CogAT®

Type: Group administered ability test battery
Purpose: To assess students' abilities in reasoning and problem solving using verbal, quantitative, and nonverbal (spatial) symbols
Copyright: 2001
Norms: 2000
Grades: K-12
Times: 30 minutes or less per session for Level K; 50 minutes or less per session for Levels 1-2; 60 minutes or less per session for Levels A-H
Scoring: Central, local, and hand scoring options are available

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Search for Profile: 7B (V-)

Profiles 7B (V-) and 8B (V-)

Profile Explanation

Students with these profiles have a median age stanine for all three *CogAT* batteries in the above-average (stanine 7) or high (stanine 8) range. They have a relatively lower score in verbal reasoning.

Characteristics of Students with These Profiles

Profile 7B (V-) and 8B (V-) students have strong cognitive resources for learning. They tend to score lower than expected on all subtests of achievement tests except those that estimate math computation skills. For some students, the cause of the lower scores is a preference for thinking in one symbol system rather than in another. For example, some students prefer to think in symbolic or visual modes and find it difficult to translate their thoughts into words. Over time, this propensity affects the development of verbal abilities, including the ability to reason with words. For other students, however, the relatively lower score in verbal reasoning stems from a lack of experience with formal English structures used in school.

Instructional Suggestions for Profiles 7B (V-) and 8B (V-)

Verbal skills are so critically important for success in school that even these above-average students need to be encouraged to develop and use their speaking, reading, and listening abilities. Nevertheless, students should always be allowed opportunities to build on their strengths. Activities that are unnecessarily verbal can thwart their performance, even in domains in which they excel. Two common sources of difficulty are (1) directions that are overly long or complex and (2) the requirement that all learning be displayed on tests that involve the translation of verbal prompts and the production of verbal responses.

For some students, however, the relatively lower score in verbal reasoning stems from a lack of experience with the formal English structures used in school. Many of these students benefit from participation in activities in which they must not only listen to speakers model formal ways of speaking but must produce such speech themselves. Drama and poetry are particularly useful. After the

language forms and syntax structures have been practiced orally, they can also be produced more readily in written essays and stories. Reading adds another dimension and builds verbal comprehension abilities more directly than any other activity.

General Instructional Suggestions for All Students with a Median Stanine of 7 or 8

Build on Strength. Because these students have above-average reasoning abilities, they tend to profit most when allowed to discover relationships for themselves. Guided discovery methods work better with such students than more structured teaching methods. However, teachers should watch for opportunities to allow greater choice for students who would enjoy more freedom to explore. Above-average students need to be challenged with materials, projects, and problems that are somewhat more difficult than those used for average students. Encourage these students to follow their interests, and reward their perseverance on long-term projects. Working with an older and more experienced student (or adult) can be especially beneficial. These students reason well and, therefore, can succeed at high levels if they persist and learn how to obtain needed feedback and direction.

Focus on Working Memory. Although they need less practice than average students to master new skills, above-average students can acquire complex skills more readily if self-monitoring processes are temporarily offloaded to another student or to a teacher. Indeed, if they are not initially overburdened with self-monitoring, these students have sufficient resources to learn at high levels. Working-memory resources can also be enhanced dramatically when low-level skills are automatic. This is often best accomplished through focused practice on particular skills. Follow the same general procedures for skill acquisition with these students as with students who reason at lower levels: begin overtly, orally, socially, and then, with practice, move to internally, subvocally, and privately executed performances.

Because these students reason well, they see connections between new concepts and ideas already stored in memory. Their reasoning skills can be improved, however, by encouraging them to find ways of communicating that precisely describe the relationships among concepts or the rules that sequence them. For example, in writing, encourage students to find words that express their ideas exactly, rather than approximately. Also encourage these individuals to revise and improve their flow of ideas. Older students profit from exercises that help them outline the sequence of their thoughts.

Encourage Strategic Thinking. Above-average students benefit from (1) opportunities to use newly acquired skills for difficult learning tasks and problems, (2) instruction that helps them plan their use of different strategies in different contexts, and (3) working with more-able peers, particularly on difficult problems or learning tasks.

These students are generally good at recognizing when they need help and at knowing what kind of help they need in order to accomplish a task. Especially when unfamiliar with a domain, these students may need help to focus attention on the most important features of a problem. By early high school, most above-average students find it helpful to acquire more general strategies for focusing attention such as a self-directed search for related concepts in memory or for analogies between material to be learned and more familiar concepts.

Above-average students are quick to acquire different learning strategies. In the primary grades, their use of these strategies may be unreflective, but by middle school they are generally quite capable of actively discovering the effectiveness of different learning and problem-solving strategies. This can be

facilitated if teachers model different strategies, encourage students to try them, and help the students keep track of the results. By high school, these individuals will have developed a wealth of different ways of coping with learning and problem-solving tasks. Exposure to alternative strategies--especially if modeled by older students or adults--can help students appreciate the value of different strategies for different persons and problems. It is also helpful if students can learn to be flexible in the classification of their own learning styles; students should expect their preferences to change as they mature.

When Grouping, Aim for Diversity. Above-average students are generally excellent group participants. Able to help explain concepts to other students, they learn much from group interactions. One factor, however, is whether more-able members of the group overshadow their contributions. Although this is less of a concern for these students than for students who have average levels of reasoning abilities, it can occur if a student is reticent or if more assertive students dominate the group.

For Additional Information

For additional information, see the following sections in the *CogAT Form 6 Interpretive Guide for Teachers and Counselors.*

- For an explanation of the profile system, see "Determining the Level and Pattern of Cognitive Abilities" on pages 49-55.
- For a general overview of "B" profiles, see pages 101-102, especially the discussion of students who show a relative strength or weakness in verbal reasoning. Also see the notes on "'B' Profiles for Students with a Median Stanine of 7 or 8" on page 107.