



Equipment and Assistive Technology Initiative (EATI) Evaluation

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Executive Summary

The Equipment and Assistive Technology Initiative (EATI) is an employment-focused program that aims, through the provision of assistive technology, to move people with disabilities towards greater participation in the labour force. However, obtaining employment involves many more aspects than acquiring assistive technology alone. Obtaining employment can involve a complex array of factors, from environmental to physical and psychosocial elements (Chapin and Kewman, 2001; Mechanic, Bilder and McAlpine, 2002). Given the complex nature associated with obtaining employment, this evaluation developed the following evaluation strategy:

Evaluation Strategy

The research team conducted this evaluation with the support and involvement of the *Equipment and Assistive Technology Initiative (EATI) Evaluation Committee*, made up of stakeholders from within the *British Columbia Personal Supports Network (BCPSN)* and the Government of British Columbia's *Ministry of Social Development (MSD)*, as well as administrators and employees working with EATI and community members (see *Appendix B*). Collaboratively, the following research objectives were identified:

1. **Explore the impact of the assistive technology or equipment provided through EATI on the lives of people with disabilities, with particular attention paid to employment goals;**
2. **Examine the impact of joint decision-making between government and community organizations on the adaptability, flexibility, effectiveness, and efficiency of EATI as a program; and**
3. **Explore the impact of the *Participation Model* on individuals with disabilities who received assistive technology or equipment through EATI.**

The Participation Model

The Participation Model, or philosophy that underlies EATI, was developed to address the lack of a comprehensive assistive technology program in British Columbia (PEADC, 2006). As a person-centred approach to the assessment, selection and attainment of assistive technology, the Participation Model continues to exist as the foundation for program decision-making.

Stemming from, the Participation Model, EATI has developed into a program that holds very unique elements. EATI requires no means testing, sets no limits as to the cost of assistive technology program participants can apply for, and holds no list of pre-approved assistive technology from which participants must attempt to select the best one for their needs. Perhaps

most notable, however, is that EATI affords many participants the opportunity to assess their own needs and determine what assistive technology, device or equipment would work best for them. This represents a significant shift from traditional assistive technology (AT) programs. In this shift EATI has created a participant-driven program for supporting people with disabilities in their movement towards employment.

Method

A mixed method approach was designed to meet the agreed upon three objectives. Semi-structured interviews with program participants and key informants were completed in addition to a survey offered to all those who had interacted with EATI. Collected information was examined in light of aggregate data provided by EATI and detailed information obtained through email and personal communication with administrators of the program. 16 interviews with program participants and 8 interviews with key informants were held. Data from 357 survey respondents who applied for assistive technology were closely examined.

Survey

A survey was designed to determine, among other things, the type of assistive technology received, the type of assessments individuals obtained, how AT impacted program participants, and whether the AT individuals needed was obtained. Survey respondents reported obtaining a wide range of assistive technology. The types of assessments held or conducted for this AT also varied. For example, an individual may have obtained a professional assessment for a motorized mobility device but conducted a self-assessment for a computer. Respondents were asked to rank the 'top 3' (or fewer) assistive technology they received from EATI in terms of how useful it was to them. Rankings in relation to the type of assessments conducted indicated self-assessments were conducted in over one third of all assessments reported. Slightly more common were assessments conducted jointly by 'both' a program participant and a professional assessor. Regardless of the assessment, survey respondents overwhelmingly reported receiving the assistive technology they needed (94.63%). Those who conducted an assessment by 'both' (a self-assessment together with a professional assessment) almost always reported receiving the right AT (99.56% overall for 'both' as compared to 91.93% for self-assessments and 91.7% for professional assessments).

Finally, from the survey it was learned the AT program participants received through EATI was holding vast impacts on their lives and employment. Respondents indicated their AT was supporting them on a whole range of areas associated with employment, but most substantially to 'volunteer,' 'develop new skills,' and 'communicate.' AT through EATI was also reported

to help program participants do a number of things within their personal lives as well. Most significantly, this included helping people to ‘get out in the community more,’ to ‘do fun things,’ and to develop an ‘increase in confidence;’ things that arguably can impact an individual’s movement towards employment as well. In addition, respondents largely reported being satisfied with the AT they received and continuing to use it and use it often.

Interviews with Key Informants

The interviews with key informants, or those who hold a close relationship to EATI, highlighted just how essential EATI is to people with disabilities in BC and the high level of need in the province by people with disabilities for AT. Informants commented on watching EATI “change lives” for the better. They also described how much of EATI’s success is due to the flexibility of the program and more importantly, the Participation Model, that not only ensures the program is participant-centred, but serves as the program’s “anchor” as well. Informants described the Participation Model as essential to joint decision-making given the different perspectives and cultures the government and community partners bring to the program. Informants commented that continued work towards building and maintaining trust and confidence in the other partner is needed, but despite this challenge, EATI has succeeded to build a partnership founded on joint decision-making and consensus.

Within many of the informant interviews, communication was highlighted as an area for improvement. Communication within the program itself, between government and community partners, but also outside the program with vendors, health professionals, and program participants requires attention. Yet EATI has managed to build good relationships with vendors, and more importantly with program participants. EATI continues to strengthen the relationships with participants through its attempts to ensure participants receive the right AT for their needs, but also that participants know how to use the AT they are provided.

Interviews with EATI Program Participants

Program participants reported being largely happy with EATI, the AT they received through the program, and the relationships they built with EATI Navigators, or EATI case managers, during the process. In fact, the relationships participants built with Navigators were described as a highlight of the program. Additionally, many participants explained how due to limited income and financial constraints, purchasing the AT without EATI’s support would have been impossible.

Participants’ experiences of receiving AT through EATI varied. Some found it to be “fine,” “good” and manageable, while others, often due to their disability, found the process onerous

and challenging. Regardless of each interviewee's disability type, communication difficulties within the program and the lack of face-to-face contact were reported to complicate the process. For example, the requirement to speak to three Navigators during the application process was repeatedly described as frustrating. Once connected with the final Navigator, however, participants described a positive assessment process. Many of the participants reported a "combined effort" or the collaborative involvement of family, friends, health professionals, and the Navigator as part of completing a self-assessment, where all those involved were perceived to be beneficial to the process. While some appreciated the opportunity to self-assess their needs, others commented on desiring the support of a professional. Regardless of the type of assessment, however, most participants received the AT they needed. AT was described as helping to reduce their reliance on friends and family, while helping to overcome functional barriers. For others, the AT also helped to come to terms with an acquired disability.

Although none of the interview participants were employed, most were engaged in some form of volunteer work and many commented on pursuing self-employment as a means for managing their needs. Some participants, however, reported a need for more training before being able to feel ready to approach employment.

Results

A thorough discussion concerning each of the following findings has been included within the body of this report.

Overall, this study found:

- EATI is meeting unmet needs for assistive technology among people with disabilities in BC.** It is impacting peoples' lives by enabling them greater participation in society, for example, to 'get out in the community more,' to 'do fun activities,' and to feel 'increased confidence' in their abilities.
- EATI is impacting people with disabilities concerning employment.** Participants overwhelmingly reported their assistive technology is helping them to 'get a job' and 'move towards employment.' Their assistive technology is also helping them 'to volunteer,' 'develop new skills' and increase their ability 'to communicate.' EATI could, however, become more connected with other government and community programs geared towards employment, such as developing a closer working relationship to refer, or even fast track, program participants to employment counsellors, job coaching, skills training, and support for starting a small business.

3. **Joint decision-making has helped EATI to develop to become a flexible and effective program.** It has helped EATI to adapt to new participant needs, to be flexible in the provision of funding, and to be effective in supporting participants in their movement towards greater labour force participation. However, there continue to be challenges associated with bringing the government and community partners together due to the varying perspectives each side brings to the program. These challenges impact communication, which can consequently impact joint decision-making.
4. **The Participation Model has been useful in bringing the government and community partners of EATI together to meet on common ground.** Joint decision-making involves a return to the Participation Model as the program's foundation. The principles and values surrounding the Participation Model continue to drive the program.
5. **EATI faces challenges associated with communication.** As EATI works to provide services throughout the province of British Columbia through a primarily virtual office environment, it has implemented some strategies to best manage its communication needs. According to the information collected from program participants, vendors, health professionals and informants within EATI, overall communication within the program continues to constitute an area for improvement. Improved communication between the participant and Navigator and vendor is particularly needed so information does not "get lost" or cause unnecessary delays serving to impact the efficiency of the program; something EATI has been working to improve.
6. **The three-Navigator approach was put in place to address a number of challenges facing EATI but it has unfortunately, led to communication challenges, and frustration and confusion for program participants.** Requiring program participants to work with three Navigators during their application process constitutes an overly bureaucratic approach, particularly given the Participation Model's values of providing supports that are "barrier free" (PEADC, 2006).
7. Originally envisioned to provide assistive technology primarily to people with physical disabilities, EATI has done its best to respond to the need for AT by people with a range of disabilities. **EATI currently provides AT to people with all disabilities, however, people with mental health issues and or cognitive or intellectual disabilities require additional support to access equitable service.**

8. **Participants have largely obtained the assistive technology they believe they needed and the vast majority of participants continue to use the assistive technology they obtained through EATI.** A high level of AT use lends support for the Participation Model and the involvement of program participants in the selection and assessment process.
9. **Collaborative assessments for assistive technology that involve program participants and professionals occur most often.** Although sometimes professionals are required to participate in the assessment process (such as for motorized assistive technology), these collaborative assessments almost always lead to participants obtaining the assistive technology they believe they needed.
10. Due to limits placed on staffing and administrative costs, EATI reviews approximately 50 applications for funding each month. All additional applications are placed on a wait list. **For some, this has meant a rather long wait from application to receipt of AT.** Although the length of the wait list has been steadily declining due to a number of possible factors, the decrease in the number of incoming applications does not represent the real demand for AT within the province. Rather it may represent those who are aware of the program have been or are being served. If EATI were to advertise throughout the province it is likely there would be a much greater influx of applications owing to an even longer wait time for program participants to access AT.

Conclusion

The Equipment and Assistive Technology Initiative (EATI) is working to move people with disabilities towards employment. EATI is filling gaps in services by offering province wide support to adults with *all* types of disabilities and offering *all* types of assistive technology without the requirement of means testing for eligibility. As all new programs face challenges in their development, EATI is overcoming the obstacles associated with developing a program from scratch. Fortunately, EATI's strength lies in the collaborative relationship it has built between the government and community partners. This unique partnership and the joint-decision making that stems from it, underpinned by the philosophy of the Participation Model, gives EATI its solid foundation.

Equipment and Assistive Technology Evaluation

Background

The need for increased access to assistive technology (AT) to enable people with disabilities to move towards employment has been well documented (Boag, Larsson and Ostergren, 2011; Yeager, Kaye, Reed and Doe, 2006; HRDC, 1998; Sauer, Parks and Heyn, 2010). Stated clearly in a vision paper by the Federal, Provincial and Territorial Ministers Responsible for Social Services, “It is essential that governments and Canadians work in partnership in order to achieve the vision of full participation” (HRDC, 1998). Yet, employment programs and the provision of AT to people with disabilities differ substantially across provinces in Canada (see for example, Ontario Ministry of Health and Long Term Care, 2008; Alberta Human Services, 2012).

The lack of a comprehensive, coordinated and integrated provincial program for accessing assistive technology in BC prompted the Government of British Columbia’s *Ministry of Social Development* to support and jointly run the Equipment and Assistive Technology Initiative (EATI), a program initiated and developed by the *British Columbia Personal Supports Network (BCPSN)*. A cooperative relationship between MSD, BCPSN, and other non-profit and for profit organizations and businesses has since resulted in ongoing development and management of the *Equipment and Assistive Technology Initiative (EATI)*. This represents not just a unique partnership of community and government partners, but a unique program aiming to reduce functional barriers to employment for people with disabilities in British Columbia.

Evaluation Strategy

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Program Profile

Background

The Equipment and Assistive Technology Initiative (EATI) began as part of the vision held by the British Columbia Personal Supports Network (BCPSN) as a way to ensure people with disabilities have access to needed supports within British Columbia. Originating in 2004, the *Provincial Equipment and Assistive Devices Committee (PEADC)*, a collaborative team of over 30 organizations, worked to engage the Government of British Columbia to improve their support to people with disabilities in the province. PEADC played a significant role in the development of the joint community and government *Personal Supports Program Working Group* in 2005, established to create a coordinated provincial plan for “the provision of personal supports, with equipment and assistive devices as the starting point” (PEADC, 2006). This working group helped to facilitate the progress and development of Personal Support Centres, which were planned for five regions within the province.

PEADC urged the Government of British Columbia to merge the wide array of government programs into one *Personal Supports Program* under the government’s *Disability Strategy*. The government announced a disability strategy during the 2005 election campaign and PEADC worked to convince government to include personal supports as an element of the disability strategy. In 2006, the Personal Supports Program Working Group, made up of PEADC and government representatives from several Ministries, signed off on the values and principles for this program and the *Participation Model* as the delivery mechanism (see *Appendix C* for the Participation Model diagram). This was intended to begin the process of creating a provincial program that would maximize access to assistive technology (similar to Ontario and Alberta), end duplication of efforts and services, and promote the goal of full participation for people with disabilities (PEADC, 2006).

In 2007, the *Low Tech Assistive Devices Program (LTADP)* for British Columbians who experience vision loss was established with the financial support of the *Ministry of Employment and Income Assistance (MEIA)*. Underlying this program was the Participation Model, which would later become instrumental in the development and management of EATI.

Unfortunately, the global economic concerns of 2007 and 2008 held a ripple effect that was felt throughout Canada and resulted in financial restraint measures put in place on every level of government, but also within small, medium, and large businesses (Ocaya, 2012). In British Columbia, the economic downturn was described as “an inescapable economic reality” and a “freeze” was placed on government funding (Fowlie, 2012) (see Appendix D). This “freeze,” however, occurred as unemployment rates had increased for all British Columbians, leaving people with disabilities to encounter great challenges in obtaining employment (BC Stats, 2012; BC Stats, 2013). In early 2010, due to this economic downturn, funding was limited and

the planned PEADC's demonstration and Personal Support Centres did not proceed as planned. At this time, the British Columbia Personal Support Network (BCPSN) was created by PEADC in order to keep the Participation Model going despite the economic situation. The joint community and government Personal Supports Program Working Group endorsed the formation of the BCPSN group and the use of the Labour Market Agreement funding as the best opportunity. The office occupied by the BCPSN and its employees became known as the 'Hub' for its newly created EATI program. Although some staff work from the BCPSN Hub office, the program primarily occupies a virtual office environment. This not only solved the funding issue for office space, but also allowed EATI program staff that work one-on-one with program participants called "Navigators," to be spread throughout the province. It also enabled Navigators, all of whom are people with disabilities themselves, to work from home, serving to reduce the challenges associated with getting to and from a workplace.

Realizing some people need face-to-face contact, the development of the *Network Partners Council*, made up of thirteen organizations and the Ministry of Social Development, enabled EATI to operate throughout the province by encouraging potential participants to use the Network Partners' offices as a "door" to the EATI program (see *Appendix E*). This cooperation among organizations, including the Ministry of Social Development, is highly unique.

In 2009, through federal transfer funding from the Government of Canada to the Government of British Columbia, *Labour Market Agreement (LMA)* funding was provided to the BCPSN (Government of BC, 2011). This resulted in a number of immediate impacts, most notably the Government of British Columbia's *Ministry of Social Development* would support the BCPSN and in fact, jointly develop and run the newly created program- EATI- by way of administering funding through the *Ministry of Jobs, Tourism, and Innovation*. Initially, the program sought to support people with disabilities move towards volunteer and employment opportunities. However, in the second year of operation, this goal was changed to the sole focus of supporting people with disabilities to move towards employment, while recognizing volunteer activities may be a step towards an employment goal and increasing one's labour force participation. Those with an interest in volunteering continue to be encouraged to participate in the program in so far as this constitutes a step towards their employment goal. This shift for EATI was in part because LMA funding is specifically designed to support unemployed persons who are not eligible for Employment Insurance (EI) benefits. Additionally, those who are employed but may not hold a high school diploma or recognized certification, or who have low levels of literacy and essential skills (low skilled) may also be eligible for funding (HRSDC, 2011).

By January 2012, EATI had over 1,000 participants and had provided funding for assistive technology to people with disabilities throughout BC. It was at this time that the BCPSN and MSD approached Dr. Tim Stainton and Dr. Lyn Jongbloed at the University of British Columbia to initiate an evaluation of the program. The Social Sciences Humanities Research

Council (SSHRC) provided initial funding for the project. Labour Market Agreement funding was provided to ensure the completion of the project.

4

**This report represents information gathered from
January 2012 to June 2013.**

Participation Model

Although EATI continues to change and adapt as the program develops, some key features of the program remain, namely the *Participation Model* (see Appendix C). This Model or philosophy driving EATI represents a means for structuring the program such that each EATI participant and their goals are central to the program and the focus of the program's involvement (PEADC, 2006). In this way, EATI represents, as one informant to this study stated, an "unprecedented" approach to assistive technology provision in British Columbia. .

Additionally, PEADC (2006) identified values, which were adopted by the joint community/government Personal Supports Program Working Group that same year. These guide EATI as they represent what the Participation Model was built upon. These include:

- ✓ **Inclusivity:** British Columbians with disabilities have the right to participate fully in society and have access to the personal supports that they need to do so.
- ✓ **Choice:** British Columbians with disabilities have the right to self-determination and will be given every opportunity to make decisions about the resources they need for their participation. Individuals who require assistance with their decision-making can be represented by their family and/or support network.
- ✓ **Accessibility:** Access to personal supports is based on need and is not tied to other factors such as individual or family income, assets, and eligibility for other services, geographic location or age. Disability programs and supports are barrier free and able to accommodate all forms of communication.
- ✓ **Respect:** Programs and supports respect language and cultural diversity, protect individual privacy and treat all citizens equitably, compassionately and respectfully.

EATI vs. Other Assistive Technology programs

EATI stands apart from other programs that provide assistive technology to such an extent that a true comparison of EATI with other programs is akin to comparing ‘apples with oranges’. This is because EATI, at its core, operates in some fundamentally different ways.

1. No list of approved AT

One of EATI’s most notable differences from many other programs that deliver assistive devices to people with disabilities throughout Canada is that EATI has no list of “approved” assistive technology for program participants and instead remains open to funding any new AT as program participants’ needs direct. In keeping with the Participation Model, EATI provides participants the opportunity to determine the solution that would best help them overcome functional barriers based on their personal needs and goals. This is different from many programs in Canada that maintain lists of approved assistive technology, devices and equipment, serving to limit choice for consumers and often resulting in out-dated technology. This means the assistive technology a person requests from EATI can be selected based on his or her needs rather than what may work best from a preapproved list of items.

2. Opportunity for self-assessment

Where other programs in Canada typically require a health care professional, such as an occupational therapist, to assess an individual’s needs and then prescribe assistive technology, EATI provides opportunity for individuals to self-assess their needs and determine what they believe would be best suited for them to attain their goals. Upon meeting certain criteria, such as possessing the disability for some time, previously using or owning AT, and being familiar with types of AT, EATI invites individuals to assess their own needs and determine what AT would best work for them. Together, Navigators and participants decide whether a professional assessment is required. Professional assessments are not discouraged, however, and often individuals make decisions based on the support of or suggestion from professionals. A formal prescriptive assessment from a professional is required in the case of motorized mobility assistive technology. The opportunity for self-assessment, again in keeping with the Participation Model, is intended to place the power of decision-making in the hands of program participants to select and apply for what they need. This “self-assessment” is also intended to reduce the time-consuming and costly process of obtaining professional assessments, particularly in situations when a professional prescribes a device the individual already knew he or she required.

3. Joint decision making by government and non-profit

EATI is structured so that decision-making for managing the program is not held solely by the British Columbia Personal Supports Network (BCPSN) or the Ministry of Social Development (MSD). Instead, it functions as a collaborative process whereby difficult decisions are shared and consensus obtained. Policy has been created for the program and agreed to by both stakeholders, owing to common ground having been established. This unique relationship, which involves sharing program decision-making, also shares the same database of information. The database, created by the BCPSN specifically for EATI, can be accessed remotely by the government and community partners through a Virtual Private Network (VPN). Although much of the program decision-making is democratic, the approval or adjudication of assistive technology rests with the Ministry of Social Development. The Navigators, in effect, work as advocates for each program participant. The task of approving applications typically involves the examination of the participant's goals in relation to the AT requested. This examination may require an application be returned to the participant for additional attention, clarity, or detail. For difficult decisions concerning the approval of assistive technology, such as when a specific device costs far beyond what the standard price of a 'typical version' may cost, meetings between the government and community members, and between the government and community partners with the EATI Partners Committee (EPC) may be arranged. For particularly difficult decisions, such as whether or not a smartphone (i.e. *iPhone*) could be approved as assistive technology, the Assistant Deputy Minister and Deputy Minister have been asked to become involved. This ability to involve those in senior positions within the Ministry of Social Development ensures not only multiple layers of safeguards, but offers something equally important; it ensures all stakeholders at all levels of EATI are aware of and involved in the day-to-day operations, the decision-making, and the shifts that have occurred since initial implementation.

4. No Price Limit on Assistive Technology

Not only does EATI provide the opportunity for many program participants to determine the assistive technology they believe will help them to overcome barriers to employment, EATI does not set a price limit on the assistive technology requested. This offers participants the ability to search out and explore AT that can best suit their needs rather than selecting from what may be available within a certain price range. The EATI program website states "There is no set price limit on the equipment provided to each person as long as the device helps to overcome an impairment and is related to employment goals" (BCPSN, n.d). Thus, each application for assistive technology is not scrutinized based on the cost associated with specific devices or equipment, but rather examined for the rationale participants provide linking the assistive technology requested to their specific needs. In this, program participants describe how the AT is required for them to overcome barriers to participation in order to move towards

their individual employment goals. By removing cost from the discussion, program participants face fewer restrictions to envisioning what assistive technology could support them on their path to employment.

5. No Means Testing

One final element that makes EATI stand apart from many other programs that provide assistive technology is the lack of a means test or ‘proof’ that program participants must provide indicating they cannot afford to access the assistive technology they require. This is an important part of EATI for “restrictions in means-tested or needs based programs that strictly and harshly limit both the income and the assets (usually called resources) that program participants or beneficiaries can earn or possess” (SNHU, 2008, p.22) often lead to a reduction in “self-sufficiency” because participants are forced to begin “from a less robust economic starting point than other people” (SNHU, 2008, pg.33). Additionally, means testing “focuses on income rather than expenditure, and so does not consider any extra costs associated with impairment” (Gooding and Marriot, 2009, pg. 692). By not requiring a means test to obtain assistive technology, EATI initiates relationships with program participants based on respect and understanding of the challenges associated with obtaining AT.

EATI differs from other assistive technology programs represent a significant shift in thinking about the development and creation of programming for people with disabilities.

Services Available in British Columbia

Prior to EATI, which now represents the only non means-tested provincial program for people with *all* types of disabilities to access *all* types of assistive technology for employment purposes, the provision of assistive technology in British Columbia was disjointed and organized through a range of organizations. Although *WorkBC*, created in August 2012, provides support to people with disabilities, income is assessed as part of the eligibility requirements for the program. Additionally, *WorkBC* does not provide assistive technology to individuals based on their employment goals, but only when an individual has “confirmed employment” or training organized for which AT is needed. *WorkBC* provides referrals to ATBC, which then require a professional assessment as part of the application for assistive technology (*Douglas College WorkBC Centre*, personal communication, June 13, 2013).

This lack of a comprehensive province-wide program for *all* adults with disabilities meant that some people with disabilities did not qualify for assistive technology at all- in other words- they fell through the cracks. The fragmented service provision not only led to frustration for service users but occasionally a duplication of efforts by service providers. For example, in British Columbia a range of organizations have provided the distribution of assistive technology and devices. These include:

- The *BC Employment and Assistance (BCEA) for Persons with Disabilities Program*
- *Medical Services Only (MSO)*
- The *Ministry of Social Development's Employment Program of British Columbia (EPBC)*
- The *B.C. Palliative Benefits Program* offered through the *Ministry of Health*
- *Non-Insured Health Benefits* from the *First Nations and Inuit Health Branch of Health Canada*
- The *Ministry of Advanced Education's* provincial *Permanent Disability Program*
- The *Ministry of Public Safety and Solicitor General's Crime Victim Assistance Program*

In addition, national, provincial, regional, and charitable organizations provide equipment and assistive devices.

- *Multiple Sclerosis Society of Canada*
- *CanAssist*
- *Tetra Society*
- *Kinsmen Foundation of BC and Yukon*
- *Canadian Red Cross*
- *ALS Society of BC*
- *Muscular Dystrophy Canada*
- *GF Strong Rehab Centre*
- *Disability Resource Centres, such as Richmond's Community Access Point (CAP)*
- *Communication Assistance for Youth and Adults (CAYA)*
- *Power to Be Adventure Therapy Society*

Although this list of organizations that provide assistive technology is not exhaustive, it is intended to highlight the disconnected approach to the provision of assistive technology to

people with disabilities in British Columbia. (See details for each organization in *Appendix F*). Despite the range of programs and organizations that currently exist for people with disabilities in BC, the creation of EATI was intended to fill an unmet need for assistive technology.

Some of the restrictions to EATI are in place due to the Labour Market Agreement (LMA) requirements, such as the requirement for participants to not have received Employment Insurance (EI) benefits in the past three years.

4

To be eligible for the EATI program individuals must be:

- ⇒ A person with a disability who has an employment-related goal, recognizing that volunteering can be an important step toward employment;
- ⇒ 18 years of age or older;
- ⇒ A resident of British Columbia;
- ⇒ Unemployed OR employed with low skills (for example, low English literacy, incomplete high school) and looking to upgrade their skills;
- ⇒ Ineligible for Employment Insurance (EI)
- ⇒ Have not received EI benefits in the past 3 years; or
- ⇒ Have not received EI maternity or parental benefits in the past 5 years;
- ⇒ Able to demonstrate a need for assistive technology;
- ⇒ Unable to access funding through other provincial government programs or private insurers; and
- ⇒ Part-time students and those who are over the age of 65 years old, who are available for work, may be eligible for EATI.

Overall Evaluation Method

Prior to beginning the study, ethics approval was sought from the University of British Columbia's Behavioural Research Ethics Board (BREB) (see *Appendix G*).

Upon receipt of ethics approval, the research team proceeded to examine the following three objectives:

1. **Explore the impact of the assistive technology or equipment provided through EATI on the lives of people with disabilities, with particular attention paid to employment goals;**
2. **Examine the impact of joint decision-making between government and community organizations on the adaptability, flexibility, effectiveness, and efficiency of EATI as a program; and**
3. **Explore the impact of the *Participation Model* on individuals with disabilities who received assistive technology or equipment through EATI.**

A mixed method approach involving both quantitative and qualitative data collection was used. This included a survey and interviews with EATI program participants. Additional information was obtained from interviews with key informants. Together this data provided an in-depth picture of the impact of EATI on employment, and on the lives of people with disabilities in British Columbia who have received assistive technology through the program. Interviews offered insight into the more nuanced aspects of EATI, which can impact employment (i.e. confidence), and program development. The interviews also offered “insider” information pertaining to how joint decision-making (the partnership between government and a non-profit organization) impacts the overall program. Supplemental information by way of aggregate data was provided by the EATI database.

Method

In order to best reach the sample population and engage EATI participants, a website was developed to serve as a platform to host the survey, recruit individuals for interviews, offer information about the study, and eventually to hold the final report, published articles and presentation material from the project. Titled the *UBC EATI Evaluation Website* (<http://eatievaluation.sites.olt.ubc.ca/>), the site was developed through consultation with the *Western Institute for the Deaf and Hard of Hearing* and the *Neil Squire Society* to ensure broad accessibility, and with support from the University of British Columbia.

