

The Visual-Spatial Learner: An Introduction

Linda Kreger Silverman. Ph.D.

Many teachers try very hard to accommodate the various learning styles of their students, but this can be an overwhelming task, as some of the learning styles inventories and models are quite complicated. As a former classroom teacher myself, I know that there are a limited number of hours in the day, and even the most dedicated teacher cannot plan for all the different learning styles and intelligences of his or her students. Take heart! There's an easier solution.

The visual-spatial learner model is based on the newest discoveries in brain research about the different functions of the hemispheres. The left hemisphere is sequential, analytical, and time-oriented. The right hemisphere perceives the whole, synthesizes, and apprehends movement in space. We only have two hemispheres, and we are doing an excellent job teaching one of them. We need only become more aware of how to reach the other, and we will have happier students, learning more effectively.

I'd like to share with you how the visual-spatial learner idea originated. Around 1980, I began to notice that some highly gifted children took the top off the IQ test with their phenomenal abilities to solve items presented to them visually or items requiring excellent abilities to visualize. These children were also adept at spatial tasks, such as orientation problems. Soon I discovered that not only were the highest scorers outperforming others on the visual-spatial tasks, but so were the *lowest* scorers. The main difference between the two groups was that highly gifted children also excelled at the auditory-sequential items, whereas children who were brighter than their IQ scores had marked auditory and sequential weaknesses. It was from these clinical observations and my attempt to understand both the strengths and weaknesses that the concept of the "visual-spatial learner" was born.

Visual-spatial learners are individuals who think in pictures rather than in words. They have a different brain organization than auditory-sequential learners. They learn better visually than auditorally. They learn all-at-once, and when the light bulb goes on, the learning is permanent. They do not learn from repetition and drill. They are whole-part learners who need to see the big picture first before they learn the details. They are non-sequential, which means that they do not learn in the step-by-step manner in which most teachers teach. They arrive at correct solutions without taking steps, so "show your work" may be impossible for them. They may have difficulty with easy tasks, but show amazing ability with difficult, complex tasks. They are systems thinkers who can orchestrate large amounts of information from different domains, but they often miss the details. They tend to be organizationally impaired and unconscious about time. They are often gifted creatively, technologically, mathematically or emotionally.

Parents can tell if they have one of these children by the endless amount of time they spend doing advanced puzzles, constructing with LEGOs, etc., completing mazes, counting everything, playing Tetris on the computer, playing chess, building with any materials at hand, designing scientific experiments, programming your computer, or taking everything in the house apart to see how it operates. They also are very creative, dramatic, artistic and musical.

Here are the basic distinctions between the visual-spatial and auditory-sequential learner:

AUDITORY-SEQUENTIAL

Thinks primarily in words
 Has auditory strengths
 Relates well to time
 Is a step-by-step learner
 Learns by trial and error
 Progresses sequentially from
 easy to difficult material
 Is an analytical thinker
 Attends well to details
 Follows oral directions well
 Does well at arithmetic
 Learns phonics easily
 Can sound out spelling words
 Can write quickly and neatly
 Is well-organized
 Can show steps of work easily
 Excels at rote memorization
 Has good auditory short-term memory
 May need some repetition to
 reinforce learning
 Learns well from instruction
 Learns in spite of emotional reactions
 Is comfortable with one right answer
 Develops fairly evenly
 Usually maintains high grades
 Enjoys algebra and chemistry
 Learns languages in class
 Is academically talented

 Is an early bloomer

VISUAL-SPATIAL

Thinks primarily in pictures
 Has visual strengths
 Relates well to space
 Is a whole-part learner
 Learns concepts all at once
 Learns complex concepts easily;
 struggles with easy skills
 Is a good synthesizer
 Sees the big picture; may miss details
 Reads maps well
 Is better at math reasoning than computation
 Learns whole words easily
 Must visualize words to spell them
 Prefers keyboarding to writing
 Creates unique methods of organization
 Arrives at correct solutions intuitively
 Learns best by seeing relationships
 Has good long-term visual memory
 Learns concepts permanently; is turned
 off by drill and repetition
 Develops own methods of problem solving
 Is very sensitive to teachers' attitudes
 Generates unusual solutions to problems
 Develops quite asynchronously
 May have very uneven grades
 Enjoys geometry and physics
 Masters other languages through immersion
 Is creatively, mechanically, emotionally, or
 technologically gifted

 Is a late bloomer

At the Gifted Development Center, we have been exploring the visual-spatial learner phenomenon for over 2 decades. We have developed strategies for working effectively with these children, guidance for parents on living with visual-spatial learners, and

techniques to help visual-spatial students learn successfully through their strengths. This information is now available in *Upside-Down Brilliance: The Visual-Spatial Learner* (Denver: DeLeon Publishing, 2002) and *Raising Topsy-Turvy Kids: Successfully Parenting Your Visual-Spatial Child* (Denver: DeLeon Publishing, 2004).

Over a period of nine years, a multi-disciplinary team created the *Visual-Spatial Identifier*—a simple, 15-item checklist to help parents and teachers find these children. There are two forms of the *Identifier*: a self-rating questionnaire and an observer form, which is completed by parents or teachers. The *Visual-Spatial Identifier* has been translated into Spanish. With the help of two grants from the Morris S. Smith Foundation, the two instruments have been validated on 750 fourth, fifth and sixth graders. In this research, **one-third** of the school population emerged as strongly visual-spatial. An additional 30% showed a slight preference for the visual-spatial learning style. Only 23% were strongly auditory-sequential. This suggests that a substantial percentage of the school population would learn better using visual-spatial methods.

Please visit our websites, www.visualspatial.org and www.gifteddevelopment.com, for more information about visual-spatial learners. Or call the Gifted Development Center (1-888-GIFTED1) or Visual-Spatial Resource (1-888-VSR-3744) to order a copy of *Upside-Down Brilliance*, *Raising Topsy-Turvy Kids*, the *Visual-Spatial Identifier*, or articles about visual-spatial learners. We also offer presentations for groups and phone consultations for parents.

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