Surviving and Thriving with Progressive Vision Loss While Becoming a Vision Professional: A Collaborative Approach

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Abstract

This article reflects the experiences of an instructor in a personnel preparation program training a student with low vision in becoming the instructor in the basic human guide technique and other indoor basic skills. In university programs, instructors are often puzzled when teacher candidates who are blind or low vision (BLV) enter their classes and accommodations beyond accessible MS Word documents or books need to be considered. Actively seeking student input and preferences to ensure that learning may take place allows for cocreation of knowledge. This article, through reflection, highlights an approach of the sighted instructor while also providing specific accommodations or modifications for techniques that may add to the safety of both the traveler and the guide from the teacher candidate's perspective. The techniques offered can provide a possible solution for BLV travelers, instructors in teacher preparation programs, or to travelers with visual impairments.

Introduction

I had been a teacher of students with visual impairments (TSVI) and a certified orientation and mobility specialist (COMS) before beginning my doctoral studies. As was customary for doctoral students, I taught courses in the undergraduate TSVI personnel preparation program. The very first course I was tasked with teaching was *Introduction to Orientation and Mobility (Intro to O&M)*, utilizing *Partners in*

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O&M by Drs. Pogrund and Griffin-Shirley (2018). After teaching two cohorts of sighted students, I had become confident in my well-balanced course.

The coauthor of this article was a career counselor for teens and adults with visual impairments at a nonprofit agency. When her position was eliminated, she decided to pursue certification as a TSVI. She brought her personal experience with low vision from optic nerve hypoplasia and visual field constrictions caused by the effects of hydrocephalus and associated surgeries. The graduate program in visual disabilities was an in-person dual bachelor's/master's program based on a cohort model, which required her to move to a new location. To support her relocation and access to higher education, she received O&M instruction through the local Lighthouse. As a guide dog handler and cane user, she needed to learn to navigate a new city and the enormous university campus with its winding paths and obsessively varying lighting conditions. During her second semester, she enrolled in the *Intro to O&M* course. We met before the semester began because she was concerned about the safety aspects (both her own and that of students whom she might teach) in her first formal O&M course.

The *Intro to O&M* course was required of all preservice TSVIs and excluded any cane work but focused on the basic O&M skills for which a TSVI is responsible to support children in a school setting (Allman & Lewis, 2014; Pogrund & Griffin-Shirley, 2018). With two major components, theory and hands-on learning, basic O&M techniques were introduced through "blindfold experiences" conducted throughout the semester. Material was presented using a flipped classroom model, where students studied human guide techniques from the book and viewed some videos and then practiced with a blindfolded partner, taking turns as both a guide and a traveler after instructor modeling.

Although I had experience teaching safe travel techniques to both children and adults with visual impairments, I wondered how I would instruct a student with low vision and significant field loss to become an effective and safe instructor of basic indoor travel skills. What accommodations or modifications might be needed in basic O&M techniques to ensure the coauthor would keep herself and her future students safe? She had experience using a human guide but shared many of the same concerns: how would a guide who used a cane keep a traveler safe when the cane only extended so far or in situations when her available functional vision wasn't consistently reliable?

Meeting of the Minds: Alterations to Suit

Through discussions of the coauthor's imminent concerns, we devised a plan to ensure her success. Although the techniques followed the textbook, I incorporated

many instructional methods that I learned from my graduate studies, and drew upon valuable O&M internship experiences from the Veterans Administration (e.g., focusing on andragogy and adults' need for understanding the "whys" as well as addressing mental and physical health concerns). Our plan included pre-teaching the techniques during office hours or at prearranged times between classes. This was further supported through proprioceptive learning by utilizing the coauthor as the consistent volunteer to model the techniques in class.

As we worked through each basic technique, we realized that the coauthor—who was, as she described herself, "5 feet and no inches" tall—might guide travelers taller than herself. To address significant height differences, we made a simple adjustment: utilizing her shoulders rather than maintaining the traditional 90° angle to the traveler's elbow. This adjustment was a practical solution that might elude those strictly adhering to technique descriptions. The co-author reflected,

> I was primarily a guide dog traveler. My guide dog schools' dogs were trained to clear a path only as wide as themselves and their handler; clearing space for an additional person was beyond their responsibility and went against their policy. When I was responsible for guiding someone else, I preferred to have contact with the environment around us; using the cane made it easier for me to identify obstacles or uneven footing that might have been in my traveler's path but not in mine. To further complicate being a low-vision guide, I am a left-handed cane user. This meant that my traveler was always on my right side, which, when traveling according to traditional traffic flow, often placed the traveler close to walls and objects that might not have been in my path. The instructor and I worked on effectively widening my cane arc on the side of my traveler, utilizing proprioceptive training. We found that this adjustment provided me, as the guide, with enough information to navigate myself and my traveler safely around obstacles.

