Back to the Future: Expanding the Profession – O&M for People with Disabilities

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In the U.S. and Australia, O&M training has evolved from service provision solely to people with vision impairment, to people with vision impairment and additional disabilities, to people with sight who have functional mobility needs. Expansion of O&M training to include people with sight who have mobility needs responds to: (i) a demand by senior management for organisational cost efficiencies; (ii) social and education policies that require people with disabilities to be mobile so they can access a range of services, as well as the community; (iii) an ethical and moral expectation by society for inclusive services to all people with disability.

This article presents an expanded perspective on mobility instruction for people with a variety of disabilities. In view of current trends, for example the need to be more cost-effective with the instructional time of the Orientation and Mobility (O&M) instructor, and increasing budgetary limitations, the future might bring an increasing demand for O&M instructors who can provide independent mobility training in a local area to both small populations of persons with vision impairment and larger numbers of individuals with sight who experience functional mobility problems (Blasch, Wiener, Voorhees, Minick, & Furlong, 2010). This article focuses on historical and current events, and policy in the U.S. and Australia all of which present a pivotal opportunity to expand and enhance O&M services in both countries. Indeed, the expansion of O&M service provision in other countries might also be a worthwhile consideration given potential cost efficiencies and referral increase.

O&M instruction in the U.S.

Formal O&M training began at the Hines Veterans Administration (VA) Hospital in the U.S. (Bledsoe, 2010). It is inspiring to reflect upon the impact that O&M instruction has had on programs for individuals with vision impairment across the U.S. and in other countries around the world. Early methods for systematically teaching O&M to Veterans focused primarily on compensating for their vision loss. Instruction focused on the physical aspects of ambulation and on such devices, as the cane, dog guides, and electronic aids that could be used to obtain information from the environment. Persons with corrective backgrounds (e.g., Suterko, Blaha, and Malamazian) and physical therapy backgrounds were originally selected for the Hines VA mobility program.
because they had worked with other individuals with disability to increase their physical mobility and ambulation (Blasch & Welsh, 1980, p. 462).

As systematic O&M instruction began to expand beyond the VA and serve populations with additional and in many cases more complicated mobility problems (for example, persons with congenital blindness, older persons who were blind, and persons with developmental disabilities in addition to blindness), it became apparent that the initial approach to instruction (the emphasis on physical skills) was not sufficient. Such problems as poor concept development, family overprotectiveness, inadequate motivation, and intellectual deficits affected the teaching and learning process. When working with students, much of the instructional time was spent on overcoming the effects of negative expectations of family members, learning to solve orientation problems, to implement a decision once made, and to cope with the reaction of others. A more complete understanding of the mobility process also grew from efforts to serve students with low vision. Many such students did not need a long cane or a dog guide, but they did need to: use residual vision, plan routes, deal with pedestrians, and develop confidence when travelling (Blasch & Welsh, 1980, p. 462).

Systematic mobility services have since been developed to guarantee each individual the opportunity to learn the way to travel to the fullest extent of their abilities. Without a formal educational system, some individuals (disabled and nondisabled) would still learn about the world and how to interact with it. However, a society must take steps to assure that each member will have this opportunity and that the acquisition of knowledge is not left to chance. Making policies, changing the environment, and developing new equipment are not enough. Learning experiences must be provided when needed.

Because many individuals with a disability go to hospitals and clinics and receive physical and/or occupational therapy and instruction, there has been a tendency to disregard the mobility problems of other disability groups based, perhaps, on an assumption that these individuals are able to teach themselves the way to travel. Many individuals with a disability are independently mobile and often these individuals are seen travelling along the streets. Some had been able to teach themselves the way to travel through the community and some still do. There are professionally staffed programs available to assist persons with certain physical impairments to learn to use prosthetic devices or other equipment, for example wheelchairs and orthopedic canes, to assist in locomotion, or to relearn the use of muscles needed for ambulation (American Academy of Orthopaedic Surgeons, 2014; Blasch & Welsh, 1980, p. 466; Mayo Clinic, 2014). There are also programs to teach individuals with cognitive impairment specific routes, methods for crossing streets, or bus riding skills (La Grow, Wiener, & LaDuke, 1990; Oxley et al, 2004).

