

## Older Citizens and Video Communications: A Case Study

Mary C. Milliken, Susan O'Donnell, Kerri Gibson, Betty Daniels  
National Research Council Canada

### Abstract

Research is absent on how older citizens are using video communications that offer rich opportunities for social connection. Our case study focuses on how and why 16 citizens aged 55 and older in a small Canadian city are regularly using video communications, such as online video, video calls and videoconferencing. We conducted quantitative and qualitative analyses to explore their motivation for using video communications, the barriers and challenges they face, and the benefits they experience – in particular social presence. It behoves developers, marketers and researchers of communication technologies to recognize that Canadian citizens over the age of 55 comprise a valid user community in its own right.

### Keywords

Older citizens, video conferencing, video calls, online video, social presence, user-generated video

### Introduction

By applying Kostakos and O'Neill's (2004) conceptualization of technology users as "citizens," we understand the various roles of technology within the public, private and social spheres of users' lives. With this construct, we are reminded that all users, regardless of age, have political, economic, social, and community rights and responsibilities that can be extended to the new information and communication spaces created by information and communication technologies (ICT).

People of all ages use ICT. However, like its design and marketing, most research on ICT has been youth-focused and ageist (Cutler, 2005). Studies often exclude older users (Hendricks & Cutler, 2005, in Cutler) or use cross-sectional comparisons between different age groups rather than treat older citizens as a separate and valid user community (Kim, 2008). Comparative

research typically shows older citizens using fewer types of ICT less often and less extensively than their younger counterparts (Czaja, 2006; Lin, Neafsey, & Strickler, 2009). These findings imply a 'failure', rather than a different approach to adopting and adapting all types of technology (Loe, 2010) by this demographic.

From 2005 to 2009 in Canada, rates of daily internet use at home for personal reasons rose from 59% to 69.1% for citizens aged 55 to 64, and from 62.8% to 65.9% for citizens 65 and older (Statistics Canada, 2010). While there are long-standing digital divides between different income, education level and age groups (Middleton, 2005; Zamaria & Fletcher, 2007), a recent study by ComScore shows that the number of citizens aged 55 and up using Facebook and Twitter for social networking increased 13% and 35% respectively between 2009-2010 (CBC, 2011). This level of growth confirms at the very least that Canadian citizens over the age of 55 comprise a valid user community in its own right. That realization has significance for developers, marketers and researchers of communication technologies, since this age group is becoming a larger proportion of the Canadian population. The 65-and-over population made up a record 13.7% of the population in 2006 (Census, 2006), and the number of seniors is projected to increase from 4.2 in 2005 to 9.8 million in 2036 (Statistics Canada, 2007). We still know very little about how this segment of our population uses the internet, and almost nothing about their use of video communications; research on how older citizens are using online video, video calls and videoconferencing – technologies that offer rich opportunities for social connection – is almost non-existent.

To make an original contribution to this underrepresented area in communication research, we developed a case study that focuses specifically on how and why 16 older citizens (55 to 77 years old) living in Fredericton, New Brunswick, Canada, are using video communications. The paucity of research led us to wonder about what older citizens thought about video technologies, and why they used them, so we looked specifically at their answers to provide us with a snapshot of what types of video communications they use, for what purposes, and in what contexts. Then we conducted quantitative and qualitative analyses of the data to help understand how and why older citizens using video communications, what their motivation is to do so, what barriers and challenges they face and what benefits they experience.

### **Why Study Older Citizens and ICT?**

The Canadian Internet Project, a longitudinal study of Canadians' internet use, has shown that digital divides persist for age, education and income (Zamaria & Fletcher, 2007). However Canada has one of the highest rates of internet use in the world, and use has grown in all age groups along with the spread of high speed connections (Statistics Canada, 2010).

In popular culture, advertising and other forms of representation, older citizens are often typified

as frail, resistant to change and disinterested in learning. Older citizens, however, do not share this view of themselves (Cutler, 2005). Ageist attitudes have a mutually reinforcing relationship with technological development; they affect not only technology design and marketing, but also how ICT is adopted and adapted by users (Cutler, 2005). When it comes to adoption, how older users interact with new technology is subject to both “external” and “internal” expectations that older users are automatically less capable than younger people. External expectations are held by other people, including the ICT industry. Internal expectations are how older citizens judge their own abilities to adopt and adapt technology (Broadly, Chan & Caputi, 2010).

