

*Teaching Students With
Visual Impairments*

**A TECHNICAL
ASSISTANCE DOCUMENT
FOR EDUCATORS AND
ADMINISTRATORS**

Requirements
and
Best Practice

UTAH STATE OFFICE OF EDUCATION 2008

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Disclaimer

This document does not reflect policy or procedures from the Utah State Board of Education. The information is intended to be guidance for school staff members as they address the unique challenges of working with students with visual impairments. The section of the guidelines that contain federal or State legal citations are requirements.

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Purpose/Introduction

The Utah State Office of Education recognizes the unique needs of students with visual impairments. The challenge to succeed and progress educationally is difficult, but for students with a vision loss or blindness, the need for accommodations and supplemental services is critical. Early identification and interventions are important for preventing academic delays and improving results for students with visual impairments.

This manual will focus on the unique educational needs of students with visual impairments: first, to help educators and administrators improve their effectiveness in understanding and meeting the needs of students with visual impairments; second, to serve as a tool for improving the effectiveness of programs in meeting the needs of students and in making maximum use of available resources; and finally, to provide references to assist educators and administrators in improving both individual growth and program effectiveness.

The Individuals with Disabilities Education Act (IDEA) requires that school districts evaluate and, when appropriate, provide special education services to students whose educational performance is adversely affected by their disability. IDEA includes visual impairments as a disability category if a school team determines the child's disability adversely affects educational performance and requires special education and related services. If the student has difficulties that do not "adversely impact the student's educational performance," the student is not eligible for services under IDEA.

IDEA places major emphasis on the participation of all students with disabilities in the general education curriculum, including participation of all students in mandated statewide and district-wide assessments.

There are numerous definitions of "visual impairment" and "blindness" including those in vocational rehabilitation and Utah State Law. For the purposes of this manual, the definition in IDEA 2004 will be used. This manual addresses students with visual impairments that are eligible for special education services.

Specific accommodations have been developed, as research-based information becomes available, to address the needs of students with visual impairments. Significant progress has been made in including students with visual impairments in statewide assessments. Although there continue to be barriers and issues regarding statewide assessment that have not yet been resolved for students with visual impairments, the inclusion of all students in statewide assessments is required. It will continue to be an evolving process with a focus on the equitable and fair assessment of all students.

Related services are critical in assisting the student to benefit from his/her special education program. An example would be orientation and mobility services; this will be discussed in detail later.

Legal Authority

The Individuals with Disabilities Education Act (IDEA), 20 U.S.C. §1400 et seq., reauthorized in 2004, is considered an education law, protecting the educational rights of children with disabilities. The IDEA contains many broad, overarching mandates for State and public agencies to further protect children with disabilities. Once identified as a student with a disability pursuant to IDEA, the student is entitled to a free appropriate public education designed to meet the student's unique learning needs.

In furtherance of these broad protections, the IDEA requires that an Individualized Education Program (IEP) be developed by the school district to address the child's unique needs. Typically, the IDEA is silent with regard to a particular method or type of instruction to be used when designing the specialized instruction for a student with a disability. However, when developing the IEP for a student who is blind or visually impaired, the IDEA contains specific mandates to be followed by the school district. Pursuant to §1414(d)(3)(B), the IEP team shall provide for instruction in Braille and the use of Braille unless the IEP team determines, after evaluation, that instruction in Braille or the use of Braille is not appropriate for the child, and further, whether the child needs assistive technology devices and services. Defined specifically in the definition section of IDEA, assistive technology can generally be described as various types of devices and services designed to help students with disabilities function within their environments.

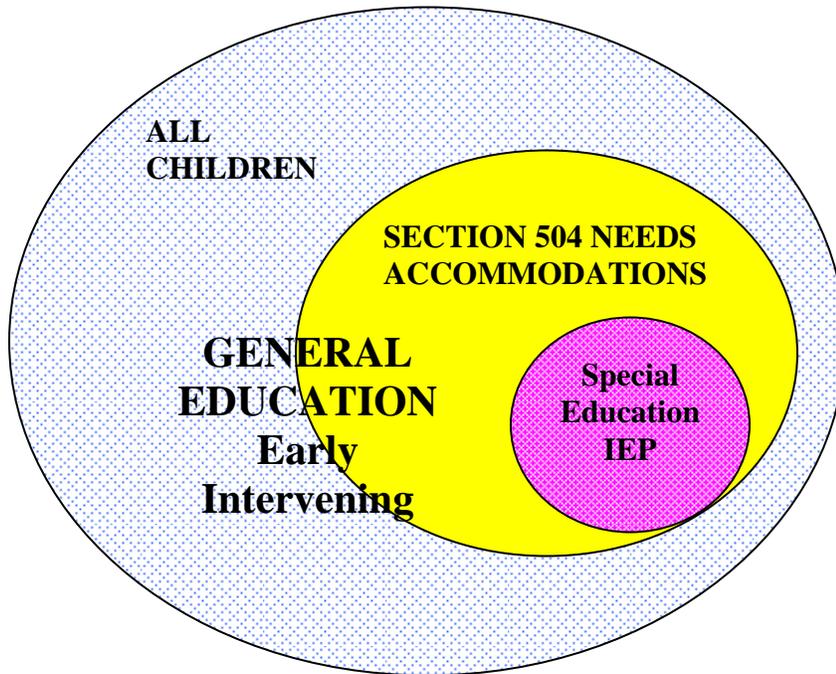
The IEP must also include a statement of the special education and related services and supplementary aids and services to be provided to the child, (20 U.S.C. §1414(d)(1)). Related services can include transportation, developmental, corrective, and other supportive services to enable a child with a disability to receive a free appropriate public education (FAPE), (20 U.S.C. §1402(26)).

In addition to the IDEA, Section 504 of the Rehabilitation Act of 1973 is a civil rights act that prohibits discrimination against individuals with disabilities. Section 504 ensures that a child with a disability has equal access to an education in a public school setting. Unlike the IDEA, Section 504 does not contain the substantive requirements for educational planning. It is possible that a child with a disability may not need specialized instruction but needs accommodations or modifications in order to permit access to an education. Section 504 mandates that public schools provide reasonable accommodations or modifications to permit access to an education for a child with a disability.

In order for a student to be eligible for Section 504, *he/she must have a mental or physical impairment that substantially limits a major life activity*. The impairment must affect the student's education. One of the major life activities is "seeing." If the condition cannot be corrected by glasses or other assistive technology, and the impairment affects the student's education, a Section 504 accommodation plan might be necessary. If a student with a visual

impairment is determined to be eligible under Section 504 of the Rehabilitation Act, the teacher of the visually impaired student may be involved as a consultant in the development of the 504 plan. The teacher of the visually impaired student can provide valuable information to assist in the success of the student in the general education classroom.

The distinction between an IDEA disability and a Section 504 disability can be confusing. The following visual depiction represents the universe of all children, including those children entitled to accommodations through Section 504 and those entitled to special education under the IDEA:



Relevant to this discussion regarding students with visual impairments, some students need individual accommodations to access an educational program, but do not need specialized instruction. For example, if a student needs large-print texts in order to access the curriculum, but is able to make adequate progress without specialized instruction, then the student would be entitled to the protections of Section 504 but would not require an IEP or be identified as a special education student pursuant to the IDEA.

There exists no bright-line test to determine whether a particular kind of assessment, service, or assistive device is the responsibility of the school district. Such determinations are made on a case-by-case basis by the IEP team, which should include the student's parent and individuals with expertise in vision impairment. By law, these decisions are driven by the student's IEP team in fulfillment of its duty to provide the student with FAPE. State educational agencies, the courts, the Office of Special Education Programs (OSEP), and the Office for Civil Rights (OCR) resolve disputes arising under IDEA and Section 504. Through the resolution of disputes comes interpretive guidance helpful to

educational agencies providing services to children and helpful to students and parents as they attempt to navigate the requirements of IDEA and Section 504.

