

## Learning and Teaching Styles for Gifted Learners

Intelligence tests tend to consist of problems that require visual-spatial and auditory sequential strengths.

Over time, the term visual-spatial learner has become synonymous with children who are strong on visual-spatial items and weak on auditory-sequential items.

High visual-spatial students usually obtain higher scores on verbal than nonverbal measures.

Visual-spatial learners describe their learning process as “thinking in images.”

Auditory-sequential learners appear to think in words.

Spatial learning is all-at-once.

Sequential learning is step-by-step.

Normally, children progress at around age 9 from a phase of eidetic imagery (i.e., recalling information through pictures) to what has been considered a more sophisticated linguistic phase (i.e., recalling information through words).

Sequential processing is measured on intelligence tests through items that ask learners to repeat random digits, sentences, or words accurately and in order.

Lohman (1994), in an article entitled, “Spatially Gifted, Verbally Inconvenienced,” argued: “The problem is erroneously labeled a discrepancy between verbal and spatial abilities, which it is not. The key is not verbal ability, but fluency in retrieving words, particularly on the basis of their sound patterns, or fluidity in assembling novel utterances. On the spatial side, it is the ability to generate and manipulate gestalten or whole patterns, usually of a fairly concrete sort, but in a fluid and flexible way.”

Gifted auditory-sequential learners are more likely to be high achievers in academic subjects, to be selected for gifted programs, to be recognized by their teachers as having high potential, and to be considered leaders.

Gifted visual-spatial learners are more often counted among underachieving and disenfranchised groups: gifted with learning disabilities, dyslexics, and ADD, and creative children from minority groups.

Spatial processing is measured on intelligence tests through items that ask learners to complete analogies, reconstruct whole items, find a missing piece, and mental rotations of objects.

Verbal reasoning is measured on intelligence tests through items that ask learners to recall vocabulary, identify similarities, and comprehend or infer information.

Ewing and Young (1992) found in a study of learning style differences of gifted middle school gifted students across cultures that Chinese American students preferred the visual modality, African Americans preferred the kinesthetic modality, and Mexican Americans did not like the auditory modality. However, the overall learning style differences did not vary significantly among these minority groups.

## Effective teachers of the gifted

From interviews of teachers of the gifted identified as outstanding or average, Whitlock and DuCette (1989) found outstanding teachers differed from average teachers in their teaching style regarding their abilities to be a facilitator and apply knowledge.

According Wendel and Heiser (1989) effective instructional characteristics of junior high school teachers of gifted students:

- Demand high-quality work
- Stress the students' personal involvement in learning and do so in creative ways
  - Conduct stimulating discussions using probing questions requiring deeper thought and ask students to think for themselves

Lindsey (1980) identified the following teaching behaviors of the teacher who is successful in working with gifted learners:

- Creates a warm, safe, and permissive atmosphere
  - Respects creativity and imagination
  - Stimulates higher-order mental processes

According to Maddux et al. (1985) gifted 7<sup>th</sup>-9<sup>th</sup> graders showed a significant preference for teachers who allow open class discussions, treat students as adults, and teach in an organized way.

Some characteristics of exemplary teachers of the gifted as identified by Feldhusen (1997) are that they

- Are well-prepared, well-organized, "on their toes," well-grounded in the subject matter, ready for creative questions
  - Are skilled in questioning for higher-level thinking
    - Focus on process as well as product
    - Can direct individualized learning
  - Can teach students to evaluate for themselves
- Are skilled in teaching higher-level thinking skills, including creativity and problem solving

Effective teaching (Van Tassel-Baska, 1998) requires posing problems to an individual student that appreciably exceed the level that the student has already mastered. Too-easy problems lead to boredom, too-difficult problems lead to frustration.

