Illinois State Board of Education
Special Education Department

Illinois Best Practices Guide for the Education of Students with Visual Impairments

This document is intended to provide non-regulatory guidance on the subject matter listed above. For specific questions, please contact the Illinois State Board of Education.

Dr. Tony Sanders, State Superintendent

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Illinois Best Practices Guide
for the Education of Students

The contents of this guide were developed by members of the Illinois Vision Leadership Council

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Introduction

This document was originally developed in 1995 to provide information for parents and teachers of children with visual impairments, a low-incidence disability. In subsequent revisions, it sought to develop a best practice service standard for teachers and parents of children with visual impairments that could be used throughout the state of Illinois as a "living document," which would be continually updated. It now includes current research, promising trends, and practices that are used nationally and internationally.

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A. Visual Impairment Overview

Definitions

The Individuals with Disabilities Education Act (IDEA) in 34 CFR 300.8(c)(13) specifies that a 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**."** A student with a visual impairment is among those whose educational potential can be developed through specialized instruction and service that may include materials and equipment.

A student with a visual impairment is one who has a disorder in the structure and function of the visual system (as described under Medical Criteria on page 5). A visual impairment, even with best correction and treatment, interferes with learning. Common terminology used to define visual impairment, include the following:

- Legal Blindness: A student has a central visual acuity of 20/200 or less in the better eye with the best correction or a peripheral field of vision no greater than 20 degrees. Exceptions include a student who is totally blind, whose eyes have been enucleated, or who has a proven non-changing eye condition.
- Functional Blindness: A student whose visual function meets the definition of blindness by an eye care specialist (ophthalmologist or optometrist) or another medical doctor, such as a neurologist. This student relies primarily on tactual and/or auditory senses for learning. A student with cortical visual impairments may fall under this category.
- Low Vision/Partially Sighted: A student who has a central visual acuity that falls between 20/70 and 20/200 in the better eye with the best correction is visually

impaired. The use of optical aids, environmental modifications, and/or specialized services gives the student the potential to use vision as an effective option for learning.

Note: This is not an exhaustive list of terms and definitions provided should not be used to determine eligibility.

Eligibility

Children ages birth to 3 identified as having a visual impairment are eligible for services from a developmental therapist for vision. Eligibility for these services are outlined and governed through the Illinois Department of Human Services (IDHS) Bureau of Early Intervention. See Early Intervention Information on the IDHS website.

Medical Criteria

Eligibility for services for a student who has a visual impairment is determined by the following medical criteria established in an eye doctor's report:

- Reduced central visual acuity
- Restricted field of vision
- Degenerative condition that is likely to result in a significant loss of vision in the future
- Neurological visual impairment
- Certain eye conditions exist (e.g., postoperative retinal detachment) that may require temporary placement
- Any visual impairment that adversely impacts education

Educational Criteria

Eligibility for special education under the category of Visual Impairment or Blindness is determined based on the definition provided in IDEA (34 CFR 300.8(c)(13)). This definition includes any impairment in vision that adversely affects a child's educational performance. A visual impairment may impact the acquisition of skills included in the Expanded Core Curriculum **(see Section D)** and may lead to a requirement for specialized instructional techniques and learning materials. Please refer to OSEP Memo 17-05 for additional guidance provided by the Office of Special Education Programs (OSEP) regarding eligibility determinations.

Impact of the Visual Impairment

Vision is the primary system of sensory input and the basis for most learning. It is estimated that 85 to 90 percent of learning occurs as a result of visual activities (United Health Care, 2014). Much is learned incidentally through casual observation, exploration of the environment,

assimilation, and ever-expanding experiences. Equal access is the goal for all students, but the same types of educational and social activities and experiences are not available at the same level of quality and quantity for students with visual impairments as they are for sighted peers. Furthermore, the information gathered by a student with reduced vision may be inaccurate or fragmented. The growth and development of a student with a visual impairment parallels the growth and development of students who are not visually impaired. All students progress through identifiable stages, yet each differs in their own rate of progress.

A student who has a visual impairment has unique needs, which in turn have a major impact on the student's educational requirements. These needs are reflected primarily in the following areas of learning:

- Concept development
- Multiple senses
- Individualized instruction
- Specialized skills
- Specialized equipment
- Unique curricular strategies or adaptations

A student who has a visual impairment can attain their full potential with appropriate educational service.

B. Identification and Visual Evaluation of a Student with a Visual Impairment

Identification of a student with a visual impairment within the educational setting is determined through the evaluation process/case study. When there is a suspicion of educational adverse effect due to visual functioning, the Individualized Education Program (IEP) team shall contact the licensed teacher of students with visual impairments (TSVI). When at all possible, an ocular report should be provided to the TSVI. Follow-up may include a classroom observation as well as classroom teacher input. If concerns warrant further exploration of visual functioning, the school district should determine if an evaluation for special education services needs to be conducted. If yes, a meeting needs to be held to determine which areas related to the suspected visual impairment will be assessed. This meeting is often referred to as a "domain meeting." The domains/areas the school district must assess, if appropriate, include the following: academic performance, general intelligence, communication status, health, hearing and vision, motor abilities, and social-emotional status. See 34 CFR 300.304. Participants in the domain meeting for a student with a suspected visual impairment shall include a TSVI along

with all other necessary team members. A TSVI will indicate if a functional vision assessment (FVA) is needed under the Hearing/Vision section of the Identification of Needed Assessment form (domain sheet). If an FVA and/or a learning media assessment (LMA) is completed, the team will discuss the results at the eligibility/IEP meeting. The team will need to consider three components for a student to be determined eligible for vision services: :

- The student has a documented visual impairment.
- The impairment has an adverse effect on educational performance.
- There are educational needs that require specialized instruction by a TSVI.

If the student is deemed eligible, the identified needs/deficits will help to guide the development of the IEP.

As previously referenced, there are two major components when identifying a student with a visual impairment. Those components are the clinical evaluation by an optometrist or ophthalmologist and functional evaluations, including an FVA/LMA, by the TSVI. The results of the FVA are used to determine what the student can see, how the student uses their vision, and under what conditions the student can see within educational environments. The results of the LMA are used to identify the best literacy format for a student (e.g., print, braille, audio, objects, or some combination). Information derived from the student's FVA and LMA helps the team identify the impact of vision loss on the student's educational program. The FVA includes the following components:

- The clinical examination conducted by an ophthalmologist or an optometrist.
- An assessment of the student's functional vision conducted by a TSVI.
- An LMA. (May also be conducted as a separate assessment.)

While visual impairment is commonly defined clinically in terms of remaining visual acuity and/or reduced visual fields, the use of clinical data alone provides the educator licensed in the area of visual impairment with the practical information regarding diagnosis.

The LMA offers a framework for selecting appropriate literacy media for a student who is visually impaired. An FVA should be conducted first in order to determine how efficiently the student is using their vision. These two assessments should be used together to help guide the team's decision about the best instructional medium for a given student, such as braille, print, dual media (both print and braille), auditory, tactile or some combination (Paths to Literacy for Students Who are Blind or Visually Impaired, n.d.).

Best practice dictates that there should be an integration of clinical data with the information gathered through the FVA and LMA in order to identify a student who meets eligibility for a

visual impairment and would benefit from specialized services. A doctor's recommendation or script alone does not qualify the student for services for the visually impaired.

Common Components of a Clinical Visual Assessment.

Clinical visual assessments (CVAs) are performed by an eye specialist and may include the following components:

- Etiology/history
- Diagnosis/prognosis
- Visual acuity (unaided and aided for distance and near point)
- Visual field
- Treatment regimen
- Color perception evaluation
- Recommendations for lighting
- Recommendations for physical/recreational activities
- Recommendations for low vision devices
- Spectacle prescription and recommendations for use

Functional Vision Assessment

The purpose of the FVA is to provide information regarding a student's visual functioning in everyday tasks in natural settings, such as school, home, and community. The result of the FVA is used to determine the educational needs of the student in respect to instruction, programming/services, placement, and materials.

The data for an FVA is gathered using a combination of informal and formal testing; observation; reports from parents/guardians and teachers; and student interviews, when appropriate. The components of the FVA completed by a licensed educator in the area of visual impairment (including a student with a cortical visual impairment) should include the following:

- An observation of the student in different settings (environmental analysis including lighting and glare)
- Interviews and work samples
- A summary of the ocular history
- Near point acuity (both with and without glasses)
- Distance acuity (both with and without glasses)
- Color perception
- Visual fixation
- Shift of gaze (including copying from near point and distance)

- Visual tracking (ocular pursuits) and scanning skills
- Depth perception
- Focusing with occlusion
- Contrast sensitivity
- Visual perceptual skills
- Visual motor skills
- Recommendations for non-prescriptive adaptive devices and equipment for use in given environmental settings
- Recommendations for special materials and assistive technology
- Recommendations for possible addition assessments (orientation and mobility evaluation*)
- Recommendations for the most appropriate learning media**

It should be noted when completing an FVA for a student with a neurological visual impairment (e.g., cerebral/cortical visual impairment) as well as a student with multiple impairments, different components may be utilized (e.g., the Christine Roman-Lantzy CVI range, observations, interviews, behavioral checklists, etc.). See **Section J** for more information.

*An orientation and mobility evaluation should be completed by a certified orientation and mobility specialist if the IEP team deems the assessment is needed to determine independent safety and travel skills. The need for this evaluation should be discussed with the evaluation team.

**An LMA should be completed to determine the most appropriate learning media for a student with a visual impairment.

Learning Media Assessment

The components of the LMA completed by an educator licensed in the area of visual impairment should include -

- Documentation of the student's use of sensory channels
- Consideration of the student's use of general learning media
- Selection of the appropriate literacy media or medium

The LMA is "an objective process of systematically selecting learning and literacy media" (Koenig & Holbrook, 2000). The LMA includes an assessment of a student's learning style or the way in which he/she uses vision; touch; hearing; and other senses, either singularly or in combination, to gain access to information (Paths to Literacy for Students Who are Blind or Visually Impaired, n.d.).

The data for an LMA includes an evaluation of general learning media that includes both instructional materials and instructional methods. The LMA helps determine and support the recommendation for a student to receive either a conventional or functional literacy media program. Conventional literacy media include the range of tools to teach academic literacy skills, such as reading and responding to literature and writing papers in both print and braille; whereas, a functional literacy program focuses on survival reading and writing skills needed for increased independence in daily life.

An FVA and LMA are recommended when the evaluation team is determining eligibility of a visual impairment. An evaluation /case study is scheduled at least every three years for a student receiving special education services to determine continued eligibility and educational services and needs. An orientation and mobility evaluation (typically referred by the TSVI or vision coordinator, where appropriate) may take place as part of this process.

Description of the Case Study Evaluation/Reevaluation Components

The consent for an initial evaluation or a triennial reevaluation is given to parents/guardians when obtaining consent for an initial evaluation or when completing the three-year evaluation.

Additional components may be recommended for the student in the domain areas, depending on the nature of the student's difficulties. Consent must be received for all areas being tested for establishing or maintaining eligibility. Specialized evaluations, such as an FVA/LMA, orientation and mobility evaluation, occupational therapy evaluation, and physical therapy evaluation, would be included in the appropriate area of the domain paperwork. The local school district can provide additional information regarding the evaluation process.

If a student does not qualify for eligibility under IDEA, the team should discuss whether a 504 Plan needs to be considered. A student with a 504 Plan may not qualify for some resources and services available to a student with an IEP.

Ongoing Assessment of an Identified Student

The assessment of a student with a visual impairment should be an ongoing dynamic process to ensure that the student's progress, changing needs, environmental variables, etc. will lead to appropriate modifications in their educational program. Consultation with the TSVI, classroom teacher, English learner (EL) teacher (if the student is an English learner), and observation of the student prior to assessment is important to determine appropriate tools; approaches; relevant tasks; and environments, all of which must be included. The activities and materials used in the assessment process must reflect typical daily tasks and involve the student in solving problems and utilizing skills. The assessment approach will be individualized, choosing appropriate procedures, activities, and materials from a variety of relevant formal and

informal techniques and instruments in the student's dominant language as well as from the student's daily repertoire of tasks and environments.

All other assessments (e.g., academic achievement, functional/developmental level, language dominance, adaptive behavior, social history, intellectual functioning, state and/or district assessments, etc.) should be conducted in consultation with a TSVI to ensure that reasonable and appropriate media and aids (e.g., braille, braille note taker, screen magnification, audio, downloads, screen reader, magnification/low vision aids, concrete models/tangible apparatus, tactile symbols, etc.) are utilized.

Assessment of functional vision skills and learning media must be addressed beyond the initial consideration of eligibility and need for service. This type of assessment should be ongoing to investigate the student's visual abilities and learning media as they relate to the changing demands of their educational program. Assessment of functional vision and learning medium should always be completed by a licensed TSVI. The content of the evaluation should include, but not be limited to, such areas as fixation, tracking, scanning, visual acuity, muscle balance, contrast sensitivity, convergence/focusing, visual discrimination, visual-motor, depth perception, print size, braille readiness, braille appropriateness, tactile media (symbols, functional braille), and assistive technology. Each evaluation should be tailored to the age and functioning level of the individual student, using age-appropriate and classroom-related materials in addition to informal and formal testing materials.

