

Teaching the *Whole Individual* with a Visual Impairment

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Characteristics of Students with Visual Impairments

Students with visual impairments (VI) are a heterogeneous group that makes up one of the smallest disability categories or about 0.4% of students served under the Individuals with Disabilities Education Improvement Act (IDEIA) and .04% of the whole school age population (Ferrell, 2000; Office of Special Education and Rehabilitative Services, 2008a; U.S. Office of Special Education Services, 2011). Visual impairments range from mild to moderate to severe, are equally represented in males and females, and are unrelated to intellect (American Community Survey, 2009-2011). Thus, a VI alone does not in any way limit cognitive functioning; and with accommodations these students can be very successful. What is more, with 57.2% of students with VI spending 80% or more of their school day in the general education classroom, it is imperative that general education teachers be apprised of the various ways to accommodate for these students, attending to both their academic and affective needs (Office of Special Education and Rehabilitative Services, 2008b).

Terminology

One cannot embark upon a conversation regarding the many facets which comprise teaching individuals with VI without first defining the population under consideration. Following is an explanation of both the legal and educational definitions used to delineate various forms of vision loss.

Legal Definition

Individuals are *legally blind* if their visual acuity is 20/200 or less even with corrective lenses. To put this in perspective, a person with 20/200 vision sees something at 20 feet that a person with normal vision sees at 200 feet. Contrastingly, persons are considered *partially sighted* if their visual acuity is in the range of 20/70 to 20/200 with correction. Accordingly, a person with 20/70 vision can see something at 20 feet that a person with normal vision sees at 70 feet.

Educational Definition

“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” (Assistance to States for the Education of Children with Disabilities, 2010). Specifically, the educational definition of blindness is based on the method necessary for learning to read. Many individuals classified as legally blind have some vision and can learn to read using enlarged print (often referred to as students with low vision); Other individuals are totally blind and learn to read using the Braille system. Educators are also concerned with *visual efficiency*, the ability to control eye movement, and *visual function*, the degree of useful vision a person has. Vision teachers can observe visual efficiency and perform functional assessments to determine how students use their vision in everyday situations.

Visually Impaired, but not Blind? (Addresses Issues Discussed in Chapter 3)

When it comes to visual impairments, it is important to remember that looks can be deceiving. The general public does not seem to comprehend disability unless it is something readily noticeable, such as a person with cerebral palsy who utilizes a wheelchair for mobility. It is as equally difficult for people to understand that it is possible to have a visual impairment without being totally blind. To exacerbate these misnomers, individuals with visual impairments

often do not look “disabled” because they do not have disfigured eyes, are not carrying a cane, or using a guide dog. In addition, they have usually learned to compensate for their impaired vision and may be able to do so at such a high level that only those who are told know of their vision loss. Teachers are not exempt from this lack of understanding of the “twilight zone”--the land between perfect sight and total blindness. Those who provide educational services to students with visual impairments must be made aware that these students will most likely still require adaptations in order to reach their full potential, regardless of appearances.

Considerations for Instruction and Assessment

Adapting for Diminished Incidental Learning (Addresses Issues Discussed in Chapter 6)

Students with VI often miss opportunities for incidental learning that their sighted peers are exposed to almost constantly (Hatlen & Curry, 1987). This is to say, if you cannot see items in your environment, it is as if they are not there. A person with a VI cannot possibly know to ask questions and engage in conversations about stimuli they do not receive. Therefore, it may be very challenging for students with VI to associate words with elements of their environment. For example, the “absence of or reduced visual cues, such as a schedule written on the chalkboard or seeing the clock, can prevent these students from following classroom procedures or anticipating coming events” (Cox & Dykes, 2011, p. 68). Thus, it is important that such associations be facilitated with input from other sources (Cox & Dykes, 2001).

