Blind Introductory Curriculum

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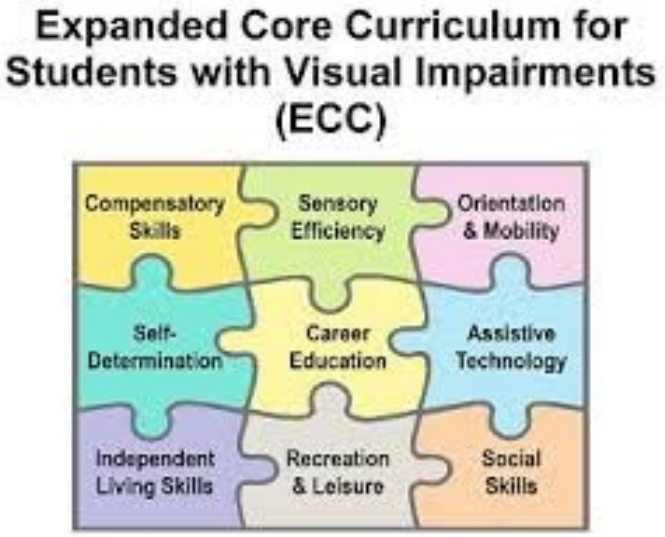
Introduction:

The below contents represent a skeleton model of a curriculum that could be further refined into a core curriculum for the train-the-trainers model in order to teach young students basic skills that will allow them to function fully in society. The curriculum is divided into modules ordered by importance. The first module is the most basic and most critical in the learning process. The idea is that a student will progress through the excess of modules until the teacher runs out of time. Contained in the document below are the modules, each detailing the core ideas that will be covered, example exercises for the students, and additional resources that can be further utilized to round out the curriculum. The goal of the work is to provide a framework and consolidate other research that has been done by a variety of other institutions that work with the blind. The majority of the work is modeled after the Expanded Core Curriculum, which appears to be the industry standard in teaching non-academic skills to blind children at an early age. I encourage both teachers and administrators to look into the key resources and perhaps build out a more clear curriculum. However, each student will have different needs and abilities which must be addressed and considered before tailoring the curriculum to their individual needs. Therefore, the modularity of the curriculum should allow the flexibility for teachers to tailor the education and maximize the time spent with these students.



Module 1: Sensory Efficiency Skills (~2-3 weeks)

Students with visual impairments need to use all available senses to learn about and understand the world around them. These skills allow students to effectively access the curriculum, learn new concepts, and communicate with others. For example, using listening skills to identify sounds and smells that indicate activities occurring nearby, using a low vision aid to examine small objects, or such as a picture in a book, or objects at a distance, such as a sign.\

1. Core Competencies
    a. External Senses:
        i. Distance (Vision, Hearing, Smell)
        ii. Contact (Taste, Touch)
    b. Internal Senses:
        i. Proprioception (body position)
        ii. Vestibular (balance and movement)
        iii. Interoception (internal body sensations)
    c. Self Determination
        i. Independence, self-advocacy, self-awareness, why am I different?, goals and act
        ii. Cleveland, J. (2007). Empowered: An activity based self-determination curriculum for students with visual impairments. Austin, TX: Texas School for the Blind and Visually Impaired.
    d. Permits Access to other areas of the curriculum
        i. Texas School for the Blind Curriculum: https://www.tsbvi.edu/self-determination-units-lesson-plans
2. Example Activities
    a. Basic Communication
    b. Meet and Greet with the teacher
        i. Note many children may be scared or unaccustomed to strangers, teachers will have to be gentle but firm in their approach and introductions
    c. Introductions to touch and movement through guided walking and hand placement
    d. Beginning conversations about the program and why it is important to begin learning these skills
3. Key Resources
    a. Fingerwalks
    b. American Printing House for the Blind (2008). Envision I: Monocular trial kit. Louisville, KY: APH [Resource Kit]
    c. American Printing House for the Blind (2008). Envision II: Magnifier trial kit. Louisville, KY: APH [Resource Kit]
    d. Barclay, L.A. (Ed.) (2012). Learning to listen, listening to learn: Teaching listening skills to students with visual impairments. New York, NY: AFB Press.
    e. Cleveland, J. (2007). Empowered: An activity based self-determination curriculum for students with visual impairments. Austin, TX: Texas School for the Blind and Visually Impaired.