The unique needs of a student with visual impairments dictate that ongoing evaluation may include specialized skill and knowledge areas. (Also known as Expanded Core Curriculum. See **Section D**.) The evaluations specific to the visual impairment must be conducted by qualified professionals in each particular area. The specific specialized skills to be assessed are as follows:

- **Activities of Daily Living** - Student should demonstrate competence in functional tasks of daily living.
- **Orientation and Mobility** - Student should demonstrate knowledge and use of orientation and mobility concepts and skills in natural environments.
- **Assistive Technology** - Student should demonstrate skills using appropriate equipment, such as braillers, braille note taker, computers, slate/stylus, augmentative communication devices, magnification devices, screen magnification software, downloading books, and screen readers, to name a few.
- **Literary Skills** - Student should demonstrate efficiency with the skills of braille reading and handwriting or other auditory, tactual media (tactile symbols and schedules).
- **Self-Advocacy** - Student should demonstrate ability to independently make accommodations and environmental changes to increase visual efficiency and to

express their own visual needs to others. A student at the high school level should demonstrate knowledge of current laws that pertain to the rights of individuals with disabilities.

- **Social Skills** - Student should demonstrate a healthy self-concept, participation in recreational activities, the ability to initiate and carry on conversations, and the use of appropriate behaviors for a variety of social situations. A student with a visual impairment may not have the same opportunities and abilities to acquire social skills through incidental observation as do other students; therefore, social situations often need to be set up to enable appropriate social skills to be taught and practiced.
- **Sensory Skills** - Student should demonstrate effective skills in the following areas as appropriate:
    - **Low Vision Skills** - Efficient tracking and scanning, systematic search patterns, eye-hand coordination and perceptual skills, as well as the appropriate use of adaptive optical and non-optical aids such as magnifiers, telescopic lenses, magnification devices, screen magnification, and screen readers.
    - **Auditory/Listening Skills** - Effective listening skills related to environmental sounds and cues and language/recorded information.
    - **Tactual Skills** - Effective skills of systematic searching, the identification and interpretation of tactual information, and functional information.

A student with a visual impairment uses a variety of learning media to read or otherwise access information (e.g., braille, screen readers, tactual models, auditory-digital download, regular size or enlarged pictures and print, etc.) and to communicate information (e.g., braille, handwriting or printing, keyboarding computer adaptations, etc.). The student's efficiency in using such a variety of learning media must be evaluated on an ongoing basis to determine the most appropriate and efficient media for a particular student, the appropriate choices of learning media for particular tasks, and whether changes in student's ocular condition or school situation necessitate a change in appropriate learning media. Evaluation of learning media is mandated by federal and state law.

Evaluation of all students with disabilities is an integral part of transition to postsecondary placements. Areas of importance to a student with a visual impairment include evaluation of the following:

- Knowledge of support organizations
- Ability to acquire materials and services
- Skills for independent living

- Knowledge needed to set up adult living situations
- Knowledge of basic adult living situations
- Knowledge of vocational/career options

Transition issues should be evaluated in a collaborative manner with all appropriate personnel, services, and agencies.

Continued eligibility must be considered and addressed through the evaluation process every three years. The reevaluation should include review and updating of all case study components (e.g., social history, adaptive behavior, academic/development, FVA/LMA.)

Illinois utilizes a Multi-tiered System of Supports (MTSS) process, which can be used to support students with learning and behavior deficits prior to special educational identification. It should be noted that MTSS may not be an appropriate process to use when a visual impairment is suspected as it could delay the services that may be needed to assist the student and allow the student access to free and appropriate public education (FAPE). Given the appropriate vision accommodations, the intensity of instruction that is available in Tier 2 and Tier 3 of MTSS instruction may be beneficial for a student with a visual impairment who has additional deficits in reading and math. This process will allow for baseline data to be collected in all areas of the evaluation to best track the development of a student with a visual impairment to assist IEP teams during the reevaluation process. This initial data and subsequent data collection via reevaluation periods will assist in the development of appropriate plans and identification of additional disabilities if they are suspected anytime during the student's educational career.

C. Unique Educational Needs of Students with Visual Impairments

Vision is the primary learning channel in the educational setting. A visual impairment creates barriers to learning in a manner that results in many unique educational needs. IDEA requires that a student with a visual impairment should have access to FAPE. A student with a visual impairment participating in general education (regular or adaptive curriculum) will also participate in specialized instruction (Expanded Core Curriculum).

Participation in General Education

The majority of students with a visual impairment can participate in the general education curriculum with appropriate accommodations and modifications as defined later in this chapter. The curricular areas (e.g., academic, nonacademic, physical education, vocational education) and the extent to which the student participates in these areas are determined by

an educational team that includes a TSVI to enhance the student's participation. In order to meet these needs, the general education teacher, in collaboration with the TSVI, must plan ahead to incorporate appropriate accommodations, including access to alternate learning channels. It is also important to be flexible and accepting of the student's needs by using special devices, moving around the room to access information, and storing special materials and equipment. It is essential to create a supportive environment, both educationally and socially, throughout the school day by demonstrating sensitivity to the needs of the student.

Learning through Alternate Channels

To be successful, a student with a visual impairment must develop skills in a variety of learning channels (e.g., tactual, auditory, and/or visual skills).

- The tactual channel is an important learning mode. For example, the student may need instruction in braille, exploration of real objects, and development of tactile discrimination skills. Training in tactual skills is essential.
- The auditory channel takes on increased importance for all students with visual impairments. The use of this channel may include electronic formats, specialized software/technology, verbalization and description of materials presented, and training to use auditory cues in the environment. Instruction in listening skills and the use of speech reading software is vital.
- A student with a visual impairment may use the visual channel for learning, depending on the level of functional vision. Functional use of vision may vary depending on the task, the material, the environment, and the student's health and level of fatigue. The visual presentation of educational tasks can be enhanced through magnification, appropriate lighting, enlarged print, good contrast, assistive technology, etc. Training in visual efficiency skills is also needed.

What Are Accommodations and Modifications?

A student who is visually impaired can do virtually all the activities and tasks that their sighted peers are able to do, but they often need to learn to do them in a different way or use different tools or materials, according to FamilyConnect. For instance, a student may need reading materials in braille rather than in print or may need to examine a real object to understand what it is instead of looking at a picture. Other examples might be arranging a classroom to let a student sit close to the science teacher who is demonstrating an experiment or allowing extra time to complete a test that the whole class is taking.

Depending on a student's abilities and needs, FamilyConnect also advises they may need such adaptations to participate in the curriculum and various activities in school, as well as to make use of instructional materials. A student will most likely learn about such adaptations from their

TSVI or orientation and mobility (O&M) instructor. “Such adaptations in school are usually referred to by the terms ‘accommodations’ and ‘modifications.’ … ‘accommodation’ refers to a change in the way a student is taught or tested without changing the standard of learning or performance or the requirements that he or she needs to meet. Some examples include having extra time to complete assignments, using braille or large print materials, having assignments or tests broken up into smaller parts, or completing assignments in a quiet setting away from other students. ‘Modification’ commonly refers to a change into what your child is learning or tested or that changes the standards or requirements he or she needs to meet. Being taught material at a lower grade level or having to complete fewer items on a test are examples of modifications.” (FamilyConnect, n.d.)

An Overview of Accommodations

The physical environment in which a student with a visual impairment learns is extremely important. Adjustments to the environment enhance how well a student can use their vision. Factors that can be controlled are illumination, color and contrast, time, size, distance, modifying the larger indoor and outdoor environment, optical devices, and digitally enhanced educational options. Not all of these accommodations are appropriate for all students since no two students see the same. Some students may need only the mildest adjustment of a single factor while others need significant changes to many factors. It is critical that a functional vision assessment by a TSVI provides the recommendations appropriate for each individual student and that devices only be used after completion of the functional vision assessment. The TSVI must be consulted for any modifications to materials prior to instruction in class. This is also crucial to allow for adequate time for material preparation. An orientation and mobility specialist may also complete an assessment to evaluate the safe and efficient travel skills of the student. Many of the environmental modifications suggested below adhere to the concept of Universal Design for Learning and will be of benefit to a number of students, not just those who have visual impairments.

- **Illumination**

  The amount of light needed for specific tasks is based on individual preferences. Students with ocular conditions, such as albinism or cataracts, are sensitive to light while other ocular conditions require additional illumination. In general, natural lighting is preferable. Gooseneck lamps or other additional light sources should be positioned so the light falls directly on the task and comes from behind and over the student’s shoulder. Facing into direct sources of light, such as windows, should be avoided. Glare should be reduced or eliminated by covering surfaces with a matte finish

or changing the angle of viewing. Shades, rheostats, or light diffusers may also be used to control the amount of illumination and the effects of fluorescent lighting in the classroom. A student with light sensitivity may also benefit from wearing a brimmed cap, hat, or visor and/or colored or darkened glasses indoors and outdoors.

- **Color and Contrast**

  Another method to enhance visual performance is the effective use of color. The effectiveness of particular colors will vary with the student. The most effective method to improve visibility is to use bold colors that provide high contrast with the background in order to highlight an object, print material, or other areas. Black and white provide the greatest contrast, but other color combinations may be optimal for individual students. High contrast of letters on a page as well as bolder and well-spaced letters may be easier to read for students. Highlighting pens, markers, and bold line paper may also be used to produce better contrast when writing. Many assistive technology devices also have the capability to change color, contrast, and size. Students with certain eye conditions like achromatopsia or color deficiency may need accommodations to assignments that would require color perception to complete (e.g., maps, math charts, color coding). It will be important for the TSVI to determine what works best for these students.

- **Space and Arrangements**

  Space between objects, print, and pictures and the arrangement of these items can be altered to enhance visual functioning. Objects, print, and pictures may need to be spaced further apart and have fewer inner details. Tactile representations of pictures, maps, and graphs that are used should be kept simple, minimizing unnecessary detail. Information on a page needs to be arranged to provide "white space" between print and to eliminate extraneous information. Access to technology makes it easier for teachers to incorporate modifications (e.g., double spacing, font size or style). Environmental clutter may also create visual complexity and make it difficult to identify objects or people. Examples of environmental clutter may include furniture arrangement; obstruction within pathways in classroom and hallways; visual clutter on bulletin boards, walls, charts, and hanging artwork; or instructional materials. Spacing and arrangement is specific to a student. As stated earlier, it is critical to consult with the student's TSVI to determine appropriate tactile graphics for graphs, charts, and maps. Providing the TSVI with the materials to be adapted must be done in a timely manner in order for the student with the visual impairment to receive the materials at the same time as their sighted peers.

- **Position**

  A student's visual impairment will dictate the positioning needs in all school environments (e.g., glare, proximity to instruction, light sensitivity, stronger visual field preference, ability to move within the classroom, safety, ease of locating seat/exits). Preferential seating should be given to students who need to be in specific locations to view activities. Some students with visual field loss may need to be to the side or at a distance in order to view the activity or object in its entirety. Students should be allowed to view objects, demonstrations, and activities from their best viewing point and should be encouraged to move independently to this position. Some students may have equipment that requires them to have extra workspace. They may also need to sit near or have access to power outlets. Teams may need to be creative in finding a classroom seat that meets a student's many needs. These decisions need to be made among all the team members involved, as appropriate.

- **Time**

  The accuracy and speed of performing tasks is impacted by a visual impairment. Discrimination, identification, and reading of print materials require more time by a student with a visual impairment. The physical demands of using vision for prolonged periods of time may cause fatigue and reduce the student's speed, accuracy, and attention. The use of braille has similar implications for impacting the student. Extra time may be needed to allow for essential learning to take place. Extra time, as an accommodation within the IEP, may be needed to allow for essential learning and assessment to appropriately take place. The general guideline is time and a half for low vision readers and double time for braille readers. Remember: This is only a general guideline, and each student's needs must be considered.

- **Size and Distance**

  Objects or printed materials that are too small to be seen well will need to be enlarged for a student with a visual impairment. The optimal size depends on the student's visual functioning and ocular condition. Methods of enlargement include bringing the object closer or increasing the size of the image through magnification or large print. Each method has advantages and disadvantages. Equipment to view items up close or at a distance, such as optical devices including reading glasses, portable video magnifiers and desktop video magnifiers, closed-circuit televisions, optical magnifiers, and telescopes, also have limitations. A student with a visual impairment may be evaluated

by a low vision specialist in order to determine the best optical device. Preferential seating should be allowed for a student who needs to view activities at a closer range. Another factor to consider is the effect of a visual field loss. A student may need to be to the side or at a distance in order to view the activity or object in its entirety. A student should be allowed to view objects, demonstrations, and activities from their best viewing point and should be encouraged to move independently to this position.

- **Optical Devices**

  An optical device may allow some students with a visual impairment to see objects at a distance or to perform tasks, such as reading or writing, with greater ease. Optical devices are available with various magnifications and uses. These devices should be recommended by a low vision specialist after a clinical vision evaluation. An optical device may not be of benefit to all students, depending on their ocular condition or functioning.

