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Use of Mobile Technologies by Young Adults Living with an Intellectual Disability: A Collaborative Action Research Study

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Abstract

This article discusses the application of collaborative action research to the use of iPods by a small group of adults with an intellectual disability (ID) who were receiving services from a governmental program. The research was aimed at developing abilities to become autonomous using videos with mobile computing devices. We produced instructional videos, which we uploaded onto iPods. The iPods were lent to the young adults with ID for a period of ten weeks, to try to develop abilities needed for autonomous living such as cooking, using a stove, using a washing machine and keeping oneself safe. In this paper, we present the results of focus groups conducted at the end of the collaborative action research during which participants voiced their opinion about the project and revealed their true interests with regards to mobile technologies. Furthermore, this article offers reflections about the action research project and identifies directions for further research.

The recent adoption of smartphones and mobile technologies by a large proportion of the Canadian population has spawned much interest from the education research community. At present, Canadian wireless carriers are now offering coverage to 99% of Canadians and smartphones and Internet sticks are available to 96% of Canadians (Canadian Wireless Telecommunications, 2011), without counting the wide range of WIFI public Internet connections such as Hotspots and other local area networks (LANs). This wireless connectivity opens the door to a wealth of opportunities that change the nature of our behaviours, our mobility, our interactions and our relationship to knowledge. In education, a use of such technologies that fits with how people use them in their everyday life is highly desirable (Davidson & Waddington, 2010).

Bearing these technological developments in perspective, this article reports on the last stage of a collaborative action research project we conducted with a small group of young adults living with intellectual disabilities (ID) who were receiving services from a government program. In the context of this study, we produced instructional videos to help participants develop various autonomous skills, such as using a washing machine, managing a budget, preparing the morning routine, cooking simple meals and attending to their personal security (Davidson, 2010; Davidson, Smith, & Naffi, 2011). We installed the videos on iPods so they could be viewed anywhere and anytime by participants. Aside from

understanding how this population gains life skills from using instructional videos, the most important objective of this study was to understand what impact mobile technology could have in the lives of people living with ID, once they had access to it. After more than ten weeks of iPod Touch use, we conducted a focus group using a highly participatory method of inquiry with our participants. During this focus group, participants revealed that they appreciated the videos, but how we planned to use the technology with them was not how they wished to use it. The next section presents the context and research problem, to determine the issues at stake when conducting research using mobile technologies with people living with ID.

Context and Research Problem

In the past few years, a body of literature inquiring about the potential of mobile technologies (m-technologies) for learning and performance has emerged. In the recent years, studies on mobile learning (m-learning) have led to the conclusion that mobile media should not be a replacement of face-to-face learning experiences, nor should it substitute e-learning completely. Instead, m-technologies are best suited for use as a supporting media in teaching and learning activities in a blended learning or hybrid model environment in which the m-technology provides anywhere and anytime access to information and people (Kurubacak, 2007; Majumder & Basu, 2010; Wagner, 2008; Wang, Shen, Novak, & Pan, 2008).

When used wisely and appropriately, m-learning can bring the learning experience to a whole new level. Indeed, with the proliferation of mobile technologies (m-technologies), such as cellphones, Smartphones, PDAs and tablets, or mobile applications, many on-the-go services are now offered (Metcalf & Marco, 2006). These technologies and services offer users the capacity to interact with objects of knowledge and other people whenever and wherever they are connected. In other words, these ready-at-hand technologies allow anywhere and anytime living, as well as working, playing and learning, provided that appropriate applications are installed or that the devices are connected to the Internet through a WIFI network or the 3G network, or to other devices.

However, this world of possibilities is not equally accessible to everyone. For some disadvantaged populations, even if they live in developed countries, access to what we have described above is not possible. One such population is people with intellectual disabilities (ID) who, despite much effort to integrate them into our society, have been traditionally excluded from much of the information and the social interactions available to the population with a "regular" intelligence (Davidson, 2010). As pointed out by Lussier-Desrochers, Dionne and Laforest (2011), m-technologies have a lot of potential to aid with learning process, both for persons with ID and in the general population.