Learning and Teaching in Every Space

TSVIs focus on access within homes and schools. Before tackling room familiarization, we first identified ways to support the coauthor in monitoring proper hand positioning for trailing (e.g., curved fingers, space between the wall and traveler) and protective techniques (Table 1). Once she knew how to protect herself in both familiar (education building) and unfamiliar indoor environments (other buildings on campus), she further worked with her peers during blindfold experiences to monitor her travelers.

> The coauthor reflected, because my central vision is still somewhat intact, I visually monitored my travelers as they practiced upper and lower body protective techniques. However, I found that confirming what I was observing using hand-under-hand technique, and sometimes physically correcting my traveler, benefited us both. It was sometimes necessary to adjust an elbow, reposition a hand to protect the core, or confirm that a student was a hand-span (stretched, thumb on hip/thigh, pinky on wall) away from a wall. Whenever I needed to physically manipulate a traveler's position, I first asked for consent to touch the part of their body I needed to work with and described what I would be doing and narrated as I went along. I had experienced the fight-or-flight reaction while being touched unexpectedly, and I never wanted my traveler to feel concerned when working with me. Ideally, the space where trailing was learned was clear of obstacles, but previewing the space was always my first step. In schools, where backpacks, benches, and wall-hangings could present obstacles, I ensured I knew how to keep the student safe. Then, as my traveler moved along a wall or surface, I walked slightly ahead, made sure the path was clear (used my cane as needed), and positioned myself to visually monitor my student within my remaining field of vision. Initially, this process took time, with a slower pace, given that trailing is one of the first skills a student learned.

As a TSVI, supporting students' room familiarization is standard practice, and I always tried to train my K-12 students, if possible, a day or two before school officially started. We found that extensively previewing environments—pairing hands-on exploration with detailed verbal descriptions prior to teaching—allowed the coauthor to understand what and where she would be teaching. Multisensory access facilitated her ability to break down the environment into its parts for her traveler. When a sighted person was not available to assist her, she used technology (e.g., Be My Eyes, Aira) to support her access to spaces. The coauthor reflected,

> When it came to room familiarization, I noticed that losing most of my visual field presented challenges in internalizing the complexity of an environment to a level where I felt uncomfortable teaching it to another person. Proprioceptively understanding the spaces first, provided me with confidence and a comfort level where teaching became the focus, not the complexity of analyzing and teaching at the same time. I actively utilized perimeter walking, naming walls, and identifying permanent structures in the spaces. Sometimes (depending on the time available), I walked through a space first using my cane and paid attention to all sensory input, then walked the space again with auditory feedback from a sighted person. These

> previews gave me the opportunity to anticipate challenges for the traveler that I could address immediately while teaching and mitigating potentially dangerous situations as they arose. As a TSVI, room familiarization requires additional collaboration with school staff, but it also provides an excellent opportunity to advocate for students while they assist me.

With room familiarization came the task of moving across doors and ensuring that fingers, toes, and canes were safe from doorjambs and hinges (Table 1). During my own graduate education, I was taught a specific technique for assisting with doors that went beyond simply "catch the door on." To ensure the safety of the hand and reduce the risk of traumatic incidents, I was taught to "plant the traveler's palm" on the door. As a guide team approaches a door and moves into 'narrow passage', the traveler moves their free hand, palm facing outward, to the side of the guide's shoulder/upper arm and keeps it there (providing tactile input to both persons). The guide opens the door and, as the team steps into the doorway, the guide leans their shoulder with their upper body to place the traveler's palm onto the door a bit over halfway in on the door's face (note: the traveler does not lean or reach for the door, also known as [aka] "no feeling for"). The traveler then pushes the door out and, as they move through, lets go without sliding their hand or fingers along the door. The hand is planted (aka "glued") to the door's face and released only as the team steps through. The coauthor added,

> Initially, I did not find the need for modification or adaptation of this technique, but when I began working with others who were not classmates, I realized I needed to adapt it to effectively position my traveler directly behind me. To do this, I verbally instructed my traveler to grasp my arm above my elbow on the side opposite the door (partially transferring sides) using a c-shaped grasp (like holding a soda can) while placing the hand closest to the door, palm out, on my upper arm near my shoulder. This ensured the proper placement of the traveler's hand on the face of the door, minimizing the potential for injury. This simple step supported both effective narrow passage alignment and keeping hands and fingers safe while requiring a modified gait (shorter steps). If the traveler had long arms, they could remain in the proper guide position as they stepped behind me. However, for my comfort, this modification made me feel more confident around doorjambs.

