

Special Issue

Impact of a Virtual Learning Program on Social Isolation for Older Adults

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Abstract

The Virtual Learning Program was developed to provide isolated English-speaking older adults in Quebec access to Cummings Centre programming through live webcasting and videos on demand. The objectives of the program were to: increase social engagement and reduce the risk for mental health issues associated with chronic illness and caregiving; and provide opportunities for lifelong learning including access to health promotion and prevention information in English. This paper presents a practice perspective of the innovative and successful use of digital technology to reach and engage older adults experiencing social isolation. Preliminary results show that the program is simple, provides opportunities for lifelong learning, and has the potential to reduce social isolation. Program challenges and suggestions for therapeutic recreation practice will be discussed.

Keywords

Innovation, learning, minority group, older adults, technology, therapeutic recreation

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Introduction

Digital technology offers a promising opportunity for improving the health and wellness of older adults and their caregivers. In order to meet the evolving needs of this demographic, accessible and appropriate technology innovations are being developed around the world. The Cummings Centre is a nonprofit community center that offers innovative programming, social services, and volunteer opportunities for older adults in Montreal, Quebec (Canada). The program department has recently implemented a Virtual Learning Program (VLP) that creates opportunities for social engagement and lifelong learning for English-speaking older adults in the province who are socially isolated and homebound.

According to the 2016 Canadian census, there are 601,155 English-speaking individuals living in Quebec. Of those, 16.3% are 65 years of age or older (Statistics Canada, 2016): They make up 6.8% of all older adults in Quebec. These individuals experience unique challenges and a high risk of isolation due to language barriers, socioeconomic inequalities, and lack of awareness of their needs. They also report less access to programs, services, and information about health-related issues in English (CHSSN, 2016). Based on the 2011–2012 Canadian Community Health Survey, the minority community of English-speaking older adults report feeling a sense of social exclusion. More specifically, they are less likely than other English-speaking age groups to feel that they have a trustworthy person they can turn to for advice or in an emergency. Older adults in this group are also less likely to report having close relationships that provide them with a sense of emotional security and well-being.

Several organizations in Quebec have worked on establishing priorities and programs for English-speaking older adults including the Community Health and Social Service Network (CHSSN, 2016), Seniors Action Quebec (Pocock, 2016) and the Quebec Community Groups Network (QCGN, 2014). Most recently, a community model entitled Promoting the Health and Well-being of English-speaking Seniors in Quebec was developed (Insert Figure 1). This model identifies the following five broad priorities that will have the greatest impact on the health and well-being of English-speaking older adults: access to health and social services in English; health promotion and prevention programs; home support and living arrangements; reducing isolation; and caregiver support.

Funded by Health Canada's *Official Languages 2013-2018 Roadmap: Education, Immigration, Communities*, The Cummings Centre developed an innovative Virtual Learning Program (VLP) that has successfully addressed several priorities identified by CHSSN by using digital technology to create opportunities for social engagement and lifelong learning among English-speaking older adults in Quebec who are homebound and isolated. This paper will present a description of the program and discuss its preliminary impact, program challenges, and suggestions for Therapeutic Recreation (TR).

Older Adults and Technology

Prior to developing the content of the Virtual Learning Program, literature related to older adults, technology and TR was examined. The Canadian Internet Use Survey (Statistics Canada, 2014) found that baby boomers (aged 45–64) used the Internet significantly more than older adults (aged 65 and over). However, while older adults were still underrepresented on the Internet, they were the fastest growing segment of