Prior to making any decisions about necessary accommodations, students with VI should receive a learning media assessment from a certified teacher of students with VI. A learning needs assessment will provide information about the student's ability to access print materials. Specifically, ascertaining information regarding student-specific preferences, such as preferred font size, reading distance, lighting needs, contrast sensitivity, and overall reading speed is

crucial(Swenson, 2013). Armed with the findings of the learning needs assessment, teachers can then select from various classroom accommodations that can be instrumental in ensuring that students with VI are afforded appropriate instructional experiences. Jones and Hensley-Maloney (2015) provide a list of possible classroom accommodations that can be very instrumental in ensuring that students with visual impairments do not miss out on opportunities for incidental learning. I would suggest that these possible accommodations be discussed with general education teachers prior to having students with visual impairments in their classrooms. In addition, each of these items could be included in the student's Individual Education Plan (IEP), which is required for any student receiving services under IDEIA. To further evaluate the effectiveness of classroom adaptations your school is utilizing for students with visual impairments, refer to Cox and Dykes (2001). The authors provide checklists that serve to facilitate the evaluation of instructional strategies, curriculum considerations, safety procedures, and adaptations related to indoor and outdoor orientation and mobility.

Assessment Practices (Addresses Issues Discussed in Chapters 2, 4, 6, and 15)

The No Child Left Behind Act (NCLB) of 2001 aimed to address the achievement gaps between students in special education and students in general education by holding schools accountable for the achievement of all students, with standardized test scores being the metric (West, 2005). The consequences of low performance on these assessments for individuals could include grade retention or failure to obtain a high school diploma (Hannan, 2007). Because accountability is measured by these standardized test scores, it is imperative that educators consider how appropriate they are for students with visual impairments (Bolt & Thurlow, 2004; Ekstrom, 1998; Reid, 1998). In addition, educators are required to provide evidence of students'

annual progress toward mastery of IEP goals and objectives, thus the validity of assessments and accommodations that are used to measure student progress must be considered (Hannan, 2007).

Threats to Test Validity. Threats to internal, external, and content validity are all factors educators must consider when evaluating assessments for appropriateness. First, with regard to internal validity, educators need to remember that standardized tests are usually norm-referenced. That is to say that the scores are based on normative data from the general population, typically children without disabilities. Thus, this norming may not be representative of the ability of a student with a VI and comparing scores of normally sighted students with those who are visually impaired may be inappropriate (Baker & Koenig, 1995; Hannan, 2007). The conditions under which the student takes a test, or external validity, may also be threatened with the use of needed accommodations. Educators must determine if accommodations will alter the construct or change the purpose of the test question (Ekstrom, 1998; Pressley, 2003). It is not sufficient to merely translate test questions, but rather test administrators must consider what is being measured and why (Reid, 1998). Finally, the content validity of test items must be evaluated to ensure they are free from cultural or visual bias (Reid, 1998).

Selecting Appropriate Formal Assessment. Jones, Haynes-Smith, Hensley-Maloney, and Gansle (2015) provide guidelines for formally assessing students with VI. The authors state that examiners should purpose to select standardized assessment batteries designed for use with students with VI whenever possible. The Woodcock-Johnson III Tests of Achievement, with both a large print edition and a Braille Adaptation (WJ III ACH-Braille; Jaffe, Henderson, Evans, McClurg, & Etter, 2010), is the only standardized achievement test with built-in accommodations for individuals with VI. Evaluation personnel using the WJ III ACH-Braille should meet qualifications for administering the WJ ACH tests (non-brailled forms) and, ideally,

be competent in Braille; however, if examiners are not competent in Braille, they may team with an ancillary examiner who is competent in Braille. Specifically, the ancillary examiner can help ensure that the student understands and follows directions, monitor floor and ceiling levels for Braille responses, transcribe Braille responses, and help identify patterns or errors in responses that may be related to the student's VI or use of special equipment rather than a true academic deficit (Jaffe, 2010).

Jones, Haynes-Smith, Hensley-Maloney, and Gansle (2015) suggest the Slosson Intelligence Test for Children and Adults (SIT-R3; Larsen & Slosson, 2000) for cognitive ability/intelligence testing. The SIT-R is an individually administered test of verbal intelligence for use with examinees ages 4-65 years. The authors note that the SIT-R3 is the only cognitive/ability assessment tool indicated as appropriate for elementary through high-school aged individuals with VI. Namely, the SIT-R3 includes a supplemental manual for use with blind or visually impaired examinees as well as stimuli sheets designed with raised and heavy bolded items.