In an effort to summarize decades of guidance, general principles that have withstood the test of time are highlighted here:

- If a school district determines a child with a disability requires a particular assistive device in order to receive FAPE, the school district must provide it at no expense to the parents. *Cedar Rapids Community School District v. Garrett F.*, 106 F. 3d 822 (8th Cir. 1997), *Letter to Bachus*, 22 IDELR 629 (1995).
- Although vision therapy may be useful or beneficial, unless necessary to ensure FAPE, or unless necessary to ensure that the student benefits from his/her IEP, it is not the responsibility of the school district. *Eugene School District 4J*, 35 IDELR 52 (OR SEA 2001), *Board of Education of the Springville-Griffith Institute Central School District*, 37 IDELR 175 (NY SEA 2002).
- When assistive technology devices or services are determined to be necessary to provide FAPE, but the school district fails to provide the services, parents may be entitled to reimbursement for services unilaterally obtained, and the student may be entitled to compensatory education from the school district. *Dekalb County School District v. M.T.V.*, 45 IDELR 30 (11th Cir. 2006), *Board of Education of the Starpoint Central School District*, 37 IDELR 120 (NY SEA 2002), *Upper Darby School District*, 26 IDELR 1183 (PA SEA 1997).
- The school district is responsible for conducting evaluations in all suspected areas of disability, and in the case of a child with a visual impairment, the IEP team is responsible for evaluating the child's reading and writing skills, appropriate media, and need for Braille. The evaluative reports of outside experts are to be considered but do not supplant the IEP team's responsibility. *In re: Student with a Disability*, 103 LRP 57778 (NM SEA 2003).
- Reasonable accommodations must be provided under Section 504. Accommodations may be considered reasonable if they facilitate access to education. *New York City Department of Education*, 39 IDELR 129 (OCR, Eastern Division 2003), *Cabrini College*, 30 IDELR 26 (OCR, Eastern Division 2004).

Eligibility and Service Options

Early identification and intervention are important because of the critical learning that takes place between birth and four years of age. Vision loss can lead to delays in cognitive development, motor skill acquisition, social and emotional problems, and functional academic skills. Many school districts have early intervening and Responsiveness to Intervention (RtI) processes. This is everything that occurs in general education, including screening, observation, and interventions, prior to a referral to special education for a comprehensive evaluation.

This section provides an overview of the process generally used for identification, through the least restrictive environment, in the context of working with students with visual impairments.

Step One: Evaluation

Many infants and toddlers with visual and/or hearing impairments receive early intervention services through the Parent Infant Program (PIP) at the Utah Schools for the Deaf and Blind. PIP incorporates family-centered practices into services for families and children from birth to age three. The school district should check to see whether the child received services through PIP.

Identification/Screening

A student must be examined by an optometrist or ophthalmologist as soon as a vision loss is suspected. Some possible indicators for vision loss could include the following:

- Eyes crossed or turning in or out
- Eyes moving independently of each other
- Reddened, watering eye, encrusted eyelids, frequent sties
- Eyes shake or wander randomly.
- Eyes are not able to follow parent's face.
- Pupils of the eyes are excessively large or small.
- Pupils of the eyes are not black; they appear to have a cloudy film on them.
- Headaches, nausea, and dizziness
- Burning or itchy eyes
- Blurring of vision at any time
- Double vision
- Rubbing eyes frequently
- Does not appear to focus with central vision.
- Turns or tilts head when looking at detail.
- Covers or closes an eye when looking at detail.

- Avoids close work or becomes tired after close work.
- Can see better during the day than at night.
- Complains of tired eyes.
- Squints eyes.
- Sits very close to the television.
- Has difficulty walking and running; appears clumsy.

The school does routine screening for all children, and it is not considered an evaluation that needs parental consent (CFR 300.302). An example would be vision screening. Parents are notified of screenings through student and parent handbooks.

Every effort should be made to locate and identify students with visual impairments. This is part of the school district Child Find requirement.

Child Find (a) General requirement. (1) The school district must have in effect policies and procedures to ensure that—(i) All children with disabilities residing in the State, including children with disabilities attending private schools, regardless of the severity of their disability, and who are in need of special education and related services, are identified, located, and evaluated; and (ii) A practical method is developed and implemented to determine which children are currently receiving needed special education and related services. CFR 300.111(a)

Examination

A student must be examined by a specialist if there is a concern regarding a student’s vision. An *optometrist* is a doctor of optometry (O.D.) who specializes in the examination and treatment of conditions or impairments of the visual system. *Optometrists* prescribe glasses and are trained to detect problems with vision, eye diseases, and other abnormalities. An *ophthalmologist* is a doctor of medicine (M.D.) who specialized in diagnosis and treatment of defects and diseases of the eye, performing surgery when necessary or prescribing other types of treatment including glasses or other optical devices.

Visual Acuity

Visual acuity is an important aspect of a complete eye exam. Visual acuity refers to the clarity or clearness of one’s vision, a measure of how well a person sees. The numerator indicates the distance (in feet) from the chart that the subject can read. The denominator indicates the distance at which a normal eye can read. Some examples are given below:

- A person with a distance visual acuity of 20/20 is said to have **“normal” vision**. If a person with a distance visual acuity of 20/20 stands 20 feet from an object, he/she sees the object as well as others with “normal” vision standing 20 feet from the same object.

- A person with **low vision**, with a distance visual acuity of 20/100, would need to stand four feet from an object to see it as well as a person with “normal” vision standing 20 feet from the same object ($4/20=20/100$).
- A person who is **legally blind**, with a distance visual acuity of 20/200, would need to stand two feet from an object to see it as well as a person with “normal” vision standing 20 feet from the same object ($2/20=20/200$).

Vision Loss/Blindness

IDEA and Utah rules state that *visual impairment, including blindness, means impairment in vision that, even with correction, adversely affects a child’s educational performance. The term includes both partial sight (low vision) and blindness (CFR 300.306(b)(1)(13)).* There is a range of vision loss for students who are low vision and for students who are blind.

Low vision is defined as a mild to moderate visual impairment with visual acuity measured between 20/70 and 20/200. A student with low vision is one whose vision can be used as a primary channel for learning, but the low vision affects daily activities. Individuals with severe low vision may be classified as partially sighted and/or legally blind.

The term *legally blind* is used when the best corrected visual acuity is 20/200 or less, or the person’s visual field is 20 degrees or less. *Legally blind* is generally used to enable a person to access services funded by the government. *Legal blindness* can range from the student having unreliable vision and relying to some extent on other senses, to being totally without sight and relying exclusively on other senses. Students who are blind learn via Braille or other non-visual media. Note: The acuity measurement of 20/200 is for distance vision. Many with 20/200 vision for distances must see much better up close, and may use vision for reading and schoolwork.

A *cortical visual impairment* is not caused by any abnormality of the eyes. It is a temporary or permanent visual impairment resulting from neurological damage within the brain, often within the visual cortex of the brain. The degree of vision impairment can range from severe visual impairment to total blindness. The damage prevents the individual from adequately receiving and interpreting what the eyes see.

Functional Visual Assessment

Visual acuity is an important component of a clinical evaluation, but it conveys limited information. For instance, we may know that a student has 20/100 distance acuity, but the preferred or optimal print size for reading may not be apparent to the parents or teacher. The vision assessment provides a description of the student’s typical use of vision during everyday tasks in multiple settings and activities. The information provided through the functional vision assessment will define the current effects of the student’s visual impairment and potential use of vision by the student in certain conditions.

It is important to note that a functional vision assessment should be conducted prior to other assessments so that other team members are able to consider visual factors unique to each student before conducting their assessment.

Learning Media Assessment

The learning media assessment is “an objective process of systematically selecting *learning* and *literacy* media” (Koenig and Holbrook). This includes the total range of instructional media needed to facilitate learning and is, understandably, different for each student. It consists of *general learning media* (instructional materials and methods) and *literacy media* (the tools for reading and writing). Instructional materials can include a range of options, such as pictures, real objects, tactile symbols, videos, worksheets, tapes and augmentave communication devices. Methods can involve modeling, demonstrating, prompting, questioning, pointing, and lecturing. The wide range of possible materials and methods provides for students at all ability levels.