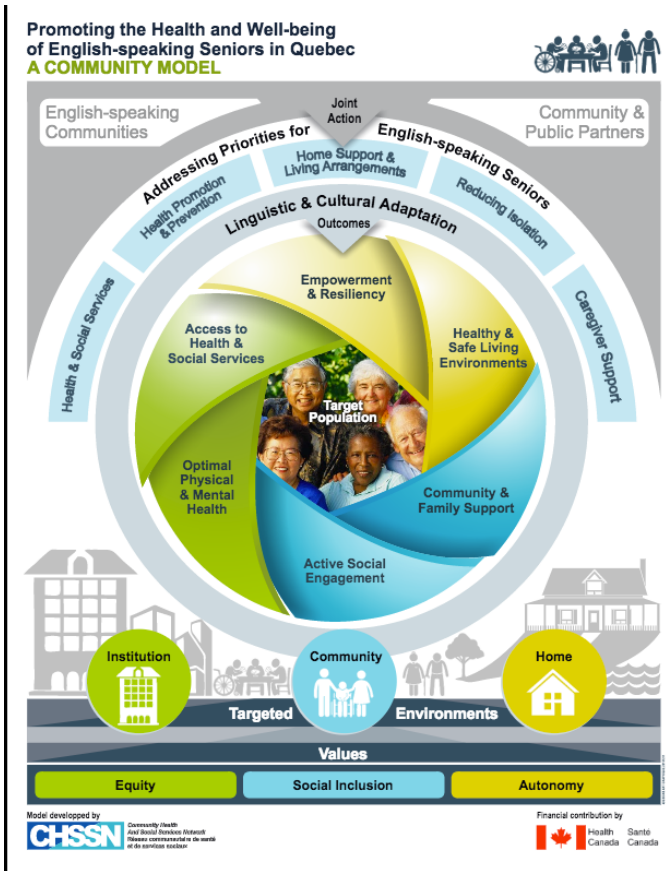


Figure 1. Promoting the Health and Well-being of English-speaking Seniors in Quebec. A Community Model. (CHSSN, 2016).

the population going online (Statistics Canada, 2014). In fact, another study from the United States showed that six out of 10 older adults went online and once they started, it often became an integral part of their daily life (Pew Research Center, 2014). For Canadian older adults, the most common purpose for using the internet was to email family and friends as an efficient way to keep in touch (Statistics Canada, 2014). Fewer older adults than baby boomers participated in instant messaging, online blogging, participating in discussion forums, and uploading photos online. Older adults, who often have more leisure time, were more likely to play games online, and stay connected to news and events; however, they were less likely to choose to get involved in online community groups than baby boomers (Statistics Canada, 2014). While boomers used the internet to search for retirement planning information and for electronic commerce, older adults tended to search for health information online, and were less likely to choose to participate in online shopping (Statistics Canada, 2014).

Older adults face unique barriers when adopting new technologies, including physical challenges that make manipulating devices difficult, skeptical attitudes, and difficulty learning to use new technologies (CIUS, 2007; Pew Research Center, 2014). One of the most difficult challenges to overcome is their lack of confidence in their own ability to learn about and properly use electronic devices (Horrigan, 2016). They are more likely than those in other age groups to say they need others around to show them how to use new devices (Horrigan, 2016). Among older adults, those most likely to use technology tend to be younger, highly educated and affluent (CIUS, 2007; Pew Research Centre, 2014).

Canada's National Population Health Survey demonstrates that education and income are both strong predictors of health, health literacy, social isolation, and life satisfaction for older adults (Roberts & Fawcett, 2001). These factors also create challenges related to access to computer, video and internet technologies. While more older adults in Quebec who speak English achieve post secondary certification than their French speaking counterparts, almost one third have no educational certification (QCGN, 2014). In addition, many English-speaking older adults are living on a low income, with 41.5% of those over the age of 64 having an annual income of less than \$20,000 (QCGN, 2014).

Leonard and Hebblethwaite (2017) interviewed TR practitioners to understand how computers and tablets are currently being used in practice, to determine challenges around program implementation, and to find ways to improve technology-based programming. These interviews highlighted challenges perceived by TR practitioners concerning: privacy and confidentiality, hospital policies, lack of financial resources, lack of time to create new programs, no Wi-Fi available for patients/clients, and logistical issues in the form of a lack of IT support.

Although the integration of digital technology is still relatively new in TR programming and challenges have been identified, practitioners have already seen ways in which it can enhance social engagement and learning opportunities among older adults through providing transferable skills, using email and Skype to help patients/clients connect with family and friends, creating online volunteering options, and making sure technology use is personally meaningful (Leonard & Hebblethwaite, 2017).