Technologies have the potential to help combat ageism when they are assistive, useful, reduce disability and promote independence; and when they come with adequate training and support that accommodates the cognitive, sensory and physical needs of older citizens (Cutler, 2005). Technologies perpetuate ageism when the device functionality, design and marketing targets ‘digital natives’ (Prensky, 2001) exclusively.

### **Why Study Video Communications?**

Communication technologies have the potential to facilitate routine tasks and support autonomy in ways that will improve older citizens’ well-being and quality of life (Gitlin, 2000, 2002). They can facilitate social interaction and communication (Dickinson & Hill, 2007), improve entertainment, provide health-related information (Xie & Bugg, 2009), services and benefits (Bertera, Bertera, Morgan, Wuertz, & Attey, 2007; Tse, Choi, & Leung, 2008); provide better access to services and caregivers (Hirsch, Forlizzi, Hyder, Goetz, Kurtz, & Stroback, 2000; Marziali & Donahue, 2006); enable learning, mental stimulation and challenge (Kim, 2008); decrease loneliness and isolation (Fokkema & Knipscheer, 2007; Sum, Mathews, Hughes, & Campbell, 2008); and help to improve self-esteem, as well as people’s satisfaction with both specific aspects and the overall quality of their lives (Shapiro, Barak, & Gal, 2006; Slegers, van Boxtel, & Joles, 2008).

Many researchers believe that video technologies are beneficial for their ability to enhance social presence. Social presence theory was first developed by Short, Williams and Christie (1976) and has been used to explain the relationship between the quality of interaction, the capacity of video-mediated communication and the conveyance of social cues (Roussel & Gueddana, 2007). Social presence is the degree to which people feel they are with each other in a collaborative, virtual environment (see Biocca, Harms & Burgoon, 2003; Hartmann, 2008). Social presence occurs on three levels: first is the sense of “being together” or co-presence, co-location, proximity, or a tangible sense of the other person on a physical and sensory level, and mutual awareness of the attention people pay to each other. The second level is “psychological involvement” or saliency, immediacy, intimacy and the ability to make oneself known. The final level is “behavioural engagement”, which becomes manifest in visual cues (Rettie 2003; Biocca, Harms & Burgoon, 2003). The theory is often used in research about videoconferencing, for example O’Donnell, Walmark and Hancock’s case study on its challenges and benefits for remote

and rural First Nations communities (2010).

One shortcoming of social presence theory has been the lack of qualification attached to different types of connection made possible through the full range of experience during mediated communication (Ijsselstein, van Baren, & van Lanen, 2003). Researchers have overcome that limitation by examining the relative degrees of social presence in a wider array of communication tools, like instant messaging, email, voicemail and video-chat applications (Pessoa Albuquerque, & Perkis, 2008).

Although no statistical data exist on the use of video communications by Canadians, a recent study shows that Americans have been watching, downloading and uploading videos at a steadily rising rate since 2007 (Purcell, 2010). The lack of research into how older citizens use video communications is likely due to the relatively recent emergence of the technology. Research into video communications is a relatively new field; after all, YouTube only first appeared in 2006. Researchers also tend to use young students as research subjects because they are frequent ICT users and they are convenient to recruit. Some research examples include a previous study conducted by the authors with university students who used YouTube, in which we analyzed the potential for civil engagement and a 'virtual' public sphere (Milliken & O'Donnell, 2008; Milliken, Gibson, & O'Donnell, 2008; Milliken, Gibson, O'Donnell & Singer, 2008), the importance of socio-cultural context on video consumption (O'Donnell, Gibson, Milliken & Singer, 2008) and gender differences in the production and consumption of video-blogs (Molyneaux, O'Donnell, Gibson, & Singer, 2008).

### **Research Method**

The case discussed in this paper is that of 16 older citizens living in Fredericton, New Brunswick. New Brunswick is one of Canada's most rural Atlantic provinces; it has fewer than 1,000,000 inhabitants and struggles to maintain its population. The city of Fredericton is the provincial capital. It sits in the valley of the Saint John River, which flows to the Bay of Fundy. It is a small but growing city, with more than 50,000 people living in the urban area and another 25,000 or more in the greater area. Two universities perch on the hill overlooking the downtown beside the river, and the residents' education levels are higher than the Canadian average. The Fredericton city government launched one of North America's first free-to-users municipal wireless Internet networks (Fred e-Zone), and the city continues to maintain, upgrade and extend the service.

