Design and Evaluation of an
Online Digital Storytelling Course for Seniors

by

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Ethics Statement

The author, whose name appears on the title page of this work, has obtained, for the research described in this work, either:

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Abstract

The aging population is growing steadily worldwide. At the same time, people are increasingly relying on technology for socialization. Thus, it is important to find ways of stimulating older adults to acquire digital literacy skills, and to foster social connectedness and lifelong learning. Previous research indicated positive results in achieving these goals through a face-to-face digital storytelling course for elders. This thesis describes a project that studied two offerings of a fully online version of the course. The courses ran for 10-15 weeks. Data collected using a qualitative approach included a demographic questionnaire, instructional materials surveys, and a course evaluation survey, followed by individual interviews. Results showed positive and consistent responses regarding the instructional material design, the sense of accomplishment and agency for creating legacy, the desire to continue using this technology, and the benefits of bonding with colleagues and the facilitator.

Keywords: digital storytelling; older adults; social connectedness; lifelong learning; instructional design; online learning

Dedication

       I would like to dedicate this thesis to the very dear people in my life, especially to my mother, who supported me throughout this important step. I would also like to dedicate this thesis to Dr. David Kaufman, who introduced me to this wonderful project and gave me endless support.

Acknowledgements

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List of Acronyms

BBC   British Broadcasting Corporation

CDS   Center for Digital Storytelling

MIF   Maimonides Interfaith Foundation

SFU   Simon Fraser University

WHO   World Health Organization

Chapter 1. Introduction

From the beginning of time, human beings have always marked their presence through messages (Miller & Moore, 1989). Even in the early stages of our cultural evolution, these messages were already found in caves in the form of paintings and drawings almost 40,000 years ago, registering our presence in this planet throughout periods of time (Droste, 2014). As these drawings evolved, it is possible that some of them could be telling us a story. Of course, we do not know whether this story was personal, collective or simply fictional. However, we do know that to tell a story is to leave a message, and that a message can be perpetuated through time for thousands of years.

When we consider The Allegory of the Cave, by Greek philosopher Plato (Huard, 2007), the message contained in a simple story narrating the dialogue between two philosophers was so powerful that it continues to be perpetuated, and still makes us reflect upon choices in life. The impact of this message shows how powerful the act of storytelling is, regardless of the means in which it is passed on. For instance, the traditions and knowledge of indigenous peoples in the Americas were shared in oral form because it was the only vehicle available before modern-era socialization with settler cultures. Yet, for a long time, the entire structure of their societies was kept because of these traditions (Darnell, 2012; Lee, 2012; Iseke & Moore, 2011). Passing on messages through oral form may have faded over time, but the storytelling tradition is as ingrained in human nature as growing up listening to our parents read Cinderella and Little Red Riding Hood at bedtime (Cajete et al., 2010). It is almost as if the tradition of storytelling were part of our DNA as humans.

Whenever a story is told, something important to the author is shared as a message. And the storyteller, by extension, chooses to share it, so others may use it in their lives or draw their own conclusions (Loe, 2013; Christiansen, 2011; Stacey & Hardy, 2011; McAdams, 2008; Brunner, 2004; Brunner, 1991; Polkinghorne, 1991). These movements can be seen in human behavior, from philosophy texts and children's

books, to sacred scriptures. For example, the sacred scriptures of the three Abrahamic faiths: the Bible, the Torah and the Koran. To this day, these scriptures have defined and guided their peoples through the stories contained in them. The story of Jesus Christ and the origin of Christianity in the Bible, the story of Moses and the origin of Judaism in the Torah, and the story of Mohamed and the origin of Islamism in the Koran are universal examples. They are the narratives of these peoples in a desert, in an immemorial period. And, based upon them, three great religious groups were created (MIF, 2019). Therefore, the power of a story is clearly much stronger to humans than a simple act of sharing. It is as powerful as it is revealing. Most importantly, it is an act of leaving legacy and knowledge to future generations (Loe, 2013).