Technology and Social Engagement

Studies show that social isolation among older adults can have detrimental effects on the health, well-being and quality of life of community-dwelling older adults (Nicolson, 2012). In Quebec, addressing social isolation by providing opportunities for inclusion through intergenerational activities and volunteerism has been identified as one of five priorities that will have the greatest impact on the health and well-being of English-speaking older adults (CHSSN, 2016).

Innovative use of digital technology has proven to be a promising tool in terms of enhancing social engagement and providing social support for older adults (Czaja, 2017). In fact, the results of a program developed by Self-help Community Services called the Virtual Senior Centre, showed that online interactive classes provided to older adults who were homebound reduced feelings of isolation and disconnection, and increased self-reported health status and feelings of being very connected (Dring, 2015).

Technology and Lifelong Learning

As the Canadian population is aging, the study of older adult education is becoming increasingly important. Past theories and paradigms of aging such as “you can’t teach an old dog new tricks” or the idea that people disengage from life after retirement from the workforce have been debunked and replaced with abundant and diverse literature that focuses on “silver surfer,” “Ulyssean living in later life,” and older adults involved in lifelong learning. Not only is learning widely recognized as an important factor in keeping a person’s mind active and agile, but older adults have been shown to have distinct learning preferences. According to Sloane-Steele and Kops (2008), older adults are motivated to get involved in lifelong learning for the sake of learning, to socialize, and to achieve goals. The same authors identified older adult learning preferences as experiential (hands-on), content/instructor-centered (learning specific topics from content experts), involving peer-to-peer discussions, and self-directed.

Older adults are increasingly using the internet for learning purposes especially since there has been an increase in the availability of courses online that are designed specifically for their needs (Salter, 2014). Specifically, for English-speaking older adults in Quebec, learning about and access to health promotion and health prevention information in English was identified as an important priority (CHSSN, 2016). This includes having access online to information about healthy and active lifestyles, preventing injury and sickness, elder abuse, and mental health in English (CHSSN, 2016).

Cummings Centre Virtual Learning Program

Given the health implications of social isolation, an opportunity existed with the use of digital technology, to reach out to people that the Cummings Centre had not previously been able to reach. The intent of the VLP was to provide older adults living in Quebec who are English-speaking and isolated from access to regular Cummings Centre programming from the comfort of their own homes with digital media like webcasts, videos on demand, and online discussion groups in order to do the following:

- Reduce social isolation and the risk for depression/anxiety associated with chronic illness and caregiving
- Provide opportunities for lifelong learning including access to health promotion and prevention information in English

In order to be eligible for the program during the period of the Health Canada grant, participants needed to demonstrate to the program manager, during an informal assessment, that getting to the Cummings Centre required a considerable and taxing effort for any of the following reasons: illness or injury (temporary or chronic, physical or emotional); limited mobility requiring the aid of assistive devices; special transportation or assistance of another person; caregiving responsibilities; and distance from Cummings Centre with no transportation.

The following sections will explore the content of the program, live lectures and the video library, discussion groups, and system requirements.

Content of the Program

The Virtual Learning Program consists of live lectures and events and a video library on demand provided by content experts in the field, as well as interactive peer-to-peer and intergenerational discussion groups offered for free during the period of the grant. Support is provided for participants who expressed the need for help with the technology including home visits and telephone support from trained volunteers.

Four older adult volunteers were trained as technical assistants (to provide home and telephone support, as well as data entry), one older adult volunteer was trained to help with live webcasts, and six volunteers were trained as discussion facilitators (three older adults and three students).

Live lectures and video library. Lectures are given at the Cummings Centre by renowned doctors, health care professionals, professors, and experts in their field. Topics covered by the lectures can be categorized as: health and wellness, music and art appreciation, global affairs, tales and travel, interactive exercise and brain training, and music concerts. These lectures and events are filmed and webcasted live and then edited and added to a video library where participants can watch the videos at their convenience on a custom-made interface developed by a private company (Insert Figure 2 and 3). During the live webcasts, participants interact with the presenter in real-time by sending in questions and comments. These are then relayed to the presenter on their behalf by a moderator in the room.