  - **Magnifiers** enlarge the area being viewed closely such as print material. They may be handheld, stand mounted, or spectacle mounted. They may also include lighting so that the item being viewed is appropriately illuminated. It should be noted that using a magnifier is recommended only for select periods or spot checking. For reading, the student should have access to digitally enhanced or large print copies
  - **Telescopes/monoculars** are designed for distance viewing and require focusing by the student. They may be used for tracking or observing objects at a distance such as the board, street signs, traffic lights, field trips, etc. Telescopes are also used for short periods of time or spot checking, not for prolonged use such as watching a movie. Telescopes can be handheld, or spectacle mounted and can have monocular or binocular lenses.
  - **Video magnifiers or closed-circuit televisions** provide an electronically enlarged image through the use of a video camera. The image is enlarged and displayed on a monitor. This device has adjustable magnification, brightness, contrast, and positive and negative polarity (dark on light or light on dark). Video magnifiers come in different sizes and can be large and used on a table or desktop or handheld and used in a variety of situations. Many enhance an image at both near and distance for ease of viewing. Most offer a color function, which provides students access to photographs, maps, and other information that may not be conducive to black-and-white images.

Indoor and Outdoor Environmental Considerations

1. Particular Environmental Accommodations

A student with a visual impairment often needs adaptations to the physical environment in order to access information and facilitate learning. For example, the student may need preferential seating within the classroom. Alterations to physical supports, such as storage space or outlets for specialized equipment/technology and books, are also frequently required. Consider the following environmental accommodations recommended by FamilyConnect.

Adaptation	***Explanation and Examples***
Preferential seating	The student is allowed to sit in the classroom wherever it is most beneficial. For example, the student may sit where they have the best view of the instruction, is away from a light source to reduce glare, or near a power outlet needed for an assistive technology device.
Flexibility to move within a room	A student with low vision is given flexibility to move closer to visual activities in the classroom (e.g., classroom demonstrations).
Additional desk or workspace	Some students require extra space to accommodate materials and equipment needed to complete classroom tasks.
Additional shelving or storage space	Braille/large print books and additional technological equipment require storage space, and adequate furnishings should be provided. This may also include a hook for a student to store their cane in the classroom in a consistent location.
Appropriate lighting	Some students benefit from additional lighting for literacy tasks; others are very light sensitive (photophobic) and require reduced lighting.
Locker accommodation	Locker accommodations may need to be made, including consideration of the impact of visual impairment on locker location (e.g., end of bank of lockers, lighting); type of lock (e.g., swipe, pushbutton, or key locks); and space (e.g., multiple lockers to accommodate equipment).

FamilyConnect, N.D.

2. Additional Indoor Environmental Accommodations

In addition to adapting the immediate workspace for a student, the larger indoor environment also may need some alteration. Such adaptations are beneficial to a student with a visual impairment and may even be necessary to comply with the Americans with Disabilities Act requirements regarding accessible paths of travel and reasonable accommodations. These changes are often helpful to all students and should be done through collaboration with the TSVI or the orientation and mobility specialist. Accommodations such as these examples are student-specific and derived

through collaboration with the TSVI and members of the educational team. See common accommodations below. Other indoor environmental conditions include the following ideas.

Concept	***Explanation***
Furniture arrangement	Arrange furniture in a logical pattern and with clearly designated passageways.
Signage	Use tactile, braille, or large print signage to designate specific areas in the room.
Designation of space	Designate specific areas in the room according to subject matter or activities.
Remove clutter	Reduce the amount of visual clutter and use color and contrast to highlight areas or identify and locate certain objects.
Lighting	Control the amount of lighting and glare with shades, dimmer switches, fluorescent light filters, seating arrangements, and modifying surface areas.
Color markings for clarity	Use contrasting colors on the edge of stairs; on lockers; and other designated areas, such as in the gymnasium, auditorium, and cafeteria, for easier identification and location.

3. Additional Outdoor Environmental Considerations

Environmental conditions may affect a student with a visual impairment in a variety of ways. Additional accommodations may need to be considered for the outdoor environment. Weather conditions and sunlight fluctuate, often making the outdoor visual and auditory environment unpredictable and uncontrollable. Travel and movement may be challenging due to drop-offs, broken sidewalks, and other hazards. The following is a brief list of modifications/accommodations that should be considered, based upon the needs of the student.

Concept	***Explanation***
Light control	Use visors, sunglasses, or hats to control illumination.
Light adjustment time	Allow extra time for students to adjust when entering a brighter or darker area.
Coloration	Use contrasting solid stripes or colors on equipment or around large areas.
Caution in shaded area	Encourage students to be more cautious in shaded areas as shadows may obscure obstacles or holes in the ground. Students may be paired with a peer or an adult in these situations and encouraged to be more cautious.
Clear outdoor clutter	Keep areas of organized paths clear of clutter and alert the student to obstacles that may be in their way.

Instructional, Testing, Assignment, and Assistive Technology Accommodations

1. Instructional Accommodations for a Student Who Is Visually Impaired

A student with a visual impairment needs to have access to both written and oral instructions and to demonstrations in all subject matter. Accommodations can help a student better understand the instruction provided by the educational team.

Adaptation	***Explanation and Examples***
Hands-on experiences	Real-life examples of pictures or actual objects are used in instruction. For example, real coins are provided when pictures of coins are shown in a book.
Models	Models of objects that are primarily visual are used. For example, objects rather than pictures are utilized to represent the planets in the solar system.
More easily readable visual aids	Your student receives their own copy of information that will be displayed on an overhead, whiteboard, or chalkboard. Copy might be in the digital form (e.g., a pdf emailed to student, screen sharing).
Clear directions	Explicit language is used when giving directions, such as "Pass your papers to the right," rather than an unclear "Over here."
Peer (classmate) note taker	A classmate takes notes of material written on the board and provides a copy to the student with a visual impairment.
Extra time for responses in class	Your student may require extra time to respond to class discussions because they need more time to read an assignment.
Oral description or narration	Oral descriptions are provided of visual display material. For example, an exhibition of fine art would be described, or portions of a video or film would be narrated during times when there is no dialog.
Experiential learning	Your student can experience concepts directly that others may view in pictures or from a distance. For example, if the class is learning about farm animals, your student might visit a farm.
Verbalization	Information that is being presented, including information on a whiteboard or via an overhead, is spoken aloud.

FamilyConnect

2. Accommodations and Instructional Materials

Instructional materials need to be put into an accessible format for a student who is visually impaired. It is important that all materials be considered — not just textbooks, but worksheets and all supplemental reading materials. It is also important for your student to receive them at the same time as their sighted classmates who read print.

Adaptation	***Explanation and Examples***
Braille	Textbooks, worksheets, and all materials used in instruction are provided in braille.
Tactile graphics	Printed maps, diagrams, and illustrations are provided in a tactile format.
Audio materials	Books and other print materials are provided.
Electronic access	Materials are provided in an electronic format to be accessed with a computer or electronic notetaker. For example, your student uses an online encyclopedia to do research for a term paper or reads a textbook in digital format.
Print book for parents	Parents of a student who reads braille may request a print or digital copy of a textbook.
Highlighting key sections	Teachers may highlight sections of books to assist the student in reviewing and scanning and locating information.
Enlarged materials, magnification, or digital access options	These provide access to instructional content by means of enlarged materials (e.g., enlarged on copier or printed in larger font), technologically enhanced information (e.g., computer or tablet), or magnification aids (handheld magnifier, video magnifier). These may include large print books as well as maps, graphs, and charts as examples. Large print books may be ordered by the TSVI, per the IEP.
Manipulatives	Physical items, such as small toys, buttons, or beads, are used to demonstrate mathematical concepts or are used in art classes to complete a tactile drawing.

Accommodations and Modifications for Assignments

Students need to be responsible for all classroom and homework assignments. Additional time, or alternatives to visual tasks, may be important modifications for the student.

Adaptation	***Explanation and Examples***

Extra time for completion	The student may need extra time because of their reading or writing speed or they lack the kind of tools required for reading or writing.
Descriptive response	The student may provide a written description of a project instead of a visual representation. For example, the class assignment might be to make a drawing of a cell viewed through a microscope. The student who has a visual impairment may provide a written description of the cell rather than a drawing.
Use of models	The student may provide a model for an assignment rather than a two-dimensional representation.
Reduction of copy work	If an assignment requires copying text or problems, a worksheet is provided so a student can write answers directly on the worksheet and will not need to copy the assignment.

3. Accommodations for Classroom Testing

Different types of accommodations and modifications can help the student with a visual impairment take their class tests along with sighted classmates.

Adaptation	***Explanation and Examples***
Extended time	The student may need extra time because of their reading or writing speed or they lack the kind of tools required for reading or writing.
Use of manipulatives	The student may use manipulatives to demonstrate understanding.
Spelling tests for braille readers	A student who uses contracted braille should also take spelling tests using uncontracted braille to make sure they can also read and write in standard English.
Dictation of responses to a scribe	The student verbally reports an answer, and the answers are recorded on the answer sheet by a scribe.
Screen access to tests administered on a computer	Depending on the student's need to read in print or braille, appropriate screen access to text may be needed through enlarged text, refreshable braille, or a copy of the test in hard copy braille.

4. Assistive Technology Accommodations

Using a digitally enhanced format may be preferred in lieu of large print paper or braille copies. A teacher can provide emailed handouts to the student so the content materials

may be enlarged or available on braille display or in audio format on the computer or tablet. A teacher can also use an app or technology that mirrors or replicates what is on the interactive board to a tablet or computer in real time, which enables a student to read up close what is presented at a distance.

The table here features a variety of assistive technology tools for the student to learn or to communicate.

Adaptation	***Explanation and Examples***
Low vision devices (near)	Magnification devices for viewing or completing near vision tasks.
Low vision devices (distance)	Telescopes for viewing or completing distance vision tasks.
Braillewriter	A mechanical tool resembling a typewriter that is used for writing or "embossing" braille.
Slate and stylus	A portable tool for writing braille made up of two flat pieces of metal or plastic that are used to hold paper and a pointed piece of metal used to punch or emboss braille dots.
Notetaker (braille or qwerty keyboard)	A notetaker is a portable device for reading and writing in class. Information can be readily transcribed in order to provide the student with a means to communicate with peers, teachers, and others who do not read braille. Some notetakers, with additional equipment, can be used for face-to-face communication between a student who is deaf-blind and sighted, hearing classmates.
Computer/touch screen tablets	A tool for literacy and learning activities and access to information, especially when equipped with specialized software and hardware.
Refreshable braille display	Technology that provides access to information on a computer screen or notetaker by electronically raising and lowering different combinations of pins in braille cells.
Speech access	Software that provides speech output for the text on the screen. Some devices have this capability installed; however, additional software may be necessary to access curriculum, per the IEP.
Braille translation software	Computer software that translates print into braille and braille into print.
Large monitor for computer	A monitor that, by virtue of its size, provides larger images for a student with a visual impairment.

Scanner	A device that copies print material and uses software to translate it into an electronic format so that it can be converted into a preferred reading medium.
On screen magnification	Accessibility options within computers or additional software that enlarge information on a computer or other screen.
Braille embosser	A raised dot printer that embosses (prints) braille.
Ink printer	A printer that is compatible with a braille device or software to provide print text for teachers and classmates.
Tactile graphics	Tactile graphics include any tool that converts print images into a tactile format. These can range from low tech (e.g., tracing wheel, wax sticks) to high tech (e.g., 3D printers and devices that produce raised line diagrams).
Talking or large print calculator	A device that provides speech and/or large print access to a calculator.
Talking dictionary	An electronic device that provides a dictionary with speech access.
Media players	Media players may be portable devices as well as software applications built into devices to access digitally recorded audio books/materials.
Alternative computer access	Methods that allow a person with additional impairments to access a computer, such as adapted keyboards and voice recognition technology.
Augmentative and alternative communication devices	Special communication devices for students who may have additional impairments or other limitations in communication. When these devices are needed, special accommodations for the student's visual impairment should be considered.
Adapted devices for daily living	These devices include a wide variety of devices adapted for a student with a visual impairment including measuring devices, kitchen utensils, games and toys, and writing aids.

D. Expanded Core Curriculum

Experts in the field of visual impairments agree that students with visual impairments require specialized instruction in a body of knowledge and skills that are disability specific. This specialized instruction is referred to as the Expanded Core Curriculum (ECC) and should be a framework for assessing students, planning individual goals, and providing instruction focusing on the student as a potential adult (Perkins School for the Blind, n.d.; Texas School for the Blind and Visually Impaired, n.d.). The student's learning is often negatively impacted due to missed opportunities for incidental visual learning. In addition to the general curricular areas of

reading, math, and the content areas, a student with a visual impairment needs specialized instruction in the ECC. These areas include the following components:

- Compensatory or functional academic skills, including communication modes
- Orientation and mobility
- Social interaction skills
- Independent living skills
- Recreation and leisure skills
- Career education
- Assistive technology
- Sensory efficiency skills
- Self-determination

Instruction in many skill areas must be provided at critical times throughout the student's educational career. The intensity of instruction in different specialized areas may increase or decrease over time as the student progresses through school. Instruction in orientation and mobility is essential as early as possible to teach basic concepts and beginning travel skills. The need for orientation and mobility instruction increases as the student matures and is able to learn more advanced independent travel skills at an age-appropriate level.

ECC needs to include the following:

- **Compensatory or Functional Academic Skills**
  "These are the skills students need to have in order to learn their academic curriculum. For instance, a compensatory skill for a student who is blind might be braille, which helps them learn how to read. Other examples of compensatory skills include tactile symbols, sign language and recorded materials." (Perkins School for the Blind, n.d.)