Module 2: Orientation and Mobility (~1 month)

Orientation and mobility is the ability to navigate one's environment safely and efficiently. Orientation and mobility ("O&M" for short) skills involve knowing where one is in relation to other objects and people in the environment (orientation) and knowing how to navigate to the desired destination using mobility skills and devices (mobility).

1. Key competencies:
    a. Developing locomotor skills:
        i. https://www.teachingvisuallyimpaired.com/uploads/1/4/1/2/14122361/motor_activities_to_encourage_braille_readiness.pdf
    b. Movement through Space
        i. Sighted Guide, Trailing, Pre Cane/Cane Skills
        Independent Travel in familiar environments
    c. Navigating their environment
        i. Understanding cities vs rural, crossing streets, personal safety
    d. Protective Techniques
    e. Retrieval of lost or dropped items
    f. Following directions/travel skills
    g. Body Image
2. Key Activities
    a. Exercising at home
    b. Walking around the house
    c. Showing how to recognize locations in the house
    d. Showing how to lead (parents) and follow (student) around in different areas
    e. How to find items on the floor
    f. Understanding the space
3. Key Resources
    a. Little Lighthouse: https://www.lvib.org/programs/little-lighthouse/
    b. The Art and Science of Teaching Orientation and Mobility to Persons with Visual Impairment by William Henry Jacobson
    c. Elementary Concepts for Students with Visual Impairments
    d. Fazzi, D. L. & Petersmeyer, B. A. (2001). Imagining the possibilities: Creative approaches to orientation and mobility instruction for persons who are visually impaired. New York, NY: American Foundation for the Blind.
    e. Jacobson, W. H. (2013). The art and science of teaching orientation and mobility to persons with visual impairments (2nd ed.). New York, NY: AFB Press.
    f. Pogrund, R., Sewell, D., Anderson, H., et al. (2012). Teaching Age-Appropriate Skills: An Orientation and Mobility curriculum for students with visual impairments (3rd ed.). Austin, TX: Texas School for the Blind and Visually Impaired.
    g. British Columbia Ministry of Education. Framework for independent Travel: A resource for orientation and mobility instruction. Retrieved from https://www2.gov.bc.ca/assets/gov/education/kindergarten-to-grade-12/teach/teaching-tools/inclusive/fit.pdf

Module 3: Social Interaction (~1 month)

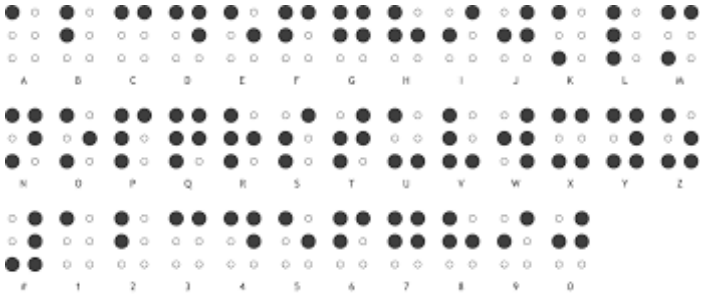
So much of communication is visual - students with visual impairments may be less able to observe the social behavior of others. These students require that the social world be made accessible through the direct instruction of the knowledge and skills for social interaction and belonging (Sacks, 2014).
Research has shown that adolescents with visual impairments are more likely to engage in passive (e.g., online communication) as opposed to active forms of social engagement, and that degree of vision loss is not predictive of the degree of social isolation experienced by a student (Gold, Shaw, & Wolffe, 2010).

1. Core Competencies
    a. Communication
        i. Facing who is speaking
        ii. Communicating Wants and Needs
        iii. Learning to understand nonverbal communication
        iv. Interaction with family and peers
        v. Recognition and expression of emotions
    b. Social Norms
        i. Basic courtesy and introduction to social norms
            1. Sharing, complementing, non-literal language
        ii. Listening Skills
        iii. India Specific Norms
            1. Personal space, cleanliness, religious norms, etc.
2. Example Activities
    a. Speaking with parents and the teacher
    b. Explaining wants and needs
    c. Communication of goals and expectations
    d. Understanding you have a say in what is going on
3. Key Resources
    a. Crow, N. & Herlich, S. (2012). Getting to know you: A social skills/ability awareness curriculum. Louisville, KY: American Printing House for the Blind.
    b. Mosley, J. & Sonnet, H. (2003). 101 Games for Social Skills. LDA Publishers
    c. APH Family Connect (2019). Social interaction skills and the Expanded Core Curriculum. Retrieved from https://www.familyconnect.org/info/education/expanded-core-curriculum/social-interaction-skills/123
    d. Miller, T. (n.d.). Social Skills for Children and Youth with Visual Impairments https://www.perkinselearning.org/videos/webcast/social-skills-children-and-youth-visual-impairments
    e. Sacks, S. Z. (n.d.). Developing Social Skills in Children Who Are Blind or Visually Impaired https://www.perkinselearning.org/videos/webcast/developing-social-skills-children-who-are-blind-or-visually-impaired