Cummings
Virtual Learning
For adults 50+

To access the webcasts, please enter your e-mail and password:
E-mail:
Password:

Music & Art Appreciation | Global Affairs & Jewish Studies | **Health & Wellness** | Science & Technology | Travel

Diabetes
with Mina Mirtaheri, Registered Dietician
from McGill University
Friday, June 02, 2017 10:00:00 AM
[Please log in to access this content.](#)

**Epidemiology: Unravelling Medical
Mysteries Part 2**
with Dr. James Hanley
Friday, May 26, 2017 10:00:00 AM
[Please log in to access this content.](#)

**Epidemiology: Unravelling Medical
Mysteries Part 1**
with Dr. James Hanley
Friday, May 05, 2017 10:00:00 AM
[Please log in to access this content.](#)

6 Pillars of Well-Being Webinar
with Louisa Jewell

**When Life Gives You Lemons: Thrive in the
Face of Adversity**

Exercise: A Good Pill for Parkinson's?
with Paola Campana, Physiotherapist

Figure 2. Log-in page for the Virtual Learning Program video library.

Harnessing the Power of Music

with Victoria McNeil, Music Therapist

The image shows a Zoom video conference interface. On the left, a woman with glasses and a yellow top is speaking into a microphone. On the right, a PowerPoint slide is displayed with the title "What's in a Song?" and the subtitle "Harnessing the power of music in daily life". Below the subtitle is a graphic of a tree where the branches are musical notes. The Zoom control bar at the bottom shows "Slide 1 of 39" and a navigation menu with various icons.

Figure 3. Sample video with simultaneous PowerPoint slides.

Live discussion groups. Discussion groups meet online with a facilitator (older adult volunteer or university student) once a month via Zoom video conferencing platform through which participants can see, hear, and speak to each other. Discussion groups include a book club and current events and each session includes an introduction/ice breaker, topics and questions led by the facilitator, and a closing/debrief.

In order to maintain the comfort of participants, facilitators begin each discussion by setting community norms and sharing the tentative timeline of the session. These norms were developed in collaboration with student facilitators (F. Hussey & V. Villeneuve, personal communication, March 3, 2016) during their placement at the Cummings Centre. The Community Norms to create a safe space comprise the following statements:

- WE WILL WORK TOGETHER as a community that values acceptance and open-mindedness.
- WE WILL OPERATE in a friendly atmosphere.
- WE WILL INVITE AND WELCOME the contributions of every member and listen to each other.
- WE WILL BE INVOLVED to our individual level of comfort.
- If we disagree, we will do so RESPECTFULLY.
- WE WILL KEEP CONFIDENTIAL our discussions, comments, and deliberations.
- WE WILL BE RESPONSIBLE for examining all points of view in a non-judgmental way

Technical requirements. System requirements include a computer or tablet with an internet connection and speakers/headphones. For the discussion groups, participants also require a webcam and microphone. Participants without webcams and microphones can access the discussion group by calling in with their telephone

without being seen. After participants register for the program, they receive an email with a link to the online video library and their username and password. Each participant receives a monthly schedule of events and an email invitation prior to each live webcast and discussion group that includes the web link to the event as well as their username and password.

Program Impact

Between January 2015 and April 2017, 116 older adults participated in the Virtual Learning Program (72 women and 44 men) with an average age of 76 (ranging from 51 to 92), which exceeded the target of one hundred provided by the grant. English was the primary language of all participants and they were all over the age of 50 living in Quebec. The book club met monthly for six months with five participants and the current events discussion was piloted once with four participants.

During this time, 65 lectures were webcasted and added to the video library with 510 total views. Table 1 shows the views broken down by year and by type of view (live versus on demand). See Appendix A for a list of lectures webcasted and on the video library.