Recruitment & Sample

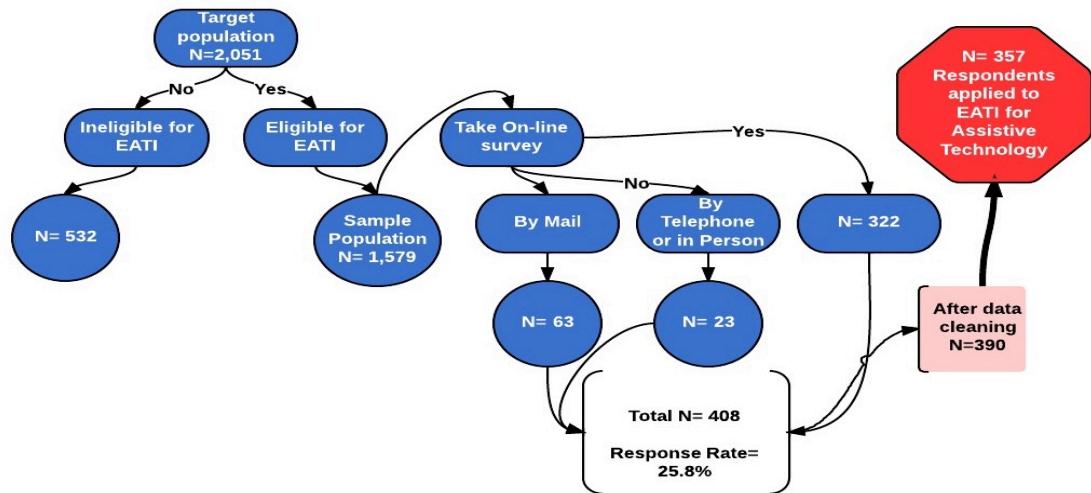
EATI participants were recruited to participate in this study by way of email or mail. Requests to participate were sent out by email beginning the week of December 11, 2012 to all those who had been in contact with EATI and had provided their electronic contact information to the program.

On behalf of the research team, EATI sent an email containing a link to the EATI Evaluation Website to all individuals who had previously provided their email address to EATI. By opening the email and clicking on the link provided, program participants were taken to the website where they could review the consent form, indicate they agreed to participate in the study, and complete the survey. As some individuals had not provided an email address to EATI during their contact with the program, a hard copy package containing the survey and consent form were mailed to those who had provided a home address. These hardcopy packages were created by the research team but again sent out by EATI administration on the research team's behalf. As some emails sent were 'undeliverable,' hard copy packages were also sent to those individuals' home addresses as well. In total, 480 hard copy recruitment packages were sent by mail and 1,571 emails linking individuals to the website were delivered. A total of 2,051 individuals were contacted to participate in this study.

A total of 408 survey responses were received and once the survey data had been cleaned, duplicates removed and outliers identified, an overall sample of 390 was confirmed.

Of all the survey responses received, 357 individuals indicated that they had applied for assistive technology. This constitutes the overall sample size for the survey data presented within this report ($N=357$) (see Figure 1).

Figure 1
Sample Population and Response Rate for EATI Evaluation



As the survey was designed to learn about the experiences of those who participated within the program specifically, the sample population included only those who were in fact program participants and had been considered eligible for services through EATI. This constituted 1,579 people, which represents the total number of individuals who have been determined to be eligible to participate in EATI as a program participant as of March 1, 2013 (EATI, n.d.) (see Figure 1).

Through the same email link and hard copy recruitment package sent to those who had connected with EATI, participants that received assistive technology through EATI were asked to participate in an interview. Individuals could indicate their interest in being interviewed one of three ways: by ‘signing up’ after reading and signing the consent form online, by reading and signing the consent form they received in the mail and returning it to the research team in the self-addressed stamped envelope provided, or by contacting the research team by email or telephone. Participants who signed up to participate in an interview were not required to complete the survey and those who took the survey were not required to sign up for an interview. From the 2,051 individuals contacted to participate in this study, a total of 182 program participants expressed an interest to participate in an interview. Individuals were then selected using randomly generated numbers via <http://www.randomizer.org/> (Polit and Beck, 2012). A total of 16 interviews with EATI program participants were arranged and conducted between January and April 2013.

Additionally, a total of 10 key informants were selected to participate in interviews and offer feedback concerning joint-decision making. The research team identified these 10 individuals as key informants for their extensive experience within the field of disability and assistive

technology. Key informants were then contacted by both email and telephone to discuss their participation in an interview. Of the 10 individuals contacted, 8 interviews were arranged with 7 informants. All key informants were provided information concerning the study and a consent form to sign prior to scheduling a time for the interviews to be held. On two occasions, key informants were provided with their transcripts to review their comments, make changes, and/ or provide additional information.

Eligibility & Sample Population

All EATI participants were eligible to participate in the survey, however, only those who obtained assistive technology were eligible to participate in an interview. No additional inclusion criteria were set. The survey gathered demographic information from everyone who participated. This included those who may have applied to EATI but were deemed ineligible for services. These survey respondents were not asked to complete the survey concerning their experience of receiving AT but rather were asked for overall comments associated with their brief involvement with EATI through the application process.

Pilot Study

A pilot study was organized in advance of offering the survey. The pilot study was designed to ensure the majority of respondents would find the survey questions clear and understandable, and that the survey itself was accessible to individuals with a range of disabilities. A request was sent out through EATI to individuals who had at some time indicated to Navigators they 'wished to help' the program in some way. This request, on behalf of the research team, was to obtain individuals interested in participating in the pilot study. A total of 9 individuals indicated interest.

Pilot study participants completed surveys in person alongside research team members so their experience could be observed, as well as by telephone, and by taking it independently online. All individuals were provided a \$40 honorarium as a token of appreciation. Based on feedback from the pilot study participants and researcher observations, a number of changes were made to the online survey design to ensure it was as accessible to as many people as possible. This included the ability for blind or visually impaired participants to be guided through some parallel survey questions more appropriate for those who work with JAWS or screen reading software. Following the completion of the pilot study and the analysis of the findings, the study moved forward to meet its three specific objectives.

Objective #1: Explore the impact of the assistive technology or equipment provided through EATI on the lives of people with disabilities, with particular attention paid to employment goals

EATI Participant Survey

Procedures

The research team designed a survey specifically to address this first objective. The survey aimed to obtain information relevant to outcomes associated with employment and attachment to the labour force, but also with outcomes concerning aspects of EATI participants' personal lives, such as the ability to 'get out in the community more.' This overall objective was met by asking respondents to both indicate what they received through EATI and in what way it may have helped them, with a specific question that sought to learn if the assistive technology (AT) they received was in fact the 'right' AT to meet their needs.

Information was also requested to learn about the type of assessments for assistive technology respondents experienced during their involvement with EATI and if they still use that AT. Survey questions incorporated elements from the *Psychosocial Impact of Assistive Devices Scale (PIADS)* (Jutai and Day, 2002). This Scale constitutes a 26-item questionnaire that aims to understand how an assistive device has impacted an individual's quality of life. The survey was also informed by the *Quebec User Evaluation of Satisfaction with Assistive Technology (QUEST)* Version 2.0 (Demers, Weiss-Lambrou and Ska, 2002). The survey was offered online from December 11, 2012 until January 20, 2013, however, surveys continued to be received by mail until February 8, 2013.

Those who held experience offering accessible surveys were consulted. This included the University of British Columbia, the *Western Institute for the Deaf and Hard of Hearing*, and the *Neil Squire Society*. The survey was designed using *Fluid Surveys*, online software that holds data on a Canadian server, and embedded within a University of British Columbia branded *Wordpress* site (see <http://eatievaluation.sites.olt.ubc.ca/>).

The research team determined the best way to reach all those who had interfaced with EATI was through the EATI administration's database. Therefore, a link to the EATI Evaluation Website, where the survey could be accessed, was contained within an email sent by the EATI administration on the research team's behalf to everyone who had at some time provided their email address to EATI. Those who requested to take the survey by telephone were

accommodated. At the close of the survey all data were reviewed, coded and entered into *SPSS Statistics*, a quantitative data analysis software program.

It should be noted that survey respondents were not required to complete all survey questions. In other words, the survey did not ‘force’ respondents to respond to each question before moving on to the next question. The survey was designed specifically without ‘forced responses’ for the following reasons:

1. Forced responses tend to increase survey “drop out” and can skew the survey responses provided by sex (males tend to stop or quit a survey with ‘forced responses’ more often than females) (Stieger, Reips & Voracek, 2007).
2. Consultations with organizations accustomed to surveying and working with people with disabilities suggested forced responses could limit the ability for some participants to participate due to their unique needs, for “forcing respondents to choose may annoy them and may not uncover the truth about their views” (Fink, 2008, p.26).
3. Given the range of disabilities program participants possess and the range of assistive technology participants may apply for and or receive through EATI, it was not possible to anticipate all possible responses. Forced responses could, therefore, limit the information offered by program participants.

Consequently, each survey question obtained a different number of responses. This translates into a floating response rate (or *n*) for each question. Therefore, the number of respondents who provided responses for each question has been noted within the findings for each variable.

For each question, however, some individuals chose to not respond. This missing data is inevitable without the use of ‘forced responses.’ Fortunately, sample sizes for each variable are generally sufficient to provide information useful to this study.

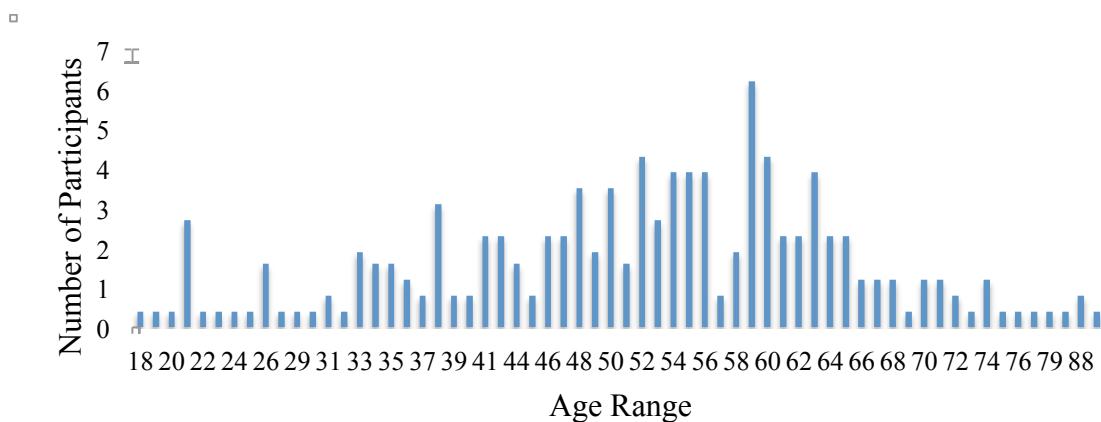
EATI Evaluation Survey Results

From the sample of 357 individuals who indicated they had applied to the Equipment and Assistive Technology Initiative (EATI) for assistive technology (*N*=357), the following results were obtained:

Age

Survey respondents ranged in age from 18-95 years old ($M= 52.04$, $SD=13.88$). 25% of respondents were 18 to 42 years old, 50% were 54 years old and under, and 75% of respondents were 61 years old and under (See Figure 2).

Figure 2
Age Distribution of Respondents (N=357)



The age range of survey respondents, who submitted an application to EATI for assistive technology, displayed in Table 1, is comparable to the age distribution of EATI program participants (EATI, n.d.a).

Table 1
Comparison of Age Range: Survey Respondents (N=357) and EATI Program Participants (N=1073)

Age Range	Survey Respondents (n)	EATI Population (n)
20 to 29	6.3% (15)	13.69% (147)
30 to 44	19.8% (47)	22.4% (240)
45 to 64	59.1 % (140)	46.7% (502)
65 and over	14.8% (35)	17.14% (184)
Total	100% (237)	100% (1073)

Note: EATI data fluctuates given continual intake of program participants.

Of those who submitted an application to EATI (N=357), 237 individuals provided their age within the survey. Others chose not to answer this question or indicated that they 'preferred not to say.' From those who provided their age, it was possible to examine their age in groups compared to the age groups of EATI program participants. This was made possible by examining EATI program participant population numbers, which were provided to the research team April 30, 2013 (EATI, n.d.a). Table 1 indicates that the EATI survey population was proportionately close in age to that of EATI program participants.

Table 2 indicates survey respondents were again comparable in age to the population of working age individuals with disabilities in BC (BC Stats, 2009). The larger proportion of survey respondents from age 30 and over within the EATI survey population is likely due to the employment focus of the program and because, “the rate of disability increases with age” (Statistics Canada, 2007).

Table 2

Comparison of Age Range: Survey Respondents (N=357) and People with Disabilities in British Columbia (BC)

Age Range	EATI Survey % (n)	BC* %
15 to 29	6.7 % (16)	6.3%
30 to 54	45.8% (109)	12.2%
55 to 64	32.8% (78)	25.1%
65 and over	14.7% (35)	-

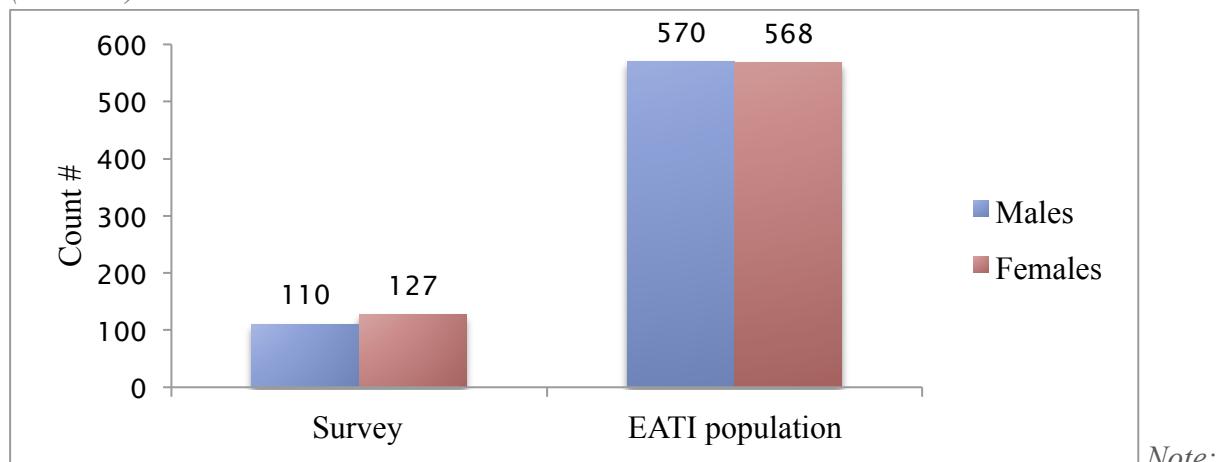
*Source: Statistics Canada, Participation and Activity Limitation Survey, 2006 (BC Stats, 2009).

Gender

In terms of gender, males constituted 46.4% ($n=110$) of survey respondents who applied to EATI, and females 53.6% ($n=127$). 120 individuals did not state their gender or indicated they ‘preferred not to say.’ This was compared to the EATI program population data (EATI, n.d.b.).

Figure 3

Comparison of Gender: Survey Respondents (n=237) and EATI Program Participants (N=1138)



Note: EATI data fluctuates given continual intake of program participants. EATI population numbers were provided to the research team on April 30, 2013 (EATI, n.d.b).

Education

The distribution of education levels among survey respondents was found to be comparable to the information collected by EATI. Both the survey findings and the EATI participant population are not substantially different from the overall educational attainment of people with disabilities in British Columbia (BC Stats, 2009) (See Table 3).

Table 3

Comparison of Education: Survey Respondents (n=256), EATI Program Participants (N=1534), and People with Disabilities British Columbia (BC)

Education	Survey % (n)	EATI Participants % (n)	BC % (n not provided)
Less than high school	12.9% (33)	20.6% (323)	23.4%
Completed high school	23 % (59)	20.8% (327)	27.3%
Certificate	16% (41)	21.7% (341)	14.5%
College	24.6% (63)	17.1% (269)	17.6%
University	23.4% (60)	16.9% (274)	17.1%
Total	100% (256)	97.1% (1534)	99.9%

Source: Statistics Canada, Participation and Activity Limitation Survey, 2006 (BC Stats, 2009).

Note: Classifications for each category may vary. EATI data fluctuates given continual intake of program participants. EATI population numbers were provided to the research team on March 5, 2013 (EATI, n.d.c).

Location

Finally, the majority of survey respondents (54.4%) lived within Vancouver and the Fraser Valley regions. 35.9% of respondents live in Vancouver, 18.5% in the Fraser Valley, 25.5% of respondents lived on Vancouver Island, 12% lived in the Okanagan, 4.6 % lived in the Kootneys, 1.5% lived in the Cariboo, 1.5% lived in Northern B.C., and 0.4% lived in other locations.

This is consistent with the larger EATI population of program participants. 60% of program participants live in the Vancouver coastal and Fraser Valley regions, just over 20% live on Vancouver Island, 14% live in the Interior, and 4% live in the northern region of the province (EATI, n.d.d). The survey data is also comparable to the 2006 Census data for British Columbia, which indicated that of the working age individuals (15-64) with disabilities in the province, 59.8% lived in the lower mainland and southern Vancouver Island area (BC Stats, 2009).

EATI Process

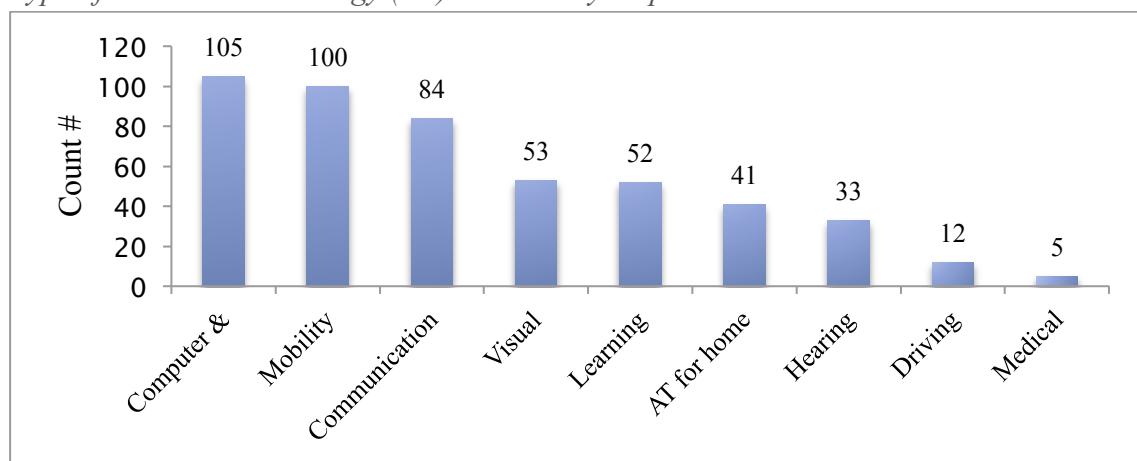
Of the 357 individuals who indicated they had applied to the Equipment and Assistive Technology Initiative (EATI) for assistive technology (N=357), 266 respondents (or 76.2%) indicated they had received or obtained assistive technology through EATI.

Type of Assistive Technology

Respondents were asked to describe the type of assistive technology they received through EATI. The many different types of AT received highlights the diverse range of needs of program participants. Figure 4 highlights the different types of assistive technology survey respondents received. (See *Appendix H* for the detailed list of how assistive technology was coded.)

Figure 4

Type of Assistive Technology (AT) received by respondents



Note: Some respondents indicated receiving more than one AT.

Although EATI does not provide “tools of the trade” or items to individuals that would be required as part of a person’s chosen profession, Figure 4 demonstrates a large percentage of the equipment received by respondents were computers and computer accessories. Discussions with EATI have indicated the provision of computers is typically to support the provision of assistive software, accessories or communication related devices.

Assessment Type

The survey sought to explore the Participation Model, specifically the use of the self-assessment process for determining one’s needs for assistive technology. As the process of obtaining assistive technology (AT) through EATI involves an assessment for that specific AT, program participants are provided with the opportunity to self-assess their needs (referred to as a self-assessment) when they have been living with their disability for some time, when they have used assistive devices before, and when they are familiar with the type of AT available that could help them move towards their employment goals (BCPSN, n.d.a). A self-assessment involves determining and selecting the assistive technology an individual believes will best work for them, which may include relying on one’s past knowledge of certain devices, working with a Navigator to identify and determine what was needed, relying on past advice from a

health professional, and/or deciding on certain AT after communicating with friends, family, and peers. In this way, a self-assessment may be a very collaborative experience.

The only circumstances where individuals are not provided the opportunity to self-assess their needs is concerning mobility-related AT, such as a motorized scooter, due to liability policies. EATI has advised the research team that there have been a handful of cases where a professional assessment was not obtained concerning mobility AT and these were in situations where AT was simply being replaced with the same (only newer) equipment.

Program participants may alternatively seek the support of a health care professional, such as an occupational therapist, to assess their needs and prescribe the appropriate AT. This is considered a professional assessment. Beyond the cases mentioned (such as motorized AT or if the individual has only recently obtained a disability) there might still be instances where individuals may desire or believe they would be best served by a professional-assessment.¹ In these situations, however, professional-assessments are not required by EATI.

4

Assessment

- ★ A self-assessment means the participant thought about his or her needs and decided what assistive technology or equipment would work for them. Participants may have completed a self-assessment with the help of a Navigator.
- ★ A professional assessment means participants met or spoke with an occupational therapist, a low vision assessor, an ergonomist or another health professional who told him or her what assistive technology or equipment would work for them.

In addition to these two options, program participants have a third option: that of 'both;' an assessment that involves both the participant's assessment and the professional's assessment together. In this situation, individuals may work with the support of a professional and then make their own decision concerning the AT, or alternatively provide insight and feedback to the professional who can then suggest what might work best for the program participant.

¹ For example, the assessment and prescription of glasses and or hearing aids typically occur by health professionals (optometrists, opticians, and hearing specialists).

In an assessment that involves 'both' program participants and professional assessors of assistive technology, the assessment is a collaborative one, rather than a prescriptive assessment that would be obtained from a professional assessment alone.

As Table 4 indicates, a large percentage of respondents reported conducting an assessment through 'both' a professional and their own self-assessment.

To determine how people were assessing the assistive technology they received through EATI, the research team was faced with a complication: some individuals received multiple AT through the program, while others received one device or piece of equipment. Therefore, requesting information on all the assistive technology program participants may have received could have constituted an overly complex survey design and a time-consuming process for survey respondents. An approach that involved examining all the AT received by respondents would also not be appropriate for surveying those who received only one device or piece of equipment. Further complicating this was the issue of what 'counted' as one assistive technology. For example, a computer with a monitor, mouse, printer and scanner can be understood by different people as anywhere from 1 to 5 items. To address these issues, the research team determined to let respondents 'count' their assistive technology, as they understood it. This provides the best means for understanding how respondents experienced the program and the assistive technology they received.

Professional Assessments for Assistive Technology

Many participants desire or may require a professional assessment but occasionally, professional assessors may provide assessments the program participant disagrees with, as one informant described:

"Sometimes a quarter of an inch means you're getting into the bathroom or not, right. So if an OT measures you and says, 'Well, you know, I think you should get a 16" and the individual is like, 'you know what- a 15" is going to work...some OT's will not write that up, they write what they think you need."

Another key informant who, as an assessor of assistive technology, reiterated this potential for disagreement:

"If you have a family and they say, 'well I really would like this.' And I said, 'Well, she can't really use that because she can't see it.' And they say, 'Well, I really want it anyway. Will you write a letter recommending it?' And I say, 'Well, I can write a letter saying you want it, but I can't write a letter saying I recommend it.' And then we get into a big fight, you know, well, or a discussion, you know. And I'll say I'm happy to write a letter saying that you would like to have this and that you feel it would work, but I can't write a letter saying it's my recommendation."

In situations such as these where professionals opt not to work with participants to achieve what the program participant understands to be the ‘right’ AT or refuse to accommodate a participant’s input within the process, EATI may fund another assessment, such as with an assessor who works for a vendor. Although this speaks to the flexibility of the program to work to meet the needs of the participant, it can also result, as one informant explained, that participant, “not getting all the information about the different equipment available...[and] only getting information on the equipment available through that specific organization.” However, the practice of funding the assessment and then also purchasing the equipment through the same organization, referred to as “double-dipping,” has raised concerns among vendors. Alternatively, “private” assessments, such as those with occupational therapists (OT’s) can be funded as well, and these, as one informant described, “seem to be a lot more flexible.”

Interestingly, the use of professional assessments has, as key informants commented, been “steadily going up” within EATI. This has been attributed to the population group served and the suggestion that EATI is now beginning to work “with a group of people who are less educated/ empowered than the initial adopters.” It is also believed to be an “unintended consequence of requests for better justifications and rationales- that’s one of the things professionals are good at.” As one informant and assessor of assistive technology explained, professional assessments are becoming more “accepted” because:

“The philosophy [Participation Model] was one thing, and you know power to them to have the philosophy, but as soon as they’re facing somebody who says, well, you know, I want a robotic this, and they think, well, how do we choose the best one? The client doesn’t necessarily know. So I think [EATI] were really happy to work with people who knew, who had the expertise, just because they wanted, you know, Super Navigators wanted to do their best and be accountable and, you know, help the client.” Yet all “professional” assessments may not be equal, particularly when conducted through a vendor organization as one informant explained, “they’ve been around for a long, long time as an organization, but that doesn’t mean they’re experts...the assessments were not prompt, they were not thorough, the client ended up with the wrong equipment.” Regardless of where assessment occurred, informants to this study commented on experiencing “great” assessments that were “bang on” for participants, but also ones that “didn’t work so well.”

Reported ‘Most Useful’ Assistive Technology

Additionally, the survey also invited respondents to provide information concerning their assistive technology (devices and or equipment) that has been most useful to them. To do this:

- **Information concerning the most useful ‘top 3’ (or fewer) devices or pieces of equipment obtained through EATI was requested**

By ranking the “most useful” assistive technology participants received, the survey sought information concerning the type of AT received, but also offered additional information to the research team in terms of the respondents perception of their AT’s utility to them.

How survey respondents understood the meaning of ‘useful’ may have varied. The survey did not specify or tell respondents how to rank or determine what was most useful and instead left this to the respondents to determine. This offered respondents the ability to express how they experienced the AT they received.

Additionally, as some people received what they understood as “1” device or piece of equipment, there were fewer responses regarding the ‘2nd most useful assistive technology,’ and again even less for the ‘3rd most useful assistive technology.’ This was expected given that not everyone has received multiple devices and equipment through EATI. This approach, unfortunately, held one limitation, namely that for those who only obtained one assistive device, it is likely that this AT was ranked as #1 or most useful potentially limiting the utility of the ranking approach.

Finally, survey respondents were asked to review how they assessed their needs concerning the assistive technology they received through EATI. This provided opportunity to examine the ranked AT in light of the ranking respondents provided. By examining the frequencies of the ranked AT given the type of assessment obtained, the findings indicate the AT ranked as most useful for respondents (AT ranked as #1) was most often assessed by ‘both’ (the program participant and a professional) (see Table 4). Self-assessments made up just over one third of all assessments conducted (35.6%). Additionally, although assessments by ‘both’ professionals and program participants were most common, making up 37.8% of all assessments reported, self-assessments were most common for assistive technology ranked as 2nd and 3rd most useful (see Note below concerning mobility AT).

Table 4

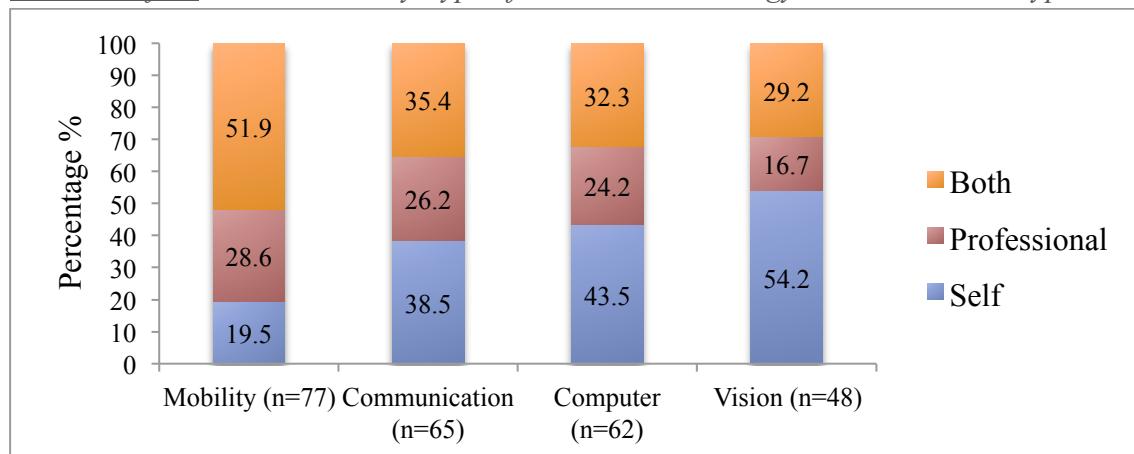
Frequencies of Assessment Type by Assistive Technology Ranked #1, #2, and #3

Rank (n)	Type of Assessment		
	Self n (%)	Professional n (%)	Both n (%)
Assistive Technology ranked as #1 (194)	63 (32.5%)	49 (25.3%)	82 (42.3%)
Assistive Technology ranked as #2 (98)	38 (38.8%)	25 (25.5%)	35 (35.7%)
Assistive Technology ranked as #3 (59)	24 (40.7%)	19 (32.2%)	16 (27.1%)
Total (351 assessments reviewed)	125 (35.6%)	93 (26.4%)	133 (37.8%)

*Note: 351 reported assessments were reviewed.***Assistive Technology Ranked as #1 (Most Useful)**

The research team examined the type of assistive technology that was more highly ranked as being useful by survey respondents (ranked as #1) in relation to the type of assessment reported for that AT. Figure 5 indicates the assistive technology most often ranked as #1 and the corresponding type of assessment survey respondents indicated were conducted for each reported AT.