The learning media assessment gathers three types of information on each student:

- The efficiency with which the student gathers information from various channels: visual, tactual and auditory
- The types of general learning media the student uses, or will use, to accomplish learning tasks
- The literacy media the student will use for reading and writing

Impact on Education

Visual impairment can result in delayed educational development that, without effective intervention, may have a severe impact on the student’s social, emotional, functional, academic, and vocational development.

Students with visual impairment are typically limited in acquiring information through incidental learning, since they are often unaware of subtle activities in their environments. They may require individualized instruction relating to specialized skills, as well as specialized books, materials, and equipment for learning through alternate modes.

Educational goals for students with visual impairments are essentially the same as those for all students. In order to accomplish these goals, however, students with visual impairments require specific interventions and accommodations of their educational programs.

Early Intervening

Some students with vision loss can be accommodated by general education through early intervening services or a Section 504 accommodation plan. Students with moderate or severe vision loss might need an evaluation for special education services.

Evaluation Issues

Unique Factors to Be Considered by the Evaluation Team of a Student With a Visual Impairment

The following is a list of unique factors that should be considered when conducting an evaluation or developing an IEP for a student who has a visual impairment:

- Cause and age of onset of visual impairment
- Degree of visual impairment
- Other disabilities and medical conditions
- Family and cultural characteristics
- Physical and psychological maturity of the student
- Environmental characteristics
- Sensory development (visual, auditory, tactual, kinesthetic)
- Social development
- Concept development and reasoning
- Listening skills and study skills
- Leisure and recreation
- Orientation and mobility
- Use of media for literacy in reading and writing
- Career education
- Motor development
- Independent living skills
- Assistive technology devices and services
- Communication modes
- Academics
- Low vision aids
- Expanded Core Curriculum

Listed below are some of the specific aspects of a functional vision assessment:

- Appearance of the eyes
- Pupillary reflexes
- Eye preference
- Acuity
- Field of vision
- Color vision
- Scanning
- Tracking
- Possible use of optical aids
- Optimal print size
- Reading distance

Psychoeducational Assessment

When children with visual impairments are referred for psychoeducational evaluation, it is usually because of concerns expressed by classroom teachers, the teacher of the visually impaired (TVI), or parents about one or more aspects of their development and learning. Because of the low incidence of visual impairments relative to other disabilities among school-age children, school psychologists and other assessment personnel working in general education schools have considerably less experience with this population. It is the consensus of major authors on assessment with this population that the TVI must be involved in consultation with the other team members who will be involved.

Prior to initiating testing, all relevant vision impairment-specific assessments should be completed and reports made available to the psychoeducational team. These include the Functional Vision Evaluation, the Learning Media Assessment, Orientation and Mobility Evaluation, and the most current report of the ophthalmologist or optometrist who

provides care to the student. The TVI should review the eye report and the results of these assessments with the team and participate in planning the assessment.

School psychologists are responsible for the cognitive (and sometimes the academic) portions of psychoeducational assessments. The following recommendations apply to other team members as well, particularly if they will use assessment instruments containing visual stimuli.

- School psychologists should familiarize themselves with the medical and developmental history of the child and with the results of the functional vision assessment and learning media assessment provided by the TVI. Knowing the medical history, particularly whether the origin of the visual impairment is in the eye or in the central nervous system, will aid teams in forming hypotheses about the likelihood of additional disabilities.
- TVIs and school psychologists should clarify the referral questions.
- School psychologists should observe the student in a variety of settings.
- School psychologists should interview the classroom teacher(s), the TVI, and the parents.
- Screening instruments of social and emotional functioning should be used to identify problem areas that may require intervention.
- Because a visual impairment may affect the ability of individuals to function independently, adaptive measures should be considered.
- School psychologists and TVIs should examine test stimuli to determine whether adaptations are needed. Adaptations should conform to the intent of the items and neither increase nor decrease the cognitive demands.
- TVIs and school psychologists should consult together about any adjustments to the testing environment that are needed (e.g., lighting, furniture arrangement relative to light sources).
- Following testing, school psychologists and TVIs should discuss the student's performance in terms of effects of the vision loss on the student's functioning.
- Scores on verbal subtests should be interpreted with caution, because many of the items sample concepts that are learned incidentally through sight.
- Performance on visual-spatial subtests should be administered to students who use their vision for most or all of their learning, but the results should be interpreted qualitatively for information on the effects of vision loss on the student's ability to function with visual material and not for computation of Full Scale, Composite, or other Total scores.

- The services of an ancillary examiner should be used when tests with Braille stimuli or requiring interpretation of Brailled responses are administered.
- Teams should make a good-faith effort to reach consensus on the presence or absence of additional exceptionalities and on recommendations for programming to enhance the child's progress in all areas of both the general and expanded core curricula.

Eligibility

While the student's vision history from a qualified eye care professional must be on record, a team of qualified professionals and the student's parents determine eligibility.

- The visual impairment must adversely affect the student's educational performance.
- The student with a visual impairment must required special education and related services.
- The team must determine that the visual impairment is the student's primary disability.
- The requirements of Rule II.G must be met, as prescribed in IDEA 2004.
- When classifying a student as visually impaired, the IEP team must consider whether other impairments interfere with the comprehension of visual and/or auditory stimuli.

Step Two: The IEP

The IEP Team

The team should include at least one person with knowledge in the area(s) of suspected disability; in this case, a *vision specialist*. The person with this training has knowledge and experience in conducting and interpreting assessments for students who are visually impaired. This is also true for children who may have other disabilities in addition to vision loss. Students with additional disabilities should be carefully assessed from a multi-disciplinary perspective.

The teacher of the visually impaired brings a variety of skills to the school:

- Consultation to other team members about eye conditions; educational implications; and the appropriateness, modifications, and interpretation of assessments for students who are visually impaired
- Knowledge of the expanded core curriculum that could include skill development relating to alternative communication modes (e.g., Braille, large print), social

interaction, recreation and leisure, use of assistive technology, orientation and mobility, independent living, career education, and visual efficiency

- Knowledge of specialized curriculum and materials to address deficits identified in the evaluation process

A credentialed vision specialist should be part of the IEP team of a student with a visual impairment. IEP teams must consider the full range of skills necessary to enable the student with a visual impairment to learn effectively. The specialist is knowledgeable about vision impairments and their functional, developmental, and educational implications.

In addition to being part of the IEP team, the vision specialist may:

- Provide training of staff members who are directly working with the student.
- Collaborate with the general educator, family, or other members of the team to discuss the progress and adaptations for the student.
- Provide direct service for the student.
- Work with family members as a liaison between school and home.
- Make referrals for additional services.
- Be the liaison between eye doctors and the IEP team.

Special Factors to Consider

IDEA includes a list of special factors that must be considered by every student's IEP team. There are two special factors that focus specifically on students with visual impairments: instruction and use of Braille and consideration of assistive technology devices and services.

Consideration of Special Factors. The IEP team also shall—(iii) In the case of a child who is blind or visually impaired, provide for instruction in Braille and the use of Braille unless the IEP team determines, after an evaluation of the child's reading and writing skills, needs and appropriate reading and writing media (including an evaluation of the child's future needs for instruction in Braille or the use of Braille), that instruction in Braille or the use of Braille is not appropriate for the child;[...] (v) Consider whether the child requires assistive technology devices and services (CFR 300.324(a)(2)(iii)).

When a student with a visual impairment is ready to read or write, an evaluation is needed to determine the appropriate media for literacy. As part of this process, the team must consider the need for Braille instruction and provide reasons if this instruction is not included in the IEP.

Many factors must be considered when making this determination. One factor to consider is the student's visual condition. For example, a student who is totally blind will usually read using Braille, whereas a student with low vision may need ongoing assessment in his or her reading and writing skills to determine when to use large print and/or Braille.

Assistive Technology

Assistive technology is not a luxury but a necessity for a student with a visual impairment. Technology increases independence and freedom of choice for students with visual impairment. The appropriate assistive technology allows students with a visual impairment access to the world of information available to their sighted peers. Technology skills provide students with increased control over their school, home, or work environments.

By using specialized assistive technology, Braille-reading students can access the appropriate material at the right time. Students with low vision now have a variety of assistive technology tools that allow them to access the instructional information that is needed to be successful in school.