Table 1

Number of Views

Year	Live	On Demand	Total
2015	87	279	366
2016	13	119	132
2017	57	114	171
Total	147	363	510

Lectures with the most views fell under the category of “health and wellness” and either focused on a timely topic of relevance to the participants such as “fear of falling” or was controversial such as “medical marijuana.”

After each webcast and discussion group, participants were asked to fill in a survey using Survey Monkey® (refer to Table 2). The survey was automatically sent out to participants who watched a video either live or on demand. This provided participants with the opportunity to express their level of satisfaction with and impact of the program both quantitatively and qualitatively, to suggest topics and presenters they would be interested in, and to alert us to any technical improvements that could be made. In addition, two focus groups ($N=8$) were conducted to solicit feedback from participants. Participants consistently reported (through surveys, focus groups and informally) satisfaction and enjoyment of the program, the simplicity of the technology, appreciation of volunteer support, and feelings of being connected to the Cummings Centre without having to leave home.

Table 2*Results from Surveys Filled Out after Lectures and Discussion Groups*

Survey Questions	Agree or Strongly Agree
Comfortable with session format	95.7%
Instructions were clear	95.8%
Images/sound were clear	85.7%
Assistance from staff and volunteers was satisfactory	88.6%
Will recommend to others	91.3%
Feel more engaged/less isolated	75.8%
Sense of support in meeting life's challenges	68.1%

Note: $N = 98$

When asked open-ended questions, participants shared that they enjoyed the lectures and found them interesting and informative. They appreciated the volunteer support and being able to participate from home, especially during Montreal winters. One participant stated, "I look forward to whichever lectures I will be home to 'attend' via computer. It is wonderful that the Cummings Centre arranged this for those of us who have a harder time getting to the Centre." Those who participated in the discussion groups expressed appreciation of the comfortable, respectful atmosphere that was created and, as another participant stated, being able to "engage civilly with other interesting people who happen to be seniors with differing opinions in discussing and debating current issues."

These results suggest that the Virtual Learning Program is a simple and easy way for participants to access technology. The live lectures and videos on demand were successful in providing opportunities for lifelong learning, including access to health promotion and prevention information for English-speaking older adults in Quebec and the discussion groups show promise in reducing social isolation by increasing engagement and offering a sense of support.

Program Challenges

Prior to implementing the Virtual Learning Program, possible programmatic challenges were identified. These challenges included: lack of access to a computer and hardware, low computer competency, and health challenges such as vision and hearing impairments. These potential barriers were taken into consideration from the outset, and accommodations were made to ensure the program was accessible to as many people as possible. Accommodations included home delivery by volunteers of four computers with internet sticks on loan from The Cummings Centre. Additionally, technical support was provided by volunteers in the home and over the phone.

In addition, the user interface design was customized for ease of use by older adults with features such as high contrast, large font, minimal distraction, and easy navigation. High-quality video production ensured best possible images and sound. A flexible interface allowed participants to make the image of the presenter and accompanying slides larger or smaller. Finally, links were made with local organizations that

were available to help with adaptations to devices for people with visual, hearing, and physical impairments.

Despite a proactive approach to identifying barriers, several challenges were identified and lessons were learned over the course of the implementation of the program. Recruiting and retaining active participants in the program was a challenge. Older adults are still underrepresented on the Internet, and it was difficult to get participants to be interested in participating in the program. The first participants were recruited by word of mouth and by identifying and calling eligible people that were known to the Centre. This small group showed great interest in the program. Webcasts were delivered weekly and participation by this group was high, however, over time, a decline in new participants joining the program and in current participant usage was noted. This coincided with a switch from weekly to monthly programming and suggests that regular programming that participants can integrate into their weekly routine would be beneficial. Participation also declined due to the health challenges of this age group. An appropriate marketing plan that includes recruiting new participants and keeping current participants engaged is necessary. Checking in with participants whose usage changed also helped to keep current participants engaged and to identify any technical challenges they were facing.