  It is essential that the student be taught literacy using the most appropriate sensory models. A student may read using braille, large print, regular print with assistive technology, and/or auditory materials. The student may write in braille, print, keyboarding, and/or dictation. The student's reading and writing medium should be assessed periodically to determine whether the current medium is the most appropriate for the student and whether an alternative or additional medium should be introduced. Once the appropriate medium is selected, instruction may be necessary to improve the student's technique, comprehension, speed, and accuracy.

  Other areas of instruction that assist a student with a visual impairment to effectively access the curriculum include the following items:

- Signature writing
- Accessibility to computers
- Specialized assistive technology designed for a student with a visual impairment
- Use of optical aids
- Closed-circuit television, video magnifiers
- Listening skills
- Braille writer and slate and stylus
- Abacus
- Instruction with specialized software, electronic books, talking calculators, or other equipment specially designed or modified for a student with a visual impairment
- Ongoing language development
- Ability to order and maintain materials and equipment
- Study and organizational skills
- Concept development
- Keyboarding

Regardless, each student will need instruction from a TSVI in each of the compensatory and functional skills they need to master.

- **Orientation and Mobility**

These skills include understanding, interacting with, and moving about in one's physical and spatial environment with independence and safety as the major goals. Instruction in orientation and mobility should be provided by a certified specialist and may include the following, which are vital to independent travel: safety and protective techniques, understanding of environmental concepts, human guide techniques, cane travel, posture, travel throughout all environments, and use of public transportation. Instruction in orientation and mobility is essential as early as possible to teach basic concepts and beginning travel skills. The need for orientation and mobility instruction increases as the student matures and is able to learn more advanced independent travel skills at an appropriate age level. Many students with visual impairments will not become drivers; consequently, a student may require instruction in utilizing public transportation as part of their transition plan. The student will be a passenger as well as a pedestrian; therefore, it is necessary for the student to have access to a driver's education program to be aware of driving practices and the rules of the road as a basic safety measure.

- **Social Interaction Skills**

A student with a visual impairment requires unique instruction pertaining to social interaction skills because of the effects vision loss may have on the formation of self-concept, opportunities for appropriate modeling in social situations, involvement in recreational activities, development of concepts about human sexuality, and understanding their visual impairment. Acceptance and understanding of one's own eye condition and its functional implications can increase a student's ability to make appropriate decisions regarding health and safety, environmental modifications, etc. This knowledge also empowers a student to be an advocate for their own needs. To compensate for this loss of incidental visual learning, special instruction must be provided in the following areas: socialization, effective education, leisure activities, sex education, and the implications of one's own visual impairment.

- **Independent Living Skills**

  Independent living skills must be systematically taught in the natural environment due to limited opportunities for incidental learning and limited knowledge of adaptive techniques. Instruction in daily living skills may include, but not be limited to, the following: personal hygiene, dressing skills, clothing care, housekeeping, food preparation, eating skills, money management, social skills, communication skills, first aid and safety, telephone usage, time management, and organizational skills. This may be addressed at appropriate age levels throughout the student's educational career so that the student can function as independently as possible. In addition, collaboration with families is critical to ensure that activities of daily living skills are incorporated into the natural environment.

- **Career Education**

  A student with a visual impairment should begin career education in the primary grades. The acquisition of specialized skills and the utilization of special equipment along with necessary adaptation for various vocational opportunities would be explored throughout the total curriculum. Work experiences must be provided to develop strong work habits, to broaden the student's awareness of employment opportunities available in current and future job markets, and to assist the student in assessing their own vocational skills and interests. Realistic goals then need to be established while still encouraging advocacy for new opportunities. A significant number of individuals with visual impairments are unemployed or underemployed; therefore, appropriate accommodations must be made to enable these students to participate in career development, work-study, and vocational education programs. Collaboration between

the general education personnel and the TSVI can ensure that such programs meet the needs of the student to facilitate employment.

- **Sensory Efficiency Training**

  Sensory efficiency training is essential for the student with low vision to fully utilize their remaining vision. A student with a visual impairment who can use their vision for learning may not be able to do so effectively without appropriate training in visual efficiency and the use of adaptive optical or non-optical aids. For example, instruction may be needed in systematic scanning skills, tracking print, figure-ground discrimination, use of video magnifiers, closed circuit televisions, specialized equipment and other magnification devices, or techniques for modifying the lighting and contrast in the environment. Instructional approaches are developmentally sequenced based on the student's needs. In addition, learning how to integrate all remaining senses to counter the impact of any missing or impaired sense is also integral to this area. For example, learning how to use tactual, gustatory, and olfactory input "rather than visual cues to identify one's personal possessions, or using hearing and the other senses to identify people one knows without visual cues, fits into this area." (FamilyConnect, n.d.) "Sensory efficiency skills must be practiced through meaningful activities in the home and community, not just at school. Taking this into account, TSVIs support sensory efficiency instruction across a range of stimulating and relevant/natural environments." (FamilyConnect, n.d.)

- **Recreation and Leisure Skills**

  These skills contribute to the quality of life for all students, including those with a visual impairment. A student with a visual impairment requires further instruction in these skills due to the fact that the loss of vision impacts the student's ability to actively engage both physically and socially. Education in such skills ensure the student's lifelong enjoyment of physical and leisure-time activities, including the following:

  - Making choices about how to spend leisure time.
  - Actively participating in physical and social recreational activities.
  - Trying new leisure activities.
  - Following rules in games and activities at an appropriate level.
  - Maintaining safety during recreation/ leisure activities.

  Education in recreation/leisure skills can positively impact the student's entire life. Physical education programs are important in providing opportunities for much needed physical activity as well as teaching a variety of recreation/leisure skills. The majority of

students with visual impairments are able to participate in physical education with their sighted peers, but there are times when the IEP team may determine that the related service of adaptive physical education is needed for an individual student. Participation in these activities may be dependent upon the risk factors associated with certain ocular conditions or other physical disabilities.

- **Self-Determination**

  Self-determination for a student with a visual impairment is critical for independence. This includes accepting their visual impairment, appropriately communicating visual needs and accommodations, and accessing the resources available. Advocating for one's own needs and learning from one's successes and mistakes empowers the student to have the confidence to be successful. Instruction in self-determination is critical in developing skills to successfully control one's life, reach goals, and participate fully in the world.

- **Assistive Technology Skills**

  These skills can unlock learning and expand the horizons of a student with a visual impairment. Assistive technology (AT) is a great equalizer and an essential part of the Expanded Core Curriculum. "Assistive technology is an umbrella term that includes assistive and adaptive tools as well as instructional services that can enhance communication, access, and learning. It can include electronic equipment such as switches, mobile devices, and portable notetakers; computer access such as magnification software, screen readers, and keyboarding; and low-tech devices such as an abacus, a brailler, Active Learning materials (e.g., Little Room®), and optical devices." (Louisiana School for the Blind and Visually Impaired, n.d.) AT does not only refer to complex high-tech electronic systems. "Many useful solutions are decidedly low tech. AT can be as simple as a book stand to hold a textbook at a comfortable position so a student with a visual impairment does not have to bend over the desk to read. It can be as complex as a computer system with screen reading and voice recognition software for students who have difficulty both seeing the screen and using the keyboard." Most students need a range of both low- and high-tech devices (American Foundation for the Blind, n.d.).

In summary, the ultimate goal of all specialized instruction, including ECC, is to make the student with a visual impairment as independent as possible. The instructional program should be designed to develop critical thinking skills that can be applied in both academic and nonacademic areas.

E. Service Continuum Options for Students with Visual Impairments

Support is available from birth through age 22 with a continuum of instructional services available. Services may range along the continuum from consultation to direct services to placement in a residential setting. (See below.) These may include services both within and outside the classroom setting from a licensed TSVI. Consideration must always be given to a least restrictive environment that includes the student with their nondisabled peers to the greatest extent possible. Factors to be considered when determining placement options include impact of the visual impairment upon learning and independence (see **Section D** for the Expanded Core Curriculum), age of onset of the visual impairment, and the presence of multiple impairments. Decisions on student needs and programs or services options are made by the IEP team, which includes a TSVI and the parents.

Early Intervention Services (Birth through Age 3)

Early intervention services are provided through the IDHS Bureau of Early Intervention. Services are aligned with nationally recommended practices (Hatton et al., 2018) and Part C of IDEA and provided in the natural environment using family-centered practices. The natural environment is commonly defined as the home or community but could also encompass child care or center-based programs. It is essential that services focus on family concerns while collaborating with families to problem-solve situations and integrate strategies in the family's daily routines. Early intervention services that address needs due to visual impairment are provided by a licensed TSVI who is referred to as a developmental therapist/vision specialist in the Illinois Early Intervention System. When appropriate, orientation and mobility services are provided by a certified orientation and mobility specialist, referred to as a developmental therapy orientation and mobility specialist in the Illinois Early Intervention System. Planning for transition to school-aged services should begin when the child reaches 2 years 6 months to determine eligibility for school-based services.

Public School Educational Programming (Ages 3 through 22)

A child who turns 3 may be eligible for educational services through the local school district. A TSVI and, if appropriate, a certified orientation and mobility specialist should be available to provide an evaluation for services. Students entering elementary school programs may have consultation and/or direct services available to them as determined by the IEP team.

- **Consultation Services:** Consultation services are available to school staff, families, and community members. These services are geared to supporting the educational team,

while not necessarily providing services directly to the student. Consultation services may include the following components:

- Assessing and monitoring the student's visual needs
- Modification of the learning environment (**Section C**)
- Assessment of safe access (Americans with Disabilities Act)
- Provision of assistive technology
- Assistance in accessing materials, transcription services (braille, large print, auditory)
- Disability awareness programs to student peers
- Staff development and training
- Modification of instructional methods and materials
- Ongoing assessment and future transition planning including college and vocational training

- **Direct Services:** It may be determined by the IEP team that the student needs direct services. These services are to be delivered by a TSVI, be it through a resource in-school program or by an itinerant TSVI who travels between students' schools throughout the day. The role of the TSVI is as varied as the individual student's needs. The TSVI continues to work in consultation with the educational team involved, as well as working in collaboration with staff to ensure continuity of instruction throughout the student's school day. Instruction may focus on, but not be limited to, providing services directly to the student with a visual impairment.
  - Adaptive skills for a student with a visual impairment. (See Expanded Core Curriculum in **Section D**.)
  - Academic reinforcement related to the vision loss.
  - Assistive technology. (See **Section H**.)
  - Ongoing assessment and future transition planning including college and vocational training.

- **Related Services:** Students with visual impairments are eligible for any related service that meets their educational needs. Students may display deficits in other developmental areas. Personnel in all ancillary disciplines, such as speech, occupational therapy, physical therapy, and vocational or social work, will be included in team collaboration with the TSVI. Deficits in the areas of safe and independent travel due to a visual impairment, spatial awareness, and physical safety require O&M services. Services by the certified O&M specialist would be considered a related service. Services

provided by a TSVI are never a related service. Vision is considered an eligibility category under Part B of IDEA, and services are considered part of the educational programming (Koch, 2005).

Public Residential Programming for the Visually Impaired

The state of Illinois provides residential facilities for students with visual impairments.

- **Illinois School for the Visually Impaired (Age 5 through 21)**
  The Illinois School for the Visually Impaired (ISVI) in Jacksonville provides a continuum of service delivery options offered in-state. ISVI is operated by the IDHS Division of Rehabilitation Services and is available to students with a visual impairment ages 5 through 21. Options pertaining to ISVI must be discussed at the student's IEP meeting. An evaluation of the student by ISVI staff occurs prior to enrollment.
- **Philip J. Rock Center (Age 3 through 21)**
  The Philip J. Rock Center (PRC) in the Chicago suburb of Glen Ellyn is a similar facility providing services to students age 3 through 21 with a combined visual-auditory impairment.

Both programs can offer opportunities for students to attend classes in community schools while living in a dormitory setting. Application to each school is made to the admissions office of the respective facility. (Addresses and phone numbers are in the **Resources** section of this document.) In addition to residential programming, both ISVI and PRC provide outreach to support students throughout Illinois. Both programs offer services from 18 through 21 if the student opts to defer their diploma from their high school.

Post-Graduation Options

- **College/University**
  If a student is planning on to attend a college or university, they should contact the disability resource center at that school to find out about support and services available prior to applying. This can help students better determine if their needs can be met at that college and also assist them in preparing prior to their high school graduation. IDHS) may also provide financial support, training, and other services to students who are eligible based on IDHS criteria. Students should contact IDHS no later than the end of their junior year in high school.
- **Vocational/Trade**

If a student is seeking training in a trade or vocational program, IDHS may provide financial support or other services to students who are eligible based on IDHS criteria. Students should contact IDHS no later than the end of their junior year in high school.

- **Illinois Center for Rehabilitation and Education – Wood Transition Option**
  "The Illinois Center for Rehabilitation and Education – Wood (ICRE-Wood) assists adults who are blind or visually impaired in rediscovering his or her independence and freedom. ICRE-Wood staff work one-on-one with participants to help them achieve his or her employment, education, training, and independent living goals. ICRE-Wood offers a concentrated, short-term residential program for adults who are newly blind or visually impaired." (IDHS Division of Rehabilitation Services -- Bureau of Blind Services) ICRE-Wood is located in Chicago, but all of its programs are free to eligible Illinois residents. Contact ICRE-Wood for current services and programs.