If the SIT-R3 is unavailable, Jones, Haynes-Smith, Hensley-Maloney, and Gansle (2015) suggest that examiners select **verbal** subtests from more popular cognitive batteries, such as the Wechsler Intelligence Scale for Children--Fourth Edition (Wechsler, 2003), for an estimation of cognitive ability. The authors caution that subtests which measure non-verbal abilities utilizing visual stimuli (such as those measuring visual spatial reasoning) may inform our understanding of student limitations, but should never be used as indicators of intellectual ability or in the calculation of a full scale IQ score (Goodman, Evans, & Loftin, 2011). Ancillary examiners may assist with cognitive assessments in the same manner as was discussed in relation to achievement testing. In addition, they may help ensure content validity of test items on measures that are not

intended for use with VI populations. For example, items that assume knowledge of color contain a visual bias against students who cannot visually distinguish color (Jaffe, 2010; Reid, 1998).

Selecting Testing Accommodations and Modifications. Bowen and Ferrell (2003) differentiate between testing accommodations (do not change the nature of the construct being tested, but provide unique access) and modifications (a change in the test—i.e., how it is administered, completed, or the construct being measured) and provide a list of possible accommodations and modifications for assessing students with VI, grouped into 6 types: (1) materials (large print or Braille versions, use of optical devices, reducing background clutter), (2) time/scheduling (frequent breaks, extended time), (3) response (use of a tape recorder, scribe, or brailled answer sheets), (4) administration (provision of work stands or yellow acetate sheets), (5) setting/environment (describing the room layout, checking for glare, and creating contrast), and (6) general (call the student by name and, if appropriate, use touch, read with an expressive voice, and read the functional vision report in advance to learn how the individual student uses vision). Bowen and Ferrell also provide a list of factors that should be considered when selecting modifications (i.e., the type and severity of the student's vision loss, the demands of the test's presentation and response requirements, the student's familiarity with the modifications being considered, and the effect of the modifications on the test's validity and ability to maintain the purpose of the assessment).

Attending to the Affective Needs of Students

In addition to adapting instructional delivery and assessment, educators need to be aware that students with VI will require explicit instruction in the areas of social skills development, independence, perceived competence, and the development of self-determination skills. (Jones &

Hensley-Maloney, 2015 Furthermore, teachers need to be cognizant of the interrelatedness of each of these components; many suggested interventions in one area benefit development in other areas, and are all necessary elements for instructing the *whole* individual. The following sections delve into instructional strategies purposed to address affective needs of students.

Fostering Appropriate Social Skills (Addresses Issues Discussed in Chapters 2, 5, and 6)

Students with VI often fall behind their peers without impairments in social skills development. For example, research has shown them to have less extensive social networks and fewer friendships (Erin, Dignan, & Brown, 1991; Shapiro, Lieberman, & Moffett, 2003).

Students with VI have been found to stay in close proximity to their teachers in social situations and rarely socialize with their peers. What is more, these students perceive a reduced control over their ability to make and keep friends (Robinson, 2002), are more often excluded from groups, and frequently withdraw from group activities. These factors can result in increased feelings of loneliness (Kalloniatis & Johnston, 1994; Shapiro et al., 2003).

These patterns of behavior may be, in part, due to the fact that students with visual impairments are not afforded the benefit of visual cues. As a result, students may not have learned behaviors appropriate in social situations (i.e., shaking hands, gesturing appropriately when talking, making eye contact, and/or or maintaining appropriate personal space (Barraga & Erin, 1992). The acquisition of these skills is important for successfully integrating students with visual impairments into general education settings (Cox & Dykes, 2001).