Figure 5

AT Most Often Ranked as #1 by Type of Assistive Technology and Assessment Type

Of the assistive technology devices and equipment ranked as #1 or most useful, survey respondents most commonly selected mobility, communication, computer, and vision related assistive devices and equipment. As Figure 5 indicates, program participants and professionals often collaboratively conducted assessments for equipment and assistive devices aimed to support program participants. This is most apparent within the category of mobility AT and it is consistent with the requirement by EATI for individuals to involve professional assessments concerning motorized equipment and devices due to issues of liability.

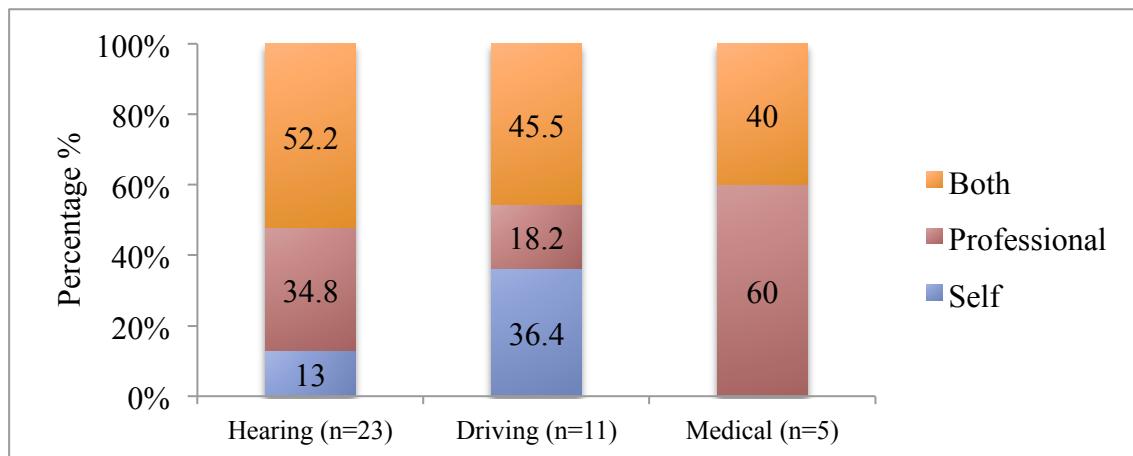
Note: Given that mobility AT often requires a professional be involved in the assessment, by examining the three other types of AT together exclusive of mobility AT, self-assessments (totaling 45.4% assessments for communication, computer and vision related AT ranked as #1) outweigh professional assessments (22.3%) and those conducted by 'both' a program participant and health professional (33.3%). It must be recognized, however, that eliminating mobility AT from the analysis limits the larger assessment, for certain types of AT may be more likely to involve a professional (e.g. medical equipment) and not all program participants are able to conduct a self-assessment due to the eligibility requirements previously discussed. For this reason, mobility AT has not been excluded from the following analyses.

Program participants, however, largely assessed vision related AT without the support of a professional assessor or in other words, often conducted self-assessments. Given that vision related AT may include items such as *JAWS* screen reader, a Braille printer or Braille embosser, or a magnifier, it may be the case that program participants had worked with this AT through their previous social and vocational networks. Additionally and as one key informant explained, program participants with vision related needs have not been provided with much assistive technology through government funded programs other than the provision of "a cane." This lack of AT provision may have contributed to requiring people with visual disabilities to seek out and work with other organizations to address their needs. The high rate of self-assessment for vision related AT may, therefore, speak to the level of involvement and support people with visual impairments have sought and received from non-government organizations. These relationships may have led people with visual disabilities to become previously exposed to AT that could benefit them and to possess a familiarity with the assistive devices available, owing to an increased degree of self-assessment in this area.

Figure 6 indicates the assistive technology selected by survey respondents that was least often ranked as #1 or most useful.

Figure 6

AT Least Often Ranked as #1 by Type of Assistive Technology and Assessment Type



Of the 194 assistive technology devices and equipment ranked as #1 or most useful, hearing, driving, and medical AT were the least often to be selected by survey respondents. The lesser frequency of the selection of these AT types as most useful may in part speak directly to these types of AT becoming obtained by program participants less often. For example, program participants may have less commonly obtained medical equipment such as a BI pap machine, a blood pressure watch, or foam wedge. By reviewing a comprehensive list of the assistive technology equipment and devices provided to program participants since April 1, 2011, what has been categorized for the purposes of this survey as medical equipment occurs rather infrequently (EATI, n.d.e). Also, the lack of self-assessments associated with this type of assistive equipment may indicate that devices, which hold a medical or health-related purpose, may more commonly be prescribed due to the prevalence of the medical model within health-related environments such as hospitals and out patient facilities.

Overall, the assessments for hearing, driving and medical AT ranked as #1 (or most useful) often involved a professional assessor. This may be related to the type of AT requested by program participants. For example, hearing aids often involve a professional assessor such as an audiologist or hearing aid specialist. Similarly, driving AT including hand controls, van conversions, and modified brakes, may require specialized knowledge that few individuals possess and therefore, the reliance on the support of the professional assessor may be essential. Driving AT, however, did reveal a higher level of self assessment possibly indicating those who applied for this AT type were aware of what they needed and confident they could obtain what was required without a professional directly involved in their application. As driving AT- specifically motorized AT- requires a professional assessment, it was expected that this category of AT would hold high levels of professional assessment. As such, the high level of self-assessment may relate to requests for driving lessons, which may more commonly be

something an individual believes he or she requires and can comfortably determine through a self-assessment.

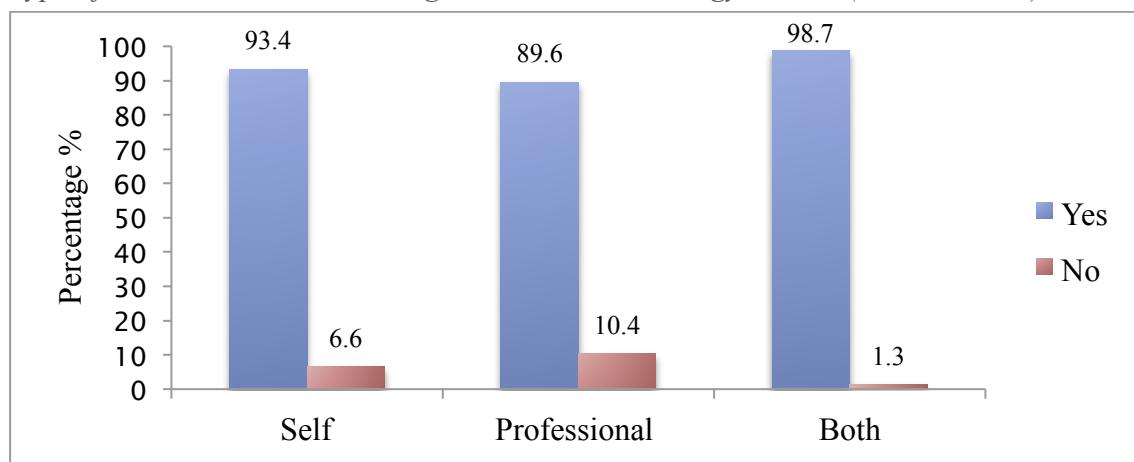
Did Respondents Receive the 'Right' Assistive Technology They Needed (AT Ranked #1)?

Once assessments for assistive technology ranked #1 (or most useful) were examined, the research questioned whether these assessments lead to the 'right' assistive technology for each program participant. For each piece of assistive technology reported by survey respondents, they were asked, "Did this assessment lead you to the assistive technology you needed?"

Although survey respondents may have interpreted the question in a range of ways and were not instructed on how to understand the question, responses indicate that respondents overwhelming received the AT they believe they needed. Figure 7 represents the 188 responses to this question from the survey for devices ranked as #1 (or most useful) given the type of assessment conducted for each device or equipment.

Figure 7

Type of Assessment led to the 'right' assistive technology needed (AT ranked #1)



Given the ranking of #1 (or most useful), it is not surprising that the majority of survey respondents believed the assistive technology they obtained was 'right' for their needs. In fact, of the 188 responses associated with this question of whether the assessment conducted led to the right AT for the program participants' needs, 94.9% responded affirmatively; the assessments conducted led to the devices needed.

Within the AT ranked as #1 (most useful), only 10 respondents indicated not receiving the AT they needed. As Figure 7 indicates, regardless of the assessment type, respondents overwhelming reported receiving the AT they needed. However, those who engaged in an assessment by 'both' (a professional and their own self-assessment) most often reported

receiving the right AT. This suggests obtaining needed AT occurs most often when collaborative assessments (by program participants and professional assessors) are conducted. Although this finding is limited given the requirement for some participants to obtain professional assessments, it remains noteworthy.

Alternatively, those who obtained a professional assessment alone (a prescriptive assessment), received the AT they needed or the ‘right’ AT, less often than those who obtained AT through a self assessment or an assessment by both (a professional and a self assessment).

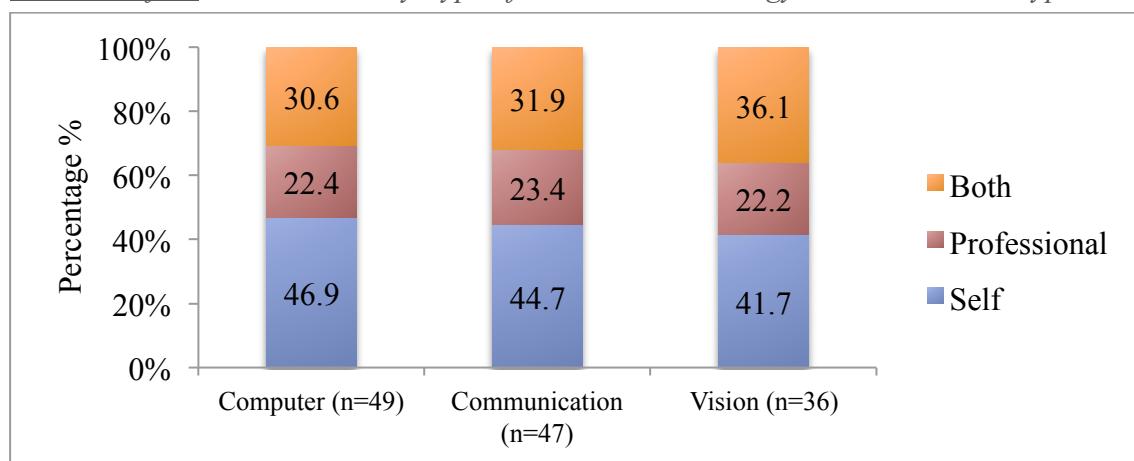
Overall, only 5.1% of all responses concerning AT ranked as #1 (or most useful) indicated the assessment did not lead to the ‘right’ or needed assistive technology for the respondent.

Assistive Technology Ranked as #2 (2nd Most Useful)

Of the 98 assistive devices and equipment ranked as #2 (or the 2nd most useful) by survey respondents, the three most commonly ranked assistive technologies included computers, communication, and vision related assistive devices and equipment.

Figure 8

AT Most Often Ranked as #2 by Type of Assistive Technology and Assessment Type

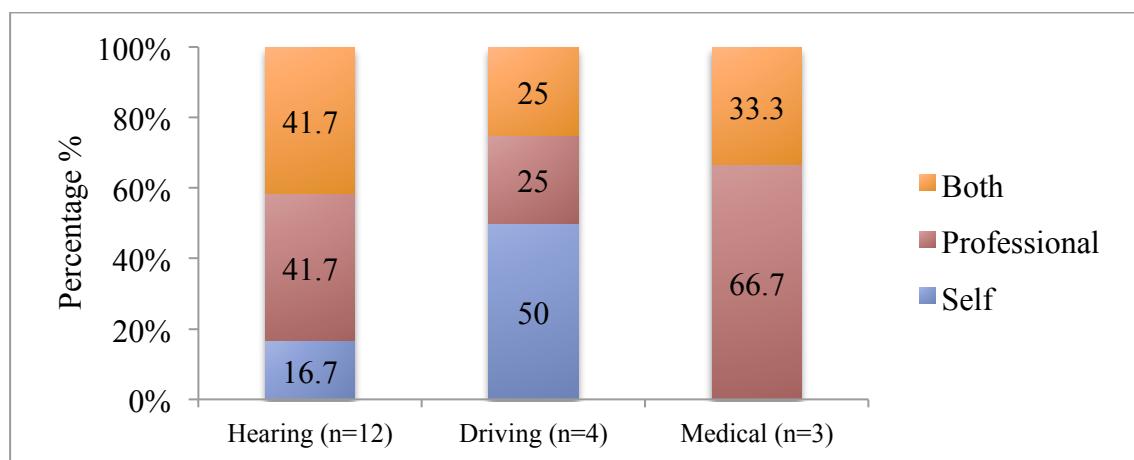


As Figure 8 indicates, these more often ranked assistive technologies were also more often self-assessed. **Program participants assessed computers, communication and vision assistive devices almost twice as often than assessments conducted for these types of AT by professionals alone.**

The three technologies least often ranked as #2 or (2nd most useful) AT and their corresponding assessment types are represented in Figure 9. Similar to those least often ranked as #1 (or most useful), these are hearing, driving and medical related devices and equipment.

Figure 9

AT Least Often Ranked as #2 by Type of Assistive Technology and Assessment Type

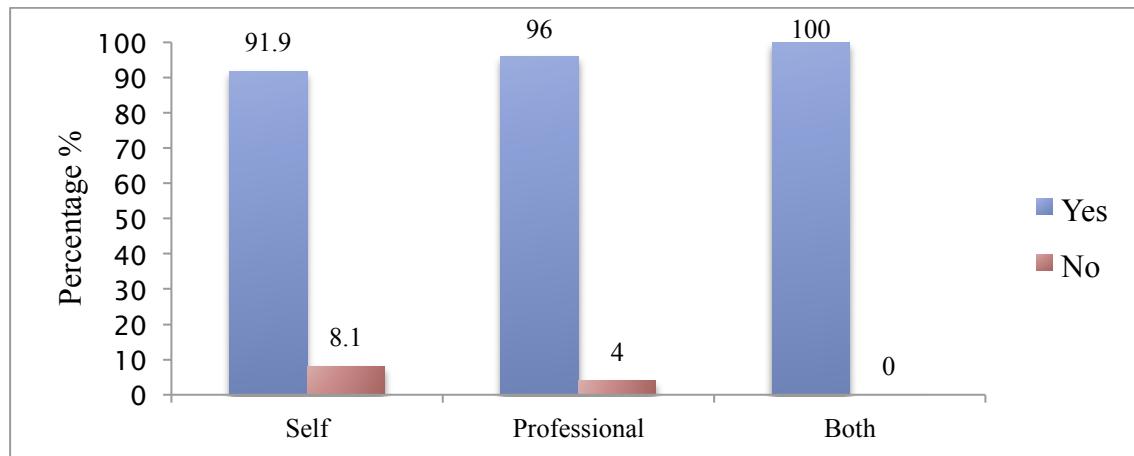


Of the 98 assistive devices and equipment least often ranked as #2 (or 2nd most useful), professional assessments were most common. Similar to the technology least commonly ranked as #1 (or most useful), this is likely related to the limited number of respondents who have obtained these devices and the policy associated with professional assessments for motorized devices. With the exception of driving AT, self-assessments were notably less common within these types of assistive technology.

Did Respondents Receive the 'Right' Assistive Technology They Needed (AT Ranked #2)?

Once again, the assistive technology ranked #2 (or 2nd most useful) was examined as to whether the assessments led to the right assistive technology the respondent believed he or she needed. As Figure 10 indicates, respondents overwhelmingly believed the assessments they obtained led to the 'right' assistive technology to meet their needs.

Figure 10

Type of Assessment led to the 'right' assistive technology #2

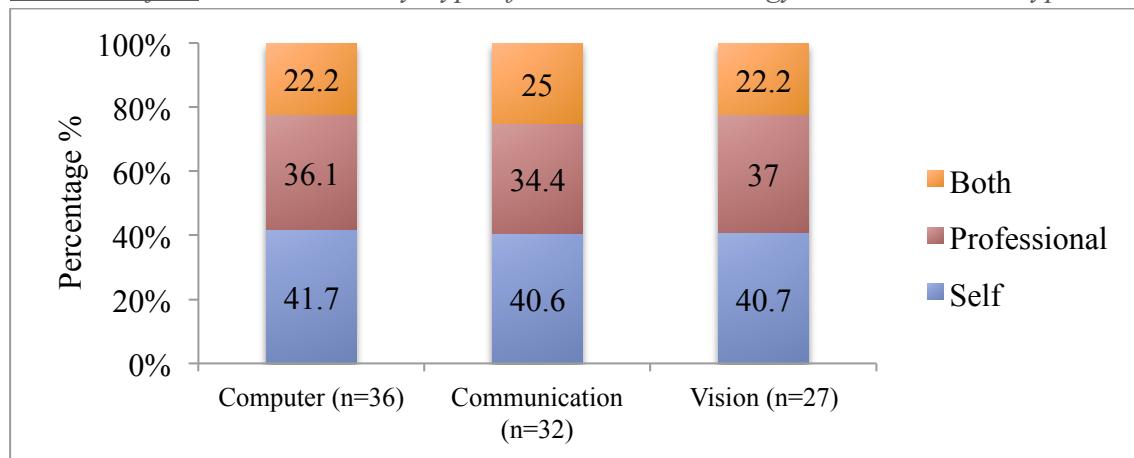
As Figure 10 indicates, respondents reported the assessments associated with the assistive technology they obtained and ranked as #2 (or 2nd most useful) largely led to obtaining assistive technology they believed to be right for their needs. Importantly, in only 4.1% of all instances where AT was ranked as #2 did the assessments conducted not lead to the assistive technology the individual needed. 95.9% of all AT ranked #2 was considered to be the right AT needed.

Of those who reported conducting an assessment by 'both (a professional and their own self-assessment) for the assistive technology ranked as #2, 100% indicated they obtained the AT they needed.

Assistive Technology Ranked as #3 (3rd Most Useful)

Finally, for the assistive technology ranked as #3 (or the third most useful) to survey respondents, the three most commonly identified assistive technology were once again, similar to the AT ranked as #1 and #2, computers, communication, and vision related AT. Figure 11 highlights the type of assistive technology most often ranked as #3 (or 3rd most useful) by the types of assessment reported.

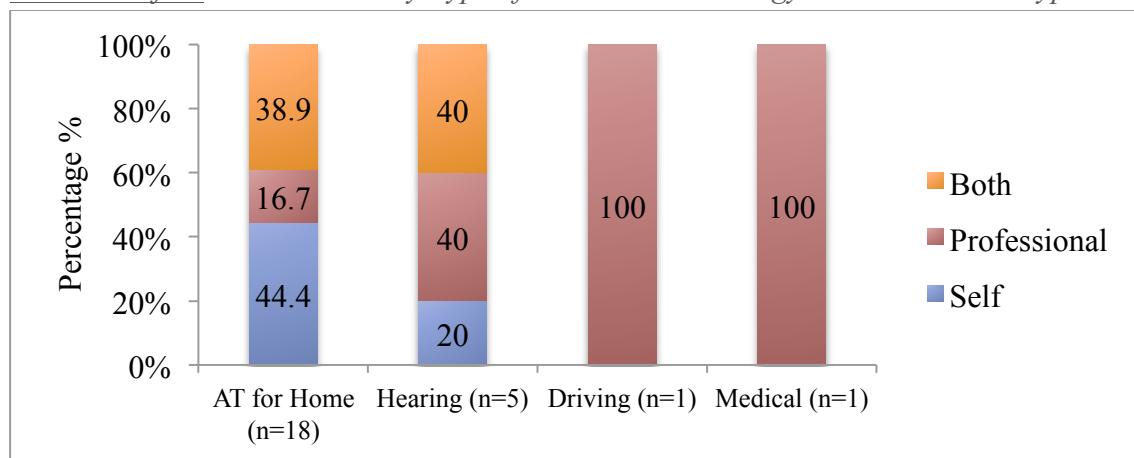
Figure 11

AT Most Often Ranked as #3 by Type of Assistive Technology and Assessment Type

The types of assistive technology most commonly ranked as #3 (or 3rd most useful) were computers, communication, and vision related AT. Overall, these types of AT, when examined together, were more often self-assessed.

The assistive technology least often ranked as #3 (or 3rd most useful) are represented within Figure 12 below.

Figure 12

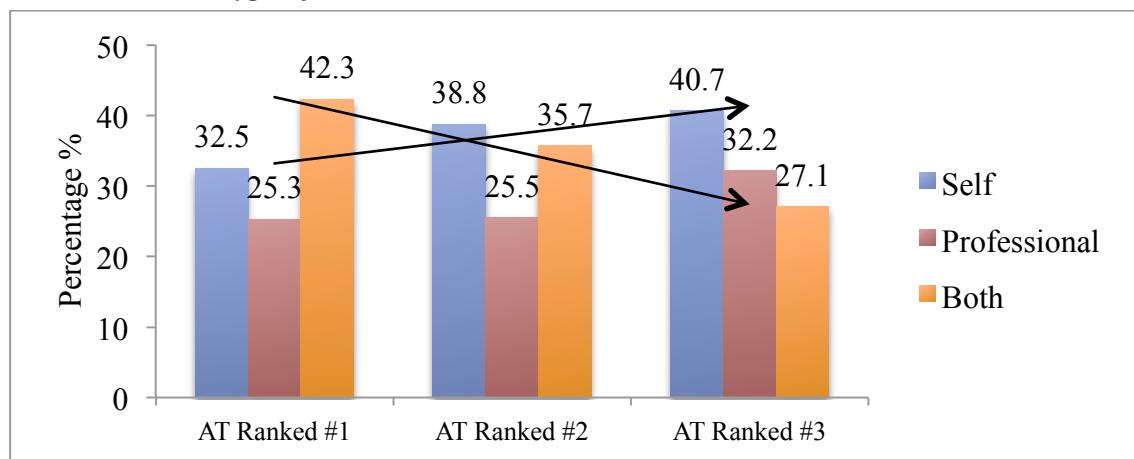
AT Least Often Ranked as #3 by Type of Assistive Technology and Assessment Type

Although examining the AT that was least often ranked as #3 (or 3rd most useful) constitutes very low numbers of AT reported, it is consistent with the AT ranked as #1 and #2. In each of the three rankings, assistive technology associated with hearing, driving, and medical devices were reported less often. This may be due to a number of reasons, such as far fewer hearing,

driving and medical devices being provided to program participants by EATI. However, it may also be due to fewer respondents experiencing these types of assistive technology falling within their “top 3” AT received. AT for the home (i.e. a bath lift, custom desk, ramp, or automatic door opener) has been included in the least often ranked AT here because the numbers of hearing, driving and medical AT were so few.

The AT ranked #3 (or 3rd most useful) is particularly interesting as it highlights a rather linear trend. When examining the rankings, there is an increase in the self-assessments from the AT ranked as #1 and #2 and #3 and a decrease in the collaborative assessments (by both program participants and professionals) (see Figure 13).

Figure 13
Linear Trend in Type of Assessment and Ranked AT



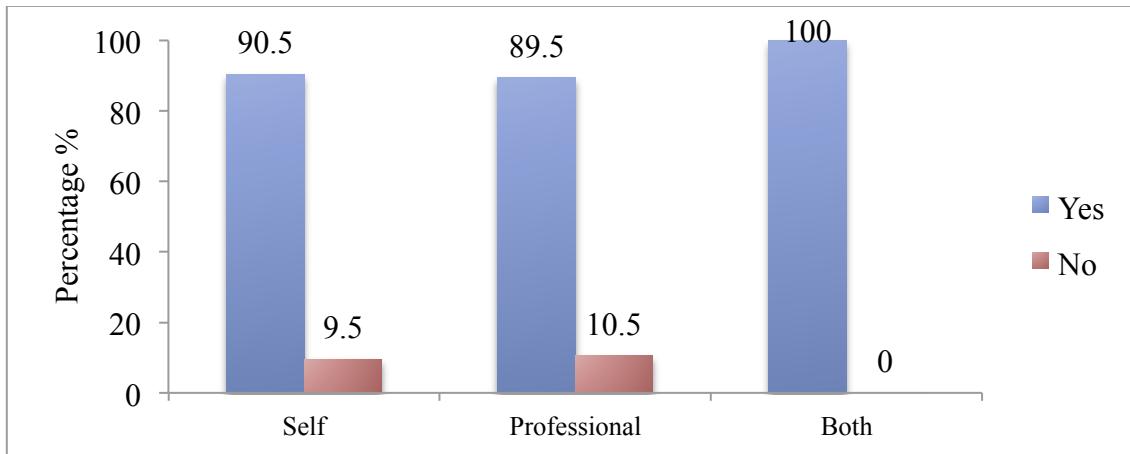
These trends suggest that the more useful assistive technology is to an individual, the more common it is to be assessed by both a program participant and a professional assessor together. Once again, it is important to note how the requirements for professionals to be involved in certain assessments such as motorized AT may impact this finding. Additionally, as the ranking of assistive technology (and possibly the utility of the AT) decreases, the use of self-assessments tends to increase. This may suggest that individuals are self-assessing for AT that is perhaps not their most useful device, but for those that continue to be ranked within their top 3. If this is the case, it may be because program participants feel more comfortable selecting certain devices and equipment with the support of a professional and do so where it is required (such as in the case of many mobility AT that involved motorized devices). The linear trend may also suggest that those things most useful to program participants are items they selected with the support of a professional.

Did Respondents Receive the ‘Right’ Assistive Technology They Needed (AT Ranked #3)?

Finally, whether these assessments for AT ranked #3 lead to the right assistive technology was examined. Once again, the data overwhelmingly suggests most survey respondents obtained the assistive technology that they considered was needed (See Figure 14).

Figure 14

Type of Assessment led to the ‘right’ assistive technology for AT ranked #3



Again, survey respondents indicated they largely obtained the assistive technology they needed for that AT, which they ranked as #3 (or 3rd most useful). Although there was a slight increase in the number of assistive devices obtained through EATI that were not quite ‘right’ for respondents or not what was needed, (7.1% of all assistive technology ranked #3 as compared to 4.1% for AT ranked #2, and 5.3% for AT ranked #1), the large majority of respondents (92.9%) obtained assessments that led them to what they considered to be the AT they needed or the ‘right’ AT.

Additionally, as Figure 14 indicates, those respondents who reported participating in a collaborative assessment with a professional (or ‘both’ assessment) always received the assistive technology they needed.

By looking at all three rankings of the reported of assistive technology together, collaborative or ‘both’ assessments can be clearly understood to more often lead participants to obtaining AT they believe they need as compared to professional or self-assessments alone (see Figure 15).

Figure 15

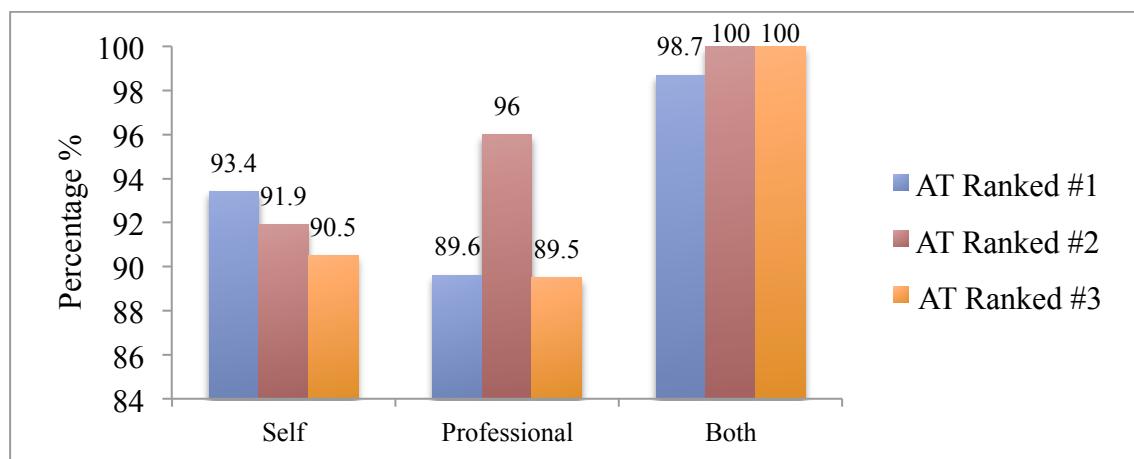
Receiving the 'right' AT by Rankings and Type of Assessment

Figure 15 indicates the degree to which respondents reported receiving the right AT or what they considered to be the right AT given their assessment type. Those survey respondents who reported completing a collaborative assessment with a professional assessor more commonly indicated they received the AT they needed as compared to those who completed a professional or self-assessment alone.

