DISTINGUISHING A VISUAL IMPAIRMENT VERSUS A VISUAL PROCESSING PROBLEM

(Excerpt from State Conference Presentation
California Transcribers and Educators of the Visually Handicapped, March, 2005, 2006)

Linda Clarke  
Teacher, Visually Impaired
Regional Service Provider, Santa Clarita SELPA

Jane Vogel  
Vision Specialist
Greater Anaheim SELPA

BASIC PRINCIPLES ABOUT VISION AND LEARNING

A. A Student Can Have Normal Vision and a Visual Processing Problem

1. Many students have vision that is within normal limits (normal visual acuity; normal visual fields), but they do not correctly process the visual information they receive.

2. The eye “collects” visual information; the processing centers in the brain “digest” it. Normal vision is not a prerequisite to accurate processing.

3. Sensory integration has to do with the organization and understanding of sensory input received; it occurs at a perceptual/cognitive level, not with the receipt of visual input through the eyes and visual pathways.

4. A visual impairment does not include difficulty in visual perception or visual-motor dysfunction and educational deficits related to difficulty in visual processing (hence the “knowing of”, integrating, interpreting, etc. visual information) and is not addressed by a teacher for the visually impaired. [Education Code 56350 (c); 56026.5]

B. A Student Can Have a Visual Impairment With Normal Visual Processing Skills

1. Vision impairments and visual perceptual and/or visual motor dysfunction are separate disabilities and may coexist.

2. There is not a causative relationship between a visual impairment and a visual perceptual or visual motor dysfunction.

3. A VI student, without additional disabilities, should be able to achieve at a satisfactory level of performance (at least at ability level), with appropriate interventions that address identified vision-related needs (e.g. print size, viewing proximity, lighting, contrast, etc.).
   a. Low vision students are able to learn well visually, once provided with adapted format, specialized low vision materials and equipment, and special modifications or techniques which serve to enable or enhance visual access to instructional information; some are also able to read regular print.
   b. Many VI students with limited vision (including reduced acuity and/or restricted visual fields) are also monocular, have close viewing distances, use eccentric viewing, have nystagmus, etc. and demonstrate good (at least age/grade expected) visual perceptual and visual motor skills and grade.expected reading skills.

4. Literature pertaining to visual impairment supports that the student with a vision impairment can acquire and use information visually for learning as long as the processing center in the brain is intact.
   a. “Poor vision doesn’t cause poor learning--it’s what the brain does with the data. It must be intact in order to make sense of various stimuli, to store up experience, to see symbols and know what they mean, to remember and associate printed letters and words. The eye does not have to be intact, but the associative areas of the brain must be.” (Faye, 1970, p. 137)
b. “Although skillful use of the eyes may not by itself enhance visual learning, it certainly increases the possibility of perceptual development through the visual sense. Of course actual seeing cannot take place until messages transmitted through the eyes are received in the brain and interpreted. Even when visual information is blurred, distorted, or incomplete, as long as the brain is able to combine images with auditory and other sensory information, the person can use vision as a contributing sense in cognitive development.” (Barraga, 1983, p. 80)

c. “Visual perception is a decision process that is related more to the child’s learning capabilities than to the condition of the eyes”. (Barraga, 1983, p. 24)

C. A Student Can Have a Visual Impairment and a Visual Processing Problem

1. Difficulty in ability to see is separate and unrelated to difficulty in recognition, or “knowing.” Some students have learning problems (already established via testing or suspected) in addition to a vision impairment (medically diagnosed, physiological vision loss).

2. In some cases, the visual processing problem may be more of a limitation than the visual impairment itself.

3. When a student has both an assessed visual impairment and a learning disability in visual processing or visual motor dysfunction, the educational needs of each must be addressed by the correct educational personnel; it is not the role or responsibility the VI teacher to remediate the learning disability as well.

