

The Visual-Spatial Learner: An Introduction

by Linda Kreger Silverman, Ph.D.

Editor's Note: Our thanks to Dr. Silverman for permission to reprint this article.

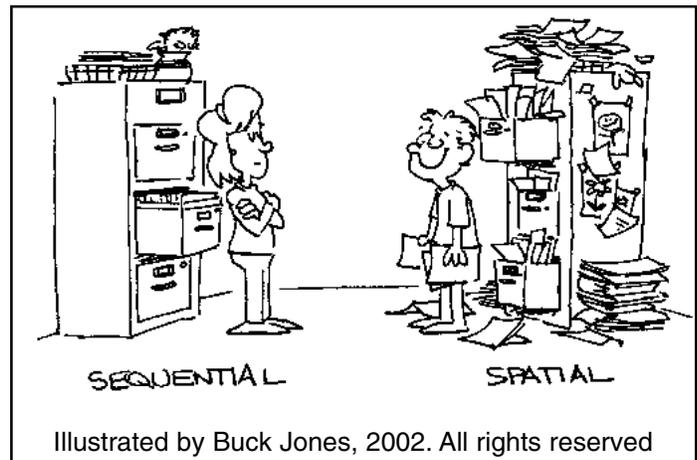
Many teachers try very hard to accommodate the various learning styles of their students, but this can be an overwhelming task, as some of the learning styles inventories and models are quite complicated. As a former classroom teacher myself, I know that there are a limited number of hours in the day, 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. You can tell you 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. See the table on the next page for the basic distinctions between the visual-spatial and auditory-sequential learner:

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

continued next page

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