For those who reported receiving the AT they needed, the difference between those who conducted self-assessments and those who obtained professional assessments was negligible. This is interesting given the involvement of professionals in programs that fund assistive technology based on their involvement because of their training and expertise. These findings may suggest program participants and professional assessors bring an equal level of expertise to the assessment process. However, it may also indicate that when either the professional assessor or the program participant makes the assessment for assistive technology alone, their ability to determine the AT that is needed may be limited.

Impact on Employment

As the Equipment and Assistive Technology Initiative (EATI) aims to move individuals toward greater labour market participation, much of the survey focused on employment related outcomes that may have resulted from using assistive technology. The research team carefully examined whether the assistive technology respondents had received was making, or had made, an impact on the participant through a number of ways related to employment (13 in total).

Different ways assistive technology may have impacted program participants were considered thoroughly. The ways or variables within the data, were assessed by asking survey respondents a series of questions that required respondents answer using a four point scale that ranged from (1) 'strongly disagree' to (4) 'strongly agree.'

The data collected from these questions were then dichotomized to indicate whether respondents *agreed* or *disagreed* with the different ways in which their assistive technology has helped them. An additional category for 'not applicable' was included so respondents could indicate whether the assistive technology received through EATI was 'not applicable' to the specific questions (e.g. obtaining a wheelchair may be 'not applicable' to using the Internet). This option was incorporated in order to account for the wide range of assistive technology provided through the program. The number of responses (or *n*) for each question has been included within Table 5.

Table 5
Impact- Employment Variables

How AT helped	<i>n</i>	Agree %	Disagree %	Not applicable <i>n</i>
Volunteer	131	95.1%	4.9%	23
Develop new skills	96	94.8%	5.2%	46
Communicate	118	94.1%	5.9%	25
Learn new skills	121	93.4%	6.6%	26
Move closer to employment	119	93.3%	6.7%	30
Use the Internet	99	93%	7%	37
Upgrade skills	111	91%	9%	33
Take training	89	88.8%	11.2%	50
Reach employment goals	116	87%	13%	32
Demonstrate skills to employers	84	86.9%	13.1%	53
Work on resume	69	84.1%	15.9%	64
Attend interviews	85	85.9%	14.1%	53
Get a job	88	80.7%	19.3%	47

As Table 5 indicates, the large majority of survey respondents reported their assistive technology helped them on this wide range of employment-related variables. Some of these

variables, such as ‘moving closer to employment’ are particularly important. For example, of the 266 individuals who reported receiving assistive technology through EATI, 119 individuals chose to respond to the statement, “My assistive technology has helped me to move towards employment.” 93.3% of these same individuals indicated they agreed with this statement.

Those who may have chosen not to respond may have abandoned the survey prior to encountering these questions, as these questions were offered towards the end of the survey. This is consistent with the overall survey completion rate of 74%. Alternatively, the missing data here may indicate that some respondents perceived the questions as not being relevant to their current life situation. For example, it is possible that for those who are working towards employment, but have a number of tasks they believe they must complete first (i.e. get pain levels under control, take training, or address personal things such as housing etc.), may *not* have believed their AT was ‘not applicable’ to their movement towards employment, but rather that they were not ready to make movement just yet. However, others still may have chosen not to respond because the question lacked meaning or importance to them or because they may not have been able to understand it.

Of the 119 individuals that responded to this question of whether their AT was helping them move towards their employment goals, 93.3% answered affirmatively. Those who may have disagreed with this statement could have received assistive technology that was not quite right or not what they needed. This is likely given the 6.7% that disagreed is can be considered *on par* with the percentage of respondents who indicated their assessments did not lead them to the AT they required (see Figures 7, 10, and 14). This likely represents a small number of respondents that may require some additional support to address issues associated with the AT they obtained.

The three most highly rated ways assistive technology was reported to help people with employment were:

- **To volunteer (95.1% of respondents agree)**
- **To develop new skills (94.8% of respondents agree)**
- **To communicate (94.1% of respondents agree)**

Of the 88 respondents who responded to the statement, “My assistive technology has helped me to get a job,” over 80% indicated they agreed or strongly agreed. Although respondents may have understood this statement in a number of ways, for example that their AT may be

helping them to get a job, or will help them to get a job, the favorable response to this statement indicates that respondents relate their AT with getting a job. On the other hand, those who did not agree with this statement may have responded negatively because they did not receive the correct AT they needed, they had not yet obtained employment, or because they believe their AT is useful in many ways related to employment, but not specifically in helping them to search out employment opportunities.

The lower number of responses to the statement concerning 'get a job' and 'work on resume' does suggest, however, that respondents may not find their AT as linked to these two tasks. For example, receipt of a hearing aid may not have been associated for some respondents with the creation of a resume. Alternatively, others who perhaps do not need to 'work on the resume' or have not approached a resume since receiving their AT, may experience this statement as not applying to their circumstances. 'Get a job' similarly may have been understood in different ways and could have left some respondents confused about how to answer. For example, some may have related it to their volunteer job or position. Alternatively, those who may be on a path towards employment, and believe their AT will help them to get a job in the future, may have been unsure how to answer. For these individuals, not responding to the statement may have been equivalent to indicating they are not quite ready to look for employment. Finally, the lower number of responses to these two variables may indicate respondents do not believe their AT is helping them to 'get a job' or 'work on their resume.' It should be noted that if this is the case, this does not necessarily mean the assistive technology they received through EATI is not helping them move towards employment, as people with disabilities can face many barriers in the process of obtaining work. Rather, obtaining a job may be something that requires more support for the individual beyond the provision of assistive technology.

Positive Impact- Life

In order to examine the impact of assistive technology received through EATI on program participants' lives; a range of 'impact-life' variables was incorporated within the survey (7 in total). These variables were carefully considered and selected based on their ability to assess how respondents experience their assistive technology in their day-to-day life.

For the 'impact-life' variables respondents were asked to indicate whether they (4) 'strongly agreed,' (3) 'agreed,' (2) 'disagreed,' or (1) 'strongly disagreed' (a four-point scale) with seven statements. The option 'not applicable' was also provided. This was to address situations where specific AT may not have been relevant to the statements being assessed. For

example, receipt of computer software (i.e. *Zoomtext*) may be ‘not applicable’ to the variable ‘get out in the community more.’

Data was dichotomized to indicate whether respondents *agreed* or *disagreed* with the different ways in which their assistive technology helped them. Each question received a different number of responses (*n*) and held missing data due to participants choosing not to answer the questions. Table 6 provides a summary of responses.

Table 6
Impact- Life Variables

How AT helped	<i>n</i>	Agree	Disagree	Not applicable
		%	%	<i>n</i>
Get out in the community	139	95.7%	4.3%	30
Do more fun things	139	95.6%	4.4%	23
Increase confidence	158	95.6%	4.4%	13
Take care of self	95	94.7%	5.3%	61
Do more at home	116	93.9%	6.1%	45
Take care of others	63	92.1%	7.9%	85
Have more energy	89	86.5%	13.5%	67

As Table 6 indicates, survey respondents overwhelmingly agreed with statements regarding how their AT has helped them. The responses suggest the assistive technology received through EATI is having a positive impact on the lives of program participants’ in a variety of ways.

The three most highly rated ways people reported their assistive technology helped them in their life were:

- **To get out in the community more (95.7% of respondents agree)**
- **To do more fun things (leisure) (95.6% of respondents agree)**
- **To obtain an increase in confidence (95.6% of respondents agree).**

Some of the statements, such as “Since receiving my assistive technology, I am able to get out in the community more” or “Since receiving my assistive technology, I feel more confident” held particularly positive responses. Very few respondents responded negatively to the statements concerning the impact on their lives. Similar to the employment-impact variables,

the small percentage of those who did not agree with the statements provided in the survey may represent those who did not receive what they believe to be the AT they needed. Alternatively, this small number may also represent those who received AT that are not related to such tasks. For example, a printer or *Livescribe* pen may not have been understood to be associated with ‘getting out in the community more.’

Usage

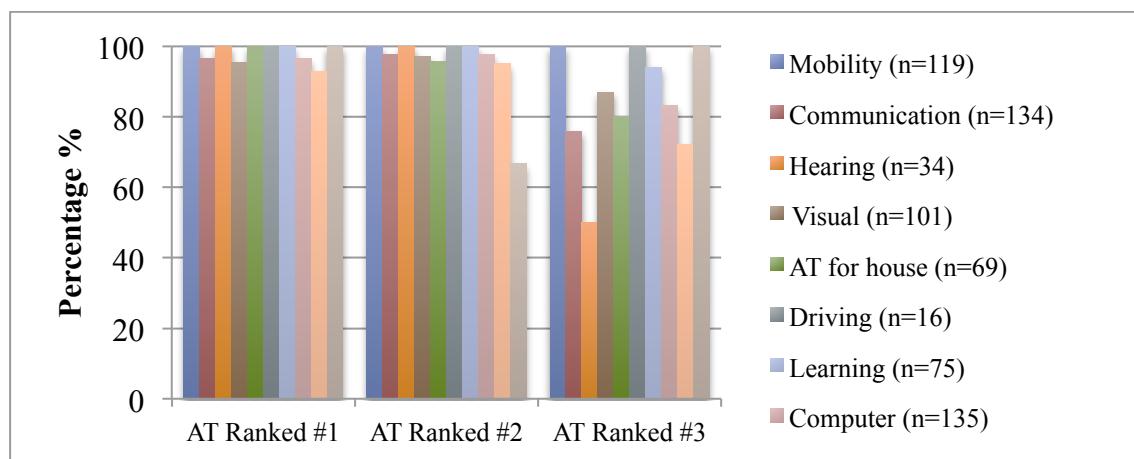
The survey also asked respondents if they continued to use the assistive technology they received through EATI. Those who indicated that they still use their AT were then also asked if they continue to use it *often*. There were no instructions provided concerning how to interpret the word ‘often,’ so it may mean different things to different respondents. Regardless of how it was understood, however, the large majority of respondents indicated they are both still using the AT they received through EATI and using it often.

- **98.3% of respondents who received assistive technology indicated they continue to use the assistive technology they ranked as #1 (most useful).** 93.1% of these same respondents indicated they use this assistive technology often.
- **97.8% of respondents indicated they continue to use the assistive technology they ranked as #2 (2nd most useful).** 93.4% of these same respondents indicated they use this assistive technology often.
- **85.7% of respondents indicated they continue to use the assistive technology they ranked as #3 (3rd most useful).** 81.6% indicated they use this assistive technology often.

Overall, 93.3% of survey respondents indicated they continue to use the AT they received through EATI. Given the Participation Model underlying the Equipment and Assistive Technology Initiative (EATI), these findings are consistent with research by Martin et al. (2011) who found “the lowest rates of abandonment were for those devices for which consumers played a strong decision-making role” (p. 239).

The very high level of use of the assistive technology obtained by survey respondents was examined further in light of the type of AT respondents received (see Figure 16).

Figure 16

Type of AT Reported Still Used by Survey Respondents

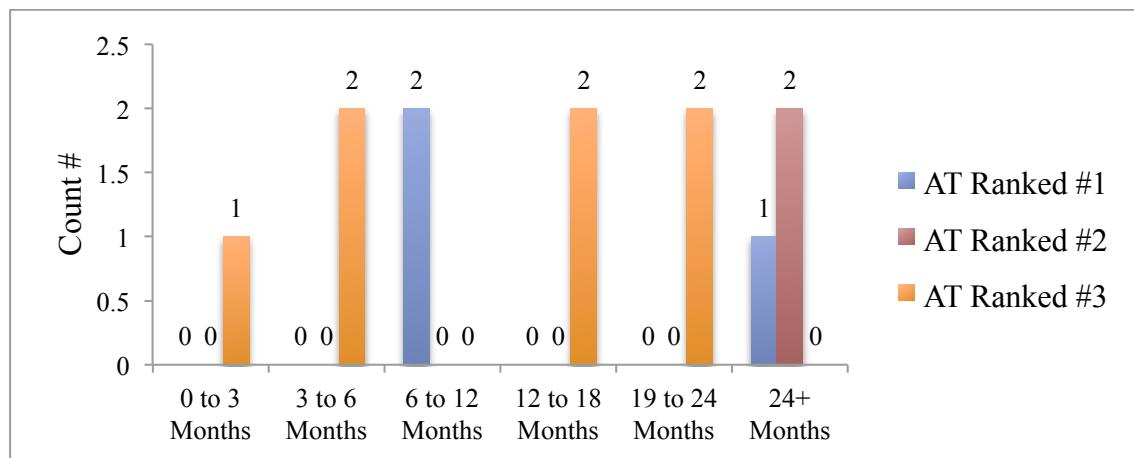
As Figure 16 indicates, the assistive technology provided by EATI to survey respondents was largely still being used. However, and as expected, the AT ranked as #3 (or 3rd most useful) was reported to be used less often than AT ranked as #1 or #2. In particular, hearing AT, computer accessories, and medical devices tended to not be used (or ‘abandoned’) more often. Hearing and medical devices were consistently ranked least often within the top three types of assistive technology within this survey (see Figures 6, 9 and 12), potentially suggesting their ranking may be related to a lesser level of need for these devices by survey respondents. The small number of reported medical AT obtained through EATI limits the ability to adequately assess it in relation to the other categories of AT.

If these devices are less often ranked within this survey, not because they are less often provided by EATI but because they are not considered within participants’ “top 3,” it is worth noting that respondents often reported obtaining professional assessments for their medical and hearing assistive technology. This is particularly interesting given the literature on the lack of use of assistive technology (or abandonment), which generally indicates one third of AT is commonly abandoned or not used (Phillips & Zhao, 1993; Scherer, 1996). **The very few responses concerning a lack of use suggest EATI’s assessment and selection process may have contributed to the exceptionally low abandonment rate for AT compared with rates reported in the literature.**

Usage of the devices was then examined in light of how long respondents reported owning the AT. Figure 17 indicates the length of time survey respondents reported owning the assistive technology they no longer use.

Figure 17

AT no Longer Being Used by Number of Months of Ownership



As this figure indicates, assistive technology that was ranked as #1 was reported not used by only 3 respondents. The ownership of this AT was between 6 and 12 months and after 24 months of ownership. AT ranked as #2 (or 2nd most useful) was reported to be no longer used after 24 months of ownership only, but AT ranked as #3 was more commonly reported to no longer being used. For this AT, there were a slightly larger number of reports of lack of use between 0 and 6 months, and 12 to 24 months of use. This is consistent with the findings of Phillips and Zhao (1993) that a large degree of non-use tends to occur within the first year of ownership.

Although there are numerous reasons an individual would choose to no longer use assistive technology, this survey drew on some of the more prevalent reasons understood for a lack of use within the literature (Arthanat, Simmons & Favreau, 2012; Wessels, Dijcks, Soede, Gelderblom & De Witte, 2003).

The reasons survey respondents indicated they no longer used assistive technology provided to them by EATI are presented in Table 7.

Table 10

Lack of Usage of Assistive Technology

Reason for lack of use	<i>n</i>
AT requires change, adjustment	25
Require training	23
Dislike its characteristics	20
Unable to try it out first	19
Disability changed	15
AT is broken	14
Reactions of others to it	13
Need help to use it	10
Other reason	10
AT is out of date	8
Found better device	4
Embarrassed by it	3

Note: Respondents were able to select multiple reasons for a lack of use.

As Table 10 indicates, the most commonly cited reasons for someone to no longer use their assistive technology received through EATI was:

- **The AT required a change or adjustment**
- **The individual required training to use the assistive technology**
- **The individual disliked characteristics of the assistive technology**

Interviews with program participants followed up on these reasons for lack of use. One participant explained, “the EATI program provided the newest most modern technology hearing aids on the market that was suited for my hearing loss,” but this can mean the AT is not widely available for testing. This same participant indicated that other AT requested at the same time through EATI could also not be tried out because “my old hearing aids were not Bluetooth, so I couldn’t try any of these [other] products until I actually had the new hearing aids and discovered [the problem].”

Other participants commented on a need for training. This is discussed in greater depth within the participant interviews (see page 93 of this report). Finally, the potential for program participants to dislike certain characteristics of AT can be expected after an individual has had some time to work with and get to know their assistive technology. It should be noted,

however, that not all reports of a lack of use of AT should be considered negative as some individuals' needs may change. In some cases this lack of use may even be considered 'good,' such as when the individual's disability may have improved leaving them to no longer require the assistive technology (Kintsch and DePaula, 2002). Table 10 indicates a total of 15 respondents reported their disability had changed in some form. For these respondents the change represented their reason (or part of their reason) for no longer using AT provided to them by EATI. Although the survey did not determine whether these 15 reports were due to 'good' abandonment, those respondents who indicated their disability changed serves as a reminder that some abandonment or lack of use can occur regardless of whether the right AT for an individual's needs was initially obtained.

Of importance, the majority of respondents who reported they had stopped using assistive technology provided by EATI indicated this was because their AT required some change or adjustment. Given the small number of respondents with this problem and the fact that the service of supporting participants to obtain changes and modifications when required is something EATI already provides (when the need is brought to their attention), this does not represent a large concern or challenge for the program. Instead, it suggests there may be program participants who are unaware EATI is available and willing to help participants obtain the changes to their AT as they require.

Satisfaction

The frequency of satisfaction with the assistive technology received through EATI was also examined within the survey. Respondents were once again asked to respond to a statement using a four point Likert scale, indicating to the extent they agreed or disagreed with the statement "I am satisfied (happy/ pleased) with this assistive technology." The scale ranged from (1) strongly disagree to (4) strongly agree. The option to select 'not applicable' was provided to address situations where specific AT may not have been considered relevant to the statement. Data was then dichotomized to indicate whether respondents *agreed* or *disagreed* with the statement assessing satisfaction.

Length of ownership was also assessed concerning respondents' satisfaction with their assistive technology. Independent samples t-tests were conducted to compare the results for length of ownership of ranked assistive technology with satisfaction (see Table 11).

Table 11

Degree of satisfaction and length of ownership of assistive technology

Rank (n)	Satisfied		Not Satisfied	
	Satisfied	Length of Ownership in Months	Not Satisfied	Length of Ownership in Months
	%	<i>M (SD)</i>	%	<i>M (SD)</i>
AT Ranked #1 (169)	96.1%	12.77 (9.7)	3.9%	9 (6)
AT Ranked #2 (83)	95.7%	11.83 (8.5)	4.3%	11 (6.2)
AT Ranked #3 (47)	90.2%	10.67 (8.6)	9.8%	11.6 (8.1)

As Table 11 indicates, respondents overwhelmingly reported being satisfied with the assistive technology they obtained. As expected, respondents were more satisfied with the AT they ranked as #1, only slightly less satisfied for the AT they ranked as #2, and again, only slightly less satisfied with the AT they ranked as #3. This highlights internal consistency within the data obtained but also indicates how EATI is leading to a very high level of satisfaction with the AT the program provides. Research by Martin et al. (2011) found that the more consumers feel informed concerning their assistive technology, the more satisfied they tend to feel. Given that respondents reported largely conducting self assessments and or assessments by both (a professional in addition and self assessment), which involved the participant at the center of decision making due to the Participation Model driving EATI, their level of feeling informed may likely be very high and as such, this may speak to the high levels of reported satisfaction.

By examining the length of ownership of the assistive technology respondents obtained in terms of whether they were satisfied with the AT, it appears the longer respondents owned the AT the more satisfied they were with it, particularly in the case for the assistive technology received most highly ranked as #1 and #2. This conflicts with the research of Martin et al. (2011) who found there to be no relationship between the length of ownership and the degree of satisfaction consumers experienced. There was, however, no statistically significant relationship between these two variables (length of ownership and satisfaction) found resulting in the differences observed within the raw data to not be conclusive.

For those who were not satisfied with their AT, the length of ownership of AT ranked #3 (or 3rd most useful) may have been slightly longer than AT ranked #2. Additionally, for those who reported being not satisfied with AT provided by EATI, these numbers were again consistent with those who reported not obtaining the right AT they needed. For example, 4.1% of respondents reported not receiving the right AT within the AT ranked #1, 5.3% within AT

ranked #2 and 7.1% within AT ranked #3. These are roughly similar percentages to those individuals who reported being not satisfied with their AT, and given the very small number of respondents for whom the assessment process did not provide them with the AT they needed, they consequently may not have been satisfied with the AT received.

Participant Comments

Finally, survey respondents were provided with opportunities to provide written comments. One opportunity for comments specifically asked respondents to describe how the assistive technology they received through EATI may have impacted their life - if they had not already indicated this within the survey.

Of the 79 comments obtained concerning this question of impact on their life, 50% of the comments indicated the respondent had an increased function or independence due to the AT they received. For example, one respondent stated, "This equipment has helped me considerably, I now do not have to rely on people." A further 29.7% of the responses indicated some form of self-improvement or increased confidence for example, "I have more confidence in continuing with my work." Additionally, 12.5% of responses indicated the AT they received from EATI supported their socialization. One respondent explained, "Now that I can actually hear again, I do not feel so isolated and can now follow conversations, enjoy lectures, church services, and other events where hearing is important." Finally, 7.8% indicated they were able to volunteer more due to the assistive technology provided by EATI. For example, a respondent stated, "Very grateful for the assistance, helps me getting out more than I had been. Getting back into the volunteer world."

At the close of the survey, respondents were also provided with the opportunity to offer their *overall* comments concerning EATI. Of the 116 comments received concerning this question of overall feedback to the program, 70.2% of all overall comments represented positive feedback. Comments coded "positive" were categorized as: 'gratitude,' 'relationships with staff,' 'impact on life,' and 'hope or plans for the future.'

Positive comment examples include:

- ❖ **"This has been a very positive experience and I appreciate the help that I have been given by the EATI;" and**
- ❖ **"I am very grateful to the people involved. They have treated me with professionalism, courtesy and a great deal of kindness."**

Positive comments far outweighed comments coded as “negative,” which constituted 10.6% of the 116 responses received in this section. Comments coded as “negative,” were categorized as: ‘process’ (e.g. concerns with the process of the program), ‘approval’ (e.g. concern with what AT gets funded and why), and ‘policy’ (e.g. frustration that EATI is specifically designed for moving people closer to employment). This last group of comments, namely those that expressed frustration with the design of EATI to support people in obtaining employment, were very few in number but do indicate a need for people with disabilities to access assistive technology they require regardless of their relationship to employment.

Negative comment examples include:

- ❖ **“The painfully slow EATI process has been extremely draining.”**

An additional 19.2% of the 116 ‘overall’ comments were associated with providing suggestions for improvement. These suggestive comments were categorized as ‘communication improvement’ (e.g. suggestions for improving the communication with program participants and or vendors), ‘desire for better or additional AT’ (e.g. dislike of specific AT received and or need for other or additional AT), ‘process improvement’ (e.g. improving the application process), and ‘professional assessment desired’ (e.g. comments indicating a desire for professional assessments).

For example, suggestion-based comments included:

- ❖ **“The application process needs to be FAR more "transparent"--there was no sort of ombudsman for the program, to whom I could lodge any sort of enquiry or complaint about "process"--without fearing that this would negatively impact the acceptance or furtherance of my application;” and**
- ❖ **“There needs to be more direct funding for training, skills and new tech equipment as well as yearly maintenance software upgrades”**

Objective #2: To examine the impact of joint decision-making between government and community organizations on EATI as a program

EATI Key Informant Interviews

Procedures

To assess the impact of joint decision-making on the Equipment and Assistive Technology Initiative (EATI), this study examined how the program operates and has evolved, and how adaptable, flexible, effective, and efficient EATI is at meeting participant needs. Through interviews with key informants, who held specific expertise, involvement, and or knowledge of the program, a great deal about EATI was learned.

All interviews were conducted in person or by telephone. Interviews were recorded using *Amolto Call Recorder for Skype*, *Voice Memos* (iPhone application), and *Call Recorder*. They were then transcribed verbatim by a Vancouver-based organization, *Scribes Transcription Services*, where a confidentiality agreement was in place with the University of British Columbia. Interviews were coded using *Nvivo* (Version 10), qualitative data analysis software, and analyzed.

All data was analyzed using thematic analysis, which requires data be examined and coded based on patterns and themes. Themes were determined based on what represents an important meaning or pattern in the responses received. Data was coded using inductive analysis so that themes within the data act to link the information. Latent level thematic analysis was also used to “identify or examine the underlying ideas, assumptions, and conceptualizations- and ideologies that are theorized as shaping or informing the semantic content of the data” (Braun and Clarke, 2006, p. 84). Coding of data continued throughout the analysis as did the refining and naming of themes. Data was also explored for overlap as UBC researchers attempted to *actively* read the data (Braun and Clark, 2006).

EATI Key Informant Interview Findings

A total of 8 interviews with key informants were held. Individuals were identified as key informants for their direct experience with the Employment and Assistive Technology Initiative (EATI). Informants included individuals such as Super Navigators, employees of the British Columbia Personal Supports Network (BCPSN) and the Ministry of *Social*

Development's Health Assistance Branch (HAB), and members of the Provincial Equipment and Assistive Devices Committee (PEDAC). Additionally, informants were selected from a range of organizations that support people with disabilities throughout the provinces such as the *Community Living British Columbia (CLBC)*, a crown corporation that supports individuals with developmental disabilities. As well, vendors of assistive technology in British Columbia, health professionals such as occupational therapists, and those who provide training and support to people who utilize assistive technology and or interface with EATI on a regular basis were included.

Conducted by two researchers, the interviews with key informants led to the development of a number of themes and categories presented below.

Perspectives on Employment

The Need for EATI in B.C.

Informants spoke directly to the need in British Columbia for EATI. Clearly explained by one informant, “The dire and desperate need that British Columbians had for an assistive devices program was so acute. And we've seen through this program, just how out-of-touch disabled British Columbians are with technology- how far back they are, how little able they are to participate in their community because of the lack of technology.” The need for assistive technology appears to be particularly serious for people with certain disabilities. For example, EATI experiences “a high concentration of people who have seeing needs relative to people with hearing needs.” This is because, as one informant explained, the available support to this population group in BC prior to EATI was extremely minimal. The assistive technology that was offered for those who are blind or visually impaired through government programming before EATI, was described as “nothing, except for a white cane...so EATI has picked up the slack.”

Unfortunately, there may be more “slack” than EATI anticipated. After a brief communication strategy in 2011 led to a large influx of new applicants, EATI felt required “to push those numbers down because we couldn't handle it.” In fact, the number of applicants today is “not a reflection of true demand,” but instead is “a managed plan” for dealing with an overwhelming number of applicants. EATI continues to struggle with managing the resources it possesses in light of the large number of applications it receives each year. It is likely that a far larger demand for assistive technology beyond the number of applications EATI receives each year exists in BC. This is because in 2006, over 35% of almost 400,000 British Columbians with

disabilities were found to have unmet needs for assistive technology (equipment or aids) (Statistics Canada, 2008). Unfortunately, without a province-wide advertising campaign, which understandably would increase the number of applications EATI receives beyond a level the program could manage, only those participants who are ‘in the know’ or adequately connected to disability supports, or social or professional networks aware of EATI, are able to access services.

“Level the Playing Field”

EATI provides assistive technology to people with disabilities in BC who are unemployed (or employed with low skills) and wishing to obtain employment. However, informants clarified that this remains only part of the overall program goal. Instead EATI recognizes, as one informant explained, “if people can not get to the place where they can level that playing field to some degree, then there is no way that they can be competitive.” This need to “level the playing field” by providing people with disabilities technology is intended to support them in their need to “demonstrate to employers” that they are “capable of doing a job.” In this way, EATI functions to decrease the need for people with disabilities to ask potential employers to “take it on faith” that they both have and can operate assistive technology that can enable them to work in a certain employment position. Unfortunately, as other informants pointed out, “Even if we can give somebody, you know, \$20,000 worth of free equipment in order to run a computer, there’s no guarantee they’re going to get a job.” This potential for not obtaining employment is due to the myriad of challenges people with disabilities face in obtaining employment. For, as another informant explained, as a person with a disability:

“You come across a lot more road blocks, you come across discrimination. Even if you have your own equipment employers are still going to think, you know, you’re a liability or, you know, what if your disability gets worse....or, what if you can’t get the job done? And I don’t know if that was taken into consideration, it’s not easy to get a job especially with a disability.”