D. A Student Can Have An Impairment In Vision That Does Not Adversely Impact Educational Performance and Does Not Require VI Service

1. It is possible to have a visual diagnosis, or an impairment in vision without meeting the federal (IDEA) or State (Education Code) educational definition of “Visually Impaired”, and eligibility for special education service as visually impaired.

   a. A medical diagnosis of an impairment in vision does not mean a referral must be initiated or that the child is having educational difficulty due to it, at a given time. Other variables (such as age, grade, functioning, instructional expectations, and impact of other disabilities/limitations) are relevant and must be considered.

   b. A student may have an impairment in vision (such as slightly reduced acuity, or eyes not aligned), but not be in need of specialized educational accommodations, including those provided by a VI teacher.

   c. There are some limitations in vision that are not severe, and which can be simply addressed via routine kinds of modifications which can be feasibly and competently addressed by staff in the educational setting (e.g. front row seating; avoidance of light copy, sensory stimulation).

   d. Not all interventions necessitate specialized services, materials or equipment unique to, or consistent with skill/training of a teacher for the Visually Impaired to enable/enhance access to instruction/educational performance.

2. Given present levels of functioning and nature of expected educational tasks, a student may not be having difficulty at this time because—

   a. Progress/performance may be consistent with overall functioning.

   b. The student is close enough and/or the materials are comfortably seen.

   c. The extent of vision (ability to see) and functional vision use may be commensurate with present levels of development, educational functioning, and kinds of tasks expected in the student’s placement.
3. Significant vision loss, including blindness, places a developing child at risk for delays in some areas of development. There are several relevant factors discussed in current literature, such as the nature and extent of exposure and experience, type and severity of vision loss, and the presence of other known or suspected limitations. The significance of the vision impairment itself may be suspect, particularly when there is a significant (or widening) discrepancy between the child’s current age and present levels of functioning.

a. The functional use of vision, and learning through vision is dependent upon developmental, perceptual, and cognitive ability to make sense out of, and use visual information received (i.e. recognition, understanding, making associations and decisions, etc.).

b. It is important to pay attention to when visual and perceptual skills emerge developmentally; the ability to make sense out of and use visual information received is directly related to developmental level and cognitive ability: “Teachers need to remember that learning through the visual sense can never exceed the level of perceptual/cognitive development of the individual.” (Barraga, 1983, p. 81)

4. Many students have other known or suspected disabilities (physical, sensory, mental) in addition to a diagnosed vision impairment. It is important to keep in perspective the nature and extent of these, as apparent difficulties observed may or may not be adequately or appropriately explained by, or related to the vision loss itself.

a. Not every developmental or educational difficulty present in a student with other disabilities is vision-related.

b. Lack of vision use, or inadequate vision use does not mean the student has a visual impairment or that he/she does not have sufficient vision to perform the kinds of activities (consistent with age, grade, functioning, and placement).

c. A student may demonstrate educational difficulties not consistent with students with a vision impairment.

d. There may be a known or suspected disability in another area such as cognition; language and/or communication; other sensory channel (e.g. hearing); neurological; psycho-motor; and/or delay in maturation.

e. VI teachers may be serving a student where student awareness, arousal, responsiveness, attention, and concentration are limited or inconsistent—e.g. more related to student motivation, experience, health, and/or social-emotional issues which account for the behavior and performance observed.


a. Decoding of retinal images occurs in the brain after visual signals are transmitted from the eye via the visual pathways. Some vision care practitioners incorrectly attribute reading difficulties to one or more subtle ocular or visual abnormalities. Although the eyes are obviously necessary for vision, the brain performs the complex function of interpreting visual images. Currently no scientific evidence supports the view that correction of subtle visual defects can alter the brain’s processing of visual stimuli. Statistically, children with dyslexia or related learning disabilities have the same ocular health as children without such conditions.”

b. “Eye defects, subtle or severe, do not cause the patient to experience reversal of letters, words, or numbers. No scientific evidence supports claims that the academic abilities of dyslexic or learning disabled children can be improved with treatment based on a) visual training, including muscle exercises, ocular pursuit, tracking exercises, or training glasses (with or without bifocals or prisms); b) neurological organizational training ......or c) or colored lenses.”

c. “Treatable ocular conditions among others include refractive errors, focusing deficiencies, eye muscle imbalances, and fusion deficiencies. “