Toward the end of the course, negotiating stairs as a guide required the most modification and practice before putting the techniques into action (Table 1). The coauthor was used to trusting her guide dog to safely navigate elevation changes in her path. Therefore, I first ensured that she handled the stairs to my high expectations and followed all the procedures I had been taught. I am yet to meet a person who did not feel nervous

about learning stairs under blindfold. In the course, students practiced guiding along hallways, through doors, and in classrooms for six to eight classes before attempting ascending and then descending stairs. I followed the procedures I was taught (a) approach stairs at a 90° angle, (b) using the guide-arm with the traveler's grasp to bring them closer to the stairs (aka "arm pull"), (c) avoid toe-checking behaviors (consider neuropathy and potential disastrous injuries due to kicking stairs), (d) shifting weight into heels (descend) or toes (ascend) as appropriate, and (e) verbalizing when each of us took the first step and when we arrived at the next landing. The coauthor reflected,

> Even when my guide dog was in the lead, I relied on handrails when ascending and descending stairs. Guiding on the stairs was my biggest fear throughout the entirety of learning to be a human guide. After mastering the stairs using my cane under the guidance of a meticulous instructor, we spent time exploring a variety of options that maintained the technique's integrity while providing peace of mind for both the traveler and me. The stairs required the most collaboration in knowledge creation. We devised the following steps: (1) becoming very efficient at aligning with stairs using my cane, (2) using a forward arm-pull and verbalizing to bring my traveler beside me at the stairs while extending my arm to the handrail, (3) having my traveler position their grasp on my shoulder and, once safely aligned, (4) situating myself on the first stair, with both of us holding onto the handrail, before signaling to my traveler that we would be moving ahead. This positioning provided me with handrail access and stability while affording my traveler space between my arm and the handrail. Excessive verbalizing during the learning stage eased much of the trepidation as it slowed the process and provided a reliable sequence.

One Year Later: Accommodating a Blind Student

The next time *Intro to O&M* was offered, I invited the coauthor's cohort to assist with the blindfold experiences. They had decided to continue into the O&M program and assisting in this course provided them with an opportunity to review foundational skills before progressing into more advanced O&M courses, student teaching, and internship placements. The coauthor played a crucial role in supporting a blind student who was a new arrival in Florida with little cane training and limited usable sight. The coauthor reflected,

> Drawing from my personal experience as both a traveler and a successful course participant, I was honored to have the opportunity to support a fellow cane user whose cane skills were less developed than mine. They needed not

only to learn how to be a human guide, but also to improve their own cane techniques for safety. Supporting the development of O&M skills in someone who was blind helped me review the techniques with additional guidance from my instructor while also teaching me how to modify supports on the spot. It solidified my decision to continue into the O&M program.

Irrespective of how experienced or knowledgeable I might have been in teaching O&M, I was still a sighted instructor with no lived experience of using a long cane. Recognizing my limitations, I entrusted the coauthor to provide hands-on demonstrations and support to this blind student throughout the semester. To ensure the student's progress, the coauthor and I debriefed after each blindfold experience to discuss what worked and identify areas that needed additional practice or modification. The success of the blind student in this course was a testament to the coauthor's ability to mentor and support the learning of someone with less vision while keeping both safe in the process.

Spreading the Word

Our individual and combined experiences in *Intro to O&M* led us to present at conferences and share most of our adaptations with attendees. The demonstrations were always hands-on; explaining where hand placement might be or how one might approach what many of us in the field might consider integrating and internalizing routine skills through practice. We demonstrated a skill, and attendees practiced the skill in pairs while we provided feedback and answered questions.

These presentations brought many "aha" moments to attendees:

- "I never thought to have the traveler grasp both elbows while navigating a narrow passage (doorway)."
- "Widening the arc on the traveler's side makes a lot of sense."
- "I will teach guides to have their traveler place the back of their hand against the guide's upper arm, so the traveler's hand is palm-out to be 'planted' on the door while moving through it."

Considering inclusion and working in tandem with learning partners opened both physical and proverbial doors.

In Conclusion: Access for All

Higher education institutions primarily employ nondisabled professionals (Lindsay & Fuentes, 2022). Even though expectations for inclusion have grown in past years, faculty (e.g., professors, instructors, teaching assistants) often have a challenging time when any type of accommodation is needed by their students (Lombardi et al., 2015).

Table 1. Basic human guide techniques and modifications.