This case study looks at 16 of 62 adults who participated in a study of technology use, a breakdown of which is available in Table 1 below. We were able to attract a broad socio-demographic spectrum of residents that can be compared to census data for Fredericton (Statistics Canada, 2006). The 62 participants aged 18 plus were 50% female and 50% male (Census: 53% female, 47% male). The age ranges were 27% aged 18-34 (Census: 34%), 19% aged 35-54 (Census: 34%), and 23% aged 55 plus (Census: 32%).

Because we were attempting to match Census categories, we did not ask individuals for their age, but rather, their age group. This sample [N=16] was made up of five females and three males aged 55-64 years, as well as four women and three men aged 65 and older. The 10 women and six men aged 55 to 77 discussed in this case study are all Fredericton residents. The study was administered on the University of New Brunswick campus in Fredericton from June to September 2009. Study participants were recruited through posters on notice boards around the city and on campus, through a local newspaper article, a university e-newsletter and researcher networks.

We did not gather data on income levels or professions, but we did ask about formal education levels; and the biggest difference between the Census and our sample was that 81% of participants had post-secondary education (Census: 58%). Of the 16 adults aged 55 and over, 10 had university degrees, one attended but did not complete university, two had college-level diplomas and three had completed high school. All listed their first language as English. Only three of the participants had lived in Atlantic Canada for fewer than 10 years, and 12 (75%) had been born in Canada. Only four self-identified with a different cultural affiliation than simply "Canadian". One 55+ year old woman self-identified as "Anglo, White Canadian, lesbian", and three women in the age category of 65+ self-identified individually as "Irish/Canadian", "Canadian/Scottish", and "English (British)".

We also asked about their use of computers and video communications. As illustrated in Table 1, of the sub group [N=6] that completed both the survey and the interview, all rated their level of expertise using a computer from 3 to 5, where 1 was "No expertise", and 5 was "Expert". One male interviewee had college-level education and rated himself at level 3, as did one female with a university degree. Of the participants with university degrees, one male and two females rated their computer expertise at 4, and one male rated his abilities at 5.

To be eligible for the study, participants had to have experience with online videos, video calls and/or videoconferencing. All participants had watched an online video. Only two participants had never participated in a video call and seven had never been in a video conference.

Participants were invited to take part in two phases of the study: a survey with multimedia content, and a structured interview. Research protocols were reviewed and approved by the research ethics board of the National Research Council of Canada. The sixteen participants in this case study completed a 90-item questionnaire, which used both closed (e.g. Likert scale responses) and open field response formats to assess their current technology use. Participants received a \$15 honorarium. Quantitative data were analyzed using SPSS statistical software for frequencies. Qualitative data from the open-answers in the survey were used anecdotally to explain these trends and specific responses.

Of the 16, six participants (three women, three men) completed a private, in-person interview that

averaged one hour in duration. The researchers used a structured interview guide totalling 90 items in eight sections, with a mixture of both open and close-ended questions. Participants received a \$15 honorarium. Interviews were audio-recorded, transcribed, and analyzed using NVivo qualitative software.

**Table 1: Characteristics of participants**

#	Age group	Sex	Highest level of education	Identify with cultural affiliation	Rate level of computer expertise on a scale of 1 (no expertise) to 5 (expert)	Participation
1	55-64	F	University	Anglo, White Canadian, lesbian	4	survey
2	55-64	F	University	Canadian	4	survey and interview
3	55-64	F	University	Canadian	4	survey and interview
4	55-64	F	University	Canadian	3	survey

5	55-64	F	University	Canadian	3	survey
6	55-64	M	University	Canadian	4	survey
7	55-64	M	University	Canadian	5	survey and interview
8	55-64	M	College level	Canadian	3	survey and interview
9	65+	F	University	Canadian	3	survey and interview
10	65+	F	University (below Bachelor)	Irish/Canadian	2	survey
11	65+	F	University	Canadian/Scottish	3	survey
12	65+	F	College level	English (British)	3	survey
13	65+	F	High	Canadian	3	survey

			school			
14	65+	M	University	Canadian	4	survey and interview
15	65+	M	High school	Canadian	4	survey
16	65+	M	High school	Canadian	2	survey

### Participant use of Online Video

To be eligible for this research project, participants were required to have previously used online video. The findings show that every participant has used and plans to continue using online video (see Table 2). The majority (63%) watch online videos at least several times a week. Participants most frequently watch videos for news and current affairs, for entertainment and amusement, videos made by friends or family, and sports. They not only watch online videos that have been forwarded to them, but also actively search for videos online.