This creates a major problem because with such opportunities being available to the general population, people living with ID are now facing a three-fold exclusion problem. First, people with ID are not yet fully integrated into society. Second, because of low literacy skills, many of them have faced issues with the new knowledge economy because much information previously available in paper is now exclusively available online. Additionally, m-technologies are not as available to people living with ID as for the bulk of the population and specialized software takes time to develop and is expensive to acquire. Many causes can be identified for this three-fold exclusion problem such as living with very little revenue, a lack of confidence and self-esteem, a low perception of self-efficacy, a low level of literacy, a lack of fine motor skills and coordination, vision problems, etc. This exclusion problem is sometimes called "digital divide" (Auh, Shulman, Thrane, & Shelley II, 2009), "digital inequality" (Friedman & Nelson, 2007), or "digital deprivation" (Gordo, 2003), and refers to the fact that certain people (for different reasons) do not have digital power (Seely Brown & Duguid, 2000).

The next section presents an overview review of the literature for this study. It reveals that m-learning is an emerging research domain that researchers are starting to document. For instance, researchers have identified that many properties of m-learning have value for the general population. However, the potential of m-learning for people with intellectual disabilities remains ill explored by researchers to this day.

The Promises of M-Learning

Building on over forty years of research in educational technology, researchers in m-learning have begun to identify the particularities and potentials of mobile devices and technologies for learning. Aside from the anywhere and anytime learning factor that characterizes m-learning, Ally (2009) observes that:

> Learners do not have to learn what is prescribed to them. They can use the wireless mobile technology for formal and informal learning where they can access additional and personalized learning materials from the Internet or from the host organization. (p. 1)

Other researchers have posited that mobile technologies tend to better engage students in the learning process (Wang et al., 2008), reduce the cognitive load (Koole, 2009), and may improve learning when used in learner-centred activities (Zhu & Kaplan, 2002). While many researchers are still trying to determine whether or not m-learning will indeed yield better results in students, a Delphi study with distance education experts suggests that the most important research needs, in terms of mobile learning technologies, are to consider the use of mobile learning technologies to support collaborative learning, to transform learning into a part of real-life, to support digital interactions dedicated learning milieus, and to engage in activities that do not correspond to the curriculum (Kurubacak, 2007). In fact, Wagner (2008) claims that:

> The better question is whether or not a video accessed just-in-time was able to help a learner perform a task when it was needed, or if a particular portable game helped the player rehearse key information so that he or she was prepared to respond in an emergency. (p. 5)

Howard (2007) claims that mobile technologies allow people to gain back lost hours, hence increasing productivity in employees, which is the added value of m-technologies. Much of the research on m-learning are focussed on ROI (return on investment) (Brandon, 2011) and only a few suggest how m-technology can be used for learning such as those mentioned above.

The bottom line with m-learning is that we have to design for the technologies that people already have, rather than expecting that people will buy new technologies to access the content (Ally, 2009). With m-learning, learners are more nomadic than ever and this allows educators to reach remote populations and provide them with more resources and more occasions to learn. Indeed, the current proliferation of small-scale pilot studies and trials shows the interest of researchers for m-learning. However, Traxler (2009) criticized the fact there is little or no "theoretical conceptualization of mobile learning and with any evaluation methodologies specifically aligned to the unique attributes of mobile learning" (p. 10). The problem is that m-learning refers to learning that uses personal technologies in various informal contexts. In this perspective, any large-scale uniform implementation of m-learning would compromise its fundamental attributes (Traxler, 2009).

There are various types of m-learning research. Some of these categories include technology-driven mobile learning, miniature but portable e-learning, connected classroom learning, informal personalized and situated mobile learning, mobile training/performance support, remote/rural/development mobile learning (Kukulska-Hulme & Traxler, 2005). In an attempt to formalize m-learning research, Koole (2009) has created a framework named "FRAME" which situates mobile learning at the intersection of "mobile technologies, human learning capacities and social interaction" (p. 25) and in the overlap between these, four constituent elements – that is, device usability, interaction learning, social technology and mobile learning. Presented in a Venn diagram, mobile learning is the centre of these constituent elements and their interactions. In other words this model suggests that mobile learning is possible under the following conditions: (1) the devices used allow users to be mobile and the users can use the devices on-the-go; (2) the devices provide access to social technologies and social technologies are available through the devices; (3) the users can interact to learn – i.e., access information and create information.