Technique	Reference[a]	Sample modification per Elaine's needs
Guide technique	Sidebar 6.1 (p. 136) Figure 6.1 (p. 138)	• Expanding the arc on the traveler side while maintaining a regular cane arc on the guide side. • Allowing for hand placement on the shoulder when height difference is significant.
Narrow passage	Figure 6.3 (p. 141)	• When in hallways, slow pace, smaller steps as "buffer" between traveler and guide is reduced.
Doorways	Figure 6.4 (p. 143)	• Align as is typical but ensure that traveler's hand is resting on upper arm of guide on the door side; then, guide presses their shoulder with traveler's hand onto the door about midway. Traveler presses door open without moving the hand—planted—and lets go when they have passed across the doorway. • It avoids reaching into the doorjamb or hinges if hand is planted firmly. • Allowing for hand placement on the shoulder instead of a c-grip when height difference is significant—palm placement is same. • Grabbing onto both shoulders to align to for narrow passage.
Reversing directions (including accurate turns)		• When teaching a U-turn, guide will have to ensure coverage is appropriate by utilizing the extended arc. • When guide is a pivot point (stands in place as traveler moves around them) the clearing must be consistent and wide.

Table 1. Continued

Technique	Reference[a]	Sample modification per Elaine's needs
		• When the traveler is the pivot point, guide can collapse the arc to typical width as they only need to clear for themselves; however, they should clear wide before beginning to walk. • In facing each other, the guide will have to ensure their cane is positioned under their thumb as appropriate OR fold the cane while stationary but ensure they clear wide before beginning to walk.
Transferring sides	Figure 6.2 (p. 140)	• The guide should only pause in a safe and cleared area when the traveler is making the transition behind the guide.
Seating	(pp. 146–147)	• Guide anchors their cane at the available seating (by table, chair, bench, auditorium). • When instructing in seating techniques, utilizing hand under hand may be necessary. • For auditorium seating, both traveler and guide should use the direction of the seats in front of them, trailing the back of the seat with the back of the hand.
Tactile search	Figure 6.10 (p. 158)	• There are multiple tactile search methods that need to be taught utilizing hand-under-hand techniques for teaching and monitoring proper technique (ask for consent before touching a person). Start on a table!
Alignment	Sidebar 6.1 (p. 136)	• Utilize as much descriptive narration as possible (e.g., handspan away from wall, shoulders aligned...), but if traveler is having a hard time, physical supports might need to be employed.

Table 1. Continued

Technique	Reference[a]	Sample modification per Elaine's needs
		• Utilize hands or cane to ensure traveler has aligned properly (ask for consent before touching a person).
Trailing	Sidebar 6.1 (p. 136) Figure 6.8 (p. 151)	• Monitoring will need to be done more closely than is typical. • Guide should select an area that is clear of obstacles before teaching the technique. • Preview area to ensure there are no protrusion on the surface that may cause injury to the traveler.
Protective techniques	Sidebar 6.1 (p. 136) Figure 6.6 (p. 149) Figure 6.7 (p. 150)	• Monitoring will need to be done more closely than is typical. • For foot probe, guide will select an area that has been cleared. • Hand positioning might require hand-over-hand review by guide (ask for consent before touching a person).
Stairs—ascend/descend	Figure 6.5 (p. 145)	• Guide approaches stairs at 90° angle, anchors cane at riser, walks up, locates handrail. • Align traveler alongside with pulling guide arm forward. (May need to transfer sides!). • Have traveler grab onto handrail reaching 45° out of hip. • Once traveler is aligned and holding the handrail, guide steps up/down one step and holds onto handrail arm length away. • Traveler holds onto guide's arm or shoulder. • Guide verbalizes shifting weight onto toes: (ascend)/heel (descend) and they travel the stairs.

Table 1. Continued

Technique	Reference[a]	Sample modification per Elaine's needs
		• Guide clears landing and verbalizes when traveler arrived.
Room familiarization	Sidebar 6.1 (p. 136) Figure 6.9 (p. 155)	• Guide will likely need a preview of the room if it is unknown or is frequently used or rearranged. • Guide may need a sighted person to provide descriptions to support mental mapping. Use technical aids!
Car familiarization	(pp. 157, 159–160)	• Just as with room familiarization, guide will need to preview the vehicle prior to instruction.

[a] References are to Pogrund and Griffin-Shirley (2018).

However, if professionals would truly embrace the idea of universal design (Dolmage, 2017) and universal design for learning (CAST, 2022) alongside a philosophy of being facilitators or co-constructors rather than strictly depositors of knowledge (Mensah, 2015), bringing students alongside could make learning an inclusive experience. Planning with access in mind requires less additional work and remediation after the fact (Lombardi & Murray, 2011). Flexibility and growth can be hard, yet are necessary to achieve meaningful inclusion.

By working closely with students who are blind or have low vision to adapt and implement systems and techniques that allow them to thrive as vision professionals, we have the power to rewrite the narrative that this profession is primarily for sighted professionals to teach individuals who are blind or visually impaired. We can provide models to show our candidates that their lived experiences can inspire and inform the next generation of professionals, reduce ableism, and foster inclusivity and empowerment within the vision and education fields.

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