Over time, the way stories were shared evolved from pictographic form in the caves, to hieroglyphs found in the Egyptian pyramids, and in Central American ancient civilizations' temples, finally reaching the written stage (UNESCO, 1995). At this point, the reading and interpretation of written stories and messages became the life's work of many people.

Now, with the advent of the digital world, we have another great shift in this paradigm. However, it is not a shift in the content of the messages, but the way stories are told and shared. Today, stories are much faster and shorter, yet the power of the messages in them remains. To tell a story in digital form is to reach a public never once imagined, in a speed without precedent (Burgess, 2006). It means perpetuating the message in this new digital universe through the internet cloud for indefinite time, as nobody can determine for how long this information will be stored. The digital world has become an incredible window through which stories and messages can connect people across the globe almost instantaneously (Couldry, 2008). What is more interesting is that, while we tell children's stories in hopes that their avid minds will learn a well-structured yet simple message, when the stories are told to adults by a person who has experienced most of the life stages, the depth and intensity of the messages are at their maximum. In this case, the storyteller is a person who has accumulated thousands of stories not just heard but lived (Hummert et al., 1994).

Therefore, the digital world is an excellent vehicle for older adults to tell stories, share messages, and create social connections in an era when people rely more and more on technology for interaction (Pecorini & Duplaa, 2017; Baecker et al., 2012; Czarnecki, 2009). One of the main reasons why these connections are important is because social isolation and loneliness are amongst the main problems associated with aging (WHO, 2002). These problems are expected to become more pressing within the next decades, given the unprecedented change in demographics across the globe. According to The World Health Organization, the pace at which the population ages worldwide is much faster today than in past decades. By 2020, it is estimated that adults in their sixties and older will have outnumbered children aged 5 years and younger (WHO, 2015). In Canada alone, the current older adult population is approximately 5.8 million, which represents around 16.1% of the country's population. This percentage is predicted to reach 20.1% (Statistics Canada, 2017) by 2024.

As a measure to address this change, The World Health Organization (2015) established goals to foster healthy ageing by stimulating lifelong learning by older adults. Following these goals, there has been an increase in research and interdisciplinary networks devoted to finding solutions to the many challenges surrounding ageing. Examples are Canada's Technology and Ageing Network AGE-WELL, and the development of the SFU Elder's Digital Storytelling course, which is the cornerstone of the present study. The results of the Elder's Digital Storytelling course research indicated that storytelling and technology foster social connectedness. It also indicated that the approach of creating a learners' community is beneficial for elders learning environment, for it stimulates lifelong learning through the improvement of digital literacy.

The present study investigates and reports on the adaptation process of the face-to-face SFU Elder's Digital Storytelling course to its fully online version on the learning management platform Canvas, and provides insights into the benefits and challenges found in its design, in addition to insights into the participants' and the facilitator's experiences.

1.1. The purpose of this research

The purpose of the project was to use an online learning management platform to adapt the content of the face-to-face SFU Elder's Digital Storytelling course to its fully online version, in order to determine if the design would help foster digital literacy, lifelong learning and social connectedness for older adults. The project provided participants with the opportunity to create a short digital movie about a personal life experience, through the guidance of written instructions, instructional videos and Skype software assistance provided by a facilitator. Similar to the study conducted on the face-to-face course, this study was also exploratory, given the limited research on design of digital storytelling for older adults. Therefore, this thesis is an additional contribution to fill out this research gap.

1.2. Research questions

This study addressed the following research questions:

1. What are the participant's perceptions and opinions of the learning design regarding the instructional material? For example, do the written instructions and instructional videos support the learning objectives from the participants' perspective?
2. Does the learning experience foster social connectedness?
3. Does the learning experience foster lifelong learning?
4. What are the participant's perceptions and opinions of the learning design regarding the role of the facilitator? For example, does the presence of the facilitator in a fully online environment support the learning objectives from the participants' perspective?