Ismail, Baharum, and Idrus (2010) suggested that the constituent of mobile learning is simplicity. This involves using short, brief, useful and pow-

erful language to help students. Cruz-Flores and Lopex-Mortero (2010) stated that m-learning should be designed by using all the mobile technology features in a didactical way and aim for reusability. Such design needs to take into consideration learner motivation, just-in-time models, collaborative activities, interdependence, teamwork skills and personal accountability.

While m-learning is very promising, one question that remains is whether or not learning transfer occurs. Indeed, m-technologies such as smartphones have the potential to disseminate a lot of information and to connect learners like no other technology, but merely transmitting information doesn't mean that learning is occurring. One study that inquired about mobile learning via short message service (SMS) concluded that learning transfer was influenced by learner characteristics and how the value of SMS learning was perceived in learners' work or academic performance (Ramli, Ismail, & Idrus, 2010). In the case of our study, we were interested in knowing if learning transfer occurred when people living with ID use m-technologies and if so, what was the meaning of this learning for them through the analysis of their self-reported practices.

The use of mobile technologies with people with intellectual disabilities is a research area which remains largely unexplored. The section below highlights the direction that this research domain should be taking.

M-Learning for People with Disabilities

M-learning is a relatively new concept and so far, research in this domain is still in an embryonic phase especially when it comes to understanding how to use it with special and underserved populations. The fact that m-technologies are becoming inexpensive and universally available is changing the landscape for individuals who are living with disabilities, including intellectual disabilities. In a recent paper, the Rehabilitation Engineering Research Center on Communication Enhancement (2010) pointed out that we need to conduct research that will demonstrate the efficacy of m-technologies for people with complex communication disorders because we need to understand who uses them, how they use them, which technologies and application software, also known as "apps," they use, where, why and how often. Such research could help inform service delivery and help improve the quality of life of this population.

In a similar perspective, the British Learning Skills Network (Smith, 2008), has defined m-learning as "an extension of e-learning that enables digital learning resources to be accessible outside the college or institution" (p. 5), or as "the innovative repurposing of widely available personal tools to capture the interest of hard-to-reach learners" (p. 5). In fact, the British Learning Skills Network values m-learning for the same reasons that most researchers do. They claim it provides anywhere, anytime, just-in-time, access to information and other people, but it also allows learning to become more flexible and personalized, hence making learners feel more in control and enhancing their self-esteem. In a nutshell, the British Learning Skills Network identified that m-learning can help enable individuals to learn better, can improve their motivation to learn and can be transformative because it can maximize and extend learning potential.

Materials and Methods

For this study, we proposed a collaborative action research project with young adults living with an intellectual disability (ID) who were receiving services from a governmental service centre. The objective of the study was to provide instructional videos on iPods to participants and evaluate the experience with them collaboratively to understand the meaning of the learning with mobile technology. This section describes the participants, research design, the research approach used to conduct this study and the technique that was used to conduct the focus group.

Participants

We recruited a total of five people with ID. Participants' age varied from 23 to 27 years old. The study was spread over a service episode of 10 weeks. As specified in the DSM-IV (American Psychiatric Association, 2000), the term "intellectual disability" refers to individ-

uals who: (a) are functioning at a significantly subaverage intellectual level (IQ less than 70); (b) have limited skills in either communication, self-care, home living, social skills, use of community resources, self-direction, academic skills, work, leisure, health and safety; and, (c) have been identified before age 18 years.