With such a small sample, the split was close between the participants who post videos online every month or so (44%) and those who have never or rarely posted a video online (56%) (Table 2A).

**Table 2: Use of online video**

A. How often do you use the technologies below?  
Check the option that is generally applicable for each



technology.					
	Never/ Rarely	Every month or so	Every week or so	Several times a week	Every day
Watch videos online (i.e. YouTube, sports or news site, etc.)	12% (2)	6% (1)	19% (3)	63% (10)	-
Digital camera – taking videos	44% (7)	37% (6)	19% (3)	-	-
Upload a video to share with others online	56% (9)	31% (5)	13% (2)	-	-
Post a text reply to online video	75% (12)	19% (3)	6% (1)	-	-

Camcorder for videos	88% (14)	12% (2)	-	-	-
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B. How often do you view online videos? Check how often you view online videos for each purpose.

Viewing online videos (about) ...	Never/ rarely	Every month or so	Every week or so	Several times a week	Every day
Entertainment /amusement	19% (3)	19% (3)	12% (2)	50% (8)	-
News / current affairs	25% (4)	6% (1)	19% (3)	50% (8)	-
Sports highlights / interviews	62% (10)	6% (1)	19% (3)	13% (2)	-
Videos made by friends / family	37% (6)	19% (3)	38% (6)	6% (1)	-

Learning how to do something at home	50% (8)	31% (5)	13% (2)	6% (1)	-
Health information	63% (10)	25% (4)	6% (1)	6% (1)	-
Videos made by peers - work or professional colleagues	63% (10)	31% (5)	6% (1)	-	-
Videos made by people from different cultures	62% (10)	38% (6)	-	-	-
Videos made by people living in rural or remote communities	81% (13)	19% (3)	-	-	-

Participants perceived the usefulness of online video as a tool for "Keeping informed"; "Not only to communicate with each other but to communicate with the rest of the world!" Participants suggested that video could be used to clarify a message or illustrate ideas and engage an audience, and because "Numerous people can view the same video", online video could be a useful tool for generating discussion about a particular topic. Some of our participants saw a

greater value in business-related uses, or to provide background information for volunteer work, while others saw greater value in using video for personal communication.

Participants said online video was a good way to keep in touch, clarify issues, enable more frequent and clearer communication, and to create opportunities for interactive exchange by coupling video with other ICT. There was also potential for cost and time-savings, and for avoiding the challenges of travel since: "Transport can be difficult and older people maintain their homes. Parents are rural but children are urban - (video) helps them keep in touch".

Most of our participants thought short online videos were a good way for people in Fredericton or greater Fredericton to communicate with each other, because "Any form of communication is good" and because video "adds a personal touch". However, some did not see video to be necessary for communication at the local level, and suggested "Why not just visit?"

Even more (92%) of our participants saw sharing short videos online as a good way for people in remote and rural communities to communicate with people in urban communities, although most (81%) never or rarely intentionally watched videos made by people living in remote or rural communities. Several participants expressed concerns with online video, specifically about "inappropriate use and distribution". It was suggested that "There need to be some guidelines re content, impact on target group/individual. I'm thinking specifically of any kind and to any degree of "hate" videos. Otherwise, it's a good mode of connection".

One finding that was particularly interesting for the researchers was the absence of a clear preference for either professionally produced or user-generated videos based on production values. For some participants, unless the technical issues are really severe, quality issues can be forgiven if the video is short and the message compelling. For others, quality is central to their engagement with the video. Rather than suggest that one form is more accepted than the other, one participant explained:

I don't think there's a single answer to that. There were some very good ones done by people at random, and there's some bloody awful ones done by government. I think both have a role.... If the subject is right, then I don't think it matters who does it, as long as they are reasonably competent.