1.3. Outline of the thesis

This thesis has six chapters. Chapter 1 presents the introduction of the research and the research questions. Chapter 2 provides the literature review, which provides the relevant literature used for the study. Chapter 3 presents in detail the original SFU Elder's Digital Storytelling course design, the choice for the video editing software WeVideo,

and the adaptation of the course design to its fully online version. Chapter 4 examines the methodology and methods used to conduct the research. It begins by introducing the case study methodology, the steps to obtain ethics' approval and the participants' consent during recruitment. It then discusses the data collection process, data management, data analysis and the measures taken to guarantee trustworthiness. Chapter 5 presents the results of the analyzed data, which includes the demographic and background information of the participants who concluded the course, the questionnaires evaluating the written instructions and instructional videos provided, the course evaluation and the individual Skype interviews. Chapter 6 concludes the thesis by presenting a summary of the major findings and their connection to the literature, discussing the study's contribution to the research field, its limitations and possible future work.

Chapter 2.   Literature review

2.1. Introduction

The literature review in this chapter focused on the six areas listed below. They were subdivided into the various contextual backgrounds which, together, formed the online SFU Digital Storytelling course.

1. Narrative as part of human nature.
2. Social connectedness and lifelong learning.
3. Digital storytelling.
4. Well-being and healthy aging.
5. Educational lens.
6. Instructional design.

2.2. Narrative as part of human nature

Storytelling seems to be intrinsic to human nature, regardless of time and the means by which the stories are shared (Darnell, 2012; Cajeste et al., 2010; McAdams, 2001). The very first traces of humans leaving messages that tell a story are so old (Droste, 2014) that we are not able to fully determine whether they were fictional, personal or just a historical record (UNESCO, 1995). Yet they all indicate the human need to register their existence in the world (Miller & Moore, 1989). This need shows that registering stories is not merely an individual act, but an extremely important movement of defining the culture of a community, a nation or an entire hemisphere (MIF, 2019; Cunsolo Willox et al., 2013; Iseke & Moore, 2011; Huard, 2007). By passing down stories, humans strengthen their values and allow their audience to draw lessons and knowledge (Loe, 2013; Christiansen, 2011; Stacey & Hardy, 2011; McAdams, 2008; Brunner, 2004; Brunner, 1991; Polkinghorne, 1991).

The passing down of knowledge contained in the stories is a cultural trace that connects peoples around the globe. It is an activity that defines us as humans and, very

commonly, is carried on by the people who have lived most of the experiences narrated, and who are able to reflect upon them (Cruikshank, 2013; Birren & Deutchman, 1991). Naturally, these people are the elders within a community, and sharing their knowledge is not only beneficial for the listeners and the community, but also to the elders themselves, as it enables them to keep their own legacies alive and makes them feel valuable (Montepare et al., 2014; Cruikshank, 2013; Wallace, et al., 2013; Hummert et al., 1994).

2.3. Social connectedness and lifelong learning

The activity of stimulating elders in a community to share their knowledge by telling their personal experiences and reflections is an important tool to establish a bond between generations (Hausknecht & Kaufman, 2018). It brings together people of different ages by evidencing interests that, otherwise, would be difficult to come up in a regular social situation. This stimulus is key to maintain older adults socially engaged, which means establishing social connections and encourage a desire to continue to learn throughout life (WHO, 2015).

With the technological revolution and people increasingly relying on technology to communicate, computers and the Internet initially seemed to be potential problems but soon became effective vehicles to foster social connectedness and lifelong learning (Baecker et al., 2012; Czarnecki, 2009; Hart et al., 2008; Thayer & Ray, 2006; Vuori & Holmlund-Rytkönen, 2005; White & Weatherall, 2000). Before the widespread of affordable and simplified devices that connect to the Internet (e.g., smart phones, laptops and tablets), the sharing of knowledge by older adults and their connections with other people sharing the same interests were restricted to being on television, publishing a book, speaking to crowds or simply frequenting local communities. However, these options always demanded the physical action of leaving home, or having access to media channels only available to a few people. But now, older adults are able to share their stories instantaneously (Couldry, 2008; Burgess, 2006). This practicality allows the important and ancient tradition ingrained in humans of sharing their stories and passing down their traditions to be a conductor of social interaction on the Internet. This stimulates them to want to learn more and to connect with others. Moreover, with the

older population growing exponentially worldwide over the years (WHO, 2002; Statistics Canada, 2017; WHO, 2015), the use of the Internet to share stories in order to foster social connectedness and lifelong learning is even more important (Baecker et al., 2012; Waycott et al., 2013; Kim and Merriam, 2004; Jonassen, 1999; Mannell and Kleiber, 1997). Thus, the importance of digital storytelling to the older population is not just to encourage social connectedness, but it also serves as a tool to stimulate them to learn 21st century skills (i.e., technological literacy (Robin, 2015; Flottemesch, 2013; Iseke & Moore, 2011; Robin, 2008; Barrett, 2006).