Adult Living Options

- **Friedman Place**
  Friedman Place in Chicago is a nonprofit supportive living community for adults who are blind or visually impaired. Most of the residents have additional health challenges that become more difficult to manage due to blindness.
- **Mary Bryant Home for the Blind and Visually Impaired**
  The Mary Bryant Home is a certified supportive living community for the blind and visually impaired in Springfield. It offers its residents a chance to live independently and experience all of the many great things life has to offer.

F. Students with Multiple Disabilities and a Visual Impairment

ance regarding the Cogswell Macy Act[OBJ]s that if a student who has multiple disabilities also is diagnosed as visually impaired, deaf or hearing impaired, and/or deaf-blind, the sensory impairment should be stated as the primary, secondary, or tertiary impairment. The sensory impairment should be separate from the multiple disability label.

Students with multiple disabilities are an exceptionally diverse group. They present with a wide range of cognitive, physical, and sensory functioning levels. They also may have a wide range of medical issues, such as extended hospitalizations, recurring medical procedures, surgeries, vulnerable immune systems, and medication effects. This diversity can result in a variety of

educational and related service needs. These factors can have obvious implications for providing appropriate assessment, educational programming, and options for service delivery.

Students with multiple disabilities are entitled to the same rights and opportunities as all other students. Information in other chapters of this guide may be applicable for students with multiple disabilities even if not discussed in this chapter. Accommodations should be made for access due to student disability and the needs generated by that disability.

The diverse needs of students with multiple disabilities make it essential that all IEP members, including the parents, work as a team. Effective teaming is essential to both assessment and programming to collaborate in all aspects of the educational program. Administrators can provide the necessary support to ensure that this communication, collaboration, and training will occur.

The TSVI plays a critical role for those students with multiple disabilities who have a visual impairment. The TSVI will have information and techniques to offer fellow team members, especially in the role of consultant and trainer to other services providers (e.g., teachers, therapists, instructional aides). The TSVI can provide direct instruction to the student, conduct appropriate assessment, and help other team members understand how a student's visual disabilities can impact various skill areas. The TSVI can also give suggestions for adaptation of materials, use of specialized equipment, and training other staff so that they can support the student in the use of their vision throughout the school day.

Assessment

Comprehensive and appropriate assessment plays a critical role in the determination of educational programming for students with multiple disabilities. All current and pertinent information from relevant sources should be reviewed prior to the assessment. Such sources can include parents, teachers, therapists, doctors, etc. Observation of the student prior to assessment is also important to determine appropriate tools, approaches, relevant tasks, and environments. Optometric and/or ophthalmological examination necessitates special experience and skill on the part of the examiner. Input from a TSVI, with help from the educational team, may be of great assistance in planning/completing the clinical assessment. For example, the TSVI can provide information to help the doctor understand the student and their needs, such as the student's mode of communication, reinforcers, and/or cognitive ability. Teachers may also substantiate reasons for corrective and or safety lenses to help with functional tasks.

A functional vision assessment and/or learning media assessment should be considered after a diagnosed visual impairment is evident. This assessment may include the following: visual functioning, daily living skills, orientation and mobility, access to communication systems, compensatory skills, behavioral and social interaction skills, and recreation/leisure skills. In addition, the many variables associated with transitioning to home, school, and work environments must be assessed. Variables in the educational environment (e.g., building layout, room arrangement, lighting, demands and expectations in the classroom, structure and reinforcement available) should also be assessed as to their impact on the student's ability to function successfully. Information from the functional vision assessment and/or learning media assessment will be useful as other educational professionals complete additional assessments (e.g., implementation of appropriate communication systems).

The assessment approach will necessarily be eclectic, choosing appropriate procedures, activities, and materials from a variety of relevant formal and informal techniques and instruments as well as from the student's daily repertoire of tasks and environments. Educational goals and strategies will be determined after an assessment is completed. Assessment should be an ongoing dynamic process to ensure that the student's progress, changing needs, environmental variables, etc. will lead to appropriate modifications in the IEP aligned with best practices in progress monitoring.

Programming Priorities

It is essential that all teachers, therapists, parents, and private providers work together to meet the needs of the students with multiple disabilities. The student's needs in all domain areas are integrated in a way that impacts the student's functioning. It is essential to look at the whole child, including the impact of the visual impairment. For example, consider the relationship of motor demands, head control, and eye gaze when working on communication. Discussions must be ongoing for all parties to understand the nature of the disability, the therapies involved, interventions suggested, and the ramifications of all these components as related to the student's functioning. Programming must be done to ensure that all areas of the student's needs are being addressed. These programming priorities include the following:

- **Collaborative Teaching**

  It is often difficult for the student to generalize the skills learned via a one-to-one (pull-out model) session when completed in a separate location away from their own classroom. When the student receives educational vision services within the classroom, the student and other educational staff benefit as instruction can more easily be replicated in all aspects of the student's day. The following variables may change daily: physical positioning of the student, placement of materials, eye preference,

auditory/tactual/visual presentation, and amount of visual demands. The student's visual performance may fluctuate throughout the day. All service providers involved benefit from an arrangement where they have an opportunity to observe and collaboratively work together to develop appropriate teaching strategies that maximize the student's educational potential.

- **Orientation and Mobility**
  When appropriate, training in relevant environmental concepts and skills to travel as safely and independently as possible must be taught in collaboration with a certified orientation and mobility specialist. When students have additional physical disabilities, these services may need to be provided in conjunction with techniques and supports from a physical therapist.
- **Vocational Skills/Transitioning**
  It is important for the team to include the TSVI when considering vocational placement and skills training. Visual skills will need to be taken into consideration when determining employment options.
- **Recreation/Leisure Skills**
  Visual impairment can impact students' motivation and ability to move and engage in their environment. It is important for the team to consult with the TSVI when considering appropriate programming.
- **Social Interaction Skills**
  Students with a visual impairment often miss social cues. Direct instruction in this area is crucial.
- **Activities of Daily Living**
  The TSVI will offer strategies in addressing activities of daily living skills, such as self-feeding, grooming, dressing, toileting, and caring for individual medical needs, when appropriate, or as part of the transition plan. One-on-one instruction may be necessary based on the degree of vision loss and its impact on development of these skills.

Strategies for Programming Priorities

- **Multisensory Approach**
  Many students with a visual impairment and multiple disabilities benefit from a multisensory approach to instruction. Providing information through more than one sensory channel – either simultaneously or in a deliberate sequence – can help keep a student engaged, control sensory state, and develop concepts. The learning media assessment described in **Section B** will be helpful in determining whether vision, hearing, or touch may provide the most information for a student; however, smell,

taste, proprioception, and vestibular inputs also offer valuable stimulation and information for the student with visual and multiple disabilities.

- **Low Vision Accommodations**
  It is critical to help the student with low vision maximize their visual functioning through various means. This may include the use of varied adaptive aids and equipment, placement of materials, and positioning the student to improve muscle tone. Instruction in scanning and tracking and their functional application to communication skills, daily living skills, and orientation and mobility should also be considered.
- **Auditory Skills**
  Provide instruction in effective listening skills in following auditory directions and identifying/recognizing environmental sounds and cues, especially as they relate to mobility and safety. In addition, auditory skills play an important role in the interpretation of spoken language and recorded information such as audio books and screen readers and speech generating devices.
- **Tactile Skills**
  Provide instruction in effective skills of systematic searching; the ability to tactually identify objects, locations, and people (as appropriate); and the functional use of objects. In addition, the IEP process must include a discussion of the appropriateness of braille instruction.
- **Methods of Communication**
  The educational team should be part of the discussion regarding augmentative communication modes or devices. Consideration must incorporate the impact of the child's visual impairment on their access to both expressive and receptive communication. For example, options could include picture size, contrast, placement, complexity, etc.

In summary, a collaborative approach must be taken when working with students with multiple disabilities who also have a visual impairment.

G. Professionals Serving Students with Visual Impairments and Certification and Licensure Requirements

Students with a diagnosed visual impairment may work with the following professionals.

Teacher of Students with Visual Impairments

A TSVI must hold a valid Illinois Professional Educator License (PEL) with an endorsement in Teachers of Students who are Blind or Visually Impaired through ISBE. Refer to 23 IAC 28.210 for Standards for the Teacher of Students who are Blind or Visually Impaired.

The TSVI is responsible for the instruction and assessment of the following Expanded Core Curriculum areas:

- Compensatory or functional academic skills, including communication modes
- Social interaction skills
- Independent living skills
- Recreation and leisure skills
- Career education
- Use of assistive technology
- Sensory efficiency skills
- Self-determination

The TSVI assesses the educational implications of a student's visual impairment in order to design, develop, and implement educational programs in collaboration with other school staff members.

The TSVI, in coordination with the general educator, needs to ensure the student has access to all educational curriculum through adapted materials, assistive technology, compensatory strategies, environmental accommodations, etc. In-service training for general educators is crucial to the student's success in the least restrictive environment. The TSVI works as a liaison among families, community agencies, eye specialists, school districts, etc.

Northern Illinois University and Illinois State University offer programs that enable a person to become licensed or credentialed to work with students with a visual impairment within the state of Illinois and prepare to become a TSVI.

Certified Orientation and Mobility Specialists

Certified O&M specialists require valid certification from the Academy for Certification of Vision Rehabilitation and Education Professionals, a member of the National Organization for Competency Assurance that strives to conduct its certification programs according to the standards established by the National Commission for Certifying Agencies.

Orientation and mobility is a related service provided to students with low vision and blindness. The orientation and mobility specialist develops and coordinates an individual program for each

student to achieve specific skills to orient one's way in the environment and mobility skills to travel safely and efficiently. The orientation and mobility specialist completes all assessments and evaluations regarding mobility and develops and implements the orientation and mobility goals on the IEP. The specialist orients the student to classrooms, the school building layout, the home neighborhood, the workplace, and the community. Other areas of focus may include sensory awareness, concept development (body image, spatial, positional, directional, and environmental concepts, etc.), self-protection techniques, human guide, cane skills, safety concepts, problem solving, planning routes, crossing intersections, and rules for safe travel. The specialist provides instruction in the independent use of public transportation. The O&M specialist assists physical education teachers by providing adaptive techniques and instructional ideas for working with students with visual impairments. Providing education to schools and the general community regarding visual impairments, orientation, mobility, and vision services is also part of the role or the orientation and mobility specialist. The specialist also assists other team members in monitoring students' orientation and mobility techniques to ensure continuity and carry-over skills.

Northern Illinois University offers a program to enable a person to become licensed or credentialed for working with students with a visual impairment within the state of Illinois and prepare to become an orientation and mobility specialist.

Vision Supervisor/Coordinator

The vision supervisor/coordinator must hold a valid Illinois PEL with an endorsement in Teachers of Students who are Blind or Visually Impaired through ISBE and may be requested to get a supervisory or a Type 75 General Administrator endorsement.

The vision coordinator provides instructional leadership for staff and students within the program for the visually impaired. The coordinator is a leader who supervises instruction of programs for the visually impaired; stimulates program and curricular development, including the core academics and the Expanded Core Curriculum; and collaborates with the leaders of other vision programs across the state as a member of the Illinois Vision Leadership Council. The vision coordinator provides technical assistance, serves as a resource, and develops and implements professional development, in-service, and training activities to TSVIs, orientation and mobility specialists, students, parents, and district personnel. The coordinator ensures compliance with state and federal regulations governing students with visual impairments. The vision coordinator is responsible for maintenance of the register of the legally blind census and other student data for the state and approval of requests for large print, braille, tangible aids, and assistive technology from the Illinois Instructional Materials Center. The vision coordinator

monitors referrals, may conduct functional vision assessments, and attends IEP meetings. Coordinators also supervise and may evaluate vision staff. Advocating for students with visual impairments in home, school, and community is an essential role of the vision coordinator.

Districts that do not employ a vision coordinator with a background and training in the field of visual impairments should collaborate with vision coordinators throughout the state. Please contact the Illinois Instructional Materials Center at 312-997-3699 for a list of vision coordinators in the state.

Developmental Therapist/Vision

A developmental therapist/vision (DTV) must hold a valid early intervention credential as a DTV issued by the Illinois Department of Human Services. DTVs serve children who are birth to 3 years of age with vision loss and their families through the Illinois early intervention system.

The DTVs support the families by providing information about the child's specific diagnosis, vision loss and its impact on development, how the visual system works, early literacy, adaptive methods' maximizing visual functioning, ideas on how to work on skills within the daily routine, resources, and transition into the education system at age 3. DTVs work directly with the children and model techniques and strategies to their parents to optimize skills.

Illinois State University offers a program that enables a person to become licensed or credentialed to work with students with a visual impairment within the state of Illinois and prepare to become a DTV.

Developmental Therapist/Orientation and Mobility

A developmental therapist/orientation and mobility must hold a valid early intervention credential issued by IDHS. Developmental therapists in orientation and mobility serve children from birth to 3 years of age with vision loss and their families through the Illinois early intervention system.

These therapists help infants and toddlers develop body orientation, orientation within the environment, and skills related to mobility. They also help children and families learn strategies for safe travel. Such instruction may include pre-cane and cane skills as appropriate for young children.