All our participants had experience using video technologies and none were resistant to the idea of increasing their use. However, many of these citizens cited age as a factor in how they, as opposed to younger people, accept and use technology. For example, when asked if they thought online videos might help build a sense of community, one participant answered:

Oh, I think they can. ... I think that your generation, not my generation, is doing a lot of this anyway. I think Facebook has done a lot of that. YouTube does a lot of that. But I don't

think, for my generation, the '70s and above, I don't think it does much except when we're pulled in to see something. .. I think the young kids that are coming through are more savvy with this stuff, and they will certainly want to use it better.

### Participant Use of Video Calls and Videoconferencing

Participants were required to have previously used video calls or videoconferencing to be eligible for the study. More than half (56%) use video calls (e.g., Skype, Messenger with video) every week or so (Table 3), primarily with family and friends. Some know how to set up or receive video calls, whereas others have participated in calls, but do not have the technical expertise to set up or receive them. Skype calls are most often made from home computers, although some participants used it when they were travelling. Everyone who has used Skype for an extended period commented that there has been technical improvement in the video, audio and reliability of the application over time.

Videoconferencing refers to more sophisticated and expensive equipment (Tandberg and Polycom units) in a specific room setting, often in an institutional environment. Twelve of our participants (75%) never or rarely use videoconferencing (Table 3) but some use it regularly, if infrequently, as part of educational, business or volunteer activities, in locations where there is technical support and participants are members of an audience who do not operate the equipment.

<b>Table 3: Use of videoconferencing and video calls</b>					
How often do you use the technologies below? Check the option that is generally applicable for each technology.					
	Never/ rarely	Every month or so	Every week or so	Several times a week	Every day
Video calls via the internet (ie Skype,	31% (5)	13% (2)	31% (5)	25% (4)	-

Windows live messenger)					
Videoconferencing using room unit (Tandberg, Polycom)	75% (12)	25% (4)	-	-	-

Many participants believe that video calls and videoconferencing are useful tools with potential applications in personal lives, business, education and volunteer work. Video calls were the “next best thing to being there”, for “sharing information”, and they could potentially produce better results than phone calls. Benefits were the ease with which people could get together, and that everyone can “feel connected to other participants”

Most of the study participants believe that if people have the technology, live video chat, video calls and videoconferencing are good ways for people living in remote and rural communities to communicate with others in more urban settings. Video calls save expense and time by eliminating the need for physical travel and reducing time spent away from work. Video call technologies are “...almost as good as face to face and more immediate than phone”; they “May make for better communication” and overcome distance and time barriers between distant locations in situations where “... face to face communication is very restricted. I’m thinking of Nunavut”. Video communication “Makes it easy to communicate on a daily basis. Good to monitor aging parents”.

Participants feel closer to the other person they are talking to when they can see a face. As one participant explained:

When you're talking to people that live a thousand miles away or whatever, and you haven't seen them for a while . . . with a video you feel closer. There's closer contact with them and you don't think: Well, I haven't seen that person for three years. I mean, you say: Well, I saw them yesterday. So I guess your ongoing relationship is closer because of the video.

Video calls are enjoyable, and allow connection with both family:

Oh, you know, I'm a grandmother. Seeing my granddaughter's little piece of art that she brings home from school, this is a crisis ... you're always trying to get the little one to do it

when he's being Skyped. Come on, now, crawl. Get in the dog's dish. Come on ...

and with friends:

... when you're talking to friends, facial expressions mean a lot ... I have a friend in New Mexico who's an artist, so when she's finished getting some works ready to do in an exhibition, she can take me out to her studio and show me her stuff. Whereas before, she'd take a digital picture and we'd put it up, ... because it's not live, I can't ask her a question, so ... live time, helps.

In more formal settings, some participants believe there has to be a reason for the visual component in a meeting, or it can be distracting. As one participant explained:

In many cases, it's the organization proving how technologically savvy it is by having access to videoconference calls. Because it's there, we want to use it. ... I don't know why they're not talking on the bloody phone really ... why, if you're trying to demonstrate something, and if you want to show somebody how to ... connect a widget to a widget then, obviously, a picture is worth a thousand words, but if it's just a conversation, why bother?