2.4. Digital storytelling

Digital storytelling means using multimedia technology to create and tell a story digitally (Robin, 2015). It is the use of multimedia to tell a story, in order to pass on a message in modern days (Leslie Rule, 2010; Klaebe et al., 2007).

It gained popularity largely because of Dana Atcheley and Joe Lambert, who founded the Center for Digital Storytelling (CDS) (Robin, 2008). Then it continued to grow in the United States, later extending its popularity to England in the early 2000s, mainly because of a partnership between the British Broadcasting Corporation (BBC) and Cardiff University. From then on, research has shown that digital storytelling has a number of ways in which it can be valuable for educational purposes, because it strengthens the practice of self-reflection, skills as a storyteller, and it serves as a means for meaning making (Linde, 2001). Moreover, it serves as a rich experience where participants are not only learning traditional story structures for the writing part, but they are also learning new technologies and how to merge them together (Czarnecki, 2009). This duality provides educators with a rich tool on which they can rely to teach traditional concepts, such as topic research, producing a script and a story that are engaging and knowledge sharing, while inserting learners in an activity which speaks directly to the medium that is part of the current reality (Robin, 2008). In addition to that, educators can use it as a tool to teach how the process of creating a digital story allows the producer to become part of the registry, as it helps the learner to make meaning (Garcia & Rossiter, 2010; Rossiter, 1999; Bruner, 1996).

The creation of a digital story requires the producer to consider the realities of not only their accounts of the story, but also the realities of the images and music used (Hausknecht, 2018). The creativity involved in the process contains the potential to have deeply impact its own creator, as well as the audience (Lambert, 2013), since a digital story offers varied and rich perspectives of life (Couldry, 2008). For instance, the use of digital storytelling in indigenous communities adds to the depth and importance of imagery and music to the cultural aspects that define the entire culture of a community (Iseke & Moore, 2011). And the use of digital storytelling has also shown positive results in intergenerational projects, where younger generations and older adults work together (Lee, 2012).

The use of digital storytelling exclusively for older adults in previous research examined the psychological impact of reminiscence, the feeling of agency experienced for learning new technologies and creating their own legacy, and how it fostered social connectedness and lifelong learning (Hausknecht, Vanchu-Ororsco and Kaufman, 2017; Pecorini & Duplaa, 2017; Heo, 2009; Bohlmeijer et al., 2007; Birren & Deutchman 1991). The results showed a reported increase in well-being, the feeling of agency gained for not only having created a legacy for friends and family, but also for being the responsible for acquiring and using the new technology, and finally, the positive experience of becoming part of a community of learners.

2.5. Well-being and healthy aging

As reported by the previous research on digital storytelling aimed exclusively at seniors (Hausknecht, Vanchu-Ororsco and Kaufman, 2017), the increase in well-being was directly related to the social connectedness experienced with facilitators, colleagues and the bond with friends and family over a product (the digital story) that initiated different dialogues, in some cases for the first time. This feeling of well-being has been the focus of attention on varied fronts, since the shift in global demographic has resulted in an increase in the number of older adults and a decrease in the number of birth rates (WHO, 2015).

The shift establishes a significant impact on the workings of society, such as relationships, workplace, and health institutions and has raised the question of how to improve the quality of life of older adults (Reichstadt et al., 2010; McDaniel & Rozanova, 2011; Bowling and Dieppe, 2005; Diener & Suh, 1997).