Illinois State University offers a program that enables a person to become licensed or credentialed for working with students with a visual impairment and prepare to become a developmental therapist in orientation and mobility.

Paraprofessional/Instructional Assistant

Paraprofessional/instructional assistant serving the student with a visual impairment works under the direction of the TSVI. Paraprofessionals are required to have a Paraprofessional endorsement from the Illinois State Board of Education.

Reader/Transcriber

Readers/transcribers transcribe materials into braille, large print, and audio or digital media. They work under the supervision of the TSVI. Transcribing materials into braille, large print, and audio or digital media is a process requiring training to learn proper formatting. The material preparation for a student with a visual impairment requires a team effort among the TSVI, general educator, and paraprofessional. It is the TSVI's responsibility to coordinate this effort. The Library of Congress offers training to become a certified braille transcriber.

Interveners for Students Who Have Deaf-Blind Approval

This approval allows the intervener to serve students with DeafBlindness. Each intervener will meet qualifications as typical for paraprofessionals. The requirements include the following, per 23 IAC 25.560(a):

1) "Each applicant for approval as an intervener shall

A) have completed 60 semester hours of college credit from one or more regionally accredited institutions of higher education;

B) hold an associate's degree issued by a regionally accredited institution of higher education; or

C) hold a high school diploma or its recognized equivalent and have achieved the score identified as passing by the State Board of Education on one of the examinations for paraprofessionals discussed in Section 25.510(b).

2) Each applicant for intervener shall also demonstrate nationally recognized intervener knowledge and skills competencies by holding a National Intervener Credential/Certificate."

The approval is valid for five fiscal years and may be renewed if professional development requirements are met. See more information on current intervener training programs and directions on how to complete the approval process in ELIS.

Educational Team

The previously defined specialists work in concert to develop the support necessary for students with a visual impairment to have equal access to educational programming commensurate with their peers. Their responsibilities extend to supporting the school, staff, families, and the communities in which students live.

The licensed/certified vision staff share their expertise through training and support to school personnel. It is essential that general educators and TSVIs collaborate regarding curriculum so that the materials may be made accessible prior to the classroom instruction. Sufficient time is required for these materials to be appropriately adapted, thus ensuring that students with visual impairments have equal access to materials at the same time as their sighted peers. The building administrator's role is to support the vision staff to ensure this process is followed.

Eye Health Care Professionals

Eye health care professionals provide key information regarding diagnosis, prognosis, and prescriptive recommendations. These specialists are not in a position to make specific educational recommendations regarding placement, services, reading media, etc.; however, the information they provide greatly assists the educational team in the initial phases of assessment.

The following is a clarification of the roles of the eye care professionals:

- **Ophthalmologist**: The ophthalmologist is a Doctor of Medicine who specializes in the diagnosis and treatment of defects and diseases of the eye; performs surgery when necessary; and prescribes other types of treatment, including corrective lenses. The team obtains information regarding a student's diagnosis, prognosis, and treatment recommendations via consultation with the ophthalmologist.
- **Optometrist:** The optometrist prescribes medications, glasses and contact lenses, vision therapy, occlusion therapy, and low vision rehabilitation. Optometrists are not allowed to perform eye surgery in some states, including Illinois, but can provide preoperative and postoperative care. The TSVI obtains information regarding the student's refractive status (degree of nearsightedness, farsightedness, etc.), oculomotor functioning (eye movement skills), and guidelines for prescribed treatment (e.g., patching therapy) or corrective lenses via consultation with the optometrist. The TSVI then may interpret this information for the parents and appropriate personnel and assist in monitoring use and care.
- **Optician**: The optician or dispensing optician is a technical practitioner who designs, fits, repairs, and dispenses prescription glasses.

- **Ocularist**: The ocularist is a trained technician skilled to fit, shape, and paint the ocular prosthesis for individuals who have lost an eye.
- **Low Vision Optometrist**: All optometrists and some ophthalmologists receive basic training in the assessment and treatment of individuals with vision loss that is not fully correctable by medical intervention, surgery, glasses, or contacts. Residency-trained optometrists complete a one-year accredited comprehensive program with training in the evaluation, diagnosis, and multidisciplinary management to maximize a student's functional vision. Treatment may include, but is not limited to, prescribing glasses, low vision devices, sun wear, assistive technology devices, and other treatments. The TSVI and /or the certified orientation and mobility specialist may develop specific programming goals related to the student's care and use of these devices via consultation with the low vision optometrist.

It is important to note that the developmental optometrist is responsible for any vision therapy services as this is a medical model. Vision therapy is not under the purview of the teacher of students with visual impairments.

H. Assistive Technology

"Assistive technology can enable a student with a visual impairment to achieve educational success and gain competitive employment," according to a 2011 position paper on assistive technology for students with visual impairments from the Division on Visual Impairments of the Council for Exceptional Children (Smith, Kelly, & Kapperman, 2011). Access to technology (a component of universal design) may be readily available; however, it may not meet the unique needs of a student with a visual impairment. Assistive technology may be necessary in order to remove barriers to access and enable a student with a visual impairment to maintain or improve educational engagement. AT can open up exciting new opportunities for a student, but it is not magic. "AT devices should not give students an unfair advantage, but instead, should provide them with the independence to compete effectively with peers" (Willings, 2020).

Specifically, a student with a visual impairment may require assistive technology, which may focus upon the following:

- Speech access
- Braille access
- Print access
- Tactile communication systems
- Any combination of these access modes

The current challenge is to provide appropriate access to and instruction in AT. This is accomplished through the following:

- Individualized assessment of assistive technology needs
- Timely distribution of assistive technology
- Appropriate instruction in the use of assistive technology

The instruction should be delineated within the student's IEP, as stated in IDEA.

It should be noted that the assistive technology is determined by the student's educational needs. While there are many options available, the student's ability to effectively use the device will be taken into consideration and then a determination will be made as to what level device is best to meet the student's needs. Many factors should be taken into consideration. They may include curriculum needs, cognitive levels, visual skills, motor skills, auditory skills, and environmental needs. These factors should be student-specific. A low-tech device may be just as beneficial as a high-tech device. It is imperative to have a plan in place to accommodate the needs of a student when the technology fails. This plan may include low-tech devices or temporary accommodations (e.g., peer buddies).

Specialized training and access to appropriate instruction may also include more universally designed technology (e.g., tablets, computers, smart phones, etc.) Most technology devices include built-in accessibility features (e.g., screen reader, screen magnifier, reverse contrast, larger bold text, guided access, accessibility shortcuts, etc.) to support the use of such devices by people who have disabilities, including those who are visually impaired. These sorts of everyday devices can be used in combination with the specialized assistive technology used by students who are visually impaired allowing for an even greater degree of customization and access to information.

Legislative Directives Related to Assistive Technology

The following section may be helpful to school districts. Language is highlighted from pertinent legislation related to assistive technology and children with disabilities. This is not specific to children with visual impairments, but the principles apply and will be useful for decision-making entities.

Federal and state law protects the rights of students with disabilities and specifically addresses the responsibility for the IEP team to consider assistive technology. For example, as stated in IDEA, "the IEP team must ... consider whether the child needs assistive technology devices and services" [34 CFR 300.324(a)(2)(v)]. In addition, if the IEP team determines that the child needs assistive technology to receive FAPE, the child may take assistive technology home (34 CFR 300.105).

IDEA defines assistive technology device as “any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of a child with a disability” [34 CFR 300.5]. (This may include low vision aids, bold line paper, braille writers, screen readers, braille embossers, and communication devices for children with a visual impairment.)

An assistive technology *service* is defined by IDEA as "any service that directly assists a child with a disability in the selection, acquisition, or use of an assistive technology device" (300.6 regulation goes on to specify that the term includes the following::

- The evaluation of the needs of a child with a disability, including a functional evaluation of the child in the child's customary environment;
- Purchasing, leasing, or otherwise providing for the acquisition of assistive technology devices by children with disabilities;
- Selecting, designing, fitting, customizing, adapting, applying, maintaining, repairing, or replacing assistive technology devices;
- Coordinating and using other therapies, interventions, or services with assistive technology devices, such as those associated with existing education and rehabilitation plans and programs;
- Training or technical assistance for a child with a disability, or, if appropriate, that child’s family; and
- Training or technical assistance for professionals (including individuals providing education and rehabilitation services), employers, or other individuals who provide services to, employ, or are otherwise substantially involved in the major life functions of that child.

Principles of Assistive Technology for Students with Visual Impairments

The Texas School for the Blind and Visually Impaired has compiled Principles of Assistive Technology for Students with Visual Impairments.

General Principles

1. Assistive technology can only enhance basic skills; it cannot replace them. (Assistive technology should be used as part of the educational process and can be used to teach basic skills.)
2. Assistive technology for students with visual impairments is more than an educational tool; it is a fundamental work tool. It is equivalent to pencil and paper for nondisabled students.

3. Students use assistive technology to access and use standard tools, complete educational tasks, and participate on an equal basis with non-disabled peers in the regular electronic educational environment.
4. Use of assistive technology does not automatically make educational and commercial software/tools accessible or usable.
5. Appropriate technology at the appropriate time.

The student should be provided with the appropriate technology for their task requirements (commensurate with typical peers) and/or developmental skill levels. Investments in technology should allow for educational growth, but it is important that technology be appropriately complex and challenging in order to meet the needs of the student.

Assistive Technology Evaluation Principles

Determination of assistive technology is typically initiated by the TSVI. This must be guided by individuals who have comprehensive expertise in assistive technology specific to blindness and low vision needs. These individuals may collaborate with others on the educational team or assistive technology specialists to determine the specific needs of students with visual impairments.

"Assistive Technology evaluation is an extension of the Learning Media Assessment (LMA). You need basic (print and/or braille) reading and writing functioning found in the LMA, Functional Vision Evaluation, Low Vision Evaluation, etc. to determine and evaluate appropriate AT requirements.
To be effective, an assistive technology evaluation should be ongoing." (Texas School for the Blind and Visually Impaired, n.d.)

Student Guidelines

"1. Every student's assistive technology needs are unique. Student needs should be matched with necessary technology rather than matching available equipment to student needs.
2. Functional use of assistive technology may require a combination of large print, speech, or braille. A student may require redundant sensory feedback in addition to his or her primary learning media (e.g., low vision student using speech output or totally blind students using speech and braille in combination).

3. The goal is to maximize the functional print and/or braille reading, writing, and/or communication rate.
4. Reading paper materials (print or braille) may be different from reading electronically (using a computer monitor, closed-circuit television, speech output, audio tape, or refreshable braille).
5. Ergonomics is important for all students at all grades with all equipment and materials. This includes keyboard location, monitor placement, feet flat on floor, book placement, assistive technology location, etc.
6. Learning and using assistive technology is a developmental process. If a student's communicative or sensory functioning (e.g., hearing, vision, and/or tactual skills) change, a new technology evaluation is needed. Time and instruction are needed for learning new sensory, learning media, and assistive technology/communication skills." (Texas School for the Blind and Visually Impaired, n.d.)

A student with a visual impairment must have equal access to a reading and writing system which is equivalent to their typically developing peers.
A student with a visual impairment must have access to assistive technology to participate in all areas of the Expanded Core Curriculum and extracurricular activities.

Teacher Guidelines

"1. Teach needed technology skills before they are required. Thus, the student can then focus on regular classroom instruction rather than simultaneously learning the curriculum and the new assistive technology skills.
2. Technology training for teachers makes students better users and maximizes the impact of monies expended. Keep teacher skills up to date. Training includes allowing teachers to spend scheduled time with a manual and equipment to develop skills and lessons.
3. Teachers need access to a phone … for tech support calls.
4. Collaboration between vision/assistive technology teacher, computer teacher, and computer maintenance professionals helps ensure a functional/seamless assistive/regular technology environment." (Texas School for the Blind and Visually Impaired, n.d.)

Teach the student how to maintain and care for their assistive technology.
Teach to the hierarchy of skills necessary for mastery of the technology tool.

In order to access vendor tech support, a teacher may need a phone (long distance) and/or internet access near the assistive technology device if there is no cell phone availability.

Equipment

"1. Ensure assistive technology is compatible with existing equipment or newly installed/upgraded application software …

2. Technology changes as a student moves to different schools at different grades. Planning is essential to fit assistive technology into the next technological environment (hardware, software, operating system, network, etc.)." (Texas School for the Blind and Visually Impaired, n.d.)

Assistive Technology Definitions

Effective assistive technology solutions for individual students can cover a continuum of low to high assistive technology. The terms defined in this section are included to inform the reader of terminology that may not be familiar; therefore, the terms included here are not meant to limit what is considered to be assistive technology. As stated at the beginning of this section, student needs must always be considered in assistive technology decisions.

The following definitions are from the Texas School for the Blind and Visually Impaired: Principles of Assistive Technology for Students with Visual Impairments: https://www.tsbvi.edu/wp-content/uploads/assets/documents/irl/principles_at_students_vi.pdf

Adaptive Keyboard -- Offer a variety of ways to provide input into a computer through various options in size, layout (e.g., alphabetical order), and complexity.

Augmentative Communication Device -- Provide speech for people who are not able to communicate verbally. Device may talk, user indicates communication through the use of tactile symbols, auditory scanning, large print symbols, etc.

Braille Embosser -- A braille printer that embosses computer-generated text as braille on paper.