The term travel instruction has come to be defined in the U.S. as “one-to-one instruction provided to people with disabilities other than blindness or visual impairments whose purpose is to enable safe and independent travel in unprotected environments, including public transit” (Helfer, Smith, Thompson, & Wolf Branigin, 2004). This type of instruction, while similar to O&M, has some specific differences, as
explained later in this article. This type of training first occurred in an unorganised fashion in different areas of the U.S. In many cases, families of children with sight and functional mobility problems who witnessed the success of others with vision impairment achieving independent mobility wanted the same mobility independence for their family members. Out of necessity, since there were no formalised programs to prepare travel instructors at that time, people with as little as a high school education and very limited training, began providing what became known as travel training or travel instruction for individuals with disabilities other than blindness. With the advent in the U.S. of the Individuals with Disabilities Education Act (IDEA) (U.S. Department of Education, 2005) and the inclusion of travel instruction as a component of special education, there began a growing demand to provide training in independent mobility for all individuals with mobility limitations.

There are several key factors in O&M instruction that have proved effective and directly relate to travel instruction. One critical factor in O&M instruction is providing individualised instruction. Attempting to teach two or more students together may result in dangerous situations and inefficient instruction since students often proceed at varying rates. A major focus of mobility instruction is on promoting student independence and individual problem-solving. It is often wise to allow a student to make a mistake, give the student time to realise that mistake, and problem solve to correct the mistake.

Another critical instructional component is that instruction should be provided in natural environments similar to those in which the student will later travel. Although teaching in simulated and protected environments may be necessary for beginning instruction, this technique is not sufficient for the development of skills that will be used over time. Natural or ecologically relevant environments are qualitatively different from the hallways of such institutions as schools and hospitals. Since mobility has concentrated on teaching in the ‘real’ environment, O&M instructors have developed a unique knowledge and expertise in teaching environmental problem solving.

Another important teaching component in O&M is the need for lessons of graduated difficulty and responsibility. Various components have to be extracted from the total mobility task and presented sequentially. It is important to develop basic O&M skills before the student can be expected to deal with complex travel situations. Although the particular sequence and approach may differ somewhat for individual students, and the approach used for persons with different disabilities may vary from that which has been most helpful for persons with vision impairment, O&M instructors are generally well versed in planning sequenced lessons of graduated difficulty and responsibility in mobility.

A further common factor to have emerged in O&M for people who are vision impaired has to do with the synthesis of skills. This synthesis may be viewed as the whole of independent travel being greater than the sum of its parts. No matter how expertly the student performs the various subskills in isolation, their various components frequently do not come together as smoothly as might be expected, unless the student gets an opportunity to put them all together in
learning situations with an O&M instructor present for teaching and assistance.

Finally, one of the more important elements of O&M instruction is its designation as the primary responsibility of one or more full-time staff members of an agency or program. A designated person is able to devote full attention to O&M programs without the distractions of other responsibilities (Blasch & Welsh, 1980, p. 464).

While O&M instructors generally now appreciate the many dimensions of travel problems, professionals working with persons with other disabilities have not always recognised similar problems in their students (Laus, 1977; Welsh, 1972). For example, physical therapists provide instruction and assistance in basic mobility for persons who have lost the functioning of their legs or have certain neuromuscular problems. This therapy is usually provided in a clinic only and does not deal with the requirements of the total travel situation. For instance, therapy does not generally cover orientation, strategies for soliciting assistance when needed, route planning, judging a safe time to cross streets, and learning to cope with the stigmatising nature of the disability in public. Teachers of individuals with intellectual disabilities may teach their students to recognise bus and street signs and may take students on group trips, but, in many cases they do not assist them to become confident with strategies for coping with disorientation and other problems while travelling alone (Blasch & Welsh, 1980, p. 465).