Discrimination in the workplace can severely limit the ability to obtain employment. In fact, research by Shier et al. (2009) indicates people with disabilities are often barred from certain types of work despite their ability to manage the tasks associated with job. This may be related to “employers [that] see [sic] the entire spectrum of disabled people as a homogenous whole” (p. 68). Overall, people with disabilities “continue to face extensive stigmatization and discrimination within the labour market, even in the face of significant constitutional and institutional support and protection” (Shier et al., 2009, p. 72). One informant explained, “If you have cerebral palsy and you have a speech problem, a lot of people automatically think you’re stupid...they’re going to think you don’t have the skills for the job.” This discrimination

does not just prevent people with disabilities from being offered work opportunities; it can significantly impact how they feel about themselves and for some, “they just weren’t able to cope with that kind of labeling.”

Another informant explained why EATI is so essential to the process of obtaining employment, “You have to build up confidence, you know, volunteering at places, you know, and then breaking through that generalization that you’re a person with a disability who’s going to cost the company more.” Despite the degree of discrimination towards people with disabilities, informants still commented on the necessity of EATI within the province, as it’s a program aimed at finding “creative solutions.” One informant summed it up as “It’s been the biggest thing that British Columbians have needed in the 20 plus years that I’ve worked in the disability arena...it’s the most important thing we’ve done for persons with disabilities in this province.”

A Unique Approach

Program Flexibility

Informants explicitly described how EATI is needed in BC due to its unique approach to the provision of assistive technology. By operating differently from other programs that fund assistive technology, EATI is able to better meet participant needs. For example, one informant explained that by “building the ship as we are rowing it,” EATI is able to adapt and make changes to the program in ‘real’ time. In fact, the EATI that exists today “doesn’t look the same now as it did when we started it. So every month, every year it changes. So it is an evolving process.” However, constant changes for improvement to the program have required a commitment to maintaining flexibility, which can be a challenging task.

One way EATI attempts to maintain this flexibility is to avoid the list-based approaches other assistive technology programs tend to use. Instead of selecting assistive technology from a list of pre-approved devices and equipment, EATI participants may seek out and apply for assistive technology that is specific to their needs. This is because list based approaches can be “very, very limiting. There’s no opportunity for unique and innovative solutions that are unique to the individual and their barriers and their needs.” Unfortunately, this same informant commented on holding a fear that EATI was in fact “moving closer to a list based approach.” However, of the informants who addressed this issue of flexibility and the list based approach, government and community partners alike, all appeared to agree with the statement: “list-based solutions do *not* support individuals in their particular goals.” Thus, program flexibility

associated with not maintaining a list of approved assistive technology is something many stakeholders agree upon.

Participation Model

The rejection of a list-based approach is very much connected to the Participation Model or EATI's philosophy for centering the services for people with disabilities on their personal employment goals. The Participation Model "describes a process that begins with the individual. Each individual has goals and a plan for achieving those goals" (PEADC, 2006). By working with program participants to further explore those goals and their plan, Navigators support participants in their selection of assistive technology.

Interestingly, despite the consensus for flexibility within the selection of assistive technology by participants, this same flexibility within policy does not appear to be so strongly supported. Instead, a division exists between those who desire more stringent policy within EATI to take "away the need to make decisions, to make a call about things" and those who desire more individual "discretion." In some areas of EATI programming where policy at one time did not exist, as one informant explained, this grey area was "intentionally" created so as to provide the Navigators and stakeholders engaged directly with participants to "exercise discretion." Yet this was eventually overturned as "they weren't comfortable" with "mak[ing] the call." This desire for less discretion appears to stem from some workers' personal discomfort with making certain decisions, but also from a desire to offer "consistent and fair" services to all participants. Walking this line between providing consistent and fair services with the need to retain the flexibility of the program, however, requires those on the front-line to be allotted a degree of discretion in decision-making.

A number of informants commented on the Participation Model as EATI's "lifejacket" and "anchor." However, there remain some challenges associated with truly adhering to the Model, most notably, the interpretation and application of the model itself. Without a clear consensus of how to interpret the Participation Model, given the constraints of the LMA funding EATI holds, one informant commented the "result [can be] some very odd responses...it needs thought to not turn it into a simple conduit for getting people equipment." The relationship of the Model to policy based on employment or labour market participation holds concerns as well, as one informant clearly stated, "EATI is reluctant to call itself an employment program." This reluctance by some may have evolved out of the shift from volunteer goals as acceptable end goals to the requirement for an employment related goal in keeping with the LMA funding requirements provided to EATI (which can include volunteering as a step in this direction). As one informant described, this was "a sad change" and a significant move "away from the

Participation Model" and towards a focus on employment as the ultimate goal rather than participants' personal goals. This signals the real challenge for EATI - that as a program aimed at reducing barriers to participation through the provision of assistive technology; the overall program goals have had to shift in order to become a program consistent with the federal funding restrictions in place. As such, EATI has had to adjust and is no longer, as one informant explained, "a perfect rendering of the Participation Model."

The focus of moving participants towards employment was commented on by a number of informants. It should be noted that EATI is not an employment program in the sense that program participants do not receive help with their job search, but rather that the provision of assistive technology is intended to help participants overcome functional barriers to employment. To do this, program participants must first determine their employment goals and identify the barriers in their path to these goals. For some informants, this was linked to the topic of questioning program participants' employment goals. A clear division exists between those informants who believe participant goals require some scrutiny and conversation with the program participant on the appropriateness of their goals, and those who believe it is not up to EATI to question participants' goals. One informant explained that by, "not questioning people's goals- even if they had no work experience, no clear idea of where they were going, appeared to be diving into what was likely going to be a...discouraging dead end." Yet other informants appeared to disagree, for example one stated, "Is he really going to reach this goal? Is it a realistic goal?...we have those questions come up. And it feels to me like they're judging a person." It appears that a middle ground between these two sides is most often accepted, where the goals may not be questioned, but the path and plan to achieving those goals is openly discussed. A concern for focusing on employment goals was echoed by another informant who commented, "they're [government partners] so focused on outcomes...employment outcomes....it's just the more important thing [is] getting people out of their homes, or even within their homes, being able to participate more in the lives, brings them more health, more vigor, more involvement." This statement clearly indicates the very different perspectives brought forward to EATI by those working from the same Participation Model. The Participation Model, in this regard, exists as an important philosophy but it remains difficult to apply or work within given differing perspectives of stakeholders and a lack of consensus on such issues.

Challenges Within

“Different philosophies” and “different cultures”

The establishment of EATI is “unprecedented” in British Columbia. However, the bringing together of the government (MSD) and community (BCPSN) partners, despite a shared Participation Model, represents no small task. Many of the informants commented on how the coming together of these two parties represented a clash of cultures. One informant described it as “our world views are almost diametrically different.” Representing the community partners this informant further explained:

“We’re risk takers, they’re not. We’re closer to the ground, they’re not...we’re strongly values driven, and try not to veer off that. I’m not saying the government isn’t values driven but it’s harder for them to get there. There are so many differences in the way we view the world...we’ve had to try to figure each other out.”

For some, “figuring each other out” has “been fun...it’s been fun to try and find ways to help our partners [the government] feel warm and fuzzy.” Unfortunately, for others, this process of “figuring each other out” has resulted, not in a collaborative and stronger relationship, but a greater “separation” or “division” or even, as one informant explained, “a gulf, it’s not a small divide, it’s a gulf.” For example, the challenges of working together has moved from a place where, as one informant explained, “I felt like we were all on the same page, that there was no division...[to] seeing some of the comments and some of the almost dragging things out, I began to feel a separation.” This perception that the division between government and the community was growing was a common sentiment and it appears to persist despite attempts to work together. However, as one informant commented, the divide exists more as “healthy tensions” that get discussed regularly; “we know it’s there, we talk about it a lot.” This work at managing the division between the government and community partners was perhaps best described by another informant who stated, “we try to make it collaborative, but I still feel like there’s that divide.”

The divide between the government and community partners stems from the “different philosophies” and “different cultures” stakeholders bring to the relationship. Often these philosophies dictate the perception of program participants. For example, informants commented, “The Ministry believes that this individual will try and drain funding from anywhere...[yet] we believe the individual has a strong goal.” Another informant clarified how in certain situations, “our government partners became very nervous about- well, this is my own opinion, about the number of seniors who were finding their way to assistive technology and I suspect, there was some fear that we would not get sufficient employment outcomes as a result.” This fear for program outcomes associated with employment consequently leads to

differing perceptions concerning the funding of assistive technology. For example, one informant stated “if employees at the Ministry worked a lot more closely with people with disabilities they might be able to see how assistive technology would meet people’s needs a lot more.” Alternatively, on occasion the government partners can perceive funding requests as contributing to “irresponsibility and unsustainability.” Highlighting the differing cultures of government and the community partners, one informant clearly stated, “Operating and deciding sometimes from a place of risk management...they operate from a place of fear of the auditor, fear of public opinion or media scandal and that sort of thing.” Given the different concerns these two stakeholders bring to the table, one informant maintained, “We’ve had to try to respect the difference, to understand the difference, to try to persuade and modify when we think the difference is unwarranted.” Yet, despite a desire to “respect differences,” the number of divisive issues is concerning for its potential to negatively impact the working relationships of stakeholders, but also the program itself by way of affecting the ability to jointly make program management decisions.

Both the government and the community partners have indicated a number of meetings have been held where the relationship between the two sides has been reviewed, where suggestions have been put forward, and where changes or solutions have been put in place with the intent of improving the relationship. Documents created following these meetings indicate ‘trust’ and ‘confidence’ in the other sides, as well as ‘conflict resolution’ have been discussed. However, these issues require continual examination. For as the program continues to evolve and change, so do the challenges the program faces serving to potentially reignite issues associated with trust, confidence and conflict resolution. Complicating efforts to maintaining a positive partnership between the two sides, however, is the rarity of face-to-face meetings due to both a “travel-ban” for the government partners and the lack of money dedicated to travel within the funding scheme organized for EATI. Yet opportunities to bring government and community partners together for face-to-face meetings may better support joint decision-making and work to lessen the “gulf” that exists within the partnership.

Joint Decision-Making

EATI continues to place a high value on the joint decision-making. Joint decision-making has become useful, particularly in situations where technology requested rests outside of the “average” costs. For example, the “visually impaired participant, typically- I think the average cost of solutions is somewhere around five or six thousand dollars. And so anything that starts to creep up to ten thousand dollars, we’ll probably have a conversation about.” Alternatively, when assistive technology “may very well be an assistive software [or technology] for

somebody, [but] it's really just the typical run of the mill piece of software [or technology]" this too, can often lend to opportunities for joint decision making between the government and community partners. By bringing all stakeholders to the table, even the larger network partners occasionally, EATI attempts "at every point, to be collaborative...[and] consensus based." One informant explained that this use of consensus decision-making has "benefited the program enormously," echoed by another informant as, "I like the way it is done...everybody has a chance to say something and everything is taken into consideration...no decisions are made unless everybody is on the same page and everybody is comfortable with it. So, I think it works." Overall, these situations constitute opportunities for having "a good open discussion."

Unfortunately, attempting to arrive at a consensus can occasionally also lead to an impasse, as was the case with one particular piece of technology requested by program participants: the smartphone. The issue of smartphones on one side suggests the utility this technology can provide to people with disabilities is vast, where on the other side, "there appeared to be a great fear that if the media got wind...that the government [would be] providing *iPhones* for people, there would all sorts of flack about it." This disagreement over smartphones resulted in the topic, as one informant described, becoming "shelved." This same informant stated, "It feels like they're not trying to work through [the disagreement], they just want to shelve it," which to this informant "doesn't make sense." However, another informant representing the government disagreed with this perspective, and a document stemming from a joint meeting suggests the topic has not been "shelved," but rather it is waiting on the community partners to develop a business case for the use of smartphones in order to further the discussion (EATI, n.d.f.). This topic of the smartphones suggests that although joint decision-making within EATI aims for collaboration, there exist some additional complications to this process. One of these is the inequitable dispersal of power between the government and community stakeholders.

Despite the aim to hold a collaborative relationship and the sharing of program management, there is the issue of inequitably distributed decision-making power. This is because the Ministry holds the final decision-making power for whether assistive technology is funded by EATI. This does not mean, however, that the government partners conduct detailed reviews of each application for funding received from program participants. Rather, "approximately 80% of applications engender no questions from adjudicators" and are approved (EATI, n.d.g). In fact, only a small handful of reviews that involve joint decision-making by both the community and government partners occur each month primarily "for clarification while others necessitate review because of risk factors" (EATI, n.d.g). The majority of applications are adjudicated with few questions posed towards the Navigators for clarification. Nonetheless, adjudication

for funding does remain with the government partners and this one-sided arrangement has led to complicate the relationship between the government and community partners. As one informant explained, “No matter how much we disagree or try to rationalize something, the Ministry has the final say.” This, however, is not how the government partners understand the adjudication process. Rather they assert the “final say” is obtained for the applications reviewed when both the government and community partners together reach a consensus. Unfortunately, the perspective of the government partners holding the “final say” or a greater power to decide the fate of participants’ applications consequently, can impact joint decision-making. An example of this is an informant’s understanding of the smartphone issue: “If they don’t outright say no, then we can’t argue about it right, because it’s not a no, it’s just on hold right now.” Thus, because the ability to approve funding exists within the adjudication function of the government partners, decision-making and adjudication hold the potential to undercut the importance of joint decision-making and collaboration altogether and instead may serve to reify divisions within the government and community partner’s relationships.

It should be noted, however, the government partners have offered to facilitate the take over of this function, yet community partners have turned this offer down. Despite the challenges associated with the different perspectives, cultures, and the “gulf” that exists between the government and community partners, as one informant explained, this sharing of the work is essential to the program. For without it, EATI could “quickly revert to being a traditional program...where you’re a contract and they manage a contract and they come in and do spot audits from time to time. And they change the rules whenever they feel like” referring to the treatment of organizations by the BC Government. This statement indicates a fear of losing the unique attributes EATI has worked to employ by becoming a “traditional” program. This same informant stated clearly, “have we been able to bridge the gaps between us – no,” but this partnership is perceived as essential in order to:

“To change the culture of government, to get government to work more closely together, to collaborate, understand and to live the Participation Model. How are we going to do that if they did not have to take part in the decision-making? [EATI] declined because it’s vitally important that the branch of the ministry that’s involved with the disability strategy, be engaged with us in trying to figure out how to make change.”

Thus, this teamwork is understood as vital to EATI’s larger overall goal of participation and social change because by possessing the adjudication function, government partners “have to engage in these conversations” resulting in both government investment in the program, and even a pride held by government for EATI’s successes.

Whether all the stakeholders entirely understand or are aware of this rationale for the partnership, however, is questionable. For example, when another informant was asked why the community partners rejected the offer to manage the adjudication function, s/he stated, “we’ve tried to figure it out and we really don’t understand it.” It is evident, however, that this partnership, though challenging, holds importance to the goals of the overall program. Yet a greater understanding by everyone involved in EATI for why the partnership exists and the benefits of partnership are clearly needed. Until the reasons, and hence the benefits, associated with the partnership are better understood by everyone involved in EATI, and a more equal sharing arrangement for the decision making function associated with approving assistive technology is developed, the divisive relationship between government and community will likely continue to persist.

Communication

The division between government and community partners has in part led to some of the communication challenges facing EATI. The virtual work environment has also contributed to communication challenges for “[with]in the virtual work environment, traditional social mechanisms that facilitate communication and decision making are effectively lost and participants must find new ways to communicate and interact, enabling effective teamwork within the new technical context” (Townsend, DeMarie and Hendrickson, 1998, p. 23). These challenges facing EATI exist despite a number of attempts to improve communication within the program. For example, one informant commented, “EATI has done a great job with communication” by bringing staff together once a year. This positive perspective of communication was typically offered in relation to the meetings of Navigators and/or community partners.

Community partners refer to the positive communication occurring among themselves by way of teleconferences on a weekly or bi-weekly basis. The ability to send a quick email or pick up the telephone was appreciated as a way for the community partners to remain in close contact. However, the government partners are not typically invited to participate in the teleconferences organized by the community partners. This is because as one informant explained, “there was a period of time when there was a lot of communication directly with [the government partners] and the Navigators and that seemed to be taking up a lot of people’s time and creating confusion, because there was a lot of thinking out loud that was going on.” Despite strategies to improve communication within EATI, one informant explained that s/he is reluctant to contact the government partners, “really it depends on my workload, if I have the time to put up a fight or not.” As those representing the community partners explained, when meetings of government and community partners do occur, topics are often “wrestled” with by the two

sides given the degree of “push back” or questioning the government partners may offer. It should be noted this was not always considered to be the case as one informant disagreed and instead stated, “push back” was “rare” and although “some pretty significant questioning of some of the strategies have been employed,” this was considered “good and healthy to have.”

Challenges associated with communication with vendors were discussed with a number of informants as well. One informant who worked closely with EATI explained, “that line of communication has been a bit bumpy, certainly over the last year and half and I think it could be better.” This in part is perceived to be due to a new strategy for better communication that included a central email and telephone system and an “intake Navigation” system designed “to smooth communication between not only EATI participants and Navigators, but amongst Navigators themselves, Navigators with the hub, and Navigators with [the government partners].” Unfortunately, this strategy may have created some of the current communication difficulties. One informant, a vendor who works with EATI, explained how the shift from one Navigator working with program participants to three Navigators working on each “file” has been frustrating. S/he commented, “Wow, like how come nobody tells us when these changes go on?...Now I’m confused because I thought you were working with so-and-so.” Although some vendors have great relationships with EATI navigators (“we’re all on a first name basis”), the communication between EATI and vendors can pose its challenges, particularly when with “some vendors it takes, you know, three weeks and five emails, like ‘Hey, where is it?’”

Communicating with program participants presents another issue. Clearly stated by one informant, “I get the sense that [the shift to three Navigators] been very confusing to the applicants.” Another informant explained, “I think we have struggled in some areas. Mental health issues...we’ve struggled with knowing or feeling that we’ve done all that can be done in understanding and supporting and navigating people through our process” and “I don’t feel as confident that I’ve done as good a job in some of the other disability areas as I did in the disability area that I know well.” Another informant described it somewhat differently as, “I think the unfortunate side is, especially for somebody with a brain injury or mental health disability, having somebody on the other end with them to help them through this process. There’s only so much we can...I think EATI doesn’t necessarily fail but I think that’s something that should be looked at.” This statement is significant as it suggests the communication (and work) with someone who may have a mental health or cognitive disability may require an additional support that is not currently being offered through EATI.

Difficulties in communication with program participants can be linked to the challenges of providing equitable services to people with all types of disabilities. This is of concern because the values the Participation Model clearly state that people with disabilities are entitled to the respect of programs that “treat all citizens equitably” and are “barrier free and able to accommodate all forms of communication.” The values also include that people with disabilities “have the right to participate fully in society and have access to the personal supports that they need to do so” (PEADC, 2006). As one informant described, EATI is “doing better than expected” on this issue for when EATI was designed, it aimed to primarily support people with physical disabilities, and EATI “just didn’t, quite frankly, didn’t think about that [services for people with mental health and cognitive disabilities] until people started presenting themselves.” Fortunately, it appears EATI is now taking this concern for equitable service provision for all disabilities seriously and is “gradually moving more and more into work with mental health consumers [and] people with developmental disabilities.” In order to live up to the values enshrined within the Participation Model, which serves as the program’s foundation, adequate communication with program participants, regardless of disability type, is essential.

Despite struggles with communication, EATI is forging some very interesting relationships; including those with vendors and health professionals, as it seeks to provide people with both the assistive technology and training they need to increase their participation in the labour force.

Forging New Relationships

Vendors

Informants commented on the relationships that have developed between vendors of assistive technology in the province and EATI. For some, this represents something very positive as one informant explained, “I’ve got vendors that I prefer to work with, so if I’ve got a participant that comes in and says, ‘Hey I want to work with this vendor,’ I’ll be like, ‘Yes, that’s awesome because they’re fast...I don’t push people to work with a certain vendor but I do get excited when certain vendor names come up.’” However, as this same informant also explained, some vendors may delay the application process:

“I’ve requested a quote from this vendor three times and they haven’t responded. [So I ask the participant] ‘Do you want to look at maybe going with another vendor?’ You know because if they can’t get us a quote how long is it going to take them to actually get the equipment in once approval comes through...do you really want to work with

them in the long run? What happens if your wheelchair breaks down and you need repairs and they can't get to it for three weeks?"'

This comment highlights the importance of the vendor providing not just a one-time service, but in fact, a long-term relationship with each EATI program participant. An informant, and vendor to EATI, indicated this relationship was taken seriously by their organization. This informant commented, "we want to be seen as a partner with EATI, we don't want to be seen as a company that's trying to sell product and services to clients. We want to be a partner...and that's how we will conduct ourselves." This desire for a close relationship to the program can hold its challenges, however, as another informant explained, "we have...vendors who I think exert rather strong control over the market for our participants," which can be particularly problematic when vendors are also in a place to provide assessments for assistive technology. Program participants within the survey raised this issue of vendors focusing efforts on selling products over focusing on the participant's needs as well. For example, one participant stated, "vendors made sale not taking my needs really into account as monetary bottom line out weighed my needs as a client...the big Vendors can talk well and the client becomes another poor decision maker." Others, however, indicated, "I was looking for used equipment and a vendor not of my needs gave me direction and support to apply for some much needed help," further indicating that some vendors look for opportunities to support participants to obtain the needed AT.

Usage and Training

EATI strives to ensure program participants receive the 'right' assistive technology to meet their needs. Not obtaining the correct assistive technology can present challenges for the individual, but also for EATI as it can lead to a lack of use (also known as 'abandonment') and "a waste of time for everybody." However, as one informant explained, EATI's flexibility is an enormous benefit in this area. S/he stated that if a participant alerts EATI that their equipment is not right for their needs, then:

"There's been a lot of different ways to manage that...we've brought the equipment back and either put it in somebody else's hands or contribute it to an organization who could use it...[and] we've increased the training for people so they can get a better handle on how to incorporate that particular device in[to] their lives."

Although this same informant admitted, "there certainly is some abandonment. There's been some wrong decisions made through the process," s/he also clearly said, "I don't think we have an abandonment problem." The program was also explained to have evolved greatly in this particular area. EATI's Navigators work with participants to ensure what they received is the AT needed and if it is not, attempts are made immediately to rectify the situation. However, for those individuals who take time to become familiar with the AT, follow up interviews are

conducted at one month (after obtaining the AT), and again at 6 months to see how the participant is experiencing the AT overall. This is important to help participants receive the right AT for them, but it also helps to limit “a deep sense of shame” that can result from an individual requesting something that may not have been quite right for their needs. To address the potential for a lack of use, follow up telephone calls aim to determine how comfortable participants are feeling with their AT, if they are using their technology, and if they require training (or more training).

The learning associated with the provision of training to participants can play a large role in whether an individual uses the assistive technology they received through EATI (Kintsch and DePaula, 2002). The relationship EATI holds with vendors plays an important role in providing this training. EATI understands this and in response has recently developed training documents that provide a list of objectives for the trainer to complete with program participants (EATI, n.d.j.). These objectives aim to ensure participants develop a foundational level of use and are able to meet a range of outcomes for their specific assistive technology. In this way EATI is attempting to address issues associated with training for its participants.

Vendors play an important role in this because not only do they supply the assistive technology, they often provide an agreed upon set number of hours for training the individual to use it. Unfortunately, the amount of time necessary to train some program participants can be much higher than for others, particularly, for example, when it involves “very sophisticated software.” Also as one informant explained, some participants hold “no experience at all on how to use a keyboard, they didn’t know a keyboard layout...so it understandably slowed things down and made [the participants] feel very stressed and very confused and it even gave them anxiety.” Therefore, the standard 10 hours of training EATI typically organizes with vendors has been understood to be, for some, “not realistic.” Although EATI has been observed to take the need for training very seriously, “in the beginning EATI was quite shocked...and I think that they almost felt that the vendors were trying to take advantage of the program and trying, you know, to sell more training hours.”

EATI now approves additional training as soon as possible and even within “one day” (Kirsty Dickinson, personal communication, May 30, 2013), however, this is part of EATI’s continual changes to improve the program. Previously, requests for additional training involved “having to go back...wait a further three, four, five, or six months for that second application to be approved and now they’ve lost- they might have lost their footing and their momentum in what they did learn.” Attempting to balance the need for additional training for some participants, while not holding an “endless ability to provide training,” EATI is faced with a significant

challenge. For on the other hand, without the training “to get to the point of feeling enough mastery to reach the launching point,” the likelihood for a lack of use or abandonment is greater, serving to undo the significant efforts made by *all* parties in the program.

Objective #3: To explore the impact of the Participation Model on individuals with disabilities who received assistive technology or equipment

EATI Participant Interviews

Procedures

Both the survey sent to all those who had interacted with the Equipment and Assistive Technology Initiative (EATI), and the semi-structured interviews with EATI participants who had received assistive technology through EATI, were conducted to meet Objective #3. The survey asked participants if they still used the assistive technology they obtained (to assess any lack of use), which in part was to assess the effectiveness of the Participation Model. Survey data also offered insight into the impact of the self-assessment on the attainment of volunteer or employment goals, and the building of employment skills. In this way, the survey worked to complement the qualitative data obtained within the interviews held with EATI participants regarding the impact of the Model (i.e.: feelings of empowerment).

Program participants who had obtained assistive technology were afforded the opportunity to sign up to participate in an interview by reading and signing the consent form online, by signing and returning the consent form in the mail or by contacting the research team by telephone or email. From the 2,051 individuals contacted to participate in this study, a total of 182 program participants indicated they were interested in participating in an interview. From those 182 individuals, participants were selected at random. Those identified were contacted by email and/or telephone to discuss the best means for them to communicate with the researcher for the purpose of an interview. This initial contact also provided the opportunity to review the purpose of the study, the participants' involvement, the time commitment, and participant confidentiality. Interviews were scheduled to occur in person (when possible), or by telephone or *Skype* (or *Voice Over Internet Protocol VOIP*). Interviews were recorded using *Amolto Call Recorder for Skype*, *Voice Memos* (iPhone application), and *Call Recorder*. Participants were provided with a \$25 gift card as an honorarium for participating. A Vancouver-based company, *Scribes Transcription Services*, was contracted to transcribe all the interviews.

Finally, all interview data were entered into *Nvivo* (Version 10), qualitative data analysis software, for coding and analysis. Thematic analysis was used to examine patterns and themes within participant comments based on meanings and patterns in the responses. Using inductive

analysis and latent level thematic analysis, coding of data was ongoing throughout the analysis (Braun and Clark, 2006).

EATI Participant Interview Findings

Interviews with a total of sixteen (16) EATI program participants, who had received assistive technology, were held between February and May of 2013. Given the scope of this study and the time parameters, this number of interview participants was adequate to generate enough data to “illuminate the patterns, categories, and dimensions” of the experiences of program participants and the impact of the assistive technology they received through EATI (Polit and Beck, 2012, p.521; Pope, Ziebland and Mays, 2000). Two researchers conducted the interviews until a point of saturation was reached where no new information was provided, and “redundancy” was achieved (Polit and Beck, 2012). Interviews led to the development of a number of themes and categories as presented below.

Interview participants were 56.2% male ($n=9$) and 43.7% female ($n=7$) and 5% lived in Vancouver and the Fraser Valley region, while 47% lived throughout the rest of the province. Interview participants held a range of disabilities including physical and mobility related disabilities, sight impairments or blindness, hearing impairments, and cognitive disabilities. A number of participants had more than one disability. Finally, interview participants were involved with EATI for range of time. Some had worked with EATI when it first began in 2009 and, therefore, had years of experience using assistive technology provided to them through the program, where others had only received their assistive technology recently and been using it for a few months prior to the interview. Participants had received a vast range of assistive technology that included specific, almost custom devices, to very generic technology useful to even those without disabilities. Some participants were in the process of applying for more assistive technology through EATI.

Coming to Know EATI

EATI participants discussed their experiences with coming to learn about the program. Most often a health professional suggested the individuals contact EATI, but others heard about EATI through friends or people in their social network. Some people arrived at EATI with little understanding of what the program could offer them; one participant said, “I was like, ‘Oh, okay, I’ll sign up.’ I didn’t know what they meant by equipment, but I thought I’d check it out.” Others immediately recognized the possibilities associated with accessing assistive technology through the program. For example, “And I looked- I saw this posting that was put

on and I was so excited.” Still others appeared almost reluctant to contact EATI due to its focus on employment. As an example, one participant commented:

“There was a notice on the bulletin board of the complex [where] I was living. And I didn’t pay much attention to it the first time I passed it because it said something about an employment program. And it was, like, while I need to do something, there’s a whole list of things that I could use before I get to the stage of trying to find work.”

Despite this concern for not being ready to seek out employment, this same individual “took down the notice and wrote down the information and looked it up on the internet.” Together these comments indicate how people at different stages within their lives, with different needs and different understandings of assistive technology, managed to learn about and make their way to EATI to obtain assistive technology.