Because students with VI might not associate names and faces through incidental classroom interactions, these students may need opportunities to become familiar with their classmates. Teachers can facilitate such opportunities by deliberately designing experiences to help build relationships among students (Cox & Dykes, 2001). For example, lunchtime is a

natural setting for increasing socialization and friendships. Teachers should make provisions for students with VI to be seated in a well-lit, low traffic area of the lunchroom—one that is in close proximity to his or her friends---in order to ensure the ability to locate friends in the noisy, crowded lunchroom,. Additionally, it is important for educators to help students learn mobility skills, so that they may arrive independently. Proactive advance planning and skills training can foster positive social opportunities that may extend beyond the school day (Shapiro et al., 2003).

Enhancing Perceived Competence (Addresses Issues Discussed in Chapters 2, 6, and 12)

Improving social dynamics for students with VI requires enhancing their self-confidence. Self-confidence is influenced by perceived competence for participating in and completing activities and impacts the initiation of mastery attempts and the development of achievement behaviors, such as effort and persistence (Kosma, Cardinal, & Rintala, 2002; Sherrill, 1998). Nurturing perceived competence is crucial because it can result in students who “exert more effort, persist longer, feel more in control, experience pride, and are intrinsically motivated to continue to participate in areas in which they feel competent” (Shapiro et al., 2003, p. 69).

The need to intervene early in the development of self-perceptions of competence is evidenced by the fact that perceptions of competence become more stable and resistant to change with age (Shapiro et al., 2003). Shapiro et al. (2003) suggest profiling role models who are blind and view themselves as accomplished athletes to increase perceptions of athletic and social competence. I contend that Walt Ashby is one such role model that could be added to a more comprehensive list of extraordinary individuals who just so happen to have visual impairments. In addition to fostering perceived competence, I argue that this introduction of other, successful, individuals with visual impairments will help mediate the aforementioned feelings of loneliness (Kalloniatis & Johnston, 1994; Shapiro et al., 2003). Because visual impairments are a low

incidence disability category, meaning they do not occur frequently in the population, and that visual impairments, when they do occur, are more prevalent in adults (American Community Survey, 2011; Office of Special Education and Rehabilitative Services, 2008; U.S. Office of Special Education Services, 2011), it is very possible that a student with a visual impairment will not know any other students with similar vision loss. This can make a person with a sensory impairment, or any impairment for that matter, feel as though they are the only one in the world who does not meet society's definition of "normal".

Promoting Independence (Addresses Issues Discussed in Chapters 2, 3, 4, and 5)

Promoting independence can also lead to greater social opportunities and increased self-confidence. Physical orientation to the classroom and classroom procedures is crucial to allowing the student with a VI to be independent. This familiarization must occur as soon as the student with a visual impairment is assigned to the classroom or any time the student is expected to interact in an unfamiliar environment (Cox & Dykes, 2001). For example, if the student will be asked to participate in a cooperative group, read in front of peers, or complete a novel task (i.e., Walt crossing the stage at graduation without mishap) they should be afforded the opportunity to rehearse their participation in the activity.

Investigating independent living skills, Lewis and Iselin (2002) found that few children with vi could walk independently to a friend's house. The inability to walk independently to a friend's house or around the school building can lead to dependence and isolation; alternatively, the ability to walk independently to a friend's house can facilitate socialization and inclusion. Increased competence with regard to mobility skills will translate into students being more capable of making friends in differing school environments and at home. The competence that

comes from independent mobility will generalize to other important aspects of life such as employment, recreation, and family (Shapiro et al., 2003).

To facilitate mobility skills and, thus, independence, Shapiro et al. (2003) suggest allowing students with visual impairments to choose their preferred destinations during their mobility classes. Mobility instruction that involves *real world* destinations not only teaches the skill, but makes the skill applicable. Opportunities for practice that involve traveling to a friend's house, an after-school job, or desired locations within the school itself can prove very valuable. For example, when a student with a visual impairment is able to arrive independently at an after school activity, they are able to be a part of student organizations and other students view him or her as being more competent (Shapiro, Lieberman, & Moffett, 2003).

