same way, they argue that the test results can be arbitrary or biased to support the professional’s point of view.

Thematic Apperception Test The Thematic Apperception Test, or TAT, was developed in the 1930s by psychologists Henry Murray and Christiana Morgan at Harvard University. It is widely used in clinical practice and in motivation research. The TAT consists of drawings that, like the Rorschach inkblots, invite a variety of interpretations. Test takers are given the cards one at a time.

They are then asked to create a story for each card. For example, people are asked what might have led to the scene depicted on the card, what the person in the picture is doing, and how the story will end.

The idea behind the TAT is that people’s needs and values emerge from the stories they tell. This can be especially true of attitudes toward other people, such as parents and

romantic partners. The TAT is also used to measure achievement motivation, the desire to do one's best and to realize one's goals.

For example, a TAT card might show an image of two women. However, it may be a little unclear exactly what their connection is. Are they mother and daughter? Do they have a close relationship? Are they friends? Here are two stories about the image shown at right:

Story 1 The mother and daughter are both annoyed. They dislike family gatherings. They have little in common and have nothing to say to one another, so they avoid even making eye contact. They are anxious for the awkward moment to be over.

Story 2 The mother and daughter are enjoying a quiet moment together. As they've gotten older, they don't have as much time to spend with one another. But they've remained close and have shared many special times. They feel lucky to have each other's support and love.

Psychologists are trained to derive attitudes and achievement motivation scores from stories such as these. As you might have guessed, the second story suggests a more positive attitude and achievement motivation than the first story.

Reading Check Summarize What are two examples of projective tests?

THEMATIC APPERCEPTION TEST



Test takers are asked to create a story for a variety of cards with images that invite interpretation.

Skills Focus INTERPRETING VISUALS What story might you be able to tell about the two figures pictured above?

SECTION 3 Assessment

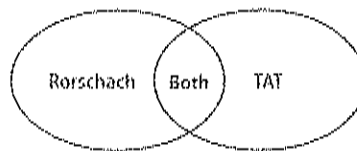
Reviewing Main Ideas and Vocabulary

- 1. Describe** What is the function of the validity scales in the MMPI-2?
- 2. Recall** What are the two types of personality tests?
- 3. Define** What is an open-ended format?

Thinking Critically

- 4. Explain** How are the two types of personality tests used?
- 5. Support a Position** Because there are no standardized criteria for scoring answers on projective tests such as the Rorschach and the TAT, how accurate do you think they are? Support your answer.

- 6. Compare** Using your notes and a graphic organizer like the one below, describe similarities in projective tests such as the Rorschach and the TAT.



FOCUS ON WRITING

- 7. Narrative** Write a paragraph in which you write a brief story to go with the inkblot or the TAT image in this section.

Taking Tests

Before You Read

Main Idea

Taking tests can be a nerve-racking experience, but there are ways to improve your performance.

Reading Focus

1. What are some tips for taking tests?
2. Multiple-choice questions are found on what sorts of tests?
3. What are some warning flags in true-false questions?
4. What strategies can you use for short-answer and essay questions?
5. How can you reduce test anxiety?

Vocabulary

cramming
cognitive restructuring

TAKING NOTES

Use a graphic organizer like this one to take notes on tips for taking tests.

Tips For Taking Tests	
1. Multiple Choice	
2. True/False	
3. Short Answer	
4. Essay	