Research Design

To meet the objective of this study, which was to develop abilities to become autonomous using videos with the aid of mobile computing devices, the research design followed very specific steps. First, a needs assessment was conducted to determine which instructional videos needed to be produced. This process is described in Davidson et al. (2011). The videos were produced in-house to fit each participant's immediate need in terms of autonomous skills and by taking the group's needs in consideration as well. The videos were uploaded to five iPod Touch® devices, which were lent to each participant for a period of ten weeks. When participants received the iPods, we provided training to use iPods to access the videos and we provided pedagogical aids to use the calendar, the alarm clock and an hourglass application. These pedagogical aids were produced in-house with screen captures and step-by-step instructions. An iTunes account was created specifically for the study with a $20 iTunes gift card so that participants were able to download some games, music or other applications. Participants were informed that we would organize a focus group at the end of the ten-week period.

This study has received the approval of the Concordia University Research Ethics Committee. This research was confidential, which means that the researcher knew the participants, but the names of the participants were not used and the results were aggregated to ensure that individual participants were not identified.

Research Approach

This study was conducted using a collaborative action research perspective because it aimed at producing social change. As defined by Lavoie, Marquis, and Laurin (2003), action research is a social way of conducting research that is associated with an intervention strategy that evolves in a dynamic context. Indeed, action research has to have authentic social needs and should be conducted in a natural context, involving participants at all levels and adjusting its objectives according to the events.

Our data collection took place after a ten-week service episode, during which the instructional videos were used on iPods. The objective of this focus group activity was to obtain the participants' viewpoints on their ability to use some applications in light of their experience in order to get first hand information to understand where they needed more assistance and training. This required a highly collaborative data collection technique, which is why we used an approach to a focus group inspired from the Social Analysis Systems (Chevalier & Buckles, 2009). The Social Analysis Systems is a collection of collaborative action research tools and techniques that have been validated through decades of work with various groups and populations across the world. In their work, Chevalier and Buckles (2009) aimed at designing a collection of research tools and techniques to conduct research socially and to make research socially relevant. This implied finding innovative approaches to data collection with the local language and knowledge structures of the participants, including involving them in the analysis and the interpretation of the data.

Focus Group Technique

To conduct the focus group we used a technique called *The Wheel* (Chevalier & Buckles, 2009). The technique was developed to help visualize multiple ratings and has been deemed useful to "organize information, compare views of different parties, assess the same element or situation at different points in time, identify priorities or expectations, and evaluate the process of learning over time" (Chevalier & Buckles, 2009, p. 218). We used *The Wheel* to conduct the focus group because our goal was to allow our participants to rate their present ability to use the application we initially provided training on (i.e., to listen to the instructional videos, use the calendar, use the alarm clock and use the hourglass, and to express their future desires in terms of using these applications). To prepare for the activity, we made a cross on the floor with masking tape. To do this, we cut two pieces of masking tape, each about 3 metres long, and placed one piece at right angles to the

other to create four axes of the same length (See Figure 1).

The figure was quite large and occupied almost the whole room. At the end of each axis we wrote "watch instructional videos, "use the calendar," "use the alarm clock," "use the hourglass" on index cards. We wrote 0 to 5 on each axis so that the participants could rate their ability to accomplish the task, (i.e., 0: I'm unable to perform the task, 5: I'm an expert). Each participant had to place a card on the scale of 0 to 5 on each axis, corresponding to each application (see Figure 2).

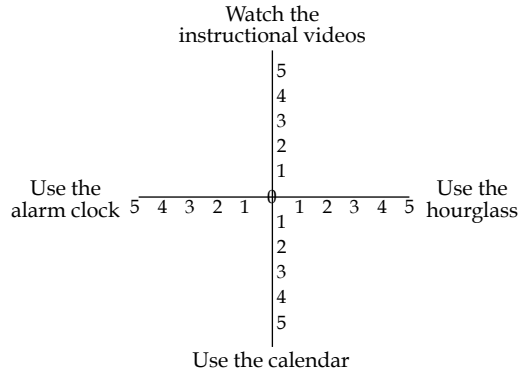

Figure 1. The Wheel layout

Results

The Wheel activity was deemed extremely useful to understand how participants lived the experience of using the iPods for a period of ten weeks and to identify what they would like to learn in the future with this technology. We had planned to obtain a rating for the four applications that participants were trained on when they received the iPods. The five participants evaluated their present ability to use the applications. From the ratings provided by the participants, as shown in Figure 3, we noticed that