Braille Translation Software -- Translate text and formatting into appropriate braille characters and formatting.

Braille Writing Equipment -- Used for creation of paper braille materials. Can be manual or electronic devices.

Portable Notetaker -- Small portable units that employ either a braille or standard keyboard to allow the user to enter information. Text is stored in files that can be read

and edited using the build-in speech synthesizer or braille display. File may be sent to a printer or braille embosser or transferred to a computer.

Refreshable Braille Display -- Provide tactile output of the information presented on the computer screen. Unlike conventional braille, which is permanently embossed onto paper, refreshable braille displays are mechanical in nature and lift small, rounded plastic pins as needed to form braille characters. The displays contain 20, 40, or 80 braille cells. After the line is read, the user can "refresh" the display to read the next line.

Scanner -- A device that converts an image from a printed page to a computer file. Optical-character-recognition software makes the resulting computer file capable of being edited.

Screen Magnification -- Software that focuses on a single portion (1/4, 1/9, 1/16, etc.) of the screen and enlarges to fill the screen.

Screen Reader -- Software program that works in conjunction with a speech synthesizer to provide verbalization of everything on the screen including menus, text, and punctuation.

Video Magnifier -- Magnify a printed image through the use of a special television camera with a zoom lens and displays the image on a monitor.

The image can be magnified, and the contrast can be increased, making print and graphics easier to see. Some devices may have the capability to read along and highlight print. These devices may be desktop or portable/handheld. This type of system should be evaluated as the needs of the student advances through their educational career**.**

I. Books and Educational Materials

A student with a visual impairment must have books and supplemental materials in a format (auditory, tactile, large print, braille) that meets their needs so that they have access to FAPE. Ultimately, it is the responsibility of the student's district to ensure the provision of equal access to educational materials, including technology, to access the curriculum. These materials must be provided to a student with a visual impairment at the same time they are provided to their typical peers. Books and educational instructional materials for a student with a visual impairment are unique, and materials are not always readily available in the format that the student can access. Adapted books and materials can be acquired through a variety of resources, including those listed below.

Illinois Instructional Materials Center

The Illinois Instructional Materials Center (IIMC) is a resource center for students with visual impairments. It is funded by ISBE as well as with federal Quota Program Funds; however, the district is responsible even if such funds are unavailable. Items can only be obtained for a student who has an active IEP or Individualized Family Service Plan (IFSP) addressing a visual impairment by a licensed TSVI, an orientation and mobility specialist, and administrators. These professionals are identified by the IIMC through a designated process requiring IIMC approved administrative signature. Items are on loan at no cost to the school district for as long as the student benefits from their use and has not accepted a high school diploma or certificate of completion.

These resources are intended for students ages birth through 22 who have a documented visual impairment as defined in **Section A** of these guidelines. The materials may include, but are not limited to, braille books, large print books, tactile aids, software, equipment, consumables, etc. The timeline for the acquisition of these materials necessitates planning ahead. Materials for the fall should be identified and ordered by early spring.

Materials available through the IIMC are funded through a combination of monies allocated by state and federal funding. State funds are specified for student use through ISBE while Quota Funds originate through federal legislation. The nature of funding from ISBE to the IIMC dictates that materials are only available to a student with a visual impairment who has an active IEP or IFSP. Additionally, federal Quota Funds through the IIMC are only available to a student who meets the stated criteria.

See more information on eligibility based on visual diagnosis. This precludes access to these materials by students who receive services under a 504 Plan unless they meet the visual criteria. See additional information from the Chicago Lighthouse.

American Printing House for the Blind

American Printing House for the Blind (APH) manufactures textbooks and other educational materials for students who are visually impaired. Textbooks and other materials may be purchased through IIMC's federal Quota Funds, when available, or purchased directly by the

district or consumers. APH produces books in several accessible formats, including braille, audio, large print, and digital file. APH develops and manufactures hundreds of products, tools, and supplies that support students and adults who are visually impaired. Examples are braille instructional programs, science teaching kits, talking computer software, low vision assessment kits, early childhood development materials, braille writing devices, digital recording equipment, and resources on topics related to blindness. There are products available through APH.

Learning Ally

Learning Ally services are limited to individuals with documented learning disabilities, vision impairment, or physical disabilities that impede the ability to process standard print. This organization offers a large collection of narrated audio textbooks and literature as well as solutions; support; and community for parents, teachers, and students. The student must meet Learning Ally's eligibility requirements. See eligibility criteria. Learning Ally has information regarding eligibility and subscriptions as well.

Bookshare

Bookshare is an online library for people with documented print disabilities. Membership is free for U.S. students and schools that qualify. The individual or the organization servicing the student will be asked to provide Bookshare with proof of disability. Individuals can sign up for membership and access the library on their own. Organizations that serve individuals with print disabilities can sign up and provide access to their students. A Bookshare membership offers unlimited access to a variety of books, textbooks, newspapers, and magazines. Information regarding individual memberships, organizational memberships, and qualifications may be found on the Bookshare website.

The National Library Service for the Blind and Print Disabled

The National Library Service (NLS) for the Blind and Print Disabled administers a free library program of braille and audio materials circulated to registered, eligible borrowers in the United States through a national network of cooperating libraries. The books and magazines are also available through the NLS Braille and Audio Reading Download online service. Other materials include music scores in braille and large print, reference publications, and other items.

National Instructional Materials Accessibility Center

National Instructional Materials Accessibility Center (NIMAC) was created by IDEA to ensure timely access to textbooks for students with print impairments in Grades K-12. It is a federally funded, online repository that makes National Instructional Materials Accessibility Standard

(NIMAS) files available in specialized formats. NIMAS files can be converted to formats like braille, digital text, etc. School districts and teachers access these files when using the IIMC, Bookshare, or Learning Ally. "[S]tudents who receive services under Section 504 are not eligible to receive accessible materials produced from NIMAS files obtained through the NIMAC unless they are otherwise eligible to receive these materials under the IDEA," according to the U.S. Department of Education Office of Special Education and Rehabilitative Services. See information for the Illinois process and contacts for NIMAS/NIMAC.

Online Textbooks

Online textbooks provide ready access to a student with a visual impairment and may be used in place of or in conjunction with large print or braille textbooks. A student may choose to use screen reading software to access the online text. In addition, it is important to address the access to graphics, maps, etc. when using online textbooks. Visual graphics provide valuable information that may not be accessible to a student with a visual impairment and will need to be adapted. These accessible materials require an adequate amount of time to acquire and/or prepare. Sometimes these graphics can be obtained through IIMC. The content must be made available by the TSVI if it is not readily accessible by the student.

Teacher-Adapted Materials

Materials not available through commercial sources like those previously listed may need to be modified or created for a student with a visual impairment. Materials must be provided to the TSVI in advance with enough time to allow for the necessary modifications to be made for it to be accessible. This will require close collaboration between the classroom teacher and the TSVI.

J. Cortical/Cerebral Visual Impairments

The area of neurological visual impairment is a relatively new area and our understanding in both the medical and education fields is constantly developing. Neurological visual impairment is a brain-based visual impairment often referred to by a variety of terms, including cortical, neurological, cerebral, or traumatic brain injury. We will use the commonly known term "cortical/cerebral visual impairment (CVI)" throughout this section. This chapter is representative of the information that is currently available related to CVI but will need continual review. This diagnosis is evolving along with our understanding of implications for educational services to best meet the needs of the student.

This is a condition in which the brain does not process visual information appropriately. This can be due to trauma or malformation of brain structures. CVI qualifies as a diagnosed visual impairment. As a result, a functional vision assessment and learning media assessment may be completed, and eligibility must be determined based on adverse effect and educational need. CVI typically falls within the purview of services provided by a TSVI.

It is important to ensure that services are in place to adequately address the unique needs of the student with CVI who may initially appear blind. A student's visual functioning may improve through intervention, unlike students with an ocular impairment. CVI students often benefit greatly from environmental and educational adaptations. All services, including those from other professionals, must be adapted to meet the needs of their unique visual processing which are indicative of a CVI. It is essential that a TSVI is involved in team decisions and planning related to how services are provided by the educational staff addressing student needs.

Role of the IEP Team

The TSVI typically begins with a review of the medical history relevant to CVI (e.g., ophthalmology, neurology). When appropriate, a TSVI completes a functional visual assessment and learning media assessment for the purposes of learning how the student uses their vision and what environmental factors and supports are most helpful for the student. Unlike other visual impairments, however, habilitation is often possible when children have CVI; therefore, the FVA/LMA must also gather data related to visual function that can be used to plan and monitor progress related to future visual function.

The visual abilities of students with CVI vary greatly from student to student. An FVA/LMA should include those components typical for all students with a visual impairment as appropriate. (See **Section B**.) In addition, tools specifically designed for those with CVI, (e.g., Roman-Lantzy CVI Range, Children's Visual Test for 3-6 Year Olds) should be incorporated. A comprehensive FVA/LMA will provide in-depth information that can inform services as provided by the entire educational team. The results can then be used to determine classroom modifications, guide ongoing programming related to visual needs, and show progress in visual efficiency over time. See references at the end of this document for further information.

Role of the Educational Team

It is critical for the educational staff to be in-serviced on CVI and its impact on functioning in all aspects of life. This training needs to be done early in the student's classroom placement and continually throughout the year. If a student's educational setting changes, it is imperative that

this training is repeated for all individuals working with the student. This teaming is crucial for the educational success of a student with CVI.

The student's engagement and success are highly dependent on the team providing embedded strategies throughout the school day and across all environments. (See "Embedded Strategies Chart for CVI Students" at the end of this section.) Such strategies provide the student with access to the curriculum as is required by mandates within IDEA to meet FAPE. The TSVI needs to be part of the team that determines the implementation of a new strategy that is visual in nature (e.g., the Picture Exchange Communication System, assistive technology). Visual needs must be considered, and adaptations must also be made to meet the student's needs. Functional use of vision can be difficult for children with CVI; therefore, it is appropriate and expected that, at times, the team will need to utilize other senses to both support the use of vision and also allow for access to information without vision. Decisions about methods for providing information to a student throughout the various activities of the day should be considered purposefully and thoughtfully by the educational team.

Determining Appropriate Amounts and Levels of Service

Several factors must be considered when determining the amount of time that a TSVI should plan to work with a student with CVI and the supporting classroom personnel/educational team.

Direct service allows the TSVI to complete the following:

- Use diagnostic teaching to continually assess and refine strategies and environmental supports for students.
- Model techniques and strategies for staff, peers, and/or parents.
- Address visual developmental needs of children with CVI.

Consultative services provide coaching for staff members who integrate strategies into the student's daily routines, build a rapport with the student, and are trained to take data on student visual behavior.

It should be noted that young students and students that acquire CVI through injury or illness often benefit from intensive services. In these cases, the intervention strategies may need to be applied at a higher level of intervention throughout the day. Diagnostic assessment will be used to determine when ongoing intensity and/or need for training in compensatory strategies.

Considerations to Help Make the Education Environment Successful

While the educational team works to help students achieve goals as set forth in the IEP document, the TSVI must work with the team to discover necessary adaptations to help the

student engage with these efforts. All students are different, but some basic strategies that are often important to consider when working with students with CVI might include the following:

- Vision often functions as a secondary sense. This will impact whether a student focuses on objects when other senses are engaged.
- Most people use vision as their primary source for taking in information. For students with CVI, auditory and tactile may be useful modes for sensory input; however, for some students, if auditory stimulation occurs simultaneously with visual input (e.g., alongside music or talking), the student's performance may be compromised. Signs of this may be closing their eyes, shutting down completely, or attending only to the auditory stimuli.
- Motor performance paired with visual attention can be extremely difficult for some students with CVI. For these children, it becomes crucial to reduce motor demands to increase visual attentiveness, and tasks like looking and reaching may need to be taught in isolation. Head, trunk, or limb support may improve a student's visual performance; however, for other children, fine motor manipulation of visually presented objects can prove helpful. The uses of gross and fine motor should, therefore, be considered on an individual basis.
- CVI affects the ability to understand visual information; thus, students with CVI work best with repetition of the same instructional strategies, materials, and colors. Introducing new items often increases anxiety and decreases performance.
- CVI affects a student's ability to make sense of their visual environment. For that reason, they have difficulty interpreting complex visual stimuli, such as multi-colored objects, busy backgrounds, and low contrast. Those working with students should consider the environment and simplify visual information to enhance processing; presenting single colored objects on a contrasting solid background will drastically improve performance.
- Students with CVI often require more time to respond to a visual stimulus. This is often referred to as "visual latency." Those working with students who have CVI should anticipate this need and provide calm and quiet intervals to give the students time to respond.

This is only a sampling of some adaptations that a teacher for the visually impaired may suggest. It is extremely important that needed accommodations are included across the student's curriculum. It is beneficial to use a team approach when planning for the students to ensure this happens.