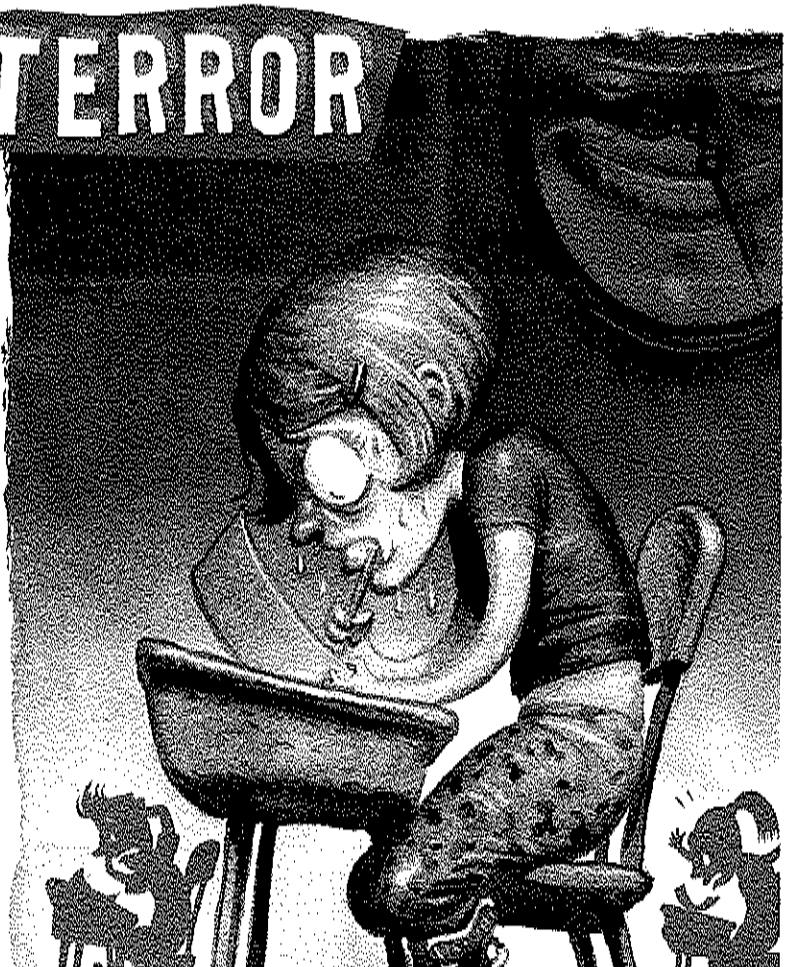
Test-Taking TERROR

PSYCHOLOGY CLOSE UP

Why are my palms sweating? There have undoubtedly been times

when you're about to take a test and you're suddenly overwhelmed with anxiety, the apprehension that you are not prepared and will not do well. You are probably familiar with the symptoms. You have a sense of impending doom. Your heart starts to pound. Your palms begin to sweat. You feel light-headed—possibly even dizzy. In the worst cases, you might feel ill.

Not a pretty picture, is it? And the worst part is that many of the physical symptoms are a direct result of a failure to adequately prepare for the test. As the old saying has it, "Prior preparation prevents pretty poor performance." This section will provide you with some tips on how to prepare for tests and, therefore, how to avoid, or at least soften, the worst effects of test anxiety. ■



Tips for Taking Tests

Many students think, “I know the material from my classes, but I just don’t do well on tests.” Sometimes they are right. But often they are wrong. When students are sure that they know something but cannot quite retrieve it—when it seems to be on the tip of their tongues—it may be that they did not learn it as well as they think they did. For them, much of the cure lies in developing better study habits.

Some students, however, do know the material and yet they still perform poorly on tests. This section offers some general tips on taking tests, as well as specific ways of coping with certain types of test questions.

Teachers generally determine the types of tests they give and when they give them. Midterm and final exams are usually a matter of school or department policy. And standardized tests, such as the SAT, are scheduled for certain dates throughout the year. You might think you have little control over the tests you take, but in reality there are many things students can do to help take charge of tests.

Gather Information Learn where and when the next test will be given. Find out about the types of questions that will be asked and the topics you should study. Most teachers and other test administrators do not mind your asking questions about tests. Some teachers may say that “everything” will be on the test, but others may offer specific information about what they consider important.

In addition, ask students who have already taken the course where test questions tend to come from. Do they tend to come from the textbook or from class notes?

Practice Plan regular study periods. Use your reading assignments and class notes to create test questions that might be similar to those on the exam. Create a study group, and practice answering these test items with group members. Define key terms on your practice test. Outline the answers to possible essay questions. Try to answer all the questions and exercises in your textbook—even the ones that were not assigned as homework. Some of them may appear on the test. Even if they do not appear on it, they will provide useful practice.

Make the most of your study group. Pool your knowledge. Quiz one another and read the answers to your essay questions aloud. This is a good way to prepare yourself for writing the essays on the actual test. In the process, you will probably discover the areas that need further study.