Financially Unable to Obtain AT

Despite how the participants learned and came to know EATI, many participants commented on how “grateful” they were to learn about EATI and/or obtain assistive technology through the program. Participants regularly commented on feeling “very grateful for the EATI program” and “very thankful in a lot of ways” for their assistive technology. One participant described it as “I got a beautiful gift.” For many, the assistive technology they received was too costly to purchase on their own. In fact, two participants commented on being homeless at different times and struggling financially, “while I wasn’t absolutely homeless...that was going to end as well and I was going to be in a shelter.” Another participant explained that prior to working with EATI, “I was financially- things went down and I had to move out of there. I was homeless for about six months, pretty much.” Others commented on their disability benefits being inadequate to provide them the assistive technology they required. For example, “I realized that I need some help because I’m on disability assistance with federal and provincial. I cannot possibly save enough to buy that equipment.” In fact, one participant explained the financial issue associated with disability benefits, “Being designated a person with a disability, while that is a health matter, you are bound by financial constraints.” This was echoed by another participant who stated, “I only qualified for CPP disability, so my income was limited.”

This lack of finances left people needing a number of things prior to encountering EATI. For example, one participant spoke about the challenges of communicating without having a computer - further complicated by vision impairment, “I was using computers at all kinds of places, for example, and using a small magnifier to read, which was a painful story.” Another participant commented on needing “some sort of scanner that I could use to, I guess, read the minutes because nothing was kind of converted to accessible format for me and I had no way

to record any sound other than by hand. I would bring it home, and my husband would have to decipher my horrible handwriting.” Needs for assistive technology to overcome functional barriers, such as these, were present within all the interviews conducted.

Barriers to Employment

The many different barriers to employment that participants experienced surfaced within interviews upon the discussion of paid employment. Often the participant’s disability presented them with challenges that their previous employers had been unwilling to accommodate. For example, one participant stated:

“When I could no longer teach, and I was teaching anyway, and I needed to lay down afterwards, they wouldn’t even allow me to lay down in their little medical office kind of thing where they had one little bed. I said, ‘I just need to lie down for a half hour after teaching. I’m fine, but I can’t go home in this situation.’ And they wouldn’t do that. So I just went and lay down in the hallway on a bench where students sit.”

Such an experience, in addition to the discrimination many participants experienced while looking for employment left some to feel, as one participant described, “Demoralized, really dispirited...feeling trapped.” Discrimination in the workplace has been written about at length within the literature and these experiences described by the interview participants were consistent with studies that found applicants with disabilities to be far less likely to be offered employment than those without disabilities (Ravaud, Madiot and Ville, 1992).

Within the job search, participants often spoke about feeling confused concerning the best way to approach a company for work as a person with a disability and questioning whether they should tell the employer they have a disability during the first introductions. One participant commented on interviews as being frustrating because, “It takes an enormous amount of energy to persuade people.” This same participant explained this is because s/he is perceived as not holding “credibility. I’m not a credible messenger or something. I don’t know. I don’t have legitimacy” due to his/her disability. Just dropping off a resume or filling out an application, however, posed challenges as one participant explained:

“I was probably very optimistic and ambitious. And I, you know, I went to [large grocery store] to apply for a job, because I thought, I can stand up and check people’s receipts and hand out the coupons...I thought that would be perfect for me. So, I went to [large grocery store] and I said, “Could I have a application please?” And she looked me and said, “For yourself?” [laugh] And I said yes. And the first time in my life I realized what it’s like for a handicapped person to find employment, you know? I—she kind of looked at me like I’m [an alien] to even think about that.”

Others commented on the many additional barriers they faced from transportation for employment, to the physical barriers buildings presented. As one participant explained:

“And even if I could, even- I get to a particular building where there’s going to be a meeting held. Well, okay, now I’m here, where’s the door? *HandyDART* doesn’t deal with anything other than drop you off.”

This statement represents not just the challenges associated with attending a job interview, but the daily challenges facing people with physical disabilities in accessing some of the services those without disabilities take for granted.

Additional challenges participants described included not possessing the specific skill base for certain jobs, let alone the skill base for looking for employment given the role computers and technology play in society today. As one participant explained, “If you don’t have basic computer skills, I mean basic computer skills...you’re not going to get anywhere. How are you going to apply? And then you have to know how to attach the resume to your email.” Another participant described how s/he understood the barriers to impact employment for him/herself, “I realize that I’m not likely, you know, going to come into full-time employment unfortunately, but that’s the way it is.” Not all participants held this sentiment. Most commonly, participants described a whole range of employment possibilities they were either interested in, or were pursuing with their assistive technology. Many of these individuals described their plans for employment in keeping with a future of open possibilities, and this was often associated with self-employment.

Self-employment was repeatedly mentioned as a means for the participant to manage his or her disability by working from home. One participant explained, “I have to limit myself to doing stuff at home. I wouldn’t work a regular eight-hour day. I’d work as many hours as I could sit at my desk, and then if I have to- even have to- I even have taken my *LazyBoy* over there and put it there to do work on my computer. So this is where – I’ve learned here at home how to work.” Another participant stated, “to be quite honest, the way that I’m paced, I wouldn’t be able to work in a normal, full-time environment.” These comments highlight more than just the recognition of self-employment and working home as an opportunity for employment, they also highlight the problem solving associated with overcoming functional barriers and meeting one’s needs. For many, however, this movement towards self-employment requires a significant learning curve and additional support.

Barriers to Participation

Participants described how attempting to complete tasks, from communicating to continuing schooling, constituted significant barriers to their participation in society. For some, their

participation within volunteer environments was an opportunity to examine what barriers existed for them. One participant, while sitting on a board for a non-profit society, led him/her to recognize s/he required assistive technology: "It was difficult. I had issues with like, you know, keeping up with agendas and stuff like that." Another participant explained, "That's why I'm really taking my time and doing this volunteer work also, not just to measure my body but to also be realistic about, you know, what I need to do. Because if I end up being drained..." Assessing and working to overcome functional barriers were particularly common for participants who had obtained a disability rather recently, or later in life. For these individuals, the barriers they face often include coming to terms with their disability, which in itself can be "a big adjustment." For example, one participant described accepting "it's a slow paced recovery, which is - I finally understand that now. But, you know, when you're used to go, go, go, it's, it's different." The participants described how as they constantly encounter barriers, they must constantly be thinking about how to overcome them, and how to "show that you can do it as good as the other guys."

For many participants, prior to their involvement in EATI, a degree of reliance on friends and family has been critical. Not being able to read something due to a visual impairment led one participant to explain, "I've had it come back and bite me in the butt because somebody read it the way they wanted to read it. And it's, like, I can't take nothing away, they offered to help, you know. I'm grateful for that." Another participant commented on experiencing "a rough patch without a scooter for a while there. I was really trying to rely on friends and church members to give me rides, but nine times out of ten, they couldn't do it." This statement highlights the difficulty individuals can face when their participation in a community depended on the availability of others. Reliance on others was most commonly placed on friends and family members, for example, "I have a sighted wife who has given me- does give me a lot of help." However, regardless of how appreciative participants indicated they were for this support, a degree of frustration was often noted. Additionally, as one participant explained, "I do have some friends, but I- you know, I wouldn't impose that kind of stuff on any of the current friends that I have, at least not on a regular basis." This comment can be understood to represent an additional barrier- the socially acceptable amount of help that can be requested. Although the friends and/or family network a participant may have can be very strong, concern for "imposing" on them, or by working around the schedules of others can prevent individuals from doing things and meeting their own needs.

However, as individuals described coming to "know" EATI and beginning to recognize the possibilities associated with assistive technology, a shift in perspective became apparent. One

participant summed it up succinctly as “there was a sense of doom and gloom -2008, 2009, 2010. You know, and EATI- just finding out there was some kind of program- took that away.”

Process for Obtaining AT

Applying to EATI

Although participants held mixed reviews of the application process for EATI, comments often involved concerns for the application itself. Beginning with the first steps, “Well, you got to go on the internet and email- you know, talk- get their site and then pull up an application and fill it out and send it in to them,” this process, as another participant described, can be challenging for those who do not have access to a computer or possess the ability or knowledge of to do this task. Although EATI has a range of Network Partners (see Appendix E), this may not be an option for those who live at a distance from these organizations.

For some, the length of the application alone was daunting. As one participant explained, the application was “very long...I mean, it’s pages long. Because you ask for something and then you have to link it to how that is going to work for you and link it to some aspect of your disability.” Yet the application itself primarily consists of three main questions, “What things do you wish to do...related to employment and/or volunteering?” “What is stopping you from doing these things?” and “What do you think you need to help you do these things?” (BCPSN, n.d.a). Through these questions, participants may choose to link their goals to the assistive technology being requested in a very succinct fashion such as providing a one-page application, or they may provide EATI a very long and detailed account of their goals and needs for AT.

Regardless of the actual application length, for some participants the energy and work required to complete the application led them to become “quite frustrated in the beginning because there was so much paperwork.” Another participant commented on the energy required for completing the paperwork, “I would have- honestly, if I was working, I would have had to take days off work to do it.” These comments indicate that for some people with disabilities, even a few questions can be overwhelming and additional support may have made the process more manageable. EATI attempts to limit the stress program participants may experience during the application process by offering participants to apply by telephone if needed. However, the focus on documentation and the creation of applications have been, as one key informant stated, “getting longer and longer.” This may be due to EATI’s increased attention to the rationale supporting each request for assistive technology. Although EATI has indicated long

applications are not necessary, the same informant explained how the desire by the community partners to provide applications that generate few to no questions from the government partners has been set as a target goal. To provide applications like this has been described as “an art” (Kirsty Dickinson, personal communication, May 30, 2013), and thus, sending the application back to the participant to edit and make changes can occur. This increasing focus on the detail within each application, however, may serve as a barrier to those without such high level editing skills.

Further complicating the application process were problems regarding information becoming lost and applications that had to be redone or completed for a second time. For one participant this was considered an enormous task, “the reapplication and then just asking for something. I had to type out a huge - for me, it’s huge. For somebody else, it would have been- nah.” For this same participant the prospect of applying again was discouraging and, therefore, “some stuff I actually bought out of my own pocket because it was too much paperwork to go and apply for funding again.” Although this was not the typical experience it indicates the importance of providing additional support to program participants when needed.

The comments provided by program participants concerning the application length and overall application process were generally consistent with the information supplied by EATI concerning the self-assessment process. Also, these experiences by interview participants are also consistent with data provided by EATI to the research team. Of the 161 responses collected by EATI during follow up surveys with program participants from January 2012 to June 2013, program participants largely reported the self-assessment process (part of the larger application process) as positive, good or manageable (64.6%, $n=104$) (EATI, n.d.h). However, a much smaller number found the process challenging or difficult, or would have, in hindsight, preferred to work with a professional (13.1%, $n=21$) (EATI, n.d.h). This suggests a much smaller group of people may require some additional support within the EATI process beyond what the Navigator may be able to provide. Unfortunately, beyond the challenges of applying to the program, there were additional challenges participants faced within the process of obtaining AT through EATI as well.

Process Challenges

Perhaps the most widely discussed challenges program participants faced in obtaining AT through EATI were associated with the length of time it took to receive assistive technology. Although EATI has worked diligently to reduce this wait time significantly, program participants who encountered EATI prior to this reduced wait time experienced much longer waits to work with a Navigator and to obtain AT. A number of participants indicated the

lengthy wait is typically on the front end of the process, or in the wait to work with a Navigator and develop a formal application together, but “once we got things in motion then that part went fairly quickly.” The range of time program participants reported waiting for assistive technology (from the time of first connecting with EATI) ranged from, “nine, ten months,” while for others, “it was a slower process, but it was like, six months.” This is consistent with the survey data, which indicated respondents on average waited between 0 and 25 months from the time they initially applied to EATI to when they finally submitted an application for assistive technology with the Navigator ($M=7.8$, $SD=6.6$).

Although participants were typically advised, “your process moves as quickly as you move” the waiting list appeared to present the major delay. For example one participant described learning of EATI: “I jumped on it right away and sent in my application and I heard back from them right away, and the process got started maybe six months later, because there was a waiting list.” Another participant commented on completing the necessary paperwork as fast as possible, “I probably did that within two days of knowing I needed to do it.” Generally, however, participants recognized the wait time was largely associated with the volume of people applying to EATI, “for your application to reach the top of the pile, I guess is what it is right?” Others understood this wait time as part of their own need for patience given their desire to “get moving” on their employment goals. While others still developed concern and even questioned whether they were actually involved in the program or if they may ever even indeed receive assistive technology. For example, “It seemed like a bit of a time delay, so there was a bit of, you know, this is not going to happen.” One informant who supported people with disabilities to access assistive technology, however, explained “But of course during a wait time, I think folks can either forget or not remember that they’re on those lists...I’m not convinced that’s EATI’s fault so much as it’s just the nature of the work.”

The concern of individuals regarding whether they would receive assistive technology may also be due to EATI operating from a virtual office and, consequently, the lack of person-to-person contact with program participants. As one interview participant explained, “it’s really longer. I- and you don’t see the process because it’s all now, like, virtual and internal. You don’t see- you’re not part of the process.” This comment indicates the lack of face-to-face contact may make the waitlist feel longer to program participants, but it also suggests that the wait may not leave participants feeling part of the application process. Given the Participation Model and focus of EATI to base its services around engaging individuals as intrinsic and central to the process, this is concerning (see Appendix C). In fact, the process for obtaining assistive technology, if in keeping with the Participation Model, should involve participants throughout every stage in the process and not leave participants to feel “not part of the process”

or so removed from it that they may not be sure they are indeed participants in the program and/or going to receive technology.

Feeling disconnected from the process was also reiterated by other participants in their desire to engage in face-to-face discussions about their needs for assistive technology. One participant explained the process may have been easier “if I could have actually have been in an office and I was able to hear and, like, exchange information, that would have been easier on me.”

Although this participant could have communicated with EATI through one of the Network Partners, the organizations were not specific to his/her disability and approaching them was not understood as an option. This suggests additional communication with some program participants may be needed to ensure all are aware of the network partners and the ability to engage on a face-to-face basis if needed. Fortunately, with the waitlist time decreasing, this feeling of being removed from the process may be lessening.

Both the length of the application process and other challenges individuals experienced within the EATI process, unfortunately, meant that for some participants, if they were provided with assistive technology that was not quite right, they were reluctant to rectify the situation to obtain the right AT. For example, one participant didn’t realize the motorized scooter he obtained would not fit on public buses. He described asking:

“‘Can I exchange my scooter for a motorized wheelchair or something?’ And they said, ‘No, because motorized wheelchairs cost more and you’d have to go through the whole rigmarole again through welfare and then through us again, and that’d probably take another year or so.’ Forget it then. I’ll just learn to live with it.”

This comment was reiterated by another participant who expressed, “you want to exchange the software or something, it goes through the process again.” Again another participant, “I was out on my own. Then if you wanted to be- or if you wanted to make an adjustment, you have to start all over again.” These comments signal the application process presented an obstacle to ensuring correct assistive technology was obtained. Since June 2012, EATI has made a number of significant changes to address issues such as these, most importantly increasing communication with program participants (Kirsty Dickinson, personal communication, May 30, 2013). Unfortunately, if an individual does not communicate the problems s/he is experiencing to EATI, or happens to miss the contact from EATI during the one month or six month follow ups, it is possible individuals might need to reapply “all over again.” This situation, however, is becoming less and less common as greater emphasis on communication with program participants is occurring to ensure the right AT is obtained.

The application process, unfortunately, is hampered by one additional problem: repetition. Within the last two years a shift within EATI for managing applications was set in motion. This shift involved moving from a one-Navigator-to-one-EATI participant (case management) approach, to the involvement of three Navigators to work with each participant. One Navigator is assigned to “intake,” one to “primary navigation” tasks, and a third Navigator to “secondary navigation” tasks. One participant explained this organization:

“The one thing that I found frustrating, I guess is the right word, is when you communicate with EATI and you go through different steps, each step is a different case worker or coordinator, you know, and so, and they move you along to different coordinators.”

This model or involvement of three Navigators with each participant has been explained by EATI as occurring for a number of specific reasons including that multiple Navigators on each file would increase transparency and better ensure participants are being provided assistive technology in keeping with EATI policy, while also receiving the most appropriate technology for their needs, and to accommodate the Navigators themselves. This last reason is because all the Navigators employed by EATI are people with disabilities and, as additional paperwork is required within the final stages of the application process, Navigators who possess greater strengths in this area were deemed to be better able to manage this more paper-heavy task. However, whether the Navigators understand these reasons as well is questionable for one key informant, and Navigator, stated, “through an application process, they [the program participants] will have to work with three different navigators. I can’t—I haven’t been able to see where the benefit is in doing that. I’ve only been able to see the negative connotations from doing it.”

Unfortunately, participants did not understand the reasons for the involvement of so many Navigators either. One participant described why s/he believed this to occur as, “I understand the concept is that nobody gets a relationship built in, there’s no personal feelings, everything is kept moving along.” This same participant explained how the lack of opportunity to build a relationship was “frustrating” because, “every time I would change coordinators I had to start all over in explaining everything all over again and the problem that I might have had, or a question that I might have had, got lost in the explanation.”

EATI has clarified that this three-Navigator system is also part of their “triaging” approach, which can help participants to become clear on their goals (and plans for meeting them) due to the repetition of working with different Navigators. EATI asserts this approach also provides additional opportunity for Navigators to offer suggestions, assess an individual’s willingness to explore employment goals, and to determine if a participant’s application should be “fast

tracked” ahead of others on the wait list. This fast tracking occurs for a number of reasons. For example if someone requires additional training, has received the wrong AT or if someone has a firm job offer, his or her application may be moved towards the top of the wait list (Kirsty Dickinson, personal communication, May 30, 2013). Unfortunately, despite the many reasons EATI lists for using the three- Navigator system, the approach appears less successful or beneficial for program participants. One participant stated, “I got passed back and forth from person to person. I had to fill out forms twice.” Others referred to this experience within the survey comment sections as well. One survey respondent stated, “The process has been frustrating, including a delay of several months to connect with a Super Navigator and then being transferred to a second and then a third one.” Another survey respondent stated, “I found the process to take a very long time, and I found that having more than 1 [one] Navigator was very confusing...This slowed the application down tremendously, also the communication between both Navigators didn't go smoothly.” Overall, the requirement to work with multiple Navigators was an issue of concern raised by key informants, and program participants within both the interviews and the survey. One participant perhaps best explained the issue of repeating oneself through the three-Navigator approach by aligning it with “being sent into surgery and having to explain your whole medical history again and you just get so frustrated that you're constantly repeating yourself.” This model, unfortunately, signals perhaps a larger issue EATI is attempting to manage: problems associated with communication.

Communication

EATI has experienced some challenges in the area of communication. Program participants commented on the communication difficulties they experienced with Navigators and with vendors of assistive technology; however, some participants indicated that a lack of communication was occurring with both. For example, one survey respondent described confusion within the process of applying for assistive technology and stated s/he was “sorry that we did not communicate better for me to understand that these gifts were indeed mine to have. When I was asked to go to a store to look at things that would help me in my life that it was just an exercise, a wish list per say, and not an actual purchase order. If I had known that, I would have worked with someone to find the products that were perfect for my condition.” An interview participant reiterated these communication challenges with their Navigator as:

“I waited for two weeks wondering what was happening because the vendor sent me the quote and [the vendor] also sent it to EATI immediately, within 20 minutes of me calling. And I received a phone call from [Navigator] saying ‘we’re still waiting for a vendor, your vendor to readjust the quote.’ And I said, ‘[Navigator], [the vendor] sent it to you two weeks ago.’ So while I was still on the phone [the Navigator] went back

through and for some reason the email got put in a different place and [the Navigator] didn't see it for two weeks. So, my whole process was delayed."

This statement was consistent with comments obtained within the survey as well. Another survey respondent stated, "I found the application process very disjointed and lacking in communication. It was extremely difficult to talk directly to a person. Each step in the process has been like pulling teeth, and there has been a lot of wasted time." There were, however, people who described a very different experience, for as one survey participant stated, "EATI staff have been invaluable- helping, talking, returning my calls, they have helped me immensely."

Unfortunately, communication difficulties cannot only lead to delays, but they can also challenge participants in terms of energy and motivation as one participant stated, "there was a mistake made where I had to reapply for the whole service again. So everything that I learned got put on hold for several months...So I lost a lot of information that we talked about." Other participants commented, "I called them back and I never hear from anybody again, yeah, which was disappointing" and, "So, out of frustration, and I hope it didn't come across too snotty, you know, I said, "As I put in my emails [dated]..." Although these may not represent the common experience of program participants within EATI, the frustration these participants experienced with communication is clear.

Some of the problems associated with communication appeared to stem from how EATI manages email and telephone communication. Participants direct their emails to the main 'Hub' email address and someone then forwards them to the corresponding Navigator. However, some participants expressed confusion as to why this system exists. "No actually I don't, I don't understand why the emails are going to just one hub and that person is directing" one program participant explained. For some participants, working with three different Navigators resulted in lost emails and miscommunication. EATI explains this organization has resulted from a need to prevent Navigators from being inundated with emails and direct communication from participants. Unfortunately, the result appears to have decreased the degree of communication between Navigators and those participants they serve, indicating EATI may have attempted to address one issue in exchange for inheriting many more.

A Combined Effort

Relationships with Navigators

Despite the large concerns with communication, the relationships that develop between the participant and the Navigator remain a constant positive within the program. Navigators were described as “open minded to my ideas” and “willing to listen to my needs...listening to what a person needs and then actually providing that, was so amazing. It was really, really good.” Both within the interviews conducted with program participants and within numerous comments provided throughout the survey, the Navigators were repeatedly referred to as “excellent resources and great helpers.” Of considerable mention were reports that emphasized the importance of working with someone who “understood” them, their disability and or their needs. For example, “That was a relief because it’s like, huh, someone knows what I’m going through, okay?” This relationship with the Navigator as a peer, as someone who has a disability resulted in participants feeling understood and connected to someone who was “aware...aware of what I need.” One participant explained this further:

“[The Navigator] had a disability...just had this ability to connect. And not saying that people who aren’t disabled- but it’s really hard to understand that, you know, all due respect to them...that there was that little extra connect that felt- you felt respected and there’s’ a difference so much in how you, I think, perceive [your work].”

The connection and relationship built between participants and Navigators appears to be strongly related to Navigators possessing a disability. Additionally, because the Navigators are employed full-time through EATI, this held the additional consequence of serving to inspire participants, create hope, and engage them in contemplating new employment possibilities for themselves. This often led to participants building upon suggestions and personal experience of the Navigator, for example, “The Navigator I had – I did end up with some of the devices that [the Navigator] had used.” One participant described how the Navigator made not only the EATI process manageable, but reduced the concern the participant held towards obtaining employment as well. S/he stated:

“[The Navigator] just walked me through everything...made it sound very simple, because it—to me, I was just intimidated all to pieces...I’m trying to get back into the workforce and this was all very overwhelming for me. Like, [the Navigator] just talked me through it...sent me papers, had highlighted on places that I needed to sign and little notes where I needed to read and stuff. [The Navigator] just was super. I guess that’s why they call them “super navigators” eh?”

This is consistent with comments collected by EATI during the follow up interviews with program participants. Program participants were quoted as saying “I think the self-assessment

was fine. I was very well supported by [a Navigator], who was very thorough with helping me through the process" and "[A Navigator] helped me with that. I didn't know a lot of the equipment."

Overwhelmingly, participants expressed positive sentiments for working with the Navigators. One survey respondent commented, "I just wanted to say all my navigators were excellent!" An interview participant summed up his/ her experience with the Navigator as, "It's been a fantastic, fantastic experience. And like I say, the people were very, it's neat to find out that they all have various disabilities as well, because again, it proves that those of us with disabilities can live a very functional normal life in society and hold jobs and families and everything." These comments indicate the importance of ensuring Navigators possess the time and energy necessary to continue to build relationships with program participants.

Network Partners, Peers, and Self-Assessment

Navigators, however, do more than build relationships with program participants. In fact, Navigators and Network partners both play a critical role in the selection of assistive technology. Although the self-assessment process is described as often involving Navigators, the potential for Navigators or Network partners to become situated as a replacement for a professional assessor, exists. For example, one participant commented that the Navigator suggested a device to him/ her and "Well, I kind of agreed and then [the Navigator] put it down on the list, and then I went over, I guess, to [the vendor]." Another participant described how "we discussed- I had an old computer...So I discussed with [the Navigator] a lot about it, and I was- okay, let's do that one." These examples represent descriptions of how the Navigators suggestions for assistive technology were accepted by participants. Although not the experience of the majority of participants, it should be noted that one participant who worked with a Network partner to complete the application for EATI indicated s/he received additional items but "I didn't ask for those." Asked to explain more about this, the participant stated, "I was told what I was- what I would need. I was never – I was never asked what I would need. I got – what I would need." This participant explained, "Even when I received what I did, I didn't know what I was getting." Finally, the individual commented, "the person at EATI? When they got on board, all they were doing- [all] they basically did was let me know what was being ordered and when it would arrive." This experience, even if an isolated case, may suggest concern for the potential for the involvement of Network partners within the assessment process.

For the most part, however, the involvement of the Navigator with the program participant was described by program participants within interviews as positive and useful to the self-

assessment process. For example, one participant commented on the positive involvement of the Navigator in their selection of assistive technology, “It was at that point that EATI pointed out, ‘Why don’t you have a new computer?’” Another participant described the involvement of the Navigator who explored the duties performed during the participant’s possible work day and, “so [the Navigator] just, you know, suggested certain equipment for me that I was not aware of at that time, including [items] I didn’t know existed.” This supportive involvement by the Navigator was appreciated by many of the participants interviewed.

In many ways, those who arrived at EATI with an understanding of what they required experienced the self-assessment and support of the Navigators and peers as useful. Participants often indicated, “I knew what I wanted to have,” or “I knew I wanted a scanner. I knew what it could do,” and even, “I was aware of the magnifier, so I requested that specifically.” For others who arrived to EATI with less knowledge of the AT they needed, the work associated with determining the correct assistive technology to meet their needs appears manageable. For example, “I had to do some research and some background research and some marketing. I also had to do some equipment research of what I felt I would need and why, so that all went fine.” Unfortunately, all participants did not share this knowledge or background of understanding assistive technology in order to determine what would work for them. A couple interview participants spoke about their relationship with ‘Peers’ or others who had received assistive technology through the program. As a new aspect of EATI, the connection of program participants to peers who may offer advice and support concerning the selection of AT appears to hold positive results as one participant explained; “Talking to the peers- they told me to, you know, not be afraid to ask for things. That [the Navigators] will say no to them or, you know, what’s probable or impossible” and that “those conversations were really actually very helpful.”

“Combined Effort”

Some participants, however, expressed desire for greater support and guidance than the Navigators and peer support system could offer. This is consistent with the recent increase in professional assessments being conducted within the program. For example, one participant stated “Being left in the dark to what your options are, is really hard to know what you’re allowed to ask for, you know” concerning the self-assessment process. Another participant commented in a similar way that the “thing that made it difficult was, although the equipment was provided, the choices weren’t there and I wasn’t sure if that was the right tool, that was the right equipment given to me.” This confusion concerning the selection of AT is consistent with comments provided within the survey as one survey respondent clearly stated, “I truly regret not talking with a professional assistive technology person” and another survey

respondent commented, “Need to be able to access professionals to help find exactly what would be helpful.”

Those program participants who obtained professional assessments generally indicated positive experiences within their interviews. For example, one participant explained, “I think there is a need for somebody to help you. It’s nice to have somebody to help you” and another participant described a specific organization and stated, “they have a professional- so they’ve seen me. They know where my limits are.” Another participant explained meeting with “an occupational therapist...for about, I don’t know, what was it in total- about four hours maybe...I thought she was very thorough.” Situations where the professionals were involved in the assessment and selection process were probably best summed up by one participant as, “I accepted the advice that was given. Yeah, I think that was the way it went, that she advised me that it should be an advantage to me and so it proved.” Finally, a survey respondent summed up the decision to seek out a professional to support him/her within the assessment process as, “I felt a proper assessment would have been more beneficial for my needs - that would be done by professionals plus input from me and my parents (who know me better than anyone.)” This collaboration of both the program participant and the professional’s input represents the assessment by ‘both’ that was so widely reported within the survey.

In fact, some of the most positive responses interview participants provided revolved around those relationships that developed when the participant’s perspective, the support of the Navigator, and the professional’s knowledge all came together in a collaborative working relationship. One participant who described working with a professional to identify the right assistive technology, communicating with the Navigator, and then finally receiving the AT, perhaps best represented this collaborative relationship. This participant stated:

“It was totally amazing because by the time I got the chair and had been fitted for the chair a couple of times, and did a trial for the chair, you don’t realize there can be a chair that actually supports your body and can be modified for your body, and part of your body that actually works. I mean, I just love this chair. I’m sitting in it now.”