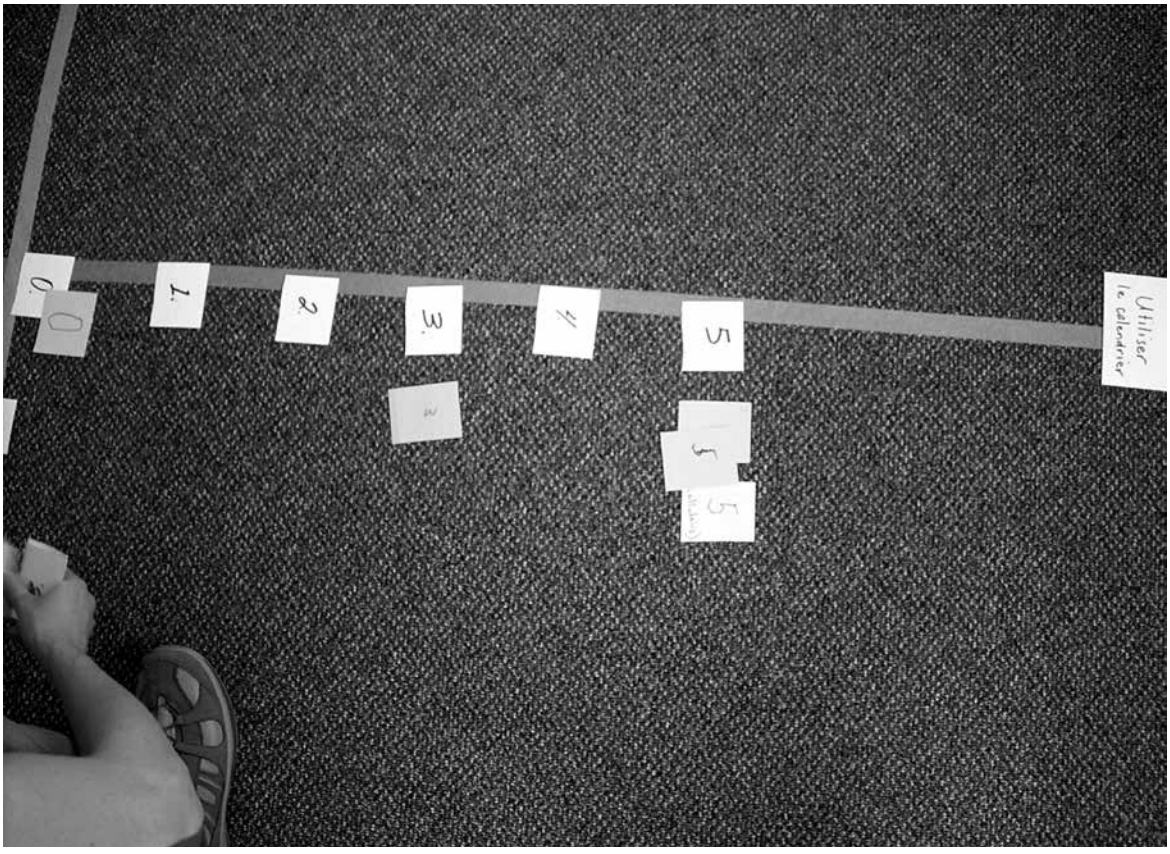

Figure 2. Rating on The Wheel.

iPods were mostly used to watch videos. This result was not surprising because the original project was about creating instructional videos that fit immediate needs and about providing access to these videos through iPods.

Although the ratings were not surprising, we were interested in the explanations participants gave about the ratings. One participant watched the videos once with her facilitator. After that session she couldn't charge it because she lived in a home without electricity, therefore she explained: "I was not able to watch the videos again." Nobody commented any further on her statement. One other participant said: "I watched the videos once, but they're boring so I didn't watch them again. I prefer watching music videos."