Other skills of independent travel that might concern the O&M and TI instructor (regardless of the students’ disability) are:

1. Such orientation skills as map reading and route planning
2. Valid concepts about the environment
3. Social competence, for example asking questions, getting directions, asking for help when needed, politely refusing assistance when not needed, and dealing with other aspects of a stigmatised identity
4. Independent decision-making and implementing the decision
5. Movement skill, and knowing the capabilities and limitations of such skills
6. Related skills, for example handling money, telling time, estimating distances, and reading signs and schedules
7. Skills in using whatever prosthetic devices might be necessary
8. Skill in using whatever types of transportation systems might be available
9. The ability to generalise these skills to as many environmental situations as possible (Blasch & Welsh, 1980).

The first comprehensive university training program for TIs, incorporating these concepts, was started by Blasch in 1977 at the University of Wisconsin. This was a two-year master degree program that focused on traditional O&M in the first year and on TI in the second year. This program was funded by the Rehabilitation Services Administration (1977-1981). The U.S. Office of Education funded a later baccalaureate program in TI at Western Michigan University in the fall of 1999. The purpose of the program was to graduate eight to 10 students each year who would teach people with disabilities other than blindness to travel independently. After five
years of operation, the program graduated 40 students as travel instructors. Of that number, 24 went on to study O&M at the master’s level and practice both TI and O&M. One went on to study rehabilitation teaching and rehabilitation counselling, and three become occupational therapists. The remainder continued to practice within the field of TI with people who had nonvisual disabilities (Helen Lee, personal communication, 1999). Those who integrated TI with O&M were described by their supervisors as being more knowledgeable about disabilities than the typical O&M instructor. They were appreciated by their employers for their broad knowledge and have shown that the integration of TI with O&M contributes to a valued professional (Blasch, et al., 2010).

Currently, no existing university preparation programs in the U.S. provide professionally trained TI. However, some O&M instructors provide travel instruction for individuals with sight and functional mobility problems. Some of these professionals are in private practice and some are already employed by school systems to teach both students with vision impairment and sighted students with other disabilities.

A research project that hired an O&M/TI professional from the graduate program at the University of Wisconsin to collect specific mobility data was funded by the Wisconsin Council of Developmental Disabilities (Blasch, 1982). The goal of the project was to evaluate the effectiveness of an O&M specialist also trained to teach mobility to sighted individuals with functional mobility limitations, and the value of such a program.

The individuals served had the following disabilities and diseases: cognitive, communication, hearing, behavioural, learning, cerebral palsy, cardiopulmonary pathology, muscular dystrophy, emphysema, and epilepsy. In seven percent of the students, vision impairment was listed as a secondary impairment. While there were many reasons for providing this service, one of the outcome measures used in this study was cost savings. Cost savings reflected the difference between the costs for specialised transportation provided prior to the implementation of this TI program and the costs for public transportation required after TI had been provided. A cost saving of $117,540 was realised in its first year of operation, based on 36 participants including the costs of the O&M instructor (Blasch, 1982). An even more telling measure of the perceived value of this program, however, may be that at the end of the project Milwaukee County (Wisconsin) Department of Public works hired the O&M instructor involved to continue providing a comprehensive mobility program for individuals with sight and vision impairment with functional mobility limitations.

While there are differences between O&M and TI, there appears to be more similarities than differences. TI for students who have disabilities other than vision impairment is generally a short-term program of instruction that often culminates with the use of public transportation to reach objectives. In contrast, O&M is a more comprehensive program of instruction that can take many months when comprehensive services are required. The basic structures of the two curricula, however, are much the same. The model of TI for children unfolds with a sequence of fundamental skills, pre-TI, and transportation training (Wiener & Siffermann, 1999). In contrast,
O&M for children consists of basic skills, indoor travel, and later O&M training in residential, rural, business, downtown, and the use of public transportation. However, the elements of concept development, spatial concepts, cognitive mapping, spatial updating, memorization, public interaction, problem solving, decision-making, and psychosocial functioning are common to both.

