



NASET's Educating Children with Severe Disabilities Series

Visual Impairments

Visual Impairments: An Overview

The effect of visual problems on a child's development depends on the severity, type of loss, age at which the condition appears, and overall functioning level of the child. Many children who have multiple disabilities may also have visual impairments resulting in motor, cognitive, and/or social developmental delays. This chapter is designed to present a basic overview of visual impairments and to provide concerned individuals with other resources for information and support.

IDEA Definition of Visual Impairments

Visual impairment including blindness means:
an impairment in vision that, even with correction, adversely affects a child's educational performance. The term includes both partial sight and blindness.

Overview of Visual Impairments

The terms partially sighted, low vision, legally blind, and totally blind are used in the educational context to describe students with visual impairments. In terms of educational definitions, each is defined as the following:

"Partially sighted" indicates some type of visual problem has resulted in a need for special education (National Dissemination Center for Children with Disabilities, 2004).

"Low vision" generally refers to a severe visual impairment, not necessarily limited to distance vision. It indicates that some functional vision exists to be used for gaining information through written means with or without the assistance of optical, nonoptical, or electronic devices (Kirk, Gallagher, & Anastasiow, 2000).

Low vision applies to all individuals with sight who are unable to read the newspaper at a normal viewing distance, even with the aid of eyeglasses or contact lenses. They use a combination of vision and other senses to learn, although they may require adaptations in lighting or the size of print, and, sometimes, Braille;

"Legal blindness" is defined as visual acuity of 20/200 or less in the person's eye after correction, resulting in some confusion (National Dissemination Center for Children with Disabilities, 2004).

“Blindness” implies that a student must learn and use learn Braille a system of raised dots that the student reads tactilely), aural methods in order to receive instruction, or other non-visual media (Heward, 2006; National Dissemination Center for Children with Disabilities, 2004). It refers to a person with “no vision or only light perception” (the ability to determine the presence or absence of light) (Huebner, 2000, p. 58)

Causes-Etiology of Visual Impairments

The etiologies of visual impairment have changed over time, as medical treatments evolve and new conditions arise that result from medical conditions or complex premature births. The most common causes of visual impairment in children in the United States vary according to reporting sources and extent of other disabilities.

Prevalence of Visual Impairments

Blindness among children from the American Printing House for the Blind, 2014 Annual Report

Each year, the American Printing House for the Blind polls each state for data on the number of legally blind children (through age 21) enrolled in elementary and high school in the U.S. eligible to receive free reading matter in Braille, large print, or audio format. This is used to develop a “quota” of federal funds to be spent in each state for material in each alternative format. These are probably the only exact numbers regarding blindness in the United States.

Total number of students: 60,393

By reporting agency

Reported by state departments of education: 50,205 (83.1%)

Reported by residential schools for the blind: 5,133 (8.5%)

Reported by rehabilitation programs: 3,661 (6.1%)

Reported by multiple disability programs: 1,394 (2.3%)

By primary reading medium

Braille readers: 5,147 (8.5%)

Print readers: 17,647 (29.2%)

Auditory readers: 5,529 (9.2%)

Non-readers: 21,042 (34.8%)

Pre-readers: 11,028 (18.3%)

American Printing House for the Blind, "Annual Report 2014: Distribution of Eligible Students Based on the Federal Quota Census of January 7, 2013 (Fiscal Year 2014)." Accessed July 28, 2014, from <http://www.aph.org/federal-quota/dist14.html>.

Disability Statistics, American Community Survey (2012)

The number of non-institutionalized males or females, ages 4 and under through 20, all races, regardless of ethnicity, with all education levels in the United States who reported a visual disability in 2012.

Prevalence:

Total: 659,700

Girls: 319,100

Boys: 340,600

Erickson, W., Lee, C., von Schrader, S. (2014). Disability Statistics from the 2012 American Community Survey (ACS). Ithaca, NY: Cornell University Employment and Disability Institute (EDI). Retrieved Jul 28, 2014, from www.disabilitystatistics.org.

Age of Onset of Visual Impairments

In schools, students with visual impairments can often be easily identified if their visual loss is severe. However, many students have milder losses that are much more difficult to identify and may go several years without being recognized (Smith, Polloway, Patton, and Dowdy, 2004). Students with visual impairments can be grouped by their age of onset. Individuals who are born with visual impairments at birth or during infancy are considered to have congenital visual impairments, while those with visual impairments after the age of 2 years old are considered to have adventitious visual impairments (Huebner, 2000).