According to most participants, the calendar and the alarm clock applications were complicated to use. One participant said: "I tried the calendar with my facilitator but after I didn't do it. I use[d] the one on my cell phone because I'm more used to it." Another participant said: "I didn't use the alarm clock on my iPod because it doesn't ring loud enough and it's hard to set up. The alarm clock on my night table works fine. The problem is that I forget to turn it on." As for the hourglass, only one participant used it every day. When we asked him how he used it, he said: "I sit in my bed and watch the white things come down. When it is over, I turn it around and it goes on and on. I look at it and it passes time."

When we asked participants if they wanted to get better at using the alarm clock, using the calendar, using the hourglass or watching videos, they said they were satisfied with what they had done. This puzzled us, as we remembered their initial enthusiasm about receiving the iPods. They said that they knew many people who had iPods and iPhones. We wondered why the "cool factor" disappeared during the ten-week period so we asked participants if they wanted to continue using the iPods. They all said yes, so we asked them what they wanted to learn to do with the iPods. The answer was obvious to them. They all said they wanted to play games, watch films and transfer music. To accommodate these new uses of the iPods, we added three rays (masking tape lines) from the centre of *The Wheel* diagram (Figures 1 and 2) and we wrote the words "play games," "watch films" and "transfer music" at the far end of each new line. We asked participants to rate their desire to learn these new uses of the iPods and four of the five participants were very enthusiastic about it.

Globally, the graphic illustration of *The Wheel* displayed in Figure 3 shows that participants had more interest in developing abilities for future activities. They explained that the applications that we installed on the iPods were fine, but they were more curious about the other functions that the iPods could do. They wanted to "Use the iPods for things that their friends and siblings do." When we asked them why they

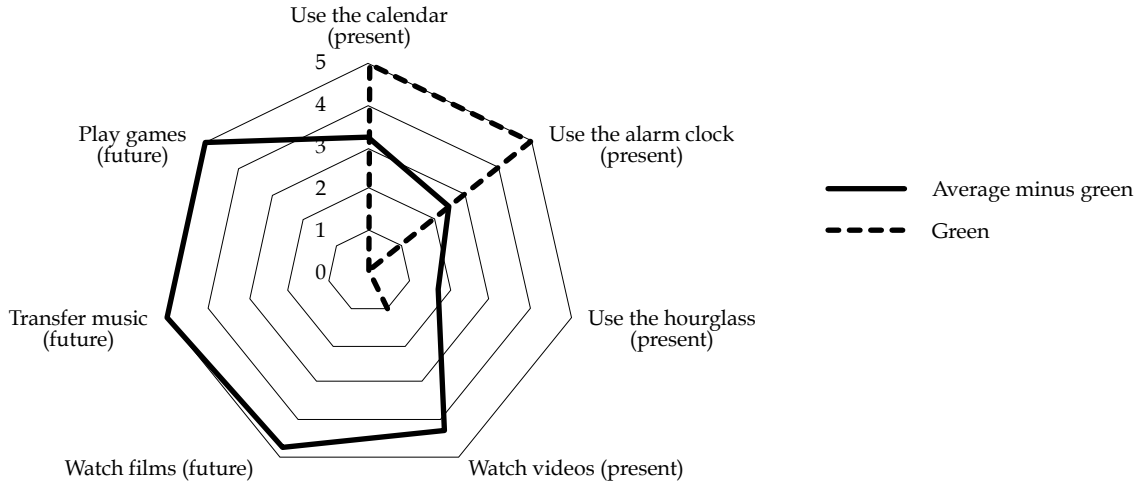

Figure 3. Average of the scores on the wheel

Note: The dotted line corresponds to the scores of one outlier participant (denoted as "Green" (see text)) to avoid skewing the mean.

didn't use the iPods to play games, watch film and transfer music, they said they didn't know how to connect to the Internet. This suggested that participants needed to be trained to connect to the Internet on public WIFI networks.