To determine the appropriate assistive technology needs, the school must provide appropriate evaluations of the student's technology needs by knowledgeable professionals.

According to the Assistive Technology Act of 1988, assistive technology refers to "any item, piece of equipment, or product that is used to increase, maintain, or improve functional capabilities of individuals with disabilities," and is a fundamental right. For students with visual disabilities, assistive technology can make access to almost any information possible. It also allows them to produce written communication and information, and to correspond independently in diverse environments.

Assistive technology can be as simple as a magnifying glass or as complex as computer/scanner-based text magnification system. A few hardware examples of assistive technology for the blind and visually impaired include portable note takers, Braille displays, talking calculators, closed circuit television (CCTV) and specialized hand-held recorders. Some software examples of assistive technology include talking word processors programs often referred as a screen reader program, magnification programs with speech, and Braille translation software.

For successful integration of assistive technology in the classroom, students need to have qualified assessments conducted by the IEP team, a qualified multidisciplinary or augmentative team. Team members should seek recommendations of a vision technology specialist if they don't have the necessary experience in this field. Training on selected assistive technologies will increase appropriate classroom use and integration. Assistive technology training should be addressed as a related service in the IEP. Appropriate technology tools and skills will increase students' competencies at home, at school, and in post-secondary environments.

It is important to note the different conditions for the individual use of various assistive technology products. For instance, assistive technology such as print-to-Braille translation programs and embossers, used by Braille Production Specialists, allow for a variety of teacher-designed materials to be produced for several students. This print-to-Braille technology is usually housed in a central educational setting in the community and facilitates the production of material for numerous students. Other technologies such as a CCTV or video magnification system, may be centrally located in a school or district for multiple student use. Additionally, some specific technologies like Braille writers and electronic note takers are used by one individual, and can be used to reinforce learning in multiple environments, including the home.

Expanded Core Curriculum

The Core Curriculum is comprised of the academic subjects a student is required to complete prior to high school graduation. In addition to the Core Curriculum, sighted students learn a large amount of valuable information through casual observation of their environment. Students with a visual impairment must be provided direct training through an *expanded Core Curriculum* to receive these same experiences.

The expanded Core Curriculum is defined as “expanded” because it encompasses not only the essential elements of the standard curriculum, but also includes instruction of additional areas of need that are a direct result of a student’s visual impairment. The expanded Core Curriculum must be systematically and sequentially taught by professionals with specialized skills. The professionals may include a teacher of the visually impaired or an orientation and mobility specialist.

Components of the expanded Core Curriculum could include instruction in:

- Compensatory academic skills.
- Communication modes (i.e., Braille, large print).
- Social interaction skills.
- Recreation and leisure skills.
- Use of assistive technology.
- Orientation and mobility.
- Independent living skills.
- Career education.
- Visual efficiency skills.
- Advocacy skills.
- Self-determination.

Supplementary Aides and Services

To provide students who have visual impairment with full access to information within the school setting, appropriate classroom adaptations and use of technology must be

considered during the evaluation and IEP process. There are a variety of accommodations, modifications, and supports that will enable a student with a vision loss to participate as fully as possible in the general curriculum and other school offerings.

Here are some possible accommodations to consider:

- Large print
- Magnification devices
- Braille
- Nemeth Braille code
- Tactile graphics
- Audiotape or compact disc
- Screen reader
- Talking materials
- Type on or speak to word processor (with grammar and spell check disabled for assessment)
- Use of calculation devices (e.g., talking calculator with enlarge keys, abacus)
- Use of personal note taker
- Change in location so student does not distract others
- Shortened assignment
- Extended time
- Oral reading

Related Services

Many students require related services to benefit from their special education program. The list of related services is not exhaustive and may include developmental, corrective, rehabilitation counseling, and other supportive services as are required to assist a student with a disability to benefit from special education. The types of related services needed by a student with a visual impairment will vary with each student. Possible related services include, but are not limited to, reader assistance, Braille transcription, and orientation and mobility.

Related services are those services required to assist the student to benefit from special education (CFR 300.34) They are provided to students with visual impairments by qualified personnel to enable those students to attain orientation to and safe movement within their environments in school, home, and communities, and include teaching students the following as appropriate: (a) spatial and environmental concepts and use of information received by the senses (such as sound, temperature, and vibrations) to establish, maintain, or regain orientation and line of travel (e.g., using sound at a traffic light to cross the street); (b) use of the long cane to supplement visual travel skills or as a tool for safely negotiating the environment for students with no available travel vision; (c) understanding and use of remaining vision and distance low vision aids and tools.

Orientation and mobility services that address travel and orientation within the environment are necessary related services for many students with visual impairments (CFR 300.34). Orientation and mobility specialists have the necessary knowledge and skills to assist students and staff with this service. Some of the responsibilities of the orientation and mobility specialist are as follows:

- Orient the student to the school environment.
- Teach independent travel in the community.
- Consult with the staff members who are directly working with the student.
- Teach cane use or the use of optical devices.
- Provide inservice training to school personnel and family members.
- Participate as a member of the evaluation and IEP teams.

Transition Services

Transition services are defined in IDEA as a coordinated set of activities designed within a result-oriented process (CFR 300.324(c)(1)). This process from school to post-school activities includes post-secondary education, integrated employment (including supported employment), continuing adult education, adult services, independent living, and/or community participation.

The coordinated set of activities shall be based upon the individual child's needs. The student's preferences and interests should be taken into account. It may include instruction (e.g., low vision aids training, Braille, technology), related services (e.g., orientation and mobility), community experiences, the development of employment, and other post-school adult living objectives. It may also include, if appropriate, the acquisition of daily living skills and a functional vocational assessment. The IEP team shall consider the academic, developmental, and functional needs of the child.

If transition is to be seamless, with no interruption in services, the student will need to decide where he/she wants to go and what he/she wants to do. Then the staff member will be able to provide appropriate support.

Studies examining the post-school outcomes of students with disabilities (such as post-secondary education, employment, living arrangements, mobility, and leisure) have found that a large portion of these students do not go on for further training. Additionally, they often do not receive needed post-school supports and services, and are not as successful as adults when compared to the general population.

Students with visual impairments often begin a post-secondary school program, but many are not successful and drop out of college after a semester or two. The focus is on helping each person find a program, training, and/or skills that will help him/her succeed in his/her adult life.

According to various reports and studies, many people with disabilities are not working. The reasons are varied and numerous, but there is also an increasing awareness that self-sufficiency, employment, and independent living can be achieved by individuals with disabilities. The research shows that when a person is working, there is an improvement in his/her self-esteem and satisfaction with life.

Statewide Assessments

All students, including all students with disabilities, are required to participate in the statewide assessment program (CFR 300.324(a)(2)). The IEP team determines whether a student with disabilities will participate without accommodations, with accommodations, or through Utah's Alternate Assessment (UAA). Accommodations are intended to reduce or even eliminate the effects of a student's disability; they do not reduce learning expectations. Accommodations should provide an equal opportunity, not give an unfair advantage over other students. The IEP team determines the instructional and assessment accommodations for a student. Accommodations that are allowed on the statewide assessments are as follows:

- Directions read aloud in English
- Questions read aloud in English
- Directions signed
- Questions signed
- Screen reader
- Directions—oral translation
- Questions—oral translation
- Large print
- Magnification devices
- Braille
- Tactile graphics
- Audio amplification devices
- Talking materials
- Bilingual word lists
- Translated formulas
- Word processor (no spell check)
- Abacus
- Write-in test booklet
- Scribe
- Use of highlighters
- Visual organizers
- Graphic organizers
- Speech-to-text conversion
- Braille
- Recording device
- Reduction of distractions to student
- Reduction of distractions to others
- Physical access—ADA
- Extended time
- Multiple breaks
- Schedule change

Step Three: Least Restrictive Environment

The determination of the Least Restrictive Environment (LRE) for a student with a visual impairment is made only after an IEP has been written that addresses the full range of the student's unique needs. A full array of services and continuum of placements must be

considered as part of the IEP process. The options could include instruction in general classes, special classes, special schools, home instruction, and instruction in hospitals and institutions.