Module 4: Compensatory Access/functional skills (~2 months)

Compensatory skills allow students with visual impairments to access and communicate information about the world. These skills encompass the following areas such as concept development, spatial awareness, listening skills, study and organizational skills, and use of specialized materials and equipment (Guerette, 2017). Compensatory skills provide students with visual impairments with the skills they need to effectively access the core curriculum and collaborate with their peers.

1. Core Competencies
    a. Access Blind Technology
        i. Use of an abacus
        ii. Introduction to Braille, Nemeth Code, Keyboards,
        iii. Understanding of Audiobooks/Internet Access
    b. Access the Core Curriculum
        i. Problem Solving
        ii. Awareness of different education curriculum (art, history, math, etc.)
        iii. Organization, Concept Development, Spatial Understanding
        iv. https://familyconnect.org/education/expanded-core-curriculum/compensatory-skills/
    c. Unique strategies for the blind
        i. Placing tactile markers, using a magnifier, organizational skills
        ii. Establishing routines, working with parents
2. Example Activities
    a. Introduction to a smartphone and computer
    b. Introduction to tactile markers
    c. Organization of one's environment
    d. Introduction to braille as a concept and language
    e. Utilizing other senses
3. Key Resources
    a. National Association for the Blind India
        i. Distribution of free braille kits
    b. PreBraille Learning: https://www.pathstoliteracy.org/pre-braille
    c. Nemeth: https://accessibility.pearson.com/resources/nemeth-curriculum/index.php



Optional Module 5: Assistive Technology (~2 months)

For students with visual impairments to participate fully and independently, they require access to current and accessible technology. Access technology has improved greatly in the field of vision that consumer technology like smartphones, laptops and tablets come with built-in accessible features. Dedicated access devices like braille notetakers go even further in supporting the specific needs for access or learning material formats.

1. Core Competencies
    a. Computing and Keyboarding
    b. Screen Reader
    c. Voice output technology
    d. Managing/updating equipment
    e. Finding information online
    f. Using applications and phones if allowed
2. Example Activities
    a. Basics of keyboarding
    b. Basics of accessibility features on technology
    c. Collaboration and finding information online
3. Key Resources
    a. Presley, I., & D'Andrea, F. M. (2008). Assistive technology for students who are blind or visually impaired: A guide to assessment. New York, NY: AFB Press.
    b. https://docs.google.com/document/d/1L3PJ_xrdVOOciam-nvR8Qusti_d5UqLE/edit
    c. iPad: https://www.perkinselearning.org/technology/curriculum/introduction-ipad-accessibility
    d. JAWS: http://www.geocities.ws/jawsnotes/powerpoint.htm
    e. NVDA: http://www.afb.org/info/living-with-vision-loss/using-technology/assistive-technology-videos/learn-nvda/1234
    f. Braille Apex: http://support.humanware.com/en-international/support/braillenote_apex/tutorials/apex_bite_size_tutorials_for_education

Optional Module 6: Independent Living Skills (~2 months)

Research has shown that students with visual impairments may not be able to perform daily living tasks at the same level of proficiency as their same-aged peers without visual impairment (Lewis & Iselin, 2002). Unlike their peers, students with visual impairments may not be able to easily observe the daily living tasks being performed by others (e.g., parents, siblings, friends).