This comment represents how receiving ‘the right’ assistive technology for a person’s needs produces a very positive result. In this situation, when the interviewer asked if everyone worked together, the respondent stated, “Oh, absolutely.” This development of a collaborative relationship is something other participants commented on as well, often including the work of a Network Partners. As one participant explained, “So basically I had to involve the – on several levels with different organizations, a couple organizations anyway. Getting feedback from the people who work there, the professionals at [organization] as well. So it’s been a combined effort.” This combined effort perhaps best describes what EATI is doing, and it represents where EATI could explore continuing to place its focus and efforts. This finding is

in keeping with the findings of the survey. Keeping in mind the limitation associated with gauging assessments by 'both' program participants and health professionals when they are required by EATI (such as for motorized AT), the pooling of efforts for assessment (assessments conducted by 'both' participants and professionals) led to 'the right' AT more often than self-assessments or professional assessments alone.

Changing Lives

Daily Tasks

Every participant interviewed commented on how their assistive technology impacted their daily life for the better. From being able to read the mail, to watching TV, to communicating with family members; daily tasks were often found to be easier, more manageable, and for some, even possible where before they were not. Participants commented on how the assistive technology they received, "helps me with everything. Anything that's written down." Others commented, "I can listen to music, and I can read a book, or whatever." For some, the assistive technology has "opened up and freed up time and physical energy. And that was my whole thing, is to bring down the pain and extend my endurance." This reduction of physical pain in addition to the ability to complete daily tasks led one participant to comment, "it's a great morale booster" concerning the assistive technology received.

Commonly interview participants referred to the increased independence they experienced from their assistive technology. One participant explained how "without my [assistive technology from EATI], my day- my life would be a little different probably still. The frustration with getting things in the mail in the beginning it was, like, I'd get something in the mail, I'd have to wait for [a friend] coming around to read it." Another participant commented on how the assistive technology meant s/he could use the bathroom without his/her spouse's help, which "has given me such freedom and has opened the door to employment for me." Another participant explained that although the assistive technology has not yet led to employment, the independence obtained was significant. This participant stated, "No, no there is no results as far as employment goes, [but] there is an incredible amount of independence created [with the assistive technology]. And that is huge especially with the hearing aids and the ability for me to hear, you know...it brings value into my life." This value may in part be best described by another participant who stated clearly, "It gave- it's given me freedom, more freedom, more confidence, you know and I just feel like I can go and try more." This enormous impact on the lives of program participants was consistent with the large portion of survey

respondents who indicated their AT helped them to ‘get out in the community,’ ‘do fun things,’ and develop ‘increased confidence.’

Family and Friends

Receipt of assistive technology through EATI appears to hold a positive impact beyond the immediate person for whom the technology was obtained. In fact, two participants commented on how their assistive technology also impacted their spouses’ lives for example, “it’s freed up his time that’s for sure.” The other participant stated clearly, “it’s improving my marriage.” Other participants spoke to the improved relationships with family members due to their newly acquired ability to communicate by email. One participant stated, “Emailing, keeping in touch with other members of your family has been- that’s been great. That’s been something that prior to this, I could- written communication was virtually off limits to me.” Another participant explained how the assistive technology received was in fact changing the nature of the relationship the participant held with family members. “Well, yeah, they’re still getting used to dad sitting up in the room, in his office, working on a computer all day instead of being out...I’m not the go-to-guy to get something fixed anymore, but at the same time, you know, it’s showing them that I’m off in another direction.”

For many, the greatest impact on their lives from the assistive technology they received was for keeping a “normal life.” One participant stated, “You know, this is where it really helps, you know, to have things to help you. To help you keep a normal life.” Another participant further explained, “Suddenly you have purpose in your life. Suddenly you’re going someplace. Suddenly your time is filled with, you know, things.” It’s these feelings and impacts beyond just getting a job, which stem from the assistive technology individuals received that serve to indicate EATI is truly changing lives by providing assistive technology to people with disabilities. Changing lives, however, does not always involve attachment to the labour force or becoming gainfully employed which limits EATI’s ability to respond to this broader need.

Getting a Job

Although the majority of interview participants described being involved in activities, regularly volunteering and working diligently towards obtaining paid employment; none of the interview participants indicated they had obtained a paid position during their interview. This may be because some of the interview participants were involved with EATI prior to the goals of the program being changed from volunteering as an acceptable goal in itself, to the current focus on moving people towards attachment to the labour market by way of employment, as one interview participant commented, “I mean at my age I wasn’t looking for employment. I’ve been retired for 20 years now.” Survey respondents, however, did comment on obtaining

employment, for example, “The EATI program has totally changed my life and opened up a whole new world through the Internet. This is helped me secure part-time employment which would not about a possible without this program.”

However, one interview participant description of his/her relationship to obtaining employment was particularly telling. This participant explained feeling:

“A teeny bit uneasy because sort of the word on the street was that [EATI and] this equipment was really meant for people who wanted it for either – you know, who were employed and needed it or wanted it to enhance their employment – or their employability, or were people who were looking for work. And of course technically, I really wasn’t looking for work. I guess if the right kind of job had landed in my lap, I would have taken it, but I wasn’t technically out there looking for work.”

When this individual in particular was asked about what it would take to get him to employment s/he explained employment would require “a network of people sort of – you know, you can’t just rely on one person all the time. You’d wear them out.” Despite this need for additional support people, this same individual who described not looking for work, also simultaneously stated, “I’m always sort of thinking about what could I do to earn some money” and s/he referred to volunteering regularly and beginning school. This active involvement in activities that are directly linked to the labour force was common within many of the interviews. One participant summed it up, “sitting around doing nothing on disability? But that’s not true. In some fashion or other, everybody that I’ve met is doing something, is working. They’re not getting paid for it, but they’re helping other people out.”

Technology

“Technology is overwhelming but it’s pretty phenomenal”

Participants arrive to EATI with a wide range of experience and background knowledge concerning their chosen field of work. Some arrive holding years of experience in a certain sector or extensive education and a recently acquired a disability, while others may have never had any substantial attachment to the labour market and have had their disabilities for all or most of their lives. Regardless, the learning associated with assistive technology can be vast and individuals often need to ask themselves “What is their frustration tolerance?” when determining appropriate assistive technology (Kintsch and DePaula, 2002, p.7). As one participant explained, “I have to do the majority of it through voice recognition. And so I had- and I’m still, even though it’s been a year, I’m still in I would say the basic- or basic or immediate band of voice recognition.” This statement clearly highlights the long learning

process associated with obtaining assistive technology. Another participant described learning assistive technology as “you’re faced with a huge learning curve but that is interesting, and that’s exciting and enjoyable.” This “learning curve” appears to be positive for those who recognize the possibilities associated with technology. As another participant explained, “technology is overwhelming but it’s pretty phenomenal.” However, other interview participants described this learning process as often extremely challenging. For example, one participant stated the process of attempting to learn how to use assistive technology was “frustrating. Very frustrating and I’m very belittled.” Another participant commented on the AT provided by EATI and the need for additional training, “I’m sure it would be a real godsend to me if I could actually use it.” Unfortunately, for these individuals who found the learning process just a little too difficult, typically this was linked to a lack of training. This was consistent with data collected from survey respondents who were not using the assistive technology provided to them through EATI due to a need for additional training.

Training and Support

Upon receiving their assistive technology, some participants indicated they were provided with adequate training and support to use their newly acquired items. One participant described receiving online tutoring for computer software that moved at his/ her pace and others described receiving adequate support from vendors during their opportunities to ‘trial’ assistive technology before purchasing it. Some participants commented on declining the offer for training because it wasn’t required, for example, “I’m totally confident. There was a training component [the Navigator] recommended, but I said no, that’s okay. I’m already good.” Others indicated they received training at home from the individual who arrived to set up their assistive technology. Unfortunately, this experience was not consistent across all of the interviews. Comments from the survey suggest some participants may require additional training, for example one survey respondent stated, “Computer training would be useful. More training” and another stated, “more education and training in general.” As mentioned previously, EATI is taking this need for additional training very seriously and working to fast track participants’ requests for additional training. However, for a number of the participants interviewed and even those surveyed who received AT some time ago, this may not be available to them without reapplying to the program.

Unfortunately, some participants interviewed described receiving items and not having any support to set them up, others commented on not receiving “really any instruction to go along with it.” One individual explained “the eight hours that they provided me, seven point five hours was just to set up the equipment. So I had the point five of training time.” Another explained, “I had an outline of what I was getting, but you know, for the training that was

supposed to come with it, it never came.” For a third interview participant, when asked about pursuing additional support and training, s/he explained, “My self-motivation was there, but the motivation to go after my training and that stuff, I sort of let go for that. I didn’t want to be just spending my time chasing them to get me further training or get my machine set up properly, or fix some of the malfunctions.” These comments and experiences can be closely linked back to the struggle associated with the application process and the challenges of obtaining ‘the right’ assistive technology. Both highlight the need for increased communication associated with addressing concerns, issues, and training needs for the assistive technology people receive. Unfortunately, the lack of training is also directly related to a lack of use of the assistive technology as well.

Usage

Assistive technology that people with disabilities receive and are unable to use, often remains in the box (Kintsch and DePaula, 2002; Phillips & Zhao, 1993; Scherer, 1996). As one participant stated, “GPS is in the box. The monitor sits in the cupboard...it’s not the right one.” Another participant was asked about pursuing additional training and support in order to use assistive technology provided and commented, “actually did inquire about, you know, getting an extension [of training hours]. But then I don’t know what is this- there is this policy I think that you have to reapply and somebody else – well, I call it adjudicating, when somebody else adjudicates that extra amount that you need.” Although additional training and support is available to program participants now and EATI is working to resolve this issue, the complicated communication system and/ or the perception by participants that they would have to return to the application process a second time appears to have impeded participants from returning, exchanging or even communicating with Navigators that the assistive technology they received is not being used. Others did not even appear to understand they could request training through EATI, so “I organized my own.” Fortunately, EATI is working to ensure these situations no longer occur but additional support to those who continue to possess AT that is not quite right, or require additional training in order to use the AT provided to them could be useful.

Despite those who experienced challenges with learning and using assistive technology, many other participants commented on using their devices regularly. One participant stated, “I use it every day” and another commented, “I’m using it way more [than when I first received it]. No, I’m using it every day.” Participants who received the ‘right’ assistive technology for their needs overwhelmingly reported being pleased with it, and being proud of its capacity and their own individual accomplishments since obtaining it. This again was consistent with the information obtained through the survey that suggests over 90% of respondents were satisfied

with their assistive technology and almost 95% continue to use the AT provided to them through EATI.

Discussion

Since “creat[ing] a program from zero, truly from zero” in 2009, EATI has faced its share of challenges. It is this short time frame, however, that requires recognition. For despite its challenges, EATI has grown to meet a large need in the province for assistive technology, while also making a place for itself within the larger consortium of programs that provide assistive technology. The willingness and ability of EATI administrators to give attention to issues and make changes to constantly improve the program speaks to the deep commitment within EATI to flexibility and adaptability. These are most definitely EATI’s strengths.

EATI administrators have led the authors of this report to believe many of the recommendations put forward in this evaluation are already tabled for review. The willingness and desire for continual improvement indicate EATI stakeholders can and will overcome the challenges it faces within the near future.

Perhaps most important, a celebration of EATI successes is long overdue. EATI has come to not only exist as the only non-means tested province-wide system for providing *all* forms of assistive technology to adults with *all* types of disabilities to move closer to employment, it has done this in less than five years (*Avia Employment Services, WorkBC Contractor, personal communication, June 10, 2013*). An even larger success exists in the relationship built between government and a non-profit organization. Despite the division between government and community partners, the working relationship underling the program continues to strive for collaboration and joint decision-making. EATI *is* a collaborative relationship between the provincial government (Ministry of Social Development) and a community partner (BCPSN), which have understandably, somewhat different philosophies and goals. The Ministry of Social Development tends to prioritize the Labour Market Agreement funding restrictions of EATI, which requires assistive technology assist people for increased participation in the labour market and employment. The BCPSN, on the other hand, tends to highlight providing people with disabilities in BC assistive technology in keeping with their personal goals associated with greater participation in *both* the labour market and life. Although this division in perspective involves “wrestling” topics, as one informant described, the result, continues to be a highly unique and, more importantly, a functioning partnership that is working *for* people with disabilities in British Columbia. Although never easy, the virtual environment EATI operates within tends to further complicate what relationship building can occur between the government and community partners, and a greater focus on bringing stakeholders together could substantially improve the collaborative work being undertaken.

Maintaining this relationship positions EATI to be not only a program that will have lasting power, but also a program that holds the capacity to expand. Networking, “building bridges,” and working collaboratively with other organizations within the province offers EATI the

potential to become a broad based system for providing assistive technology for both employment and broader inclusion purposes for people with disabilities. The 13 Network Partners organizations involved with EATI stand as a demonstration of this potential. To do this, however, care and attention to the relationships and foundation upon which EATI rests is needed. Thought, work, and debate to arrive at greater consensus concerning how to manage what in essence, began as a means for providing people with disabilities equipment, and is now a program that possesses federal funding criteria focused on increasing employment, is key. This is no small task and in fact; it serves to position stakeholders at opposing sides depending on whether the equipment or the employment elements of the program are perceived as paramount. The resolution, of course, lies somewhere in between. Arriving to this place, however, requires EATI seek clarity on the program objectives and policy that support them, beyond but also in keeping with the Participation Model, which has to this point anchored the program.

Additionally, EATI's success at impacting the employment status of some individuals requires recognition. EATI has slowly been collecting information through its own process of following up with participants in the months and years after receipt of assistive technology. Although it was never the intent of the program to record employment statistics, through conversation with EATI participants the program has become aware that 118 program participants have found employment after receiving assistive technology over the past four years. This number, however, is not current, nor is it necessarily reliable as it was never the intent of the follow up interviews to focus on employment statistics. Instead, the follow up interviews were intended to assess the success of the participant with using their assistive technology. Nonetheless, 118 individuals employed represents considerable employment obtained by those who were previously unemployed. Taken together with an examination of EATI's 290 follow up responses to the question "Have you been able to make any progress towards your employment goals?" the program appears to be supporting people with disabilities to attain employment. Within EATI's follow up interviews, 77.2% ($n=224$) of the program participants interviewed indicated they had indeed moved towards their employment goals- a percentage very similar to the responses found in the survey of this study (EATI, n.d.i).

The survey and interviews conducted within this study are clearly consistent with this information EATI has collected. Program participants reported overwhelming agreement with statements that their assistive technology was helping them to 'volunteer,' 'develop new skills,' and 'communicate;' three important elements that can lead to employment. Although interview participants had not reported obtaining employment per say, most reported working towards employment through a range of activities, from attending school, to volunteering and learning new skills. Although EATI may not be obtaining concrete numbers associated with employment being achieved, it should be noted that obtaining assistive technology will not guarantee an individual employment; enormous barriers such as transportation and

discrimination also have to be overcome. Along with those participants who have reported obtaining employment to EATI and within this survey, is something else largely significant - the percentage of people with disabilities who are “unemployed” has increased. In fact, more people with disabilities through EATI are “participating in the labour market” than before their participation in the program (Government of BC, 2011a; Government of BC 2012). This can be understood as a number of participants, who previously thought of themselves as not being able to work, now consider themselves unemployed and looking for work (Government of BC, 2011a; Government of BC 2012). This shift in perspective is significant and holds a greater importance than employment rates can demonstrate.

Yet program participants do not only perceive themselves differently and as employable, they are ‘volunteering,’ ‘developing new skills,’ and ‘communicating’ more than before they received the assistive technology through EATI. These are essential components to obtaining employment. Yet EATI’s reach goes far deeper than this – the technology provided to participants enabled them to ‘get out in the community more,’ to enjoy leisure activities (“do fun things”) and it has helped to ‘increase their confidence.’ By increasing an individual’s quality of life in these ways, and consequently their self-efficacy, the momentum to explore and seek out opportunities for employment may also be more likely to occur (Regenold, Sherman & Fenzel, 1999). Interestingly, these benefits unfolded largely from obtaining ‘the right’ assistive technology, which was reported to most commonly occur when program participants worked with professionals to determine together what would best meet their needs.

Directly related to the positive experience reported by program participants were the relationships between the Navigators and participants. This is an extremely positive aspect of the program. By hiring staff with disabilities the program offers participants a supportive relationship with someone who understands what the participant is going through, but also someone who has overcome barriers to employment himself or herself. This is an essential component of the program and something that is clearly “working” for EATI. Unfortunately, the length of time it takes to receive assistive technology through EATI remains a concern. Although the use of three different Navigators is believed to have recently reduced wait times, the movement of program participants through this three-Navigator system has contributed to confusion, frustration, and a reduced opportunity for relationship building. This has led to additional complications within what was an already struggling communication system.

One topic which EATI informants agree upon is the importance of continuing to allow EATI participants to seek out and apply for the assistive technology they need; they are not required to select from a list of preapproved devices. This provides EATI participants increased choice for assistive technology, but may also translate into more of the ‘right’ devices being obtained. Overwhelmingly, participants are satisfied with the assistive technology they have received, and they are continuing to use it- and use it often. This indicates EATI is guiding people to a

remarkable level of equipment use and potentially a low level of equipment ‘abandonment.’ This may largely be due to the efforts taken by EATI to address those occasions when the obtained assistive technology is not quite right, such as if it requires modification or if additional training may be required for using it. Fast-tracking these concerns is likely reducing what small amount of lack of AT use exists within the program as well.

Overall, the Equipment and Assistive Technology Initiative (EATI) is fundamentally and undeniably changing lives of people with disabilities in the province of British Columbia. This was evident within the survey, interviews conducted, and a review of the follow up interviews EATI conducts with program participants. Program participants have indicated there are vast benefits associated with being provided the assistive technology that meets their needs.

Limitations

This study represents a comprehensive evaluation of the Equipment and Assistive Technology Initiative (EATI). There were, however, some limitations. Most notably, when the research team set out to contact program participants, information concerning the study was sent via email. Although this represented a cost effective and environmentally appropriate means of communication, it may be possible that some people were unable to participate due to lack of access to email or a computer. Indeed many participants could have requested from EATI and/or had been waiting for assistive technology to help them communicate via email. Given the majority of people with disabilities tend to be older in age, the ability and knowledge to communicate by email may have been reduced for those who perhaps held less access to email or understanding of computer technology.

Another limitation is that the request to participate in this study was sent during the month of December 2012 and January 2013 and consequently may have been overlooked given the holiday season. This timing of the project may have had an effect on the number of participants who were available and willing to participate in the survey and or sign up to participate in an interview.

Additionally, the self-selection of program participants to be interviewed and/or take the survey may constitute another limitation due to the “biases resulting from pre-existing differences between groups” (Polit and Beck, 2012, p. 244). It is possible that those who had a very positive experience, or alternatively, those who had the opposite experience, may have been more inclined to complete the questionnaire and/or sign up to participate in an interview. However, interview participants held overwhelmingly positive experiences, with only some individuals experiencing challenges. Although 6 interview participants reported not receiving

all the AT they believe they needed, they typically reported positive experiences and receiving other AT that was needed. Additionally, only 23.8% ($n=83$) of the 357 survey respondents who applied for AT reported not receiving assistive technology, but it must be noted that this number includes individuals who were in the process of applying and may have been on the waitlist. The very small amount of dissatisfaction within the survey and the few participants that did not receive the AT they believed they required is consistent with reports from one key informant representing the government partners who indicated applications that are ‘denied’ or not approved are in fact, very rare. Thus, although the study does not suggest the self-selection of participants for this study led to biased results, it nonetheless remains a potential limitation.

Despite these limitations, the demographic data obtained within the survey represented such close similarity to the overall EATI program participant demographic data that the survey can be understood to be generalizable to the larger EATI population. Although the survey is not generalizable to the larger population of people with disabilities within the province of British Columbia, there are clearly areas where informal inferences may be drawn due to consistencies in demographic data. Interviews and the qualitative data they produce, however, are never intended to be representative, but rather offer deeper insight into particular experiences and help the formation of “analytical categories and theoretical explanations” (Pope, Ziebland and Mays, 2000, p.114). The interviews included in this study serve to supplement the survey in order to offer a more complete picture of the Equipment and Assistive Technology Initiative (EATI).

Findings & Recommendations

Based on the findings from this study, the following recommendations are offered to EATI for consideration:

Finding	Recommendation
<p>1. EATI is meeting unmet needs for assistive technology among people with disabilities in BC. It is impacting peoples' lives by enabling greater participation in society, for example, to 'get out in the community more,' to 'do fun activities,' and to feel 'increased confidence' in their abilities.</p>	<p>Given the success of EATI to help meet the needs of people with disabilities in BC, and the very low level of 'abandonment,' the province should consider greater permanence for the program by contributing to its funding.</p>
<p>2. EATI is impacting people with disabilities concerning employment. Participants overwhelmingly reported their assistive technology is helping them to 'get a job' and 'move towards employment.' Their assistive technology is also helping them 'to volunteer,' 'develop new skills' and increase their ability 'to communicate.' EATI could, however, become more connected with other government and community programs geared towards employment, such as developing a closer working relationship to refer, or even fast track, program participants to employment counsellors, job coaching, skills training, and support for starting a small business.</p>	<p>As EATI is working to help people move towards employment and greater participation within the labour market, a greater linking of EATI to the Government of British Columbia's larger employment strategy could be beneficial. This could include stronger links with supports provided through, for example, <i>WorkBC</i> (Government of British Columbia), the <i>Nelson Cares Society</i>, <i>EmployAbility</i>, <i>CBI Consultants</i>, or <i>EntreActive</i> etc. In this way, EATI could connect program participants with additional supports including employment skills training, employment counsellors, and support associated with starting a small business. An increase in the number of network partners to provide greater access (and referrals) to available programs and services may also be beneficial for participants.</p>
<p>3. Joint decision-making has helped EATI to develop to become a flexible and effective program. It has helped EATI to</p>	<p>A greater focus on partnership, joint decision-making, and the sharing of decision-making power between the</p>

<i>Finding</i>	<i>Recommendation</i>
<p>adapt to new participant needs, to be flexible in the provision of funding, and to be effective in supporting participants in their movement towards greater labour force participation. However, there continue to be challenges associated with bringing the government and community partners together due to the varying perspectives each side brings to the program. These challenges impact communication, which can consequently impact joint decision-making.</p>	<p>government and network partners is recommended. Although EATI government and community partners have built a unique partnership, continuous work (i.e. teambuilding approaches and a focus on greater consensus of program goals, objectives etc.) could be useful to close the “gulf” separating the two sides.</p>
<p>4. The Participation Model has been useful in bringing the government and community partners of EATI together to meet on common ground. Joint decision-making involves a return to the Participation Model as the program’s foundation. The principles and values surrounding the Participation Model continue to drive the program.</p>	<p>Although the Participation Model has anchored the program it does not govern service delivery, nor does it address that the program operates as both an employment program and an equipment program. In order to more seamlessly move from the Participation Model to service delivery, it may be useful for the government and community partners to compare how they understand the program’s mission, goals and objectives, and to discuss how differences in perspective can impact service delivery.</p>
<p>5. EATI faces challenges associated with communication. As EATI works to provide services throughout the province of British Columbia through a primarily virtual office environment, it has implemented some strategies to best manage its communication needs. According to the information collected from program participants, vendors, health professionals and informants within EATI, overall communication within the program continues to constitute an area</p>	<p>A review of the current means for communication within EATI (among Navigators and government partners) and outside EATI (with vendors, health professionals and program participants) to address the concerns raised within this report are suggested.</p>

<i>Finding</i>	<i>Recommendation</i>
<p>for improvement. Improved communication between the participant and Navigator and vendor is particularly needed so information does not “get lost” or cause unnecessary delays serving to impact the efficiency of the program; something EATI has been working to improve.</p>	
<p>6. The three-Navigator approach was put in place to address a number of challenges facing EATI but it has unfortunately, led to communication challenges, and frustration and confusion for program participants.</p> <p>Requiring program participants to work with three Navigators during their application process constitutes an overly bureaucratic approach, particularly given the Participation Model’s values of providing supports that are “barrier free” (PEADC, 2006).</p>	<p>A review of the three-Navigator system to address the expressed concerns in this report is suggested.</p>
<p>7. Originally envisioned to provide assistive technology primarily to people with physical disabilities, EATI has done its best to respond to the need for AT by people with a range of disabilities. EATI currently provides AT to people with all disabilities, however, people with mental health issues and or cognitive or intellectual disabilities require additional support to access equitable service.</p>	<p>In keeping with the Participation Model’s focus on inclusivity, EATI is encouraged to continue to examine the support needs of persons with mental health, cognitive or intellectual disabilities and those who struggle to express themselves verbally to participate. An increase in the number of network partners to provide greater access to physical office environments and face-to-face communication for participants that desire this form of support may be beneficial.</p>
<p>8. Participants have largely obtained the assistive technology they believe they needed and the vast majority of</p>	<p>The Participation Model as a citizen-centred approach should continue to be held as central to the program’s focus.</p>

<i>Finding</i>	<i>Recommendation</i>
<p>participants continue to use the assistive technology they obtained through EATI. A high level of AT use lends support for the Participation Model and the involvement of program participants in the selection and assessment process.</p>	
<p>9. Collaborative assessments for assistive technology that involve program participants and professionals occur most often. Although sometimes professionals are required to participate in the assessment process (such as for motorized assistive technology), these collaborative assessments almost always lead to participants obtaining the assistive technology they believe they needed.</p>	<p>Collaborative assessments signal another way EATI is embracing joint decision-making. When possible and desired by the program participant, the involvement of a professional who is willing to work with the program participant should continue to be encouraged.</p>
<p>10 Due to limits placed on staffing and administrative costs, EATI has reviewed approximately 50 applications for funding each month. All additional applications are placed on a wait list. For some, this has meant a rather long wait from application to receipt of AT. Although the length of the wait list has been steadily declining due to a number of possible factors, the decrease in the number of incoming applications does not represent the real demand for AT within the province. Rather it may represent those who are aware of the program have been or are being served. If EATI were to advertise throughout the province it is likely there would be a much greater influx of applications owing to an even longer wait time for program participants to access AT.</p>	<p>EATI attempts to best manage its wait list for services. Minimizing the repetition in service provision that occurs through the three-Navigator approach may reduce the wait list. The resources currently used to centralize and route all emails and telephone calls for Navigators should be reviewed to reduce applicant wait times.</p>

Implications & Conclusion

The Equipment and Assistive Technology Initiative (EATI) has crafted the beginnings of a much larger strategy for people with disabilities in British Columbia. In its evolution, EATI has developed a provincial program through a primarily virtual work environment, while bringing together government and community partners to meet a common need. The learning involved in these large tasks should be offered to other organizations as a parallel project to the *Knowledge Translation Plan* developed by the research team and intended to aid the dissemination of learning that has occurred within this study (see *Appendix I*). As EATI offers enormous insights and opportunities for learning for other programs for people with disabilities, the importance of communicating with other organizations is enormous. Such opportunities may hold the additional benefit of helping EATI to firm its foundation and arrive at greater program consensus.

Due to it's client-centred focus and the opportunity for participants to self-assess for AT, EATI represents significant social change in British Columbia; one that places people with disabilities at the center of decision making concerning their needs. By acting as a positive example of consumer-driven decision-making, EATI may singlehandedly work to restructure how programs for people with disabilities are created within the province. The shift in working with program participants to expand upon their goals by offering them choices leads to participants feeling excited to embark on employment possibilities. The relationship building between participants and Navigators ensures support during the process but also inspires and engages participants in understanding themselves as employable. This impact on the perceptions of people with disabilities towards employment is far reaching. Despite the multitude of challenges people with disabilities face in obtaining employment, EATI is setting the groundwork for a future of greater labour force participation by people with disabilities in BC.

Appendix A: Research team**RESEARCH TEAM**

Dr. Lyn Jongbloed, Dip (OT) (S.A.), BSc (OT) (UWO) MA, PhD (UBC), FCAOT

Principal Investigator, Associate Professor

Lyn is an Associate Professor in the *Department of Occupational Science and Occupational Therapy* in the Faculty of Medicine at UBC. Her teaching focuses on theories underlying rehabilitation practice on the legislative, socio-political and service delivery issues influencing practice. Her primary research interests are the interrelationship between disability and the social, economic and political environment. An author of many publications in notable journals such as *Stroke*, the *Lancet*, and the *Archives of Physical Medicine and Rehabilitation*, Lyn is also co-editor of the book *Disability and Social Policy in Canada*, now in its 2nd edition (2006) with Dr. Mary-Ann McColl.