The child who is placed in the educational setting that will be most beneficial in addressing his educational potential is in the least restrictive environment for that child. Blind and visually impaired students have the capability to grow up to be adults who are literate, mobile, social, employable, and independent. Appropriate services, including serious consideration of placement, will determine whether the student receives adequate instruction so that all of these attributes are attained.

The determination of LRE must be based on the identified and unique needs of the student with a visual impairment. Each student's IEP team must fully consider ways to remove obstacles to educating the child with a visual impairment in less restrictive settings before proceeding to a more restrictive setting. Each school district must ensure that a full continuum of alternative educational settings is available to meet the needs of a student with visual impairments.

Teachers of the visually impaired provided services in a variety of settings. Typical service delivery models include consultative, itinerant, resource room, self-contained, and specialized schools.

Consultative services are provided for students participating full time in the general education classroom with minimal support services. The primary role of the teacher of the visually impaired is consultation services to parents, classroom teachers, and school personnel. Limited time is spent in direct services.

Itinerant services are provided for students who require specialized instruction to develop compensatory skills associated with their vision loss. Teachers of the visually impaired who are providing itinerant services spend a majority of their time in direct instruction on specific skill areas such as Braille instruction, independent living skills, or training in the use of adapted materials or assistive technology.

Resource room services are for students who require daily support services and specialized instruction to develop compensatory skills associated with their visual impairment. These services are provided by a teacher of the visually impaired and/or an orientation and mobility specialist, and/or a resource teacher.

Self-contained classrooms and specialized schools are intended for students with extremely severe impairments who cannot be accommodated in a resource or general education classroom. Every attempt should be made to connect the student's program with the general education curriculum.

Step Four: Review/Extended School Year

The student's IEP needs to be reviewed at least once each year to determine whether the annual goals are being achieved and to revise the IEP as appropriate (CFR 300.324(b)).

The student's IEP team has the responsibility to consider the need for extended school year services (ESY) annually (CFR 300.106). ESY is designed for students who significantly regress in their educational skills and require a longer-than-normal time to recoup those skills.

Reasons why ESY services may be needed vary from student to student. The IEP team must determine whether the learning that has occurred during the regular school year will be significantly jeopardized if ESY services are not provided.

All IEP goals should be considered annually for ESY services. The IEP does not develop a new IEP for ESY, but uses the existing IEP. It is possible for a student to receive just a related service for extended school year.

Educational Considerations

Specialized classroom instructional strategies for the general education teacher with a student who has vision impairment in the general education classroom

As previously mentioned, there are two main functional categories of visual impairments: low vision and blind. Low vision students usually are print users, but may require special equipment and materials. The definition of *legally blind* covers a broad spectrum of visual impairments. The extent of visual disability depends upon the physical sensory impairment of the student's eyes, the age of the student at the onset of vision impairment, and the way in which that impairment occurred. Vision also may fluctuate or may be influenced by factors such as inappropriate lighting, light glare, or fatigue. Hence, there is no "typical" vision impaired student. The major challenge facing visually impaired students in the educational environment is the overwhelming mass of visual material to which they are continually exposed (e.g., textbooks, class outlines, class schedules, PowerPoint presentations, whiteboards, writing). In addition, the increase in the use of films, video, computers, and television adds to the volume of visual material to which they have only limited access. Assisting in overcoming a student's visual limitation requires unique and individual strategies based on that student's particular visual impairment and his/her skill of communication (e.g., Braille, print, listening, etc.). The following is a list of possible education considerations:

- It's okay to say "look" and "see." Even fully sighted people use their other senses in the context of looking at something. Visually impaired people might look at things in a different way, but "seeing" is in the perception (rather than the eye) of the beholder.
- Audiovisual presentations and demonstrations are made accessible to severely visually impaired students by providing verbal explanations. Read what is being written on the board and/or describe what is pictured in the presentation. Allow the student time to handle tactually adapted materials. See <http://www.tsbvi.edu/technology/powerpoint.htm> for guidelines for PowerPoint presentations.
- Speak to the class upon entering and leaving the room or site. Call the student with a vision impairment by name if you want his/her attention. Describe, in detail, pertinent visual occurrences of the learning activities. Offer to read written information for a person with a visual impairment, when appropriate.
- Describe and tactually familiarize the student to the classroom, laboratory, equipment, supplies, materials, field sites, etc. Give verbal notice of room changes, special meetings, or assignments. Orally, let the student know if you need to move, leave, or end a conversation.
- Use descriptive words such as "straight," "forward," "left," etc. in relation to the student's body orientation. Be specific in directions, and avoid the use of vague terms with unusable information, such as "over there" "here" "this" etc. Instead, use spatial directions from the student's perspective. Remember that the student's left and right are opposite yours when you are facing the student.
- Seat or encourage the visually impaired student to come to the front of the classroom or presentation area in order to be certain that he/she hears all instruction/explanation correctly. Seat the student away from glaring lights (e.g., by the window), preferably in front of the class.
- Request that the TVI order the appropriate textbooks for the student in the preferred medium. Braille materials take an exceptionally long time to order and/or prepare. Textbook committee members should be aware of this and be certain that Braille textbooks can be ordered in January for the following fall so that they can be transcribed in time. Extra time may be required for math and technical books, as Braille mathematical notation requires a unique certification that many literary Braille transcribers do not possess.
- Classroom handouts, especially those with pictures or diagrams, also require a great deal of time to transcribe into Braille and tactile formats or verbal descriptions. Classroom teachers would be wise to provide materials to be transcribed at least two weeks ahead of time, preferably on disk, as some text can be transcribed using computer translation software.

- Expect the visually impaired student to complete the same assignments as the rest of the class. Due to alternative media, assignments may take a visually impaired student longer to complete. An average of double time for Braille or tape is a good rule of thumb. Due to time constraints, it may occasionally be necessary to reduce the number of examples to be completed for classwork or homework (such as in math problems), as long as the student is able to demonstrate that he/she understands the concepts and/or skills exhibited within each example.
- Independence is of primary importance! Be patient. Observe the student, silently encouraging independent problem-solving skills. Wait until the student asks for help, and provide minimal assistance only as needed to build self-confidence and independence.
- Avoid leaving doors and drawers ajar or chairs out from under tables and desks. Either keep furniture consistent or inform and/or involve the student in rearranging. If a student with a visual impairment is in class, routinely check the instructional environment to be sure it is adequate and ready for use.
- Address all students by name so that the visually impaired student can learn to associate names with voices of classmates. Address the visually impaired student by name as well, so he/she knows when he/she is being spoken to.
- Encourage the student's use of proper posture, eye contact (as much as possible), and proper social etiquette. Encourage appropriate mannerisms to maximize the student's physical and emotional health, as well as the student's social, educational and career potential.
- Always treat the visually impaired student equally with other students. This includes discipline and special privileges, as well as involvement in extracurricular and leadership opportunities.
- Give the visually impaired student as many opportunities to help others as to be helped by others.
- Please don't presume that, just because the student can't see and is using other learning mediums, the student is incapable. Try to allow the student to use his/her strengths to learn.
- All students, including those with visual impairments, learn at individual rates.
- If you are asked to guide a student with a visual impairment, identify yourself, offer your services and, if accepted, offer your arm to the student's hand. Tell him/her if he/she has to step up or step down, him/her know if the door is to his her left or right, and warn him/her of possible hazards.
- Do not pet or touch a guide dog. Guide dogs are working animals. It can be hazardous for the visually impaired person if the dog is distracted.

Summary: As much as possible, treat the student the same as any other student, and your example will encourage classmates to do the same.

Environmental Considerations

As you start planning environmental considerations for the blind and visually impaired, it is best to determine the extent of the vision loss. What can the person see? Is the student's vision blurred or clear? Is the student sensitive to bright lights or bright lighting with glare reduction, etc.? When enhancing visual performance in a school setting, it is best to have a combination of light sources available, including natural light from windows and doors, in addition to fluorescent and incandescent sources. Generally, the student should be positioned with his/her back to natural light sources.

