

DESCRIPTION OF THE DIFFERENTIAL APTITUDE TEST BATTERY

Structure of the Differential Aptitude Tests

As with the First Edition of the DAT, this Fifth Edition includes tests that assess eight important aptitudes: Verbal Reasoning, Numerical Reasoning, Abstract Reasoning, Perceptual Speed and Accuracy, Mechanical Reasoning, Space Relations, Spelling, and Language Usage. In order for guidance professionals to be able to interpret test results in relation to occupational or career decisions, test content needs to bear a relationship to different courses and occupations. The DAT meets this requirement; the eight tests within the DAT and their applicability to particular courses of study and career fields are discussed below.

Verbal Reasoning

The Verbal Reasoning test measures the ability to reason with words to understand and use concepts expressed in words. The test consists of analogies. Each analogy has two words missing – the first word in the first relationship and the second word in the second relationship. Thus the test assesses the ability to infer the relationship between the first pair of words and apply that relationship to the second pair of words.

The Verbal Reasoning test may be useful in helping to predict success in academic courses as well as in many occupations, including business, law, education, journalism, and jobs involving high levels of authority and responsibility..

Numerical Reasoning

The Numerical Reasoning test measures the ability to perform mathematical reasoning tasks. In order to ensure that reasoning rather than computational facility is stressed, the computational level of the problem is low.

Numerical reasoning is important for success in such courses as mathematics, physics, chemistry, and engineering. The ability to reason with numbers is also important in many occupations, such as accounting, laboratory work, carpentry, and technicians and engineering.

Abstract Reasoning

The Abstract reasoning is a non-verbal measure of reasoning ability. It assesses how well individuals can reason with geometric figures or designs. Each test item is a geometric series in which the elements change according to given rule. The test taker infers the rule(s) that are operating and predicts the next step in the series, based upon those rules.

This type of abstract reasoning is useful in courses or occupations that require the ability to see relationships among objects in terms of their size, shape, position, and quantity.

Examples include such fields as mathematics, careers involving chemistry or biomedical science, pharmacy, computer programming, music, drafting, and car repair.

Perceptual Speed and Accuracy

The Perceptual Speed and Accuracy test measures the ability to compare and mark written lists quickly and accurately. The test items do not call for reasoning skills; rather the emphasis is on speed.

The Perceptual Speed and Accuracy test may predict success in certain kinds of routine clerical tasks, such as filing or coding and time management at exams. Good scores are also desirable for certain jobs involving technical and scientific data.

Mechanical Reasoning

The Mechanical Reasoning test measures the ability to understand basic mechanical principles of machinery, tools and motion. Each item consists of a pictorially presented mechanical situation and a simply worded question. Items require reasoning rather than special knowledge.

Those who do well in mechanical reasoning usually find it easy to learn how to repair and operate complex devices. Occupations such as carpenter, mechanic, engineer, electrician, and machine operator are among those that require mechanical ability.

Space Relations

The Space Relations test measures the ability to visualise a three-dimensional object from a two dimensional pattern and to visualise how this object would look if rotated in space. Each problem shows one pattern, followed by four three-dimensional figures. Test takers are to choose the one figure that can be made from the pattern.

Occupations in which an individual is required to imagine how an object would look if made from a given pattern include drafting, architecture, art, interior design, clothing design, carpentry and dentistry.

Educational Aptitude (Verbal Reasoning and Numerical Reasoning)

The combined Verbal Reasoning and Numerical Reasoning score provides the best general measure of education aptitude or the ability to learn from books and teachers to perform well in academic subjects.