Several technical challenges were also experienced. For the lectures, the webcasting requires the interaction of many different elements working together such as an Internet connection, microphones, audio, mixer, video capture device, and an encoder (Insert Figure 4). If there is a problem with any one of these elements, it affects the viewer's experience. The presenters were required to stand relatively still in a small area, and participants in the room could not move around too much or make too much noise otherwise it would be disruptive to the people viewing from home.

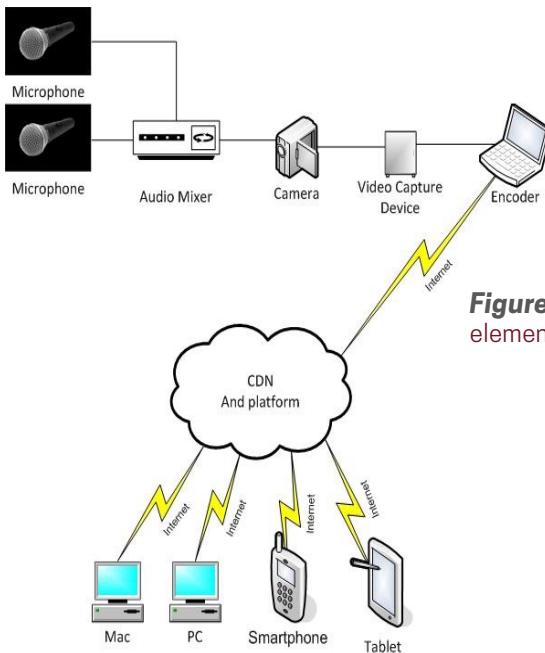


Figure 4. Diagram demonstrating the elements of webcasting and how it works.

They had to remember to speak into the microphone and repeat questions out loud before answering so that participants at home could hear them. Presenters were asked to send their PowerPoint slides in advance, however often they were received late, or changes were made at the last minute. It became very important to have a program manager be in touch with the presenters early enough to ensure all of their technical information would be prepared in advance. Participants at home reported very few technical difficulties, and those that did primarily had trouble with their own Internet connection.

For the discussion groups, the technology was much simpler for staff; however, participants reported more challenges. They needed to install and run Zoom, which does not work the same on every device. More technical support was needed and provided by volunteers and by Zoom, and a short manual was created with instructions. With this support, participants were soon able to access the discussion groups easily on their own.

Another challenge identified was the cost of the program for the organization. Several elements of the program would not have been possible without grant funding. For the live lectures and video library, a significant amount of equipment needed to be purchased, and we had to contract a private webcasting company to film the events, broadcast them live, host the video library, and eventually train internal staff to do this independently. The discussion groups, on the other hand, were less costly but required more time to find discussion facilitators and to organize each of the online meetings.

Considerations for Therapeutic Recreation

There has been an expanding role of technology used in TR practice. From assistive devices to video games, TR practitioners are finding better ways to address the leisure needs of their clients by understanding the relationship between technology and recreation participation. In addition, digital technology is opening up a vast array of new opportunities for recreation and entertainment for older adults (Hebblethwaite, 2017). Globally, the population is aging and technology is booming. It is imperative that these trends are considered and clients are enabled with skills through leisure education to navigate digital devices and information technologies.

Although the Virtual Learning Program was not developed specifically within a TR setting, many elements of TR practice were considered. There was no standardized individual assessment, although all interested participants were asked questions by phone to ensure eligibility for the program, their topic interests, and to determine if they would require any specific adaptations to participate. Even though the participants were offsite and there were no meetings in person, every effort was made to develop a therapeutic relationship. Participants were called often, especially at the beginning of the program, to check in and see how the program was going for them. After that, participants were called if a change in participation was noted. This became critical for helping participants navigate challenges to participation, understanding their motivation to participate, and adapting the content of the lectures based on their interests and needs. Accessibility and inclusion were considered by addressing identified barriers, offering volunteer support, and loaning computers to participants who needed them.

The program was developed based on best practices related to older adult learning including lectures given by content experts, and peer-to-peer discussion groups offering

opportunities for experiential and self-directed learning, as well as the understanding that the success of the program would be dependent on how well the technology creates a sense of community and whether it provides opportunities for social interaction.