Be Test-Wise Small oversights can cause you problems on a test. For example, be sure you read the directions carefully and follow them precisely. Bring the right materials to class. Be sure your pencils are sharpened or that your pens have blue or black ink. Have some paper available, if only to use as scrap paper. Ask your teacher if you may use a pocket dictionary to check your spelling on essays. Teachers may also let you bring calculators and formulas to science and math tests.

Reading Check **Recall** What is an example of being test-wise?

Multiple-Choice Questions

Multiple-choice items are common on many types of tests. They are used in standardized tests, such as the SAT, and they are also used in classroom quizzes and exams. Educators and psychologists often use multiple-choice questions because they encourage the student to focus on the right answer (and reject the wrong ones). They can also be graded quickly and objectively.

Here are some hints for doing well on multiple-choice tests:

- *Try to answer the question before you look at the choices.*
- *Consider every possible choice.*
- *Look for answers that are opposites. When you see two answers that are opposite in meaning, one of them is likely to be the correct choice.*
- *Look for the best choice listed.*
- *Mark difficult questions so that you can come back to them later.*
- *Guess only when the odds of gaining points outweigh the odds of losing points.*
- *Change your answer if you think you have made a mistake.*

Reading Check **Analyze** Why should you look for answers that are opposites?

Statistically Speaking...



Taking Multiple-Choice Tests You can make the odds work in your favor on a multiple choice exam. How? By taking into account some of the percentages listed below, which were compiled by researchers at Rutgers University, as well as other scholars. By playing these odds, you can become a more intelligent test-taker.

50% If you can eliminate two choices, you have increased your odds to one in two, or 50 percent.

57.8% Percentage of answers that go from wrong to right when changed

20.2% Percentage of answers that go from right to wrong when changed

22.8% Percentage of answers that go from wrong to wrong when changed

Skills Focus INTERPRETING CHARTS Based on these percentages do you think it's a good or bad idea to change the occasional answer on a multiple choice test?

Source: <http://lrc.rutgers.edu/pdf/multiplechoicexams.pdf>

True-False Questions

True-false questions can be tricky. After all, if half the questions are true and half are false, it is possible that you could earn a grade of 50 percent simply by guessing. The following pointers can help you maximize your performance on true-false items:

- *For the item to be true, every part of it must be true.*
- *Be wary of items that use absolutes such as all, always, or never.*

- *Items that provide more information and are longer than others tend to be true.*

Keep in mind that these are only rules of thumb, however. They are not foolproof instructions. Your best strategy is still to study thoroughly and know the answers on your own.

Reading Check Analyze What are the odds of answering a true-false question correctly?

Short-Answer and Essay Questions

Short-answer items ask the test taker to give a brief response to a question. Here are some pointers for short-answer questions:

- *Answer in brief but complete sentences.*
- *Include significant terms in your answer.*
- *Avoid simply restating the question in different terms or making circular arguments.*
- *Use detail if time and space allow.*

The first step in answering an essay question is making certain you have understood the question. Read the directions carefully and look for key words to guide your answer. Ignoring them increases the chances that you will omit important points from your answer.

Before beginning to write your essay, make a quick outline on a piece of scrap paper to help you organize your thoughts. The outline should help you keep track of the main points you wish to make in your answer. Mark where you will start and where you will end. Jot down key terms that represent ideas you wish to expand on in your essay. If you run out of time before you complete the essay, attach the outline to show where you were headed. It may help your grade (and it certainly will not hurt it).

Express your strongest ideas first. When you lead with the concepts you know best, you build a foundation for a strong argument.

How long should your essay be? A good rule of thumb is "Don't count words; just answer the question." Teachers will reward you for being on the mark as long as you have provided sufficient support for your argument.

Reading Check Summarize What is the first step in answering an essay question?

Test Anxiety

Some students become anxious before and during exams. The anxiety they experience consists of feelings of dread and foreboding. Test anxiety ranges from increased tension to actual physical symptoms, such as rapid breathing, pounding heartbeat, light-headedness or dizziness, and nausea.