Gender Features of Visual Impairments

According to the U.S. Department of Education (2004), more boys than girls are visually impaired. Additionally, increasing numbers of infants are born very prematurely and survive. These children are at high risk for multiple disabilities, including visual deficits, and will substantially increase the number of Americans with visual impairment.

Characteristics of Visual Impairments

The effect of visual problems on a child's development depends on the severity, type of loss, age at which the condition appears, and overall functioning level of the child. Many children who have multiple disabilities may also have visual impairments resulting in motor, cognitive, and/or social developmental delays.

Cognitive

Visual impairments directly influence development and learning in a variety of significant ways. As a group, students with visual impairments will exhibit a wide range of cognitive and intellectual abilities.

Blindness and low vision can impact the child's cognitive experience in many ways, including limited range and variety of experience, restriction of movement within the environment, and limited interaction with the environment itself. When the absence of normal experiences with the environment is limited, the effect on a child's development is significant (Pogrud & Fazzi, 2002). A young child with visual impairments has little reason to explore interesting objects in the environment and, thus, may miss opportunities to have experiences and to learn. This lack of exploration may continue until learning becomes motivating or until intervention begins (National Dissemination Center for Children with Disabilities, 2004).

Academic

Visual impairments can have a significant effect on the academic performance of a child, particularly in the areas of reading and writing. Students with visual impairments may use a variety of alternative media and tools for reading and writing, depending on their individual needs. They may use Braille or an alternative form of print (Friend, 2005).

Educational Implications of Visual Impairments

In the mid-1900s, most students with visual impairments were educated in residential schools or separate classrooms. Now the trend is reversed: About 90% of the students are educated in public schools, and most of these children spend some time in the regular classroom with students of their own age (U.S. Department of Education, 2004).

The most common model for providing necessary adaptations is the assignment of an itinerant teacher to serve the student directly in the regular classroom or to provide consultation to the educational team. This professional is also responsible for obtaining specialized materials and textbooks, conducting assessments related to the visual impairment such as the functional visual evaluation, and collaborating with the educational team to ensure that team members understand the child's educational needs.

In some cases, children with visual impairments are educated in separate classrooms or specialized schools. A specialized placement may be due to the presence of additional disabilities that create complex educational needs or to the preference of the student's family. Some specialized schools encourage short-term placements for students with visual impairments who need to work on a specific skill such as orientation and mobility or assistive technologies (Lewis, 2002). This option may be especially worthwhile after a student experiences a decrease in vision and needs an intensive opportunity to learn adaptive skills. Specialized schools may offer summer programs that allow students with visual impairments to socialize with peers who have common experiences, and many students remember such programs as valuable in helping them develop an understanding of the effects of their own low vision or blindness.

The National Agenda for the Education of Children and Youth with Visual Impairments, Including Those with Multiple Disabilities, a set of goals established by families and professionals in 1995, has provided a framework for advocacy for a continuum of high quality educational services for learners who are visually impaired (Corn, A.L., Hatlen, P., Huebner, K.M., Ryan, F., & Siller, M.A., 1995).

Most students with visual impairments are able to use vision for some activities. Families and professionals could encourage use of vision for activities where it is more efficient or can provide information. Use of vision in regular activities can be determined by administration of a functional vision evaluation, an observational assessment completed by a certified teacher of visually impaired children. This assessment should include recommendations for adaptations, services, and instructional skills that will help the student learn to use vision appropriately (Erin, 2003).

Students who are blind will need opportunities for direct experiences with materials and objects because they do not gain information from pictures. The opportunity to pat a cow, to stand in the ocean, or to climb a tree will be more valuable for young children who are blind than relying on verbal descriptions. As children grow older, they will understand raised line representations of concepts such as maps, charts, and other graphics that can be reproduced through technology to allow tactile examination (Steinkuller, Du, Gilbert, Foster, Collins, & Coats, 1999).

Most students with visual impairments rely on auditory information for some part of their learning. Books on tape or CD, spoken output from the computer, and use of tape recorders for memos provide a quick means of access that has the advantage of being meaningful to sighted peers (National Dissemination Center for Children with Disabilities, 2004; Koenig & Holbrook, 1995).

Children with visual impairments vary widely in their learning abilities and needs, and educational support from a professional in visual impairment is vital in their learning. As they grow older, it is important for them to have contact with adults who are visually impaired and to have the opportunity to participate in regular work experiences. Not only must education provide information access, but it must also help them develop the skills needed to make decisions and experience the results of these decisions (Erin, 2003). Educators and families should resist the temptation to provide assistance where it is not needed; only through initiative and experience will a student understand his own capabilities and develop a realistic plan for his future.