One participant in the group was an outlier. For the present uses of the iPods, he rated his ability to use the calendar and the alarm clock as excellent and he was not interested in anything else. Because of the wide gap between his current use of the iPods and his future intentions, we decided to present his results differently, to avoid skewing the group's results. For the purpose of this analysis, we called this participant "Green" because he had the green index cards when we did the activity. The full line on Figure 3 corresponds to the group's rating average, while the dotted line corresponds to "Green's" ratings. His explanation was "I'm an expert in technology. I don't need this." We noted that this participant already had an iPod Touch and he was using it mostly for entertainment purposes, such as watching movies, listening to music and playing games. This suggested that this participant was not well suited for the study, even though his facilitator thought it was a good idea for him, but there could be competing explanations, which will be discussed in the next section.

Discussion

When conducting research with mobile technologies, the "cool factor" can be an element of attraction to participate to the research, but there are also some downsides. During the recruitment phase, participants were told that they would have access to mobile technologies. According to their facilitators, the technology element was a definite motivation for them to participate. One of the problems is that once participants had access to the technology, most of them didn't know how to use it for learning purposes. For one participant who was tech savvy, participating in an iPod Touch project was really cool because he identified with the technology. However, when he had to listen to the videos, he didn't think they were very interesting although one of them had been specifically tailored for his needs as indicated by his facilitator.

Nevertheless, we have learned three valuable lessons from the "cool factor" in terms of conducting research with mobile technologies. First, when conducting research with mobile technologies, there is an impending danger of getting people who volunteer as participants because they think that the technology is "cool." There are possible pitfalls to any research, but in the case of mobile technologies, researchers should be even more careful in the recruitment of their participants and interpret their reactions of the learning experience carefully. However, we can safely say that despite this problem, it is worth taking the risk because of the fact that iPods and other mobile technologies could give access to many more resources than those we initially installed. For the purpose of this study, we installed a limited number of videos and applications, but the iPods were never locked and participants had a credit on iTunes they could use. However, none of the participants tried connecting their devices to the Internet; therefore nobody used their iTunes credit. This does not correspond to a rich and thorough use of these technologies, as mentioned by many researchers (Ally, 2009; Howard, 2007; Kurubacak, 2007; Wagner; 2008; Wang et al., 2008; Zhu & Kaplan, 2002).

Second, our experience suggested that even if the instructional videos were made specifically for our participants, their lack of motivation and interest was obvious as soon as they spoke about their experience with the study. However, they were far from being demotivated to use the technology and this was obvious during the focus group exercise in which they were discussing their future use when they said they wanted to play games, watch films and transfer music. In the end, the learning experience was forced upon them, but what they really wanted to do with the iPods is what everybody else does with them.

Third, we can also claim that it is not because people have access to advanced technology that they know how to exploit it to its maximum capacity. Lately, many iPod users have started to take advantage not only of the wealth of information that is available online, but they also have been using their iPods as phones by downloading VOIP applications such as Talkatone, Viber and iCall. When connected to a WIFI network, these applications turn iPods

into mobile phones. While iPods will probably never give full access to all the services that mobile phone users have, they can certainly open up other opportunities to people who cannot afford the cost of a mobile phone. This is one example of how we can use iPods to better serve us among thousands other uses that currently exist.

In retrospect, our experience suggests that participants need structured support to use the technology. Perhaps accessing the wealth of videos that are currently accessible on video sharing sites, such as YouTube, Video Jug and Vimeo, would be more useful for providing services to this population, rather than waiting for instructional videos to be produced. While Cruz-Flores and Lopex-Mortero (2010) suggested that m-learning activities should be designed in a didactical way, one must accept that a wealth of resources are readily available on the web and these can all be used as resources, providing someone is there to help people with ID to use them. In this perspective, perhaps one of the most interesting research opportunities with mobile technologies and people living with intellectual disabilities is to make some trials with the delivery of services using mobile technologies as a resource rather than as a tool for instruction. As mentioned in the review of literature, we are still in an embryonic phase in this domain of research and perhaps we need to understand how the mobile technologies that have already been adopted by people with ID can be used for learning. This would correspond to a more organic experience, as suggested by Davidson and Waddington (2010).