Forms were created including a presenter release form, a checklist for presenters to make sure needs were identified in advance, a checklist for participants to make sure they had the proper system requirements, a manual for participants to help access the lectures and discussion groups, and a webcast manual for IT staff and volunteers.

Evaluation consisted of looking at outputs and outcomes of the program. The program was set up to document the number of videos recorded, number of participants and number of views automatically (outputs). The satisfaction/impact survey was conducted and analyzed using Survey Monkey®. Further comparison of the impact of the lectures versus the discussion groups is warranted.

Future program plans include online social games, such as bridge and rummy that can be played around a virtual table where everyone can see hear and talk to each other. Individual games and brain teasers that can be played alone and offer opportunities for brain fitness will be explored. Discussion groups will be expanded to include topics such as personal development, navigating the health care system and caregiver support groups. In order to offer more opportunities for peer-to-peer learning, participants will be encouraged to lead discussion groups based on their own areas of interest and expertise.

Methods for motivating participants and helping them to integrate the use of the Virtual Learning Program into their daily routine of participants and engaging them within the first few days and then over time will need to be further explored.

Conclusion

The Virtual Learning Program at The Cummings Centre has proven to be a valuable program in supporting English-speaking older adults in Quebec. It is clear that this demographic is interested and capable of learning new technologies and benefits from having access to participate in programs in English from the comfort of their own homes. One of the most important pieces of feedback received was that many participants would like to have more opportunity to interact with others through virtual learning. Moving forward, it will be important to consider ways that a virtual community can be developed among users so that participants feel that they are more connected to one another. Although recruiting and developing discussion groups may be more labor intensive than the lectures, they provide an opportunity to connect with other people and demonstrate that technology is in fact a practical and beneficial tool that can improve the quality of participants' lives.

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Appendix A

List of lectures webcasted and on the video library

Health and Wellness	Global Affairs
Strategies for Healthy Aging: An Active Brain Your Smile for a Healthy Life Osteoporosis: Healthy Bones, Healthy Aging Music: Mind, Body and Soul Diabetes Epidemiology: Unravelling Medical Mysteries Six Pillars of Wellbeing When Life Gives you Lemons: How to Thrive in the Face of Adversity Parkinson's Disease and Chronic Pain Parkinson's Disease and Exercise Fall Prevention Mindful Eating Update on Alzheimer's Disease and Treatment Radical Resthomes Sleep: What Keeps You Up at Night Concern's and Challenges for Seniors Healthy Relationships: Dating, Violence and Abuse Harnessing the Power of Music Downsizing and Relocation It's Okay to Forget Super-Agers Comforting the Mourner Glaucoma Awareness Neuroplasticity and Stroke Holistic, Integrative and Alternative Medicine The Art of Communication Brain Awareness Gratitude Meditation Symposium Food and Wellness The Brain and Music The Alert Brain Medical Marijuana Coping with Hospitalization Sex and Aging Passages: The 2 nd Half of Adult Life Standing Chair Exercises *interactive Seated Chair Exercises *interactive Brain Training *interactive	Supporting Senior's Empowerment: Our Government's Commitment Baseball: The Thinking Man's Game Donald Trump is Sworn in...Now What? Why Montreal Matters in the 21 st Century The Jews of Canada Ashkenazim and their Legacy The Jewish Community's Achievements in Quebec Protection for Internally Displaced Persons How to Protect Yourself in the Digital Age Fraud Protection Survivors of the Green Suitcase Current events in Jewish Advocacy Music and Art Appreciation Oscar Peterson: A Look at His Beginnings This Magic Moment: Music from New York City Outdoor Sculptures on McGill Campus Broadway Revusical Astaire vs. Kelly The Art of Portraiture Bookcase Stories Tales and Travel Walking the East Coast Trail of Newfoundland Antarctica Rocks Around the World Italian Gardens Living and Working in Space Canada Down East: My Travels in Atlantic Canada Mediterranean Cruise Social Games Jeopardy *interactive