O&M training in Australia

In Australia O&M was formally introduced in 1951 marked by the opening of the first guide dog training centre in Perth, Western Australia. During the first 20 years of guide dog services (other guide dog organisations were also established in other states of Australia) the primary focus was on guide dog mobility (Harrison, 2010, p. 80). However, from 1970 this focus shifted when formal education in O&M (orientation and mobility cane skills) was introduced by Professor Stanley Suterko (visiting from the U.S.). Suterko delivered an O&M training workshop attended by guide dog instructors and allied health professionals (e.g., physiotherapists and occupational therapists) working at the National Guide Dog Training Centre, Melbourne, Victoria. In addition, Suterko assisted in writing the first O&M training course in Australia (Wiener & Welsh, 1980, p. 630). Since that time, throughout Australia, O&M services have been available as well as guide dog training. In most states it has been common practice for first-time clients to receive an initial assessment as a basis on which to identify their mobility preferences and need. If a client is suited for a guide dog and wants to use one as a mobility aid, then long cane training is usually a prerequisite to guide dog training. Long cane training assists a client’s concept development, orientation, and self-confidence when eventually working as a part of a guide dog unit.

Academic training in O&M, influenced by Suterko, resulted in an ‘in-house’ national training scheme. When the national training scheme ceased, organisations conducted their own training, and some in collaboration with local universities, using their academic expertise. Currently, two university master degree programs include training in O&M. First, the Master of Special Education (Sensory Disability), RIDBC Renwick Centre, and The University of Newcastle includes three O&M subjects as well as specialist subjects in vision impairment. Second, the Master of Human Services offers a major specialisation in O&M, Griffith University, Queensland.

Australia’s Social and Education Policies requiring O&M to be extended to all people with disability

Similar to events in the U.S., ‘TI’ has been practiced in Australia mostly by untrained carers of people with disability for many decades. However, TI has also been practiced by some O&M instructors but recognised as part of their O&M service. Hence, in Australia, some instructors provide O&M services to people both with and without vision impairment (e.g., Options4mobility, 2014). Timely questions to be asked by leaders of the O&M profession might include: what is the advantage of using a separate label for O&M and TI when both require the knowledge and skills of O&M? What is the disadvantage of simply offering
‘O&M’ to all people needing mobility service regardless of their vision status?

The need for O&M by people with disabilities has been largely in response to government and community attitudinal change requiring the inclusion of people with disabilities into mainstream social, education, and work environments. Over the decades, a range of government disability policies have necessitated people with disabilities being required to travel independently. Some examples of related disability policy follow.

A national policy of ‘deinstitutionalisation’, a continuing process from the 1970’s to the 1990’s influenced people with disabilities to move from institution-based to community-based accommodation (Doessel, Scheurer, Chant, & Whiteford, 2005; Lindsay, 1996; Young & Ashman, 2004). The ‘International Year of Disabled Persons’ (IYDP) in 1981 increased the awareness of the government and community to the challenges experienced by people with disabilities and helped to reduce barriers that prevented people with disabilities achieving equality with able-bodied people. In Australia, after the IYDP, a range of initiatives followed that included: a move from institutional-type services towards a community-orientated service provision; The Disability Services Act in 1986 that provided funding and support services for people with disabilities; and integration initiatives that enabled people with disabilities to participate in mainstream education, employment, and recreation activities.

Examples of other policies that supported integration of people with disability into mainstream society included the: (i) Disability Reform Package (1991) that reformed income support payments for people with disabilities aiming to encourage their integration into the workforce (ii) Disability Discrimination Act (1992) aimed at eliminating discrimination against people with disabilities as well as ensuring equality and promoting acceptance and the rights of people with disabilities (iii) Commonwealth Disability Strategy (1994) developed to ensure people with disabilities had equal opportunity to access all Commonwealth Government programs, facilities and services (iv) 1998 Commonwealth – State Disability Agreement and (v) National Disability Strategy 2010-2020.