As far as the participant's desire to connect to the Internet goes, it seemed as though this was not a complicated issue because of the availability of WIFI networks in several public places in the city. In one session, they could learn about the procedure to connect the iPod to the Internet and then they could learn the specific procedure to connect to certain public networks (sometimes it is easy, but sometimes one must register to the service). One trouble spot that seems clear to us is the participants need to use the Internet appropriately and to protect themselves from the potential dangers of online activities and this is another reason why structured accompaniment is necessary.

Last but not least, we faced several technical problems during the course of this study. The most important problem was synching of the iPods with a different library. Some of the participants had friends or siblings who wanted to help them upload music, games and videos on the iPods. One of the facts about iPods is that they will only synchronize with one iTunes library. This means that when the items from one library are uploaded to an iPod, all the previous library items are erased. The problem with our study is that synchronizing implied erasing the instructional videos, which we had produced for our participants. The other issue we faced was that one participant didn't have electricity for most of the duration of the study, so it was impossible to recharge the iPod. What puzzled us is that the participant claimed to have watched the videos once, totalling 20 minutes of viewing. An iPod Touch battery is usually sufficient for 2.5 hours of viewing or 6 hours of listening to music. When that participant's iPod was handed back to us, it had been synchronized with another library and the instructional videos had disappeared. The facilitator told us that she didn't see the iPod for the whole duration of the project because the participant claimed it was not charged. From this, we can infer also that the videos were not used for learning the skills that the participant needed to learn.

Conclusion

There are many advantages to conducting collaborative action research with populations that are suffering from social exclusion and we cannot stress their benefits enough for all parties involved. With this study, we were able to gather first hand information from people living with intellectual disabilities who face several problems on a daily basis and need to voice these problems and find ways to deal with them. By thinking out loud and using their own words and local knowledge structures about their experience with the instructional videos on the iPods, participants in this study were able to realign the objectives of the next phase of this study. This is certainly an advantage for researchers who wish to understand the impact of mobile technologies on learning and performance, and for researchers who wish to find appropriate methods to serving

this population. No matter how well designed a study is, the wealth of information that can be discovered when giving these populations a voice is priceless for researchers in education and for society in general.

The technique to conducting our focus group was also a definite asset to the research. We used techniques inspired by Chevalier and Buckles (2009), but there are many other techniques and tools that can be used creatively to obtain the necessary data for research and that allow participants to get involved in all steps of the research, from the formulation of research problems, to collecting, analyzing and interpreting the data. Such techniques can be very helpful when conducting collaborative action research with disadvantaged populations because they allow researchers to obtain first hand information, to readjust the objectives of the research, to fine tune the problems studied and to better act on those problems. This requires going back and forth in the planning, action and result phases through a reflective, iterative process. When following these principles accurately, the next steps of any study should emerge from the participants themselves, like what happened in our study.

Finally, despite the limits of this study, we can safely say that while mobile technologies and m-learning seem "cool," learners with intellectual disabilities need to be supported in a structured process for learning, otherwise, they will end up using these powerful technologies as a replacement for a TV set, in the same way that the TV set replaced babysitters back in the "older" days. Needless to say, design alone will not help learning. Mobile learning without good pedagogy will not yield the intended results, nor will it change the natural desires to be entertained. (An example of the videos can be found at: http://www.youtube.com/watch?v=5OythwOhQYA)

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Key Messages From This Article

People with disabilities: No matter how difficult it is, you have the right to voice your opinions about what you want to learn. You can use any method you like to communicate your ideas.

Professionals: Mobile technologies are becoming a part of life for every Canadian citizen. People living with ID can benefit from these technologies, but they need support and guidance. They can learn how to learn how to use these technologies from various accessible applications and from Internet resources.

Policymakers: Policies about the provision of technological resources to people with ID should be informed by action research with first hand information from people with ID. Mobile technologies should be integrated for what they were meant for, using an organic approach (i.e., shared accountability), rather than in a didactic manner.

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