Anxiety may be very uncomfortable, but it is not always a bad thing. It is normal to feel somewhat anxious as a test approaches. Anxiety shows that we understand the importance of the occasion and that failure may have serious consequences. But some test-anxious students allow negative thoughts and self-doubts to distract them, preventing them from focusing on the test itself.

Be Prepared One way to overcome test anxiety is to be prepared. If you study carefully and review the material regularly, you can be confident that you will recall what you have learned.

Review the material regularly before a test and avoid **cramming**, or preparing hastily for an examination. Learning takes time. Studying a reasonable amount every day is far more effective than cramming suddenly the night before. You can begin to cope with possible test anxiety right from the beginning of the semester—by planning a regular study schedule and sticking to it.

Overlearn Overlearning means reviewing the material, even after you think you have mastered it. Overlearning accomplishes two objectives: remembering the subject matter longer and building confidence.

Think Helpful Thoughts There are some strategies for ending upsetting thoughts and focusing on the task at hand—the test. What are the negative thoughts that occur to you at test-taking times? Write them down. Once you are aware of these negative thoughts, then you can replace them with positive ones.

This method of coping is called cognitive restructuring. **Cognitive restructuring** means consciously changing the thoughts one has in a particular situation. Cognitive restructuring consists of the following four steps:

1. Identify self-defeating thoughts, paying special attention to exaggerated ones.
2. Replace self-defeating thoughts with positive messages to yourself.
3. Imagine yourself in the testing situation and practice positive thinking.
4. Reward yourself for thinking positively.

If you consistently practice cognitive restructuring, you will become less anxious and more confident about taking tests. Your grades may reflect the changes.

Reading Check Summarize What is cognitive restructuring?

ACADEMIC VOCABULARY
foreboding sense of impending evil or misfortune

SECTION 4 Assessment

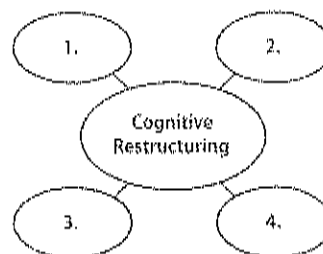
Reviewing Main Ideas and Vocabulary

1. **Describe** How can making an outline help you answer an essay question more effectively?
2. **Recall** What two objectives does overlearning accomplish?
3. **Describe** Why can test anxiety be a good thing?

Thinking Critically

4. **Summarize** What does practicing for a test involve?
5. **Identify Cause and Effect** What type of stress do some students feel before or during tests, and how might this stress affect their scores?

6. **Categorize** Using your notes and a graphic organizer like the one below, describe the four steps of cognitive restructuring.



FOCUS ON WRITING

7. **Narrative** Write a paragraph in which you describe your worst case of test anxiety.

Writing a Personality Quiz

What do your answers to questions on a personality quiz say about you? Can your answers reveal your gender?



**Reading and
Activity Workbook**

Use the workbook to
complete this lab.

1. Introduction

In this chapter you have learned about different kinds of personality tests. These include both objective tests that present test takers with a standardized group of test items, and projective tests that have no clearly specified answers.

The goal of this activity is to simulate a personality quiz by writing test items for such a test. The class will work in two groups—all the girls will be in one group, and all the boys will be in another. Each group will attempt to write questions for a personality quiz. The goal is to have the answers to the questions reveal the gender of the quiz taker.

Each group should make a list of the questions they would ask to determine the personality of a member of the opposite sex. Here are some sample questions:

- ❑ What is your favorite color?
- ❑ If you were a tree, what kind would you be?
- ❑ If you could be any kind of animal, what would you be?
- ❑ What is your favorite leisure time activity?

2. Writing the Quiz

Working in groups according to your teacher's instructions, write a personality quiz that simulates a real personality test. Here are some steps to follow in order to narrow down your list of questions to the best ones.

- ❑ Which questions are appropriate?
- ❑ Are the proposed questions valid or not? Why?
- ❑ What other questions might you ask?

Is there likely to be a difference in the type of questions from a gender standpoint between the two groups? Should there be such a difference? If not or if so, why?

- ❑ From the 15 or 20 questions that your group has come up with, choose the top five questions.
- ❑ Next to the top five questions list the reasons why each is valid.