Embedded strategies chart for CVI students:

Objective	Switch Talk	Calendar	Mobile Prone/ iPad	Free Time	Adapted Swing	Sensory Room	Get Ready for Home
Color	Use red switch on black background		iBabySee or Ruby app	Position fully supported gaze at lightbox		Single red or silver object	Cubbie lined with red tape
Movement				Add movement to activity to engage	Swing to and from 8" circle	Add movement to activity to engage	
Visual Latency	Wait time!					Wait time!	
Visual fields	Place switch for left peripheral viewing				Alternate standing to left and right of student		
Complexity	Block out visual clutter		No sound on apps; choose app with simple graphics	No sound		One object presented in front of black background	
Light gaze			Face away from lights/ windows	Turn overhead lights off			Turn tap light on in cubbie
Distance Viewing		Tactile Objects					
Visual Reflex			Touch red rope lights to bridge of nose				
Visual Novelty			Use familiar apps	Use familiar materials		Preferred items	

American Printing House

K. DeafBlind

ISBE guidelines state that if a student who has multiple disabilities is also diagnosed as visually impaired, deaf or hearing impaired, and/or DeafBlind, the sensory impairment should be included as an eligibility category on the IEP. The secondary (or beyond) impairment should be separate from the multiple disability label.

A student with DeafBlindness is entitled to the same rights and the same opportunities as all other students. Information in other sections of this guide may be applicable for students with DeafBlindness even if not discussed in this section. Modifications should be made for access due to student disability and the needs generated by that disability.

Effective teaming, which would include the family, is critical to both assessment and programming. Ideally, the TSVI, the teacher of the deaf and hard of hearing (TDHH) and the teacher of the DeafBlind or DeafBlind specialist (Illinois DeafBlind Project) will work collaboratively to support the student, family, and educational team. Administrators will provide the necessary support to ensure that this communication, collaboration, and training will occur.

Together, the TSVI and TDHH will assess the impact of the visual impairment on visual language systems (American Sign Language [ASL], cued speech, speech reading). They will also need to determine if and when tactile forms of manual communication, such as tracking and tactile sign, should be used (during dark assemblies, after a winter evening basketball game) and develop a plan to transition to more tactile modes of communication if the student's vision changes over time. The TSVI may play various roles for a student with DeafBlindness. The TSVI will have information and techniques to offer fellow team members, especially in the role of consultant and trainer to other services providers (e.g., teachers, therapists, instructional aides, Deaf-Blind interveners). The TSVI can provide direct instruction to the student, conduct appropriate vision assessments, and help other team members understand how a student's visual impairment can impact language and academic access, concept development, and social awareness. The TSVI can also give suggestions for adaptation of materials and use of specialized equipment, and train other staff in order to support the student in the use of their vision throughout the school day.

Assessment

Comprehensive and appropriate assessment plays a critical role in the determination of educational programming for students with DeafBlindness. All current and pertinent

information from relevant sources should be reviewed prior to the assessment. Such sources can include parents, teachers, therapists, doctors, audiologists, etc. Observation of the student prior to assessment is also important to determine appropriate tools, approaches, relevant tasks, and environments. The use of sign language interpreters, as appropriate, greatly facilitates the information gathered by optometrists and/or ophthalmologists. Input from a TSVI, with help from the educational team, may be of great assistance in planning and completing the clinical assessment, especially if the student with DeafBlindness has additional disabilities.

Assessments, such as a functional vision assessment or learning media assessment, should be considered for a student with DeafBlindness and residual vision. FVA/LMA are addressed in **Section B** of this document. In addition, the considerations addressed in **Section F** will be relevant if the student has additional disabilities.

The assessment approach will necessarily be eclectic, with choices made from appropriate procedures, activities, and materials from a variety of relevant formal and informal techniques and instruments, as well as from the student's daily repertoire of tasks and environments. Educational goals and strategies will be determined after assessment is completed. Assessment should be an ongoing dynamic process to ensure that the student's progress, changing needs, environmental variables, etc. will lead to appropriate modifications in their educational program aligned with best practices in progress monitoring.

There is a low incidence of DeafBlindness, so tools are not validated on this population. In some instances, few or no standardized options will provide valid, relevant information on a student. The role of the TSVI often will be to consult with other professionals who conduct assessments to support modifications of assessment, when possible, so that testing provides useful information for educational planning and decision-making.

Programming Priorities

A student with DeafBlindness can be educated in a variety of settings. Whatever the setting, attention must be given to ensuring the student has access to curriculum, environment, peers, and social experiences. This can be accomplished in a number of ways and often varies depending on the setting.

It is important for the team to consider strategies that will enable successful access. The common characteristic among all persons with DeafBlindness is that they have difficulty gathering information. No matter their cognitive, physical, and sensory functioning level, a person with DeafBlindness does not benefit from incidental learning. This makes concept

development -- building the foundations for language (both auditory and visual) and understanding social cues -- extremely challenging.

It is essential that all teachers, therapists, parents, and service providers work together to understand and meet the many and varied needs of the student with DeafBlindness. Ample time for communication among team members, including the TSVI, is critical and must be provided. Programming must ensure that all areas of the student's needs are being addressed. These programming priorities include the following:

- **DeafBlind Intervention** – A TSVI may be responsible for directing and supporting a student's DeafBlind intervener. The definition for intervener services, according to the National Center on Deaf-Blindness, notes that "Interveners … provide access to information and communication and facilitate the development of social and emotional well-being for children who are DeafBlind. In education environments, intervener services are provided by an individual, typically a paraeducator, who has received specialized training in DeafBlindness and the process of intervention. An intervener provides consistent one-to-one support to a student who is DeafBlind (age 3 through 21) throughout the instructional day."

  Well-trained interveners become the eyes and ears for a student and do not promote dependence. Instead, they will do the following:
  - Provide consistent access to instruction and environmental information that is usually gained by typical students through vision and hearing, sensory resources that are unavailable or incomplete to an individual who is DeafBlind
  - Provide access to or assist in the development and use of receptive and expressive communication skills.
  - Facilitate the development and maintenance of trusting, interactive relationships that promote social and emotional well-being.
  - Provide support to help a student form relationships with others and increase social connections and participation in activities (National Center on Deaf-Blindness). **Section G** of this document has information about the training to prepare DeafBlind intervener candidates for approval.
- **Communication/Language Systems** – Students with DeafBlindness use a wide variety of communication/language methods and tools and may be anywhere along the communication spectrum from pre-intentional to full language users. The student's placement may, but is not required to, align to their communication or language

system. For example, a student using ASL does not necessarily need to be placed in a self-contained program for students who are deaf and hard of hearing.

- **Collaborative Teaching** – Opportunities for specialists to work together are likely, especially if a student with DeafBlindness has multiple professionals on their team. Orientation and mobility specialists need the facilitation of any assigned interpreters or interveners and need the information from teachers of the deaf/hard of hearing. TSVIs will also need the assistance of any assigned interpreters and interveners (Clyne, 2015; Kennedy, 2015). When TSVIs provide and demonstrate the skills within the classroom (rather than using a pull-out model), they can collaborate with other staff. In addition, when the student receives educational vision services within the classroom, the instructional strategies can more easily be replicated in all aspects of the student's day.
- **Orientation and Mobility** – If the student uses an interpreter, lessons must often be paced so that communication, demonstration, instruction, and movement occur sequentially rather than simultaneously. This is especially true for students who use tactile sign or watch sign at distance (due to tunnel vision).
- **Social Interaction Skills** – Students with DeafBlindness often miss social cues. Direct instruction in this area is crucial (Miles & Riggio, 1999).
- **Transition** – A student with deaf-blindness requires a highly planned and structured transition to adulthood, whether the goals include volunteering, competitive employment, vocational training, or college. Fifth-year programs, such as those available at the Illinois School for the Visually Impaired and the Illinois School for the Deaf, are often appropriate for students with DeafBlindness who require direct teaching of daily living, transportation, and social skills needed in university/work environments. National programs like Helen Keller National Center may be considered as a summer program prior to or after graduation. As part of a transition plan, schools might consider informing families and students of the after-graduation services available at Illinois Center for Rehabilitation and Education-Wood through the Illinois Department of Human Services.

Strategies for Programming Priorities

- **Multisensory Approach** – Many students with DeafBlindness benefit from a multisensory approach to instruction. Providing information through more than one sensory channel – either simultaneously or in a deliberate sequence – can help to fill in the gaps left by inadequate visual and auditory information. The learning media assessment (**Section B**) will be helpful in determining whether vision, hearing, or touch may provide the most information for a student; however, smell, taste, proprioception,

and vestibular inputs also offer valuable information for the student with DeafBlindness.

- **Low Vision Accommodations** -- It is critical to help a student with low vision maximize their visual functioning through various means. This may include the use of varied adaptive aids and equipment, placement of materials, and positioning if the student has additional physical needs. Of special concern is the impact of both acuity and field loss on the reception of visual sign language. The TSVI is instrumental in helping teachers of the deaf/hard of hearing, interpreters, interveners, and others modify the presentation of sign language so that the student with DeafBlindness can perceive all of the signs and additional information that may be delivered via the face and body during ASL or speech reading. For more information, you can download Assessment of Deafblind Access to Manual Language Systems.
- **Auditory Skills** – Students with DeafBlindness who use hearing aids or cochlear implants may undergo a period of aural habilitation. The TSVI may be needed to help modify the visual components of the standard listening curricula, determine visual or tactile landmarks that would be relevant when identifying or recognizing environmental sounds and cues (especially as they relate to mobility and safety), and guide other team members toward consideration of other sensory factors (tactile) that might impact the student's synthesis of auditory information in various environments. If the student has difficulty understanding electronic speech, the TSVI can help the team consider other tools that use natural speech or make a transition from listening to speech to receptive braille on a refreshable braille device.
- **Tactile Skills** – The TSVI is a critical team member to provide instruction in effective skills of systematic searching; the ability to tactually identify objects, locations, and people (as appropriate); and to use objects functionally. In addition, the IEP process must include a discussion with respect to the appropriateness of braille instruction. If the student's vision and/or hearing changes or fluctuates, decisions must be made regarding transitions from listening and print to sign, tactile sign, and/or braille.
- **Technology Options** -- The options to support the student should also be explored with the team. The TSVI will have a valuable perspective to share with the AT team, especially in regard to visual and tactile components of equipment being considered. In addition, schools should inform families of the Federal Communications Commission's National DeafBlind Equipment Distribution Program (also called ICanConnect). This provides equipment needed to make telecommunications, advanced communications, and the internet accessible to Americans with DeafBlindness who meet income requirements. Installation; training; and other technical support, including individual

assessments of each consumer's specific accessibility needs, are also available. Ongoing service fees are NOT covered.

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https://www.ilga.gov/commission/jcar/admincode/023/023000250G05600R.html

Illinois Department of Human Services Division of Rehabilitation Service -- Bureau of Blind Services
https://www.dhs.state.il.us/page.aspx?item=32305

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M. Resources

General Resources

American Foundation for the Blind

American Printing House for the Blind

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FamilyConnect

Hadley School for the Blind

Illinois Department of Human Services Bureau of Early Intervention

National Library Service (NLS) for the Blind and Print Disabled

Texas School for the Blind and Visually Impaired

Assistive Technology Resources

American Printing House for the Blind - Tech

AppleVis - Dedicated to Technology for the Blind

Illinois State Board of Education: Assistive Technology

Texas School for the Blind and Visually Impaired Assistive Technology

Perkins School for the Blind

SET-BC – British Columbia Advisory Group on Special Education Technology

TechVision

Educational Material Resources

APH Louis Material Search

Bookshare

Chicago Lighthouse for the Blind Illinois Instructional Materials Center

Eligibility for Access to Quota Funds A

Family Connects Accommodations and Modifications

Learning Ally Eligibility

National Instructional Materials Access Center (NIMAC)

National Library Service for the Blind and Print Disabled, Library of Congress

Cortical Visual Impairment

Little Bear Sees - Parent Education and Resources for Cortical Visual Impairment

Paths to Literacy – Cortical Visual Impairment and Adaptations for Literacy

Perkins School for the Blind CVI

Pinterest Pages for CVI

Strategy to See – Strategies for Students with Cortical Visual Impairment

Texas School for the Blind and the Visually Impaired - Introduction to Cortical/Cerebral Visual Impairment

Texas School for the Blind and the Visually Impaired - Cortical Visual Impairment Pediatric Visual Diagnosis Fact Sheet

Texas School for the Blind and Visually Impaired – Cortical/Cerebral Visual Impairment Information

Deaf-Blind

Assessment of Deafblind Access to Manual Language Systems

Federal Communications Commission - National Deaf-Blind Equipment Distribution Program

Important Organizations

American Foundation for the Blind is a national nonprofit that provides learning courses and resources.
Associated Services for the Blind and Visually Impaired offers rehabilitation and adaptive training.
Chicago Lighthouse provides services that include a low-vision clinic, independent living resources, and employment services.

Helen Keller Services for the Blind provides college preparatory courses, training, and employment services.
National Association of Blind Students connects students with leadership resources in their state.

Notable Service Agencies

Hadley School for the Blind
700 Elm Street
Winnetka, IL 60093
800-323-4238
info@hadley.edu, www.hadley-school.org

ICRE-Wood
1151 South Wood Street
Chicago, IL 60612
312-633-3520 (V), 312-633-3828 (TTY)

Illinois Department of Human Services (IDHS)
Office Locator
https://www.dhs.state.il.us/page.aspx?module=12&officetype=7

Illinois School for the Visually Impaired (ISVI)
658 East State Street
Jacksonville, IL 62650
217-479-4400

Philip J. Rock Center and School
818 DuPage Blvd.
Glen Ellyn, IL 60137
630-790-2474 (V)