As a result, there is a need to provide direct, systematic instruction in independent living skills not only so that students can understand the skill in question, but also understand the adaptive tools and strategies they can use to master that skill – among other important outcomes:

1. Core Competencies
    a. Self Care
        i. Dressing/Clothing Management
        ii. Personal Hygiene
        iii. Eating/Food Management and Preparation
    b. Home Management
        i. Labeling and home maintenance
            1. Financial Management and understanding
2. Example Activities
    a. Organizing one's space
    b. Learning about showering and personal hygiene
    c. Learning how to organize a closet and pick out clothes to wear
    d. Basics of food preparation and safety around the house
3. Key Resources
    a. Bender, D. (2018). Clothing Management Assessment Manual: Functional Skills Assessment. Louisville, KY: American Printing House for the Blind
    b. Bull, K., & Shannon, S. (2018). Everyday life: A guidebook for teaching independent living skills. Watertown, MA: Perkins School for the Blind.
    c. Bull, K., Lind-Sinarian, S., & Martin, E. (2008). Clean to the touch: Housekeeping for young people with visual impairments. Watertown, MA: Perkins School for the Blind.
    d. Greeley, J. C. & McCall, M. D. (2018). Teaching life differently: The Expanded Core Curriculum for babies and young children with visual impairment. Watertown, MA: Perkins School for the Blind.

Optional Module 7: Future Steps/Connection with the Core Curriculum

1. Synergistic Learning
    a. Science: Note taking, tactile games, interact with shapes
    b. Social Studies: Note taking, tactile maps, role playing, disability rights movement
    c. English/Native Language: communication development, vocabulary, career development
    d. Arts Education: tactile development and appreciation for the arts, music development
    e. Physical Education: Movement and mobility development through games
    f. Mathematics and Applied Sciences: Size and measurement, spatial concepts, numbering systems
2. Example Activities
    a. Basic books and literature surrounding different topics in school
    b. Tactile globes and board games
    c. Understanding what will come in school and how they will have to adapt
3. Key Resources to Consider

a. Beaver, J. M. (2006). DRA-2: Developmental reading assessment: Grades k-3. Lebanon, IN: Celebration Press.
b. Johns, J. L. (2017). Basic reading inventory: Pre-primer through grade twelve and early literacy assessments. (Adapted into Unified English Braille by PRCVI.). Dubuque, IA: Kendall Hunt.
c. American Printing House (n.d.). Tactile and Visual Globe.
d. American Foundation for the Blind (n.d.). Chronology of events in the history of the education of people who are visually impaired. Retrieved from: https://www.afb.org/online-library/unseen-minority-0/historical-chronologies/history-education-visually-impaired-people
e. American Printing House (2008). Sense of Science series. Louisville, KY: APH. Listed below are the three resource kits available from PRCVI:
f. Fast, D., & Wild, T. (2018). Teaching science through inquiry based field experiences using Orientation and Mobility. Journal of Science Education for Students with Disabilities, 21, 29-39.
g. Duckworth, B. (1983). Brigance diagnostic comprehensive inventory of basic skills: Green level. Louisville, KY: American Printing House for the Blind.

Not Included/Continued Learning

1. Recreation and Leisure
2. Career Education

Works Cited/Key Articles Used

PRCVI: https://www.prcvi.org/resources/the-expanded-core-curriculum/
PRCVI Library: https://library.prcvi.org/Permalink/catalog27076
Perkins School for the Blind: https://www.perkins.org/wp-content/uploads/2021/07/ECC_Brochure_2021_digital.pdf
Perkins India: https://www.perkins.org/india/
West Virginia ECC Guide: https://wvde.state.wv.us/osp/vi/WV%20ECC%20Book%20in%20PDF.pdf
Texas School for the Blind:
https://www.tsbvi.edu/selected-resource-topics/123-general-2/103-assessment-and-instructional-resources-2#_1_12
National Association for the Blind India: https://www.nabindia.org/education/
Teaching students with visual impairments:
https://www.teachingvisuallyimpaired.com/the-expanded-core-curriculum.html
Family Connect: https://familyconnect.org/education/expanded-core-curriculum/compensatory-skills/
Paths to Literacy: https://www.pathstoliteracy.org/pre-braille

Core Curriculum:
https://www.prcvi.org/resources/the-core-curriculum/
https://www.pathstoliteracy.org/topic/math-literacy
https://www.tsbvi.edu/selected-resource-topics/123-general-2/103-assessment-and-instructional-resources-2#_1_14
http://visionempowertrust.in/teacher-instruction-kit/ ****

Expanded Core Curriculum:
https://www.prcvi.org/resources/the-expanded-core-curriculum/
https://www.perkins.org/wp-content/uploads/2021/07/ECC_Brochure_2021_digital.pdf
https://www.tsbvi.edu/self-determination-units-lesson-plans

Random Articles:
https://www.jetir.org/papers/JETIR1803250.pdf
https://files.eric.ed.gov/fulltext/EJ683811.pdf