Below is a list of considerations that will not apply to all students to the same degree, but should be considered as part of the planning for better school success.

1. When planning for a person with no vision or a very small amount of light perception, you need to consider the following:
 - a. Concentrating on touch, smell, and vibrations.
 - b. Changing textures in flooring or on walls.
 - c. Taking into account the safety features of all equipment.
 - d. Determining whether fixtures and fittings are firmly attached.
 - e. Determining whether the furniture is sturdy but without sharp corners.
2. When planning for a person who has some useful vision, you need to:
 - a. Use changing textures.
 - b. Begin to introduce color and contrast.
3. A variety of light options need to be considered:
 - a. Use available skylights to illuminate awkward places like stairwells and passages, if possible.
 - b. High wattage bulbs, day-glo bulbs, soft glow bulbs, and florescent tubing can all be used to increase lighting or add contrast.
 - c. Dimmer switches are useful.
 - d. Anti-glare screens on pictures, TVs, and computers are a good idea.
 - e. Some people like grey mirrors.
 - f. Use proper placement for mirrors.
 - g. Use Braille labeling for identifying items.
 - h. Use contrast when possible.

Teacher of the Visually Impaired

Listed below are suggested responsibilities for the teacher of the visually impaired.¹ Each school district will have its unique policies and procedures regarding teachers and paraeducators.

- Provides initial and ongoing assessment:
 - Consults with assessment team(s) to determine appropriate testing materials and modifications needed.
 - Assists with assessments when needed.
 - Interprets assessment results when needed.
- Has primary responsibility for specialized instruction and services required to meet the unique educational needs of the visually impaired student.
- Possesses the skills and abilities necessary to provide and coordinate this specialized instruction.
- Assists the student, parents, special and regular education personnel, and student's peers in:
 - Understanding the unique educational needs and learning characteristics of visually impaired students.
 - Becoming aware of services and support available from local programs for visually impaired students.
 - Acquiring information regarding local, state, and national resources for the education of visually impaired students.
 - Interpreting the visually impaired student's specific eye condition, the educational implications of the visual impairment, and the results of functional vision and learning media assessments.
- Consults regularly with the classroom teacher, other regular and special education personnel, parents, and others to coordinate programs and services for the visually impaired student.
- Assists the site administrator and teachers in making environmental adjustments for the student in the school.
- Shares responsibility with classroom teachers in the identification of instructional areas in which the student requires assistance.
- Ensures that large-type or Braille texts, supplementary materials, educational aids, and equipment needed by the visually impaired student and the classroom teacher are provided in a timely manner to ensure the student's maximum participation in all classroom activities.

¹ The majority of this information was compiled from *Quality Programs for the Visually Impaired*, developed by Nancy Toelle of the Texas School for the Blind and Visually Impaired (TSBVI).

- Provides instruction in the development and maintenance of IEP goals and skills to meet the student's unique educational needs in the following Expanded Core areas:
 - Orientation and mobility
 - Compensatory skills
 - Independent living skills
 - Career and vocational education skills
 - Social interaction skills
 - Visual efficiency skills
 - Self-determination
 - Recreation and leisure
 - Assistive technology
- Prepares sequential and meaningful instruction geared to the student's assessed needs, goals and objectives, functioning, and motivational levels. This instruction should be reflected in weekly or monthly lesson plans as appropriate.
- Provides assistance to the classroom teacher in academic subjects and activities of the classroom that, as a direct result of the student's visual impairment, require adaptation for the student.
- Conducts functional vision/learning media assessments and produces written reports.
- Attends IEP meetings/504 meetings for students with visual impairments.
- Schedules time efficiently for assessment, instruction, planning, preparation of materials, travel, and conferences with relevant school and other key individuals.
- Maintains ongoing contact with parents to assist them in the development of a realistic understanding of their child's abilities, progress, and future goals.
- Provides inservice training programs for school personnel and students and education for parents regarding the needs of visually impaired students and adaptations, programs, and services for these students.
- Makes available pamphlets, films, and other public information materials that may be useful in developing realistic and unprejudiced attitudes toward visually impaired students.
- Coordinates with other personnel such as O&M specialists, career/vocational education staff, rehabilitation counselors, transcribers, readers, and school counselors, as appropriate.
- Maintains a current reference library of professional materials and resources.
- Acquires information and training about current research, development, and technology, and attends professional development opportunities to expand and increase knowledge base specific to the vision impairment field.

Using Paraprofessionals

Paraprofessionals can play an important role in helping students with visual impairments succeed in inclusive classroom settings. However, they must guard against doing for these students what they can do for themselves. Guidelines that may be helpful in maximizing student independence include the following:

- Maintain high expectations. Students should get their own books, paper, and equipment. Students should respond to the teacher's directions (e.g., "take out your science book and turn to page 15"). Students who do not have additional disabilities that necessitate shortened or modified assignments should be expected to do the same quantity of work as their sighted peers. Guidelines for shortening or modifying assignments for students whose additional disabilities necessitate such adaptations should be developed by the student's IEP team. Assignments, even when shortened or modified, should be complete and turned in on time. Working together, students and paraprofessionals should develop organizational systems that allow students to keep track of their own assignments and know which assignment is which.
- Separate from the student as quickly and frequently as possible; observe what does and doesn't go well, and work with the student individually to increase independence. Suggest that the teacher assign the student a partner to work with (e.g., someone who can describe videos, read materials on the board, ect.). Help other students in other parts of the room who may require assistance. If students are divided into small groups, join a group other than the one that includes the visually impaired student. Be sure the student interacts primarily with the teacher and not with the paraprofessional.
- Allow students to learn from positive and negative consequences. Congratulate students when they do good work and merit good grades. If their work is incomplete, sloppy, or otherwise less than their best efforts, urge the teacher to grade the work according to the same standards used to grade the work of sighted peers.

The bottom line is this: The paraprofessional's job is to do as little for the visually impaired student as possible, so that the student becomes just one more member of the class.

Glossary

The following are some common terms and definitions associated with working with students with visual impairments.

Acuity: Sharpness of vision; usually refers to central vision.

Adventitious: Acquired; not congenital (can be acquired by accident or disease; the disease may or may not be hereditary).

Age-appropriate: In reference to students with developmental delays, the use of materials and activities that reflect chronological age rather than developmental age.

Aligning: To line up one side of the body against a surface to establish a line of travel.

Blindisms: Repetitive stereotypical movements and mannerisms that are observed in some blind children (e.g., eye pressing, bouncing, rocking, spinning, head banging); they may serve a function of self-stimulation or communication, and may be reduced or eliminated with behavioral interventions designed to replace these behaviors with more functional ones.

Braille: System of reading used by the blind, consisting of characters composed of six dot positions, arranged in a rectangle two dots wide by three dots long, in 64 possible combinations.

Clues: Stimuli (visual, auditory, olfactory, tactile) that can be used to determine one's location, position in space, or line of travel.

Color blindness (color deficiency): Inability or reduced ability to perceive colors, identify them, or discriminate them one from another.

Compensatory skills: Skills needed by students with visual impairments to overcome the effects of vision loss with regard to accessing all areas of the Core Curriculum, e.g., Braille, listening skills, handwriting, abacas (see *Functional skills*).

Contrast sensitivity: The ability to see objects that are not outlined clearly or that do not stand out from the background.

Convergence: Ability of the eyes to move toward one another to maintain fixation on a near object.

Depth perception: The ability to perceive the relative distance of objects and their spatial relationship to each other; a function of binocular vision.

Developmentally delay: Failure to reach developmental milestones (e.g., motor, speech, language, sensory) during normal age range.

Distance vision: Visual acuity attained at six meters (20 feet).

Early intervening: Accommodations and strategies provided in the general education environment for students who are academically and/or behaviorally “at risk.”

Early intervention: Programs and services under Part C of the Individuals with Disabilities Education Improvement Act (IDEA); intended for infants from birth through age two years.

Field of vision: The angular extent of the physical environment visible to an eye held in a fixed position; also called “visual field.”

Fixation: Positioning of the eyes in such a way that the object of regard is centered on the fovea (point of best acuity, at the center of the retina).

Focus: The point where light rays converge after passing through a lens.