Building Self-Determination Skills (Addresses Issues Discussed in Chapters 3, 4, and 6)

Evidence suggests that students with VI have lower levels of self-determination (Robinson 2002; Sacks, Wolffe, & Tierney, 1998). Students may be too shy, scared of rejection, or lack the confidence needed to advocate for themselves and make life decisions (Shapiro, Lieberman, & Moffett, 2003). As a result, someone other than the student with VI may be making many of their decisions—implying a need for students with VI to be taught to take initiative (Blankenship, 2006a, 2006b.; Lipkowitz & Mithaug, 2003; Sacks, Lueck, Com, & Erin, 2006). Namely, research has shown that greater self-determination skills are associated with more positive academic and transition outcomes (Fowler, Konrad, Walker, Test, & Wood, 2007; Konrad, Fowler, Walker, Test, & Wood, 2007; Lee, Wehmeyer, Soukup, & Palmer, 2010; McGuire & McDonnell, 2008; Wehmeyer & Palmer, 2003; Wehmeyer & Shwartz, 1997).

Students must be taught effective problem solving skills and strategies for overcoming barriers and fears in order that they become self-directed (Shapiro, Lieberman, & Moffett, 2003).

Wehmeyer, Palmer, Agran, Mithaug, and Martin (2000) contend that instruction must become student-directed; Instead of the classroom teacher having full control over “when, what, why, where, and how” a student will learn. Student-directed learning involves the student in every aspect of their education and places the responsibility for learning on the student (Wehmeyer, et. al., 2000, p. 440). The authors suggest using the *Self-Directed Model of Instruction*, which is comprised of three phases of instruction. At every phase, the student encounters a problem to be solved and a series of student questions designed to help guide the student through the problem-solving process. The sets of student questions for each phase represent the same steps in the problem-solving process: 1) identifying the problem, 2) identifying plausible solutions to the problem, 3) identifying possible barriers to solving the problem, and 4) identifying potential consequences associated with each solution. The primary objective is for students to self-regulate by setting goals, formulating plans, and making adjustments.

In asking teachers to provide instruction to the *whole* individual, it is important to be cognizant of the numerous demands that teachers face, especially given the accountability demands that stem from NCLB. Thus, the beauty of the *Self-Directed Model of Instruction* is that it can be applied to many differing educational situations, allowing for objectives to be met, but using a student-directed approach, instead of a teacher-directed one, to do so.

By using children’s and adolescent’s literature to foster both literacy and self-determination skills, teachers can make their instructional time go farther (Konrad, Helf, & Itoi, 2007). Thus, when selecting reading materials, teachers can purposefully select books that include characters with disabilities. However, teachers should use caution when choosing books to incorporate into their curriculum because these characters are not always portrayed appropriately. Selected books need to have well-developed structure and characters, be of

interest children and teachers, have realistic portrayals of individuals with disabilities, and address key issues related to special education (Smith-D/Arezzo, 2003). Konrad et al. (2007) provide guidelines, taken from The Council on Interracial Books for Children (1980), for screening children's books: a) teachers need to examine illustrations and storylines for stereotypes and characters' roles, b) examine power and leadership roles, c) consider which characters are cast as the heroes, d) evaluate the language used to describe characters, and e) reference the copyright date because more recent books are more likely to convey realistic characterizations. To further facilitate the selection process, Konrad et al. (2007) recommend children's book which feature characters with disabilities and include activities to utilize in conjunction with them in order to promote self-determination. The beauty of this instructional strategy is that it is another method for introducing students to accomplished role models with disabilities, as discussed previously.

Conclusion

Visual impairments are considered a low incidence disability category, range in severity from mild to moderate to severe and are equally represented in males and females (American Community Survey, 2009-2011; Ferrell, 2000; Office of Special Education and Rehabilitative Services, 2008a; U.S. Office of Special Education Services. 2011). A visual impairment alone does not limit cognitive functioning; and with appropriate accommodations these students can be very successful. The increased inclusion of students with visual impairments in the general education classroom renders it absolutely crucial that general education teachers be apprised of the various ways to accommodate for these students (Office of Special Education and Rehabilitative Services, 2008b). Considering the academic provisions students require, as well

as the affective needs of students, is essential to effectively teaching the *whole* individual with a visual impairment.

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