Dr. Tim Stainton, BSW (UWO), MSW (Uoft), PhD (LSE)

Professor and Director UBC School of Social Work and Director of the Centre for Inclusion and Citizenship

Before joining UBC in 2002 Tim held Faculty appointments at the University of Wales Swansea where he was Director of Social Work, McGill University and was tutor in Social Policy at the London School of Economics. Prior to his academic career he worked in the field of intellectual disability in a number of roles including as Director of Policy and Programs for the Ontario Association for Community Living and at the Community Living Society in Vancouver working on the deinstitutionalization of provincial institutions. He is author of numerous works on service and supports for people with intellectual disabilities, disability rights, individualized funding, history, ethics and theory. He was recently Guest editor of a special issue of the *Journal on Intellectual Disability Research* on Human Rights. He is active in the disability rights and community living movements and is a board member of several disability rights organizations. He is also active in consultation and training on disability related issues internationally.

Donna Drynan, BSc (OT), MEd

Senior Instructor & Academic Fieldwork Coordinator

Donna brings over 28 years of working with children in the area of assistive technology to her role of Senior Instructor & Academic Fieldwork Coordinator in UBC's *Department of Occupational Science and Occupational Therapy*. She has worked in direct practice, both BC

and Ontario, and she has provided significant expertise as a consultant in the area of Assistive Technology.

Donna has taught at UBC since 1994, and her research interests lie mainly in the area of adult education. Her teaching expertise is in Assistive and Rehabilitation Technology and she has designed and delivered courses in this area for over 15 years. Recently she had become responsible for courses related to professional education of occupational therapists. She designed and delivered courses to practicing occupational therapists on how best to educate students in the field, and taught similar topics to entry-level OT students. Donna supports participatory learning and has worked hard at developing her skills as a teacher and facilitator for both large and small groups of students. She is particularly interested in how Occupational Therapy students acquire competency while learning in the field. As well, she is interested in the role inter-professional (IP) education plays in the acquisition of IP competencies. Donna is currently the UBC Faculty Representative for Rehabilitation Sciences, CHIUS.

Patricia Johnston, B.A., B.S.W., M.S.W., PhD student**Research Assistant & Project Manager**

Holding both front line work experience as a social worker, and having worked as a program and policy specialist, Patricia has provided direct consultation to two provincial and two territorial governments. She is currently furthering her interests in social policy by pursuing a Ph.D. at UBC's *School of Social Work*. As a professional social worker, Patricia has worked with people with disabilities in British Columbia and throughout Canada's Arctic. She has worked previously with Dr. Timothy Stainton on research as part of the *Community Living Research Project* in 2008.

Sandy Rogers, M.S.W. Student**Research Assistant**

From Montana, Sandy moved to British Columbia in 2012, and is currently working towards her Master's degree at UBC's *School of Social Work*. In addition to receiving an undergraduate degree in social work from the University of Montana in 2010, Sandy has worked with people with disabilities in several different capacities for over 7 years. Beginning as a personal care aide for people with physical disabilities, Sandy moved on to work on the Children's Autism Waiver for the state of Montana as an early intervention trainer for young children with autism. She has experience working at a group home for men with co-occurring diagnoses of autism and bipolar disorder and as a Targeted Case Manager for adults with developmental disabilities and mental illness. Sandy is currently completing a practicum at *Community Living British Columbia*.

**Sarah Erickson, B.Sc. Kinesiology, MOT Student
Research Assistant**

Sarah Erickson is currently completing the final year for her *Master of Occupational Therapy* degree at the University of British Columbia. Throughout her adult career she has volunteered to work with athletes with developmental disabilities at events such as *Operation Track Shoes* in Victoria. Sarah has worked and volunteered in a number of hospitals and long-term care settings with individuals who have a range of physical and cognitive abilities. As such, she is passionate about ensuring all individuals, regardless of abilities, have the tools they need to participate in meaningful activities of daily living.

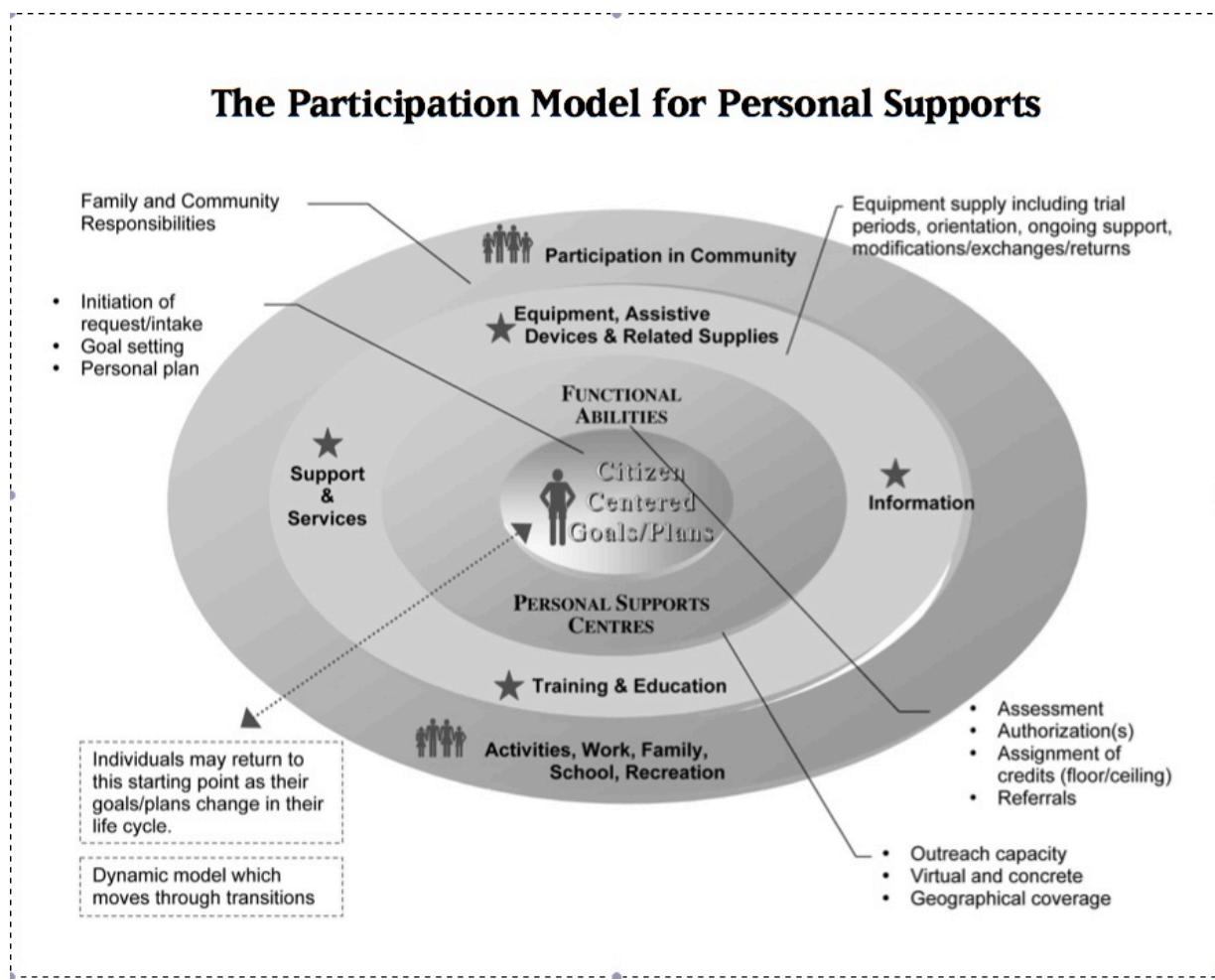
**Sara Wilson, B.A., MAOT Student
Research Assistant**

Sara Wilson completed her Bachelors Degree in Psychology at Simon Fraser University in 2008 and is currently enrolled in the Occupational Therapy Masters program at the University of British Columbia (class of 2013). She has worked as a research assistant and research coordinator that involved running a multi-site study aimed at examining the relationship between cognitive changes and psychiatric symptoms related to diagnoses of Schizophrenia and Bipolar disorder at the University of British Columbia.

Appendix B: Acknowledgements**ACKNOWLEDGMENTS**

The research team would like to acknowledge the time and energy offered by the following:

- The EATI Evaluation Committee: The Evaluation Committee provided tremendous help by way of reviewing documents, answering questions, and making suggestions throughout the entire project.
- EATI program participants and key informants: All those who offered their time and information to this project, without this input the project would have been severely limited.
- The EATI Evaluation website (<http://eatievaluation.sites.olt.ubc.ca/>) and survey was developed with support from University of British Columbia, the *Western Institute for the Deaf and Hard of Hearing*, and the *Neil Squire Society*. Insight and suggestions offered towards its design were appreciated.
- The research team would like to acknowledge that the *Social Sciences and Humanities Research Council (SSHRC)* grant, *Community- University Research Alliances (CURA) Funding*, and the Government of British Columbia who kindly provided support through the *Labour Market Agreement* for this project.
- The research team wishes to acknowledge the extremely valuable support provided by Dr. Leanne M. Currie, DNSc, RN, Associate Professor, the University of British Columbia, School of Nursing.

Appendix C: Participation Model Diagram

Source: Provincial Equipment and Assistive Devices Committee (PEADC). (2006)

Appendix D: British Columbia Context**BRITISH COLUMBIA CONTEXT**

British Columbia has experienced some significant changes since the Equipment and Assistive Technology Initiative (EATI) was first conceptualized. Social, economic and political shifts have all impacted people with disabilities in British Columbia. These shifts include:

1. Economic uncertainty associated with international financial crisis

The global economic concerns of 2007 and 2008 held a ripple effect that was felt throughout Canada and resulted in financial restraint measures put in place on every level of government, but also within small, medium, and large businesses (Ocaya, 2012). The impact of the global recession was felt everywhere. In British Columbia, it was described as “an inescapable economic reality that we all, I think, need to come to grips with” and a “freeze” was placed on government funding (Fowlie, 2012). This “freeze,” however, occurred as unemployment rates had increased for all British Columbians, leaving people with disabilities to encounter great challenges obtaining employment (BC Stats, 2012; BC Stats, 2013). Although people with disabilities in Canada have long experienced discrimination in many areas of their lives, from employment, to finding adequate accommodation and accessing services among other things, attempting to obtain employment when unemployment among those without disabilities has risen, can highlight the discrimination people with disabilities face in finding work (Brodie, 2012). An increased difficulty for people with disabilities to obtain work can often be due to the tendency by employers to hire people without disabilities over those with disabilities (Schur, 2003). People with disabilities in British Columbia have reported economic factors as the as “the primary cause of discrimination, perceiving the economic infrastructure as the major challenge to the fulfillment of their rights” (Disability Rights Promotion International Canada, 2011, p. 7). Thus, much of the social exclusion people with disabilities may face in other areas of their lives can in fact stem from their relationship to employment and participation in the labour market.

2. Cost of housing in British Columbia

It is well-known that British Columbians pay some of the highest costs for housing in the country. For those who reside in the greater Vancouver region, the cost of housing (both rental and ownership) has grown to a point where many have been forced to make pay more for

housing, move outside of Vancouver city limits where rents tend to be lower, or face homelessness (Klein and Copas, 2010). This increase in housing costs has in part been attributed to the need for housing in Vancouver prior to the 2010 winter Olympics (Crompton and Witt, 2013). Unfortunately, increases in housing costs can contribute to stress that may complicate one's health, and moving to less expensive housing can mean moving away from long-term support networks, neighborhoods, and accessible transit (West Coast Leaf, 2011). An increasing need for additional finances for housing has even encouraged some to explore moving to another province (Hyslop, 2012). Given the "market value" for rental housing in Vancouver and the Fraser Valley, it is not surprising that British Columbian's with disabilities often live below the low income cut off (LICO) (BC Stats, 2008; Statistics Canada, 2007).

Yet, given this context of extremely high housing costs, people with disabilities continue have a 18% lower employment rate than people without disabilities (Government of BC, 2011). In British Columbia, those with disabilities of working age (15 to 64 years old) represent 16% of the province's population, but almost 40% are not in the labour force at all (Government of BC, 2011). Directly related to a lack of employment, the "income range of \$10,000 to \$14,000 was reported most frequently by individuals in BC with disabilities" (Government of BC, 2003). This means that for many of people with disabilities in British Columbia, poverty can be a fact of life (Kneebone and Grynishak, 2011; Stapleton, O'Day, Livermore and Imparato, 2006). It is now recognized that "there is a significant gap between the labour market participation of people with disabilities and people without disabilities" where "the on-going labour market disadvantage is widely reported" (Edwards et al., 2010, p. 117).

3. The creation of the Harmonized Sales Tax (HST)

Increasing the cost of basic daily goods and services, the Harmonized Sales Tax (HST) has been referred to by advocates and non-profit organizations as a targeted tax aimed at the most marginalized groups (Klein, 2011). Although the HST has recently been phased out, the economic impact has been described as "a bite out family budgets" (Ivanova, 2010). As unemployment and inflation were increasing in British Columbia beginning in 2007 and 2008, the creation of HST on many goods and services further impacted living costs for people with disabilities. This is because people with disabilities are twice as likely to be living below the "poverty line" than those without disabilities. Consequently any increase on day-to-day purchases can lead to serious financial strain (Crawford, 2009; Pokempner and Roberts, 2001). Additionally, research in 2009 in British Columbia indicated only a small percentage of people with disabilities (PWD beneficiaries) supported financially through income assistance claim

any earning exemptions (Stainton, 2009).

The number of people with disabilities living in poverty has increased substantially. For example, in 2001 there were 127,500 people with disabilities in British Columbia with a total income of less than \$11,999 per year. In 2006, this number of people rose to 160,640 (Statistics Canada, 2006a). Yet employment alone does not appear to eliminate poverty for people with disabilities. In fact, the unemployment rate for people with disabilities in the province was effectively cut in half between 2001 and 2006 (BC Stats, 2009a), however, people with disabilities with an employment income less than \$11,000 per year in British Columbia has risen from 55,440 people in 2001, to over 124,880 people in 2006, signaling the sharpest rise in low income Canadians nationally (Statistics Canada, 2006a). This translates into more people with disabilities entering the workforce, but they are in effect, earning less (Statistics Canada, 2006a). This is despite the fact that the average hourly wage for the majority of British Columbian's has been steadily increasing since 2002 (BC Stats, 2012a). The high level of poverty associated with having a disability in BC also persists notwithstanding the province holding higher completion rates for those who attend post secondary education than the Canadian average (BC Stats, 2009).

Appendix E: List of Network Partners

NETWORK PARTNERS

- BC Association for Individualized Technology and Supports <http://www.bcits.org/> | Voice: 604-326-0175 | Fax: 604-326-0176
- BC Coalition for People with Disabilities <http://www.bccpd.bc.ca/> | Voice: 604-872-1278 | Fax: 604-875-9227
- Spinal Cord Injury BC <http://sci-bc.ca> | Voice: 604-326-1237 | Fax: 604-326-1229
- Neil Squire Society <http://www.neilsquire.ca/> | Voice: 604-473-9363 | Fax: 604-473-9364
- North Shore Disability Resource Centre <http://www.nsdrc.org/> | Voice: 604-985-5371 | Fax: 604-985-7594
- East Kootenay Local Community Implementation Group, Canadian Red Cross Help Equipment Program | Voice: 250-426-7568
- Keremeos Measuring Up Team measuringup@hotmail.com | Voice: 250-499-5017 | Contact: Kelly McKay or Heather Walkus
- Prince George Personal Supports Centre <http://www.employment-action.bc.ca> | Voice: 250-564-8044 | Fax: 250-564-8864
- Richmond Centre for Disability <http://www.rcdrichmond.org/> | Voice: 604-232-2404 | TTY: 604-232-2479 | Fax: 604-232-2415
- Seeing Caucus (for people with visual impairments) | Betty Nobel bnobel@vcc.ca
- Victoria Personal Supports Centre <http://www.drcvictoria.com/> | Voice: 250-595-0044
- Western Institute for the Deaf and Hard of Hearing <http://www.widhh.com/> | Voice: 604-736-7391 | TTY (TDD): 604-736-2527 | Fax: 604-736-4381

Appendix F: Services in BC**SERVICES AVAILABLE IN BRITISH COLUMBIA**

- The *BC Employment and Assistance (BCEA) for People with Disabilities Program* operated by the *Ministry of Social Development*, provides employment and assistance services and support to persons with disabilities who wish to volunteer, work or be self-employed or for those who are unable to do so. Individuals are categorized under programs for *Person with a Disability (PWD)* or *Person with Persistent Multiple Barriers (PPMB)*. Once designated, individuals may be eligible for financial assistance, and a range of medical services and supplies provided by this same Ministry. The Ministry may provide medical supplies and equipment prescribed by a health professional (e.g. orthotics, wheelchairs), and basic dental and optical services. The Ministry does not provide ‘high tech’ assistive technology and devices (such as computers or computer software) for employment. To access the benefits the Ministry does offer, individuals require a medical practitioner’s prescription, an assessment from the required professional that confirms the need for the equipment or device requested, and they must be determined to possess no available resources from which to pay the cost of the health supplement.
- *Medical Services Only (MSO)* benefits are provided to individuals who are not in receipt of income assistance. These benefits are very similar to those available to individuals who are also in receipt of income assistance via the PWD and PPMB designations.
- The *Ministry of Social Development’s Employment Programs for Persons with Disabilities (EPPD)* was replaced in April of 2012 by the *Employment Program of British Columbia (EPBC)*, which offers services to people with disabilities as through a needs assessment. The program, intended to be a “one-stop shop” to those looking for employment, may provide employment counseling and support, employment workshops, skills training, job coaching and development, and follow up support.
- The *B.C. Palliative Benefits Program* offered through the *Ministry of Health* enables individuals in the end stage of a life threatening disease to remain at home by providing them with necessary medical equipment.
- *Non-Insured Health Benefits* from the *First Nations and Inuit Health Branch of Health Canada* provides qualified Aboriginal people with a limited range of medically necessary health related equipment.

- The *Ministry of Advanced Education* provides post-secondary students who have disabilities with funding for support and to purchase assistive technology and devices through the provincial *Permanent Disability Program*. Additionally, *Assistive Technology- BC (AT-BC)* and *Canada Study Grant for Services and Equipment for Person with Permanent Disabilities (CSG-PD)* can be accessed to help cover the cost of assistive technology.
- The *Ministry of Public Safety and Solicitor General's Crime Victim Assistance Program* helps those who have a disability resulting from a violent crime access disability aids and modifications to their home and vehicle if required.

In addition, certain charitable organizations provide equipment and assistive devices. For example, the *Multiple Sclerosis Society of Canada* offers funding for equipment purchase and permanent loan. To access this program, however, individuals require the recommendation of a medical professional to support their need for the equipment. An organization out of the University of Victoria called *CanAssist* accepts applications for customized assistive devices for individuals with disabilities. The *Tetra Society* creates custom innovative equipment for individuals whose needs are not met by commercially available products, and the *Kinsmen Foundation of BC and Yukon* receives applications for assistive equipment and technology for people with disabilities.

Other organizations, such as the *Canadian Red Cross*, *the ALS Society of BC*, *Muscular Dystrophy Canada*, *GF Strong Rehab Centre*, and some *Disability Resource Centres*, such as *Richmond's Community Access Point (CAP)* offer health equipment loan services and programs in British Columbia. Additionally, some organizations provide specific equipment or technology to individuals not related to health or medical needs, for example, the *Communication Assistance for Youth and Adults (CAYA)* provides assistive technology for communication. This program provides professional assessment and a loan bank of equipment, holding intake cycles three times a year. The *Power to Be Adventure Therapy Society* offers programs where adaptive equipment is available for individuals with disabilities to access the outdoors through rock climbing, camping, kayaking etc.

Appendix G: Certificate of Approval from UBC's Behavioural Research Board

The University of British Columbia
 Office of Research Services
 Behavioural Research Ethics Board
 Suite 102, 6190 Agronomy Road, Vancouver, B.C. V6T 1Z3

CERTIFICATE OF APPROVAL - MINIMAL RISK

PRINCIPAL INVESTIGATOR: Lyn E. Jongbloed	INSTITUTION / DEPARTMENT: UBC/Medicine, Faculty of/Occupational Science and Occupational Therapy	UBC BREB NUMBER: H12-01481
INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT:		
Institution N/A		Site N/A
CO-INVESTIGATOR(S): Tim Stanton Donna Drynan		
SPONSORING AGENCIES: N/A		
PROJECT TITLE: Employment and Assistive Technology Initiative (EATI) Evaluation		

CERTIFICATE EXPIRY DATE: July 6, 2013

DOCUMENTS INCLUDED IN THIS APPROVAL:	DATE APPROVED: July 6, 2012	
Document Name	Version	Date
Protocol: Proposal APPENDIX H	Version 3	June 26, 2012
Consent Forms: Interview Consent Form EATI Participants APPENDIX F Key Informant Consent Form APPENDIX C Survey Consent Form APPENDIX B	Version 3 Version2 Version 3	June 13, 2012 June 8, 2012 June 13, 2012
Advertisements: Interview Recruitment Letter EATI Participants APPENDIX E	Version 3	June 13, 2012
Questionnaire, Questionnaire Cover Letter, Tests: Survey APPENDIX A Interview Questions EATI Participants APPENDIX G Key Informant Interview Guide APPENDIX D	Version 5 Version 3 Version 3	June 13, 2012 June 25, 2012 June 25, 2012
Other Documents: Letter of Support MSD APPENDIX J Letter of Support BPSN APPENDIX I	N/A Version #2	June 28, 2012 June 27, 2012
Other: The website that will house the online survey has yet to be developed. Once completed, it will contain the information within the Survey Consent Form APPENDIX B and the Interview Recruitment Letter EATI Participants APPENDIX E. Once created, the website URL will be forwarded to UBC BREB.		
The application for ethical review and the document(s) listed above have been reviewed and the procedures were found to be acceptable on ethical grounds for research involving human subjects.		
<i>This study has been approved either by the full Behavioural REB or by an authorized delegated reviewer</i>		

Appendix H: Coding for Survey**EATI PARTICIPANT SURVEY CODING****Types of AT**

Mobility Related Assistive Technology:

- mob_any
- mob_wheeled (e.g. power and manual wheelchairs, scooters, 4 wheel Rhino ATV)
- mob_cane
- mob_walker
- mob_lift/trailer (e.g. stair lift, wheelchair lift, trailer for wheelchair)
- mob_prosthetic (e.g. computerized above knee prosthetic)
- mob_accessories (e.g. bike lights, wheelchair wheels, walking poles, mount for wheelchair)
- mob_footwear (e.g. foot brace with shoe, winter boots for diabetic)
- mob_dog (e.g. guide dog)

Communication Related Assistive Technology:

- com_any
- com_ipad (e.g. ipad)
- com_speech (e.g. Dragon Naturally speaking)
- com_phone (e.g. iphone 3GS, telephone box hearing system)
- com_other (e.g. equipment to answer telephone from bed, dials operator to place calls)

Hearing Related Assistive Technology

- hear_any
- hear_aid (e.g. hearing aids)
- hear_fm (e.g. fm receivers)
- hear_other (e.g. tape recorder, bed-shaking alarm clock, Resound unite TV transmits sound of TV to hearing aids, blue tooth)

Vision Related Assistive Technology

- vis_any
- vis_reader (e.g. JAWS screen reader)
- vis_braille (e.g. Apex braille note taker, Braille display, Braille embosser, Braille printer)
- vis_glasses (e.g. sunglasses, specialty lenses)
- vis_software (e.g. zoom text, zoomex)
- vis_gps (e.g. Trekker Breeze GPS)
- vis_electronics (e.g. pen friend, intel reader, small hand recorder, book sense, Victor reader stream, Plex (or Play) Talk, Hand Held Ruby Magnifier, camera)
- vis_other (e.g. magnifier, CCTV)

Assistive Technology related to activities around the house

- house_any

- house_bathbench (e.g. bath lift)
- house_hospbed (e.g. hospital bed)
- house_furniture (e.g. workstation, custom desk, office chair, specialty bed mattress)
- house_reno (e.g. ceiling lift, ramp)
- house_other (e.g. remote lock for door, automatic door opener, toilet seat raiser)

Assistive Technology related to Driving

- drive_any
- drive_education (e.g. driving lessons)
- drive_adaptations (e.g. hand controls, 6 way power seat, modified brakes, van conversion)

Learning Related Assistive Technology

- learn_any
- learn_software (e.g. all miscellaneous software not including Dragon Naturally Speaking, JAWS screen reader or Zoomtext/Zoomex)
- learn_education (e.g. training on equipment, such as trekker breeze or software)
- learn_other (e.g. Live scribe pen)

Other Assistive Technology

- computer (or laptop)
- compaccessories (e.g. printer, rolling cart for large monitor, music keyboard stand)
- other_medical (e.g. blood pressure watch, BI pap machine, CPAP, foam wedge)

Appendix I: Knowledge Translation Plan

KNOWLEDGE TRANSLATION PLAN

012 July 15

Knowledge translation has been defined as a “dynamic and iterative process that includes synthesis, dissemination, exchange and ethically-sound application of knowledge” (CIHR, 2012, p.1). For the purposes of evaluating the *Employment and Assistive Technology Initiative (EATI)*, the following knowledge translation plan has been developed:

1. Goals

This EATI Evaluation knowledge translation plan holds two goals: to increase knowledge and promote action. Based on the results of the EATI Evaluation, sub-goals may include informing practice and or changing policy, both at the operating level of the program and at the higher government level. These goals are important to the evaluation of EATI and to the accessibility of assistive technology for people with disabilities in British Columbia.

2. Knowledge-user Audience

Knowledge users constitute “individual[s] who [are] likely to be able to use research results to make informed decisions about health policies, programs and/or practices” (CIHR, 2012, p.1). Knowledge-users for the EATI Evaluation project include: policy makers, administrators and funders within the provincial and federal governments, particularly the *Ministry of Social Development (MSD)*; managers, administrators, and service providers within the EATI program itself including the *British Columbia Personal Supports Network (BCPSN)*; board members, community leaders, and community based non-profit organizations engaged with EATI; program participants; academics in the field of disability studies; and other professionals within the disability community who interface with EATI or with individuals who access EATI.

Knowledge gained from this study will serve to inform, “what’s working” and where program practice or policy may require adjustment. Additionally, knowledge users, including program participants, and the wider community may benefit from learning about the program.

Communication with all knowledge users will primarily occur through the provision of a final report on the website designed for the EATI Evaluation. By making this final evaluation report available online, it will be available to all consumers of EATI services and may be read by others outside the identified knowledge user audience. Knowledge users who are intimately involved with EATI will be involved in ongoing discussion, consultation, and communication via email, telephone, tele/web-conferencing and participate in the research process. These knowledge users are both the immediate audience and their involvement represents a significant exchange of information and mutual learning.

3. Strategies

This knowledge translation plan holds four strategies for sharing information from the EATI Evaluation:

- The initial strategy involves posting the final report from the evaluation on the EATI Evaluation website for all knowledge users and the wider community to access. Considered a “diffusion” strategy, this approach that requires researchers disseminate information by making the report available and accessible to all who wish to read it. This further requires it also be presented in plain language summaries. In this popular format, the sharing of knowledge may enable the report’s findings to reach beyond the target audience of knowledge users.
- The second strategy requires researchers to participate in small group meetings with knowledge users, both informally and formally, such as in a workshop format or by way of presentations. The researchers will provide information pertinent to the needs and interests of each knowledge user group. One example of this may be reviewing the findings as they relate to service needs through interactive small group meetings for government officials and administrators of EATI.
- The third strategy involves uploading the final report and related papers on the *Centre for Inclusion and Citizenship (CIC)* website through UBC’s School of Social Work in coordination with a colloquium and multi-site video presentation with the wider disability community in British Columbia.
- The final strategy requires the University of British Columbia (UBC) researchers conducting the EATI Evaluation to prepare peer-reviewed papers to publish and present at conferences tailored to specific audiences such as academics, policy developers, and service providers in the field of disability studies. This strategy is intended to create a vehicle for communicating the results of the evaluation to a much larger audience of knowledge users.

These strategies will enable the research team to meet the goals of this knowledge translation plan in the following ways:

Goal	Strategy
Increase knowledge	<ul style="list-style-type: none"> • Online dissemination of final report available to all knowledge users • Accessible plain language summaries • Small group meetings, colloquium, and targeted presentations • Publication of peer-reviewed papers, attendance at conferences

Promote action	<ul style="list-style-type: none">• Present findings to knowledge users including any relevant suggestions for program or policy change• Participate in small group meetings and presentations• Publication of peer-reviewed papers, attendance at conferences
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Questions the UBC research team will continue to ask as it develops these strategies further include:

- *To what extent will the project have relevant findings that may impact practice, programs and/or policies related to the provision of assistive technology related to employment?*
- *To what extent will the project's findings be useful to other contexts, practice, and programs?*

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