The development of the National Disability Strategy (NDS) is a commitment by all governments to a unified, national approach to maximise the participation as equal citizens of people with disability, their families and carers in Australian society (Australian Government Department of Social Services, 2014). Currently, as part of the NDS, the National Disability Insurance Scheme (NDIS) is being rolled-out in some states of Australia with provisions that will eventually extend to all states and territories. Briefly, the NDIS is a referral service to assist people with permanent disability to access mainstream, disability, and community support. Eligible individuals with disability will be funded annually to purchase services, aids, and equipment from registered service providers (NDIS, 2014). Clause 34 of the National Disability Insurance Act provides guidelines about what supports and services can be funded to assist a person to achieve their goals, become independent, develop skills for day to day living, take part in the community, and work and earn money (Commonwealth of Australia, 2012).
Australia’s School and Post-School Education Policies necessitating O&M

Today in Australia, the majority of special education is provided in mainstream schools with specialist support services. Special education is delivered in a variety of ways including (a) in regular classrooms with modified curriculum or teaching support; (b) small classes within a regular school; or (c) enrollment in a special school although only a few special schools are available for students requiring intensive support. At the conclusion of high school, students with disabilities can access ‘post-school options’ or ‘transition to work programs.’ These two-year transition programs are for school leavers with disability who need support to make the transition from school to work, or further education. However, a prerequisite to participation in these important programs for individuals with disability is to “use mainstream transport to get to and from the program” (NSW Family & Community Services, 2014). Hence, the expectation for students who want to participate in the programs to access work and further education is to travel independently.

“Extending the Product Line: O&M for all individuals with mobility needs”

Currently in Australia, there are hundreds of individuals with disabilities of all ages who are expected to travel safely and independently to school, work, and recreational activities. However, many of these individuals have not yet received professional O&M. The major reason for this is that the majority of O&M specialists who have the qualifications and expertise to service people with a range of disabilities are employed by organisations that provide services exclusively to people with vision impairment.

It is timely, particularly under Australia’s National Disability Insurance Scheme, to consider extending O&M services to include people with a range of disabilities as well as vision impairment (Figure 1). In this way, traditional O&M organisations can turn from being ‘exclusive service providers’ to ‘inclusive service providers’ providing essential mobility services to all people with disabilities with the added advantage of increasing an organisations referral numbers. Some O&M organisations in Australia already provide O&M to people with disabilities in addition to vision impairment. For example, people with vision impairment and a learning impairment; a hearing impairment; a physical impairment; an intellectual disability; or a mental health issue. The opportunity provided by the NDIS would, therefore, be a relatively smooth transition from an exclusive O&M service to an inclusive O&M service.

The foundations to extend professional training in O&M to other disability areas other than vision impairment already exist via the two master degree programs that offer O&M subjects within them. Subjects in O&M related to other disability areas (e.g., learning impairment, cerebral palsy) could be taught by practicing O&M instructors with an academic and professional background in disability. Alternatively, existing postgraduate special education degrees, of which there are many, might also include O&M/disability subjects into which O&M specialists and/or students could enroll.
The following case is a typical example of an O&M program delivered in 2013 to a person with vision with additional disabilities. The program was provided by an O&M specialist with qualifications in O&M and disability/psychology.

Peter

At age 19, Peter had autism and a moderate intellectual disability. He had speech limitations and echolalia and also experienced difficulty sleeping resulting in him occasionally falling asleep in public. He recently completed high school and was required to attend a ‘transition to work program’ where he and his co-workers would visit various locations to participate in lawn mowing and gardening. However, to be included in this program, it was expected that Peter travel independently twice a week to the base-facility to meet his co-workers before heading out to the various gardening jobs with their supervisor. Peter had received some O&M two years prior, and had learnt strategies to cross particular controlled and uncontrolled roads independently on route to a local shop close to his home. This route served to increase Peter’s ability to cross roads as well as his self-confidence to travel alone. The O&M program also increased the confidence of Peter’s parents and their trust of Peter’s travel ability preparing them for future O&M he might undertake.