Others do not see video calls as useful in their lives, and have some concerns that using video calls "... would encourage being shut in unnecessarily". With the written comment, "Helpful for students but not as effective as Tim Horton's", one participant seemed to suggest that video calls are more valuable for younger people, but that face-to-face meetings at a coffee shop are preferable.

If the equipment was easy to use and adjust to the point where it was 'invisible' it would "... get the technology out of the consciousness and get the message". However, the technology is not at that level of easy use, which limits how people use the technology and what they use it for.

To avoid technology problems, one participant described how it is more practical to use a home computer rather than a moving or mobile connection:

I know a number of people that use Skype and video ... but they're using it all the time from a fixed setup. You know, let's say, grandma to grandkids, right? Because once you set it up ... anything that you end up tearing down or putting away and then coming back to put it together, it's just not that straightforward.

Even though almost all of our users had high speed internet service, some still experience bandwidth and network traffic issues. They understand and accommodate network issues by scheduling calls to avoid high-traffic periods, but if the technical barriers to video communication

can not be overcome, they resort to another means of communication. In one instance, our participant explained:

My son's in Taiwan and we were trying to use Skype and getting his computer and ISP running, enough bandwidth and ours, and connecting and getting the time right and everything else. He often just said: To heck with it, and phoned us.

Technical issues can interfere with enjoyment; when there are equipment problems, such as "making sure the blasted camera is working, which it sometimes is and sometimes isn't, and I never really have found out why. ... Basically, I don't really enjoy the technology very much at the level I'm operating it in." When technical issues recur consistently, "... the bottom line is, it's such a pain in the proverbial and more often than not, I confine myself to instant messaging and writing."

And yet, if a stable connection can be made, issues with technical quality do not necessarily interfere with the call because the content takes precedence over technical clarity. As one female participant explained: "It's sort of like passport pictures ... You're kind of fuzzy today, but maybe that's how you feel. I don't know. I mean, you deal with it."

We asked participants specifically about using video technology for health. Most agreed that using live video chat, video calls or videoconferencing may be a way for people to communicate with health professionals. It: "Might allow for longer doctor's visits", better access and or more timely service; savings in time waiting, travel, money, "especially for rural people. It can take a long time to travel and much could be accomplished in video chat". A video call might cut back on the number of trips patients or clients have to make to hospitals, offices and clinics. Regular video calls might be a good way for health care professionals "... to monitor changes in patients" through "regular ongoing contact". Countering this optimism, a retiree from the nursing profession commented that in her experience, doctors are only rarely the first health care professionals to incorporate technological tools into their practices.

Some participants thought it might be best to have certain boundaries around the technology usage. For instance, using video calls or videoconferencing in health care situations "... should be used to supplement consultations or identify need for further consultation". Another participant suggested that video would be best used only "If it is strictly an information delivery consultation", rather than an examination or diagnostic process. Another suggested that medical professionals would benefit from these technologies "... Especially in Atlantic Canada where resources/expertise tend to be centralized" in urban settings, while much of the population lives in rural areas.

## **DISCUSSION AND CONCLUSIONS**

This case study focuses on older citizens living in a small city in Canada who are frequent users



of ICT. As an investigation of an under-studied population, it makes a compelling case as to why this group should be given singular attention.

All the participants in our study use online video, video calls and videoconferencing on a regular basis. They are actively using online videos; for most, watching a video online to learn about news and current affairs or for entertainment and amusement is an integral part of their weekly routine. They more often post, forward and share existing videos than produce videos themselves.

Participants recognize the intrinsic value of video to improve a sense of connection, or increase the social presence that comes from seeing the person with whom they are communicating. Our finding suggests that earlier research on ICT and social presence applies to older citizens and video communications (Biocca, Harms & Burgoon, 2003). Participants who have regular contact with family and friends used video calls because the technology increased the social presence or the sense of being together in real time, whether they were in contact to discuss the artwork of a grand daughter or a friend.

Seeing the other person in the conversation allows engagement with a deeper connection, even after a long time had passed since they had met in person. The social presence enabled by video increased their engagement in the activity. The ability for the person to make him or herself seen on video has value, since social presence is not just about seeing other people; it is also about being seen, and presumably, heard. They could forgive some technological issues and would 'suffer through' poor quality of sound or image for the value of content and connection.