Functional skills: Practical skills of independent living that enable an individual to perform in home, community, and employment settings at an optimal level of personal dignity; includes use of functional academic skills of reading, writing, and math, and skills of appropriate interpersonal communication.

Glare: A quality of relatively bright light that causes discomfort in the eye or that interferes with visibility.

Large print or type: Print that is larger than type commonly used by sighted individuals; typically defined as 18-point or larger.

Light perception (LP): The ability to distinguish light from dark.

Long white cane: A cane that is designed for travel; used to detect obstacles and changes in the terrain.

Low vision (partial sight): Reduced central acuity or visual field to the extent that even with the best optical correction (glasses or contact lenses) the individual is visually impaired.

Low vision aids: Devices for visual access to print materials, ranging from handheld magnifying lenses or monocular telescopes to complex electronic systems (video magnifiers); includes lenses designed to increase the size of an image or bring it into better focus.

Low vision assessment: Comprehensive assessment of a person's visual impairment, visual potential, and capabilities; may include prescription and dispensing of low vision aids.

Orientation and mobility: The use of sensory information to know one's location in relation to other objects in the environment, and to move from one location to another in a safe and efficient manner.

Mobility device: Equipment used in the same manner as a long white cane, to detect obstacles and changes in terrain; includes pre-cane devices used in orientation and mobility instruction of young children.

Monocular: Pertaining to one eye; pertaining to low vision aids used with one eye.

Near vision: Visual acuity measured at normal reading distance, 36 to 40 cm (14 to 16 inches) from the eye.

Nemeth code: Braille code used for mathematical and scientific notation.

Ophthalmologist: A medical doctor (M.D.) specializing in diagnosis and treatment of disorders of the eye; an ophthalmologist may treat visual conditions medically, surgically or by prescription of corrective lenses.

Optician: A professional who grinds, fits, and dispenses corrective lenses prescribed by an ophthalmologist or optometrist.

Optometrist: A doctor of optometry (O.D.) specializing in the examination, diagnosis, and treatment of conditions or impairments of the visual system, testing visual acuity, depth and color perception, and ability to focus and coordinate the eyes.

Orientation: The ability to use sensory information to know one's location in the environment and to know one's relationship to objects in the environment. Process by which a person who is blind or visually impaired uses the remaining senses to establish his or her position and relationship to all other significant objects in the environment (see mobility).

Peripheral vision: Ability to perceive the presence, motion, or color of an object outside the direct line of vision.

Photophobia: Abnormal sensitivity to and discomfort in the presence of bright light.

Residual vision: Unusable remaining vision.

Sighted guide: A travel technique in which the person who is blind takes the upper arm of a sighted person and follows; the technique follows a specific form in which the guide walks one step ahead and may also offer verbal cues as to stairs, changes in terrain, and narrow spaces.

Snellen Chart: One of many charts used for testing central visual acuity, consisting of lines of letters, numbers, or graphic symbols in graded sizes, labeled with the distance at which it can be read with normal vision; designed for testing vision at distance (six meters or 20 feet) or near point (40 cm or 16 inches).

Visual attention: Ability to maintain focus on a visual stimulus.

Visual awareness: Knowledge of the presence of an object within the visual range.

Resources

Parent Infant Program

The Parent Infant Program (PIP) at the Utah Schools for the Deaf and the Blind incorporates family-centered practices into services for families and children birth to three with vision or hearing loss. PIP recognizes that early identification and services for children with sensory loss can significantly optimize developmental potential. PIP is a home-based program, fostering activities in a variety of natural settings using developmentally appropriate practices. The Parent Infant Program strives to:

- Support parents in their efforts to understand their child's vision loss.
- Support parents in understanding their child's unique needs.
- Provide resources to parents to prepare their child for further education.
- Provide early intervention vision services in coordination with other service providers within each local early intervention program.

Baby Watch Early Intervention and Utah Schools for the Deaf and the Blind Parent Infant Program collaborate in provision of services through interagency agreement.

Where are PIP services provided?

PIP will provide sensory services in the child's natural environment determined appropriate by the IFSP team. Natural environments are the places where young children experience everyday, typically occurring learning opportunities that promote and enhance

behavioral and developmental competencies. Examples of natural environments include home, daycare, toddler classes, nurseries, community parks, eating establishments, etc.

How do I contact PIP?

Ogden: 801-629-4743
Salt Lake: 801-464-2000
Statewide: 800-990-9328

Program Coordination for Students with Hearing and Visual Impairments

The Utah Schools for the Deaf and the Blind (USDB) is a program option for hearing impaired, visually impaired, or deaf-blind students. Program options available to students with sensory impairments and their families must be considered on an individual basis through the cooperative efforts of each school district and the USDB. The local district shall inform the parent or guardian of the child that a representative of the USDB can assist in developing the individualized education program and make recommendations for placement (UCA 53A-25-104(d), 203(d)). If services are to be provided by the USDB rather than the LEA, documentation of the need for services from the USDB must be determined by the home school district's Individualized Education Program (IEP) team. *All requirements of Part B of the IDEA and these rules apply* to eligible students, whether they are served by the USDB, and LEA or a combination of the two.

National Instructional Materials Accessibility Standard (NIMAS)

The State of Utah has established a standard under CFR 300.172 Appendix C, the National Instructional Materials Accessibility Standard (NIMAS) for the purpose of providing instructional materials for persons who are blind or persons with print disabilities. This is in coordination with the National Instructional Materials Access Center (NIMAC). The coordinating agency for Utah is The Utah State Instructional Materials Access Center, housed at the Utah Schools for the Deaf and the Blind Offices in Salt Lake City.

State Organizations/Resources

Utah State Office of Special Education
250 East 500 South
P.O. Box 144200
Salt Lake City UT 84114-4200
801-538-7587
<http://www.schools.utah.gov>

Utah Baby Watch Early Intervention Program
P.O. Box 144720
Salt Lake City, UT 84114-4720
801-584-8441
<http://www.utahbabywatch.org/contactus.htm>

Utah Parent Center
2290 East 4500 South, Suite 110
Salt Lake City, UT 84117-4428
(801) 272-1051

(801) 272-8907 (fax)
<http://www.utahparentcenter.org/>

Division of Services for People with Disabilities
Department of Human Services
120 North 200 West, Suite 411
Salt Lake City, UT 84103
(801) 538-4200
<http://www.hsdspd.state.ut.us>

Division of Services for the Blind and Visually Impaired
250 North 1950 West, Suite B
Salt Lake City, UT 84116-7902
(801) 323-4343
<http://www.uror.utah.gov/dsbvi.htm>

Utah Schools for the Deaf and the Blind
742 Harrison Blvd.
Ogden, UT 84404
(801) 629-4700
(801) 629-4896 Fax
1-800-990-9328
<http://www.usdb.org/>

Utah State Instructional Materials Access Center
(801) 464-2029
<http://www.usimac.org>

National Federal of the Blind—Utah
webmaster@nfbutah.org
<http://www.nfbutah.org/>

Utah State Library for the Blind and Disabled
250 North 1950 West, Suite A
Salt Lake City UT 84116-7901
(801) 715-6789
800-662-5540
<http://blindlibrary.utah.gov/>

National Organizations/Resources

- American Council of the Blind
<http://www.abc.org>
- American Foundation for the Blind
<http://www.afb.org>

- American Printing House for the Blind (products)
<http://www.aph.org>
- Association for the Education and Rehabilitation of the Blind and Visually Impaired
<http://aerbvi.org>
- Braille Authority of North American (BANA)
<http://www.brailleauthority.org>
- Blind Children's Fund
<http://www.blindchildrensfund.org>
- California Braille Transcribers Association
<http://edtech.sandi.net/epd/ctevhhome.html>
- Hadley School for the Blind
http://www.hadley-school.org/Web_Site/Hadley-School.asp
- Helen Keller Services for the Blind
<http://www.helenkeller.org>
- International Braille Research Center
<http://braille.org>
- Lighthouse for the Blind
<http://www.lighthouse.org>
- Lions International Services for the Blind
<http://lwsb.org>
- National Braille Association
<http://www.nationalbraille.org>
- National Federation of the Blind
<http://nfb.org>
- National Library Service of the Blind
<http://lcweb.loc.gov/nls>
- Texas School for the Blind and Visually Impaired
<http://www.tsbvi.edu>