The route to work required Peter to travel on a bus from his home for approximately 15 kilometres (nine miles), exit the bus at a major bus station, and then walk a route to work that included a zebra crossing on a major busy road. Peter achieved independence on this route over a period of 14 months. The major teaching strategies that took into account Peter’s needs and strengths included:

(i) Wearing a bag, hat, or item of clothing in bright red, yellow, or orange to increase his safety and visibility to motorists, bike riders, and other hazards when travelling;

(ii) Backward chaining (to maintain his focus and motivation): The route was broken into three main teaching segments taught in the following order (a) exit bus stop (near work place) walking to the base-facility (b) home bus stop to exit bus stop (near work place) (c) from his home walking to home bus stop. Importantly, it was only after Peter was independent on a segment did he then move on to learn the next segment;

(iii) Zebra road crossing strategies (strategic positioning on the crossing in an area highly visible to traffic; positive reinforcement of the strategy to cross when there were either no vehicles or when the vehicles had stopped);

(iv) Bus travel (learning to identify the bus using a cue card; hailing the bus, entering the bus and presenting his travel ticket, seat positioning near the front of the bus, identifying the ‘white bridge’ landmark where he rang the bus bell; exiting the bus) with the instructor using positive reinforcement and succinct instruction;

(v) Walking the route from his home to the home bus stop crossing one controlled crossing;

(vi) An alarm was set to sound approximately one kilometre from the exit (work) bus stop. Peter, if
Figure 1. An expanded future for O&M services in Australia and the U.S.

Australia

- 1970s-present: Social & education policies require people with a disability to be mobile so they can access services, and the community;
- O&M training to people vision impairment with additional disabilities;
- O&M training to people with sight who have mobility needs;
- 2014: National Disability Insurance Scheme: Payment to O&M organisations that provide services to people who have mobility needs.

USA

- 1950s: Hines VA Hospital O&M training to people with vision impairment;
- O&M training to people with vision impairment with additional disabilities;
- O&M training to people with sight who have mobility needs;
- 2014: U.S. Association of Education and Rehabilitation (AER) of Blind and Visually Impaired approve O&M instruction to individuals with sight who have mobility needs.

Expanded Future

O&M training for all people with disabilities who have mobility needs

Benefits of an expanded future

- Organisational cost efficiency
- Increase in O&M referrals
- Responds to social & education policy and practice
asleep, woke to turn the alarm off and attended to seeking the landmark where he reliably pressed the bus bell;

(vii) Presenting a cue card to the driver if assistance was required;

(viii) Phoning his parents on his mobile phone when he had arrived at the work place (i.e., Peter rang his parents and they confirmed with him that he had arrived at the work place);

(ix) Implementing behavioural teaching strategies such as fading, modelling; positive reinforcement; and criterion setting (i.e., once it was believed that Peter had acquired a skill such as reliably pressing the bus bell to exit the bus, then this reliability was tested by setting a criterion of eight times. That is, if Peter reliably pressed the bell eight consecutive times independently over eight training sessions, then it was assumed he had acquired this skill. Criterion setting was applied to the fading process and other training segments on the route).

Peter currently travels this route safely and independently. The training approach and techniques taught to Peter are similar to those used in O&M programs with people with similar disabilities who also have vision impairment.

Summary

The profession of O&M for people with vision impairment began in the U.S. and Australia with instructors employed because of their experience in the rehabilitation of physically disabled Veterans and/or their professional backgrounds in corrective, occupational, and physical therapy. As the mobility program developed and professional academic training of O&M specialists expanded, so too did the knowledge and in-depth understanding of the many facets of independent mobility. As the profession grew, the services expanded to a diverse population of individuals with vision impairment. Based on the success of O&M programs, non-vision impaired individuals with a disability wanted this same level of instruction to achieve safe and independent mobility. Because of the specialised training and expertise of the O&M instructor, as detailed in the specific example presented, it is evident that the O&M professional is the most qualified and knowledgeable to provide this instruction. Indeed, it might be considered a moral and ethical obligation of the O&M profession to provide mobility instruction to those in need even if individuals are not vision impaired. The US Association of Education and Rehabilitation of the Blind and Visually Impaired (AER) recently passed a position paper supporting the concept of O&M instructors expanding their teaching of mobility to the non-visually impaired.

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References


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