Videoconferencing is used much less frequently than video calls by the citizens in this study. They did not have direct contact with the equipment because someone else usually ran the session. Psychological involvement is enhanced by videoconferences in employment or volunteer work situations, when used for demonstration or to see results of activities at other locations. In some cases, videoconferencing was seen as a useful tool that might help improve communication or resolve a problem. However, if there was no particular visual function, the visual component could be a distraction.

Most study participants recognize the value of social presence in video and use diverse technologies flexibly and critically. They have a functional approach to technology, but they also use it for fun. Older citizens are interested in technology and the benefits it can offer, and they would likely use it more often if it better accommodated their needs. This requires adjustment to external expectations and sensitivity to internal expectations of skill development on the part of ICT and instructional design. Physical limitations exist, but none of the participants in our study fit the ageist stereotype of being disinterested in technology.

The older citizens in this study are critical users. None had to be "convinced" that video

communication has overall value, but some were sceptical about how various applications of technology would be necessary for them. They recognize the power of video to engage, inform and entertain, but would be more interested to use it if they have adequate reason and support. The value of video calls and videoconferencing was proportional to its perceived usefulness: if it improved communication, was used by a loved one or enabled demonstration of something visual, then it had value.

The relative value of video communication tools is also related to their ease of use. When there were technical problems, our users would overcome barriers to use by adapting, getting training - often from their children - or by turning to other methods of communication such as the telephone, email and online chat. Our users were aware that there could be risks and potential for abuse in online videos and video calls or videoconferences, and recommended standards, controls or safeguards be put in place to protect users.

Our study confirms earlier findings by Broady, Chan and Caputi (2010) that older citizens do have internal expectations about their own ability to use technology, and that they may project that thinking on other people. While citizens may face technological barriers beyond their control that prevent them from using video more often and more fully, for some, their self-assessment is tinged with internalized ageism about their technical abilities or proclivity to use ICT; they attribute the affinity for technology to younger people and their own frustration with technological challenges to their relative age, rather than other factors such as shortcomings in technological design.

The potential for a technology like video communication to facilitate routine tasks and support autonomy in ways that will improve older citizens' well-being and quality of life (Gitlin, 2000, 2002) can only be realized when it is useful and properly designed to be accessible for older citizens. They will adopt and adapt it to their needs, but the long-held 'age barrier' to technology use would be more quickly overcome if the design process involved a wider range of user input. It should be noted that older citizens face technological barriers to use that are not only related to age, confirming earlier research by Hernández-Encuentra, Pousada and Gómez-Zúñiga (2009).

Similar to Harley (2009), our study confirmed that older citizens are often using these tools to enable intergenerational communication in both the private and public spheres of their lives. As such, these citizens have political, economic, social, and community rights and responsibilities in the new information and communication spaces created by ICT. Therefore, it behoves developers, marketers and researchers of communication technologies to recognize that older citizens are not a homogenous group of disempowered, under-resourced, under-skilled people; instead, they form a viable and valid group of technology users, with different patterns of adoption, adaptation and reasons for using ICT than other demographic groups.

This case study provides a snapshot and descriptive analysis of video communication use in a

moment in time in the lives of a small group of citizens aged 55 and above, living in Fredericton, New Brunswick. Our findings cannot be generalized to the larger population. However, our work provides an interesting starting point for involving a group of citizens in the development of a video-enabled ICT that is useful and adaptable to their needs, has adequate support and training, and could be incorporated into an activity they already do. Follow up studies to see whether that experience would move the use of video into other areas of their lives (i.e. if they used it in volunteer work, would they then use it at home?) would then provide useful insight into the adoption and adaptation patterns of this valuable demographic.

Another interesting area of research would be to address older citizens' ambivalent relationship with audio and video quality and its relationship to content. Some questions that arose during our study included: whether the expectation of good quality sound and image was the result of a life-long experience of professional video production, versus today's youth experience with YouTube videos of varying quality; whether it was a question of taste or if it was faculty-related. We found the ambivalent relationship these citizens had with technical quality and video content interesting, since there was no clear preference between user-generated and professionally-made videos. Our participants were critical viewers for whom the quality of image and sound was important, but they readily forgave shortcomings in quality if the content was compelling. Another interesting area of further research about usage patterns and engagement is the possibility that citizens relate to peers better than to younger people in videos.

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