Assistive Technology Organizations/Resources

- Assistive Technology Industry Association (ATIA)
Phone: (877) 687-2842
Website: <http://www.atia.org>

- Closing the Gap
Phone: (612) 248-3294
Website: <http://closingthegap.com>

- Technology and Persons with Disabilities Annual Conference (CSUN)
Phone: (818) 885-2578
Website: <http://www.csun.edu/cod>

Assistive Technology Funding and Information Resources

Medicaid	800-662-9651	Medicare	800-633-4227
CSHCN	800-829-8200	UATF loans	800-524-5152
Aging & Adult Services	877-424-4640	DSPD	800-837-6811
Voc Rehab	800-473-7530	Veterans	800-613-4012
ARC of Utah	800-371-3060	HARP	800-829-8200, ex. 5
Ability Foundation	801-261-5738	Globus Relief	801-977-0444
Eyecare4kids	801-255-8525	UCB loans	801-220-0800
Relay Utah	800-346-4128	Hear Now	800-648-4327
	801-530-6638 TTY		

Centers for Independent Living

Utah Independent Living Center, 800-355-2195, 801-466-5565, V/TTY (SLC)
Options for Independence, 753-5353 Voice & TTY (Logan)
Active Re-entry, 637-4950, (Price)
Red Rock Center, 800-649-2340, 673-7501 Voice & TTY (St. George)
Tri County Independent Living Center, 612-3215 V, 612-3732 TTY (Ogden)
Central Utah Center for Independent Living, 373-5044 Voice & TTY (Provo)

Assistive Technology Appeals and Information on Rights

Disability Law Center at 800-662-9080

Utah Assistive Technology Information
Access Utah Network 800-333-8824

Division of Services for the Blind and Visually Impaired 800-284-1823

Utah Center of Assistive Technology
888-866-5550

Sanderson Center for the Deaf 800-860-4860

Utah Parent Center 800-468-1160

Utah Schools for the Deaf and

The Blind 800-990-9328

Other Utah Resource Information

211 or 888-826-9790

www.utah.gov

Family Disability Resource Library 866-284-2821 or 435-797-7022

Utah State Library for the Blind 800-662-5540, TTD 801-715-6721

National Assistive Technology Websites

<http://www.abledata.com> 800-227-0216-Huge information database of assistive technology

<http://www.afb.org> Info on video magnifiers, Braille products, speech systems, etc.

<http://www.nfb.org> Technology resources, Braille products, synthesizers, GPS, etc.

<http://www.tsbvi.edu> Product info, training, assessment, manufacturer's links, etc.

Government Websites

<http://www.disabilityinfo.gov> Disability-related information, government programs

<http://www.FirstGov.gov> Federal and state info - apply for grants, jobs, passport, etc.

<http://www.govbenefits.gov> Find government benefits for which you may be eligible.

National Disability Resources

<http://www.familyvillage.wisc.edu> Info on disabilities, health, technology

<http://www.disabilityresources.org> Extensive list of Internet resources

<http://www.nichy.org> Info on children with disabilities, state and national resources

<http://www.aapd.com> Life insurance, prescription card, vehicle loans, no-fee credit cards

Vision Assistive Technology Vendors

Ai Squared, <http://www.aisquared.com> , 802-362-3612, ZoomText, screen reading/magnification

American Foundation for the Blind, <http://www.afb.org>, 212-502-7638, evaluations of AT

American Printing House for Blind, <http://www.aph.org>, 502-895-2405, talking software/products

Axis, Karl Smith, Access Technology Consultant, <http://karl@axistech.net>, 866-824-7885

BookBinder Group, 800-804-8004, markets telesensory products

Dancing Dots, <http://www.dabcingdots.com>, 610-783-6692, Braille music technologies

Duxbury Systems, 978-692-3000, <http://www.duxburysystems.com>, Braille translation software

En-Vision America, <http://www.envisionamerica.com>, 309-452-3088, portable barcode reader

Enabling Technologies, <http://www.brailler.com>, 561-225-3687, Braille embossers, print

devices

Enhanced Vision Systems, <http://www.enhancedvision.com>, 714-374-1821, CCTV, Jordy glasses

Freedom Scientific, <http://www.freedomscientific.com>, 800-444-4443, PacMate

Handy Tech, 916-652-7253, Braille Wave note taker, Bookworm Braille book reader

Humanware, <http://humanware.com>, 800-722-3393, BrailleNote Mpower Maestro

Independent Living Aids, <http://www.independentliving.com>, 800-537-2118, 700 products

InfoCon, www.infocon-inc.com, 209-478-7075, converts books into large print

Innoventions, <http://www.magnicam.com/magnicam>, 303-797-6554, portable magnification

JBliss, <http://www.jbliss.com>, 408-557-6748, VIPinfoSoft, ezVIP, VIPintoNet

KNFB Reading Technology, Inc., <http://www.knfbreader.com>, 877-547-1500

Kurzweil, <http://www.kurzweiledu.com>, 781-276-0657, text-to-speech software

MagniSight, <http://magnisight.com>, 719-578-8893, CCTV

Mindmaker, <http://mindmaker.com>, 408-467-9200, text-reading agent from Windows

Optelec, <http://www.optelec.com>, 800-828-1056, on-screen video magnifiers

Rocky Mountain Low Vision, <http://www.magnified.com>, 877-656-1021 Video Magnifiers

Plexor, <http://www.plextalk.com/index.htm>, 81-335-178061, Plectalk, digital talking book player

Quantum Technologies, <http://www.quantech.com>, 800-722-3393, Nomad electronic Braillewriter

Repro-Tronics, <http://www.repro-tronics.com>, 201-722-1880, tactile images, software, Thermo-Pen

Revolution Enterprises, <http://www.advantagescans.com>, 800-382-5132, graphite cane and holders

SensAbility, 847-367-9009, Galileo reading system/print-to-speech

Sighted Electronics, <http://www.sighted.com>, 201-666-2221, CCTV, Braille displayers, embossers

Telesensory Corporation, <http://www.telesensory.com>, 408-616-8700, video magnifiers, Braille access

ViewPlus Technologies, <http://www.viewplus.com>, 541-754-4002, personal printer embosses Braille

VisuAide, <http://visuaide.com>, 888-723-7273, digital talking book player

WizCom Technologies, <http://www.wicomtech.com>, 888-777-0552, portable scan-and-hear dictionary.

Legal Issues and Braille

- Utah State Core Curriculum
<http://www.uen.org/curriculum/html/grade.html>
- OSEP IEP guide
<http://www.ed.gov/offices/OSERS/OSEP/products/IEP>
- Blind Person's Rights and Education Act, Utah Braille Literacy Act
<http://www.le.state.us.us~code/TITLE53A/53A1C.htm>
- CEC
<http://www.ced.sped.org/index.html>
- CEC Code of Ethics
<http://www.ced.sped.org/ps/code.html>
- CEC VI Standards
http://www.ced.sped.org/ps/perf_based_stds/visual_impairment_03-12-01.html

Resource Lists

- NICHCY Fact Sheet on Visual Impairment
<http://www.nichcy.org/pubs/factshe/fs13txt.htm>
- "Educating Students with Visual Impairments" ERIC Digest
<http://ericec.org/digests/e653.html>
- NCIP
"Organizations Supporting the Visually Impaired"
<http://www2.edc.org/NCIP/library/vi/organ.htm>
- Blindness Resource Center
<http://nyise.org/orgs.htm>
Information and URLs for blindness organizations in the United States

Other

- “National Agenda for the Education of Children and Youths with Visual Impairments, Including Those with Multiple Disabilities” at <http://www.tsbvi.edu/agenda/index.htm>
- “Strategies for Teaching Students with Visual Impairments” <http://www.as.wvu.edu/~scidis/vision.html>
- “Blindness and Visual Impairment: State Infrastructures and Programs” <http://www.projectforum.org/>

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