Interestingly, the concept of well-being itself is not clearly defined, as it represents a broad and complex structure of factors (Ryan & Deci, 2001). However, it is conceived that, among the many psychological factors, well-being could have main indicators, which are positive relations with other people, self-acceptance, environmental agency, autonomy, personal growth and life purpose (Ryff, 1995). And, for this reason, programs focusing on fostering a sense of life engagement, social interaction and learning opportunities are being seen as increasingly important to older adults (Cattan et al., 2005).

2.6. Educational lens

The educational lens area encompassed literature regarding the five following sections: (1) instructional content scaffolding, (2) learning technologies, (3) social interactions in virtual communities (4) case study research framework, and (5) trustworthiness.

2.6.1. Instructional content scaffolding

This project used scaffolding of the instructional content, in order to assure that participants were continuously provided with frameworks to support the expected learning and performance that could extend beyond their capacity (Jonassen, 1999). This way, learners received constant support throughout the entire process, and the support was removed gradually, as they became capable to develop their own learning strategies around the content (Sfard, 1998).

The adaptation of the instructional content ensured that each new concept to be learnt was gradually presented through definitions, which were always followed by situated examples and practice activities. All examples were created in order to be as

relatable as possible to the participants' reality, because, in face of new information, situations or problems, humans tend to naturally access their memory for relatable experiences (Polya, 1957).

2.6.2. Learning technologies

The design of the online course was based on the concept that the learning management platform, the instructional videos and the video editing software WeVideo should function as Mindtools (Jonassen et al., 1998). Instead of serving only as media channels for delivering instructions, the course design used them as knowledge construction tools that participants learnt with, not from.

In this constructivist approach, not only were the participants the designers of their own digital story by using the video editing software WeVideo, but the function of the three technologies employed in the course design were interwoven to serve as tools that allowed participants to be their own knowledge designers. Therefore, these technologies were not expected to create the digital stories for the participant, but to serve as mind-extension cognitive tools (Derry and LaJoie, 1993).

Considering that constructivist approaches to learning focus on creating environments where the learner is an active participant in ways aimed at guiding them to build their own knowledge, rather than having the instructor simply ensure that the information given was understood (Jonassen et al., 1998).

2.6.3. Social interactions in virtual communities

The design of this project was of a fully online asynchronous course. Within the stipulated 10-week period informed upon registry, participants had access to all modules from the beginning, and were free to complete the proposed activities in their own pace.

Because of its nature, the design faced the possibility of having its participants loose interest and not complete the course due to a lack of social interaction with colleagues and the facilitator. In the absence of face-to-face interaction, "it is easy for

students to get confused or lost in complex course structures, making interaction with content more difficult" (Swan, 2002, p. 30).

As learning theories are increasingly emphasizing "the social as well as the constructivist nature of the learning process" (Jonassen et al., 1998, p. 29). According to Swan (2002), learners' perceptions of satisfaction and learning in online courses are directly associated with three factors: (1) Interaction with course content, (2) Interaction with course instructors, and (3) Interaction among course participants.

Therefore, providing participants with the sense of belonging to a learning community, where they could communicate with colleagues and the facilitator was one of the cornerstones of this project's design (Rourke et al., 2001).

Even though the digital stories are individual, the learning process occurs while they are interacting within a learning community (Land et al., 2012; Hawthorn, 2006). This interaction is key to the efficacy of the learning process, as previous research showed that older adults consider educational activities to be more pleasurable and rewarding when participants interact with each other (Kim and Merriam, 2004; Mannell and Kleiber, 1997).

2.6.4. Case study research framework

The qualitative research design chosen for the project was Stake's (1995) case study methodology, which serves as a tool for inquiring phenomenon that occurs within a specific context, as well as it serves to illuminate the phenomenon, in order to obtain insight from varied sources (Baxter & Jack, 2008). Case studies can be separated into three categories, according to Stake (1995): (1) intrinsic, which focuses on only one specific phenomenon that distinguishes itself from others (2) instrumental, which focuses on a particular case for a deeper understanding of the phenomenon, and (3) collective, which explores different cases derived from the phenomenon to obtain a broader perspective.

However, it is normally expected that they combine, since one case is usually extended to more than one category. Because this project contained different contexts from which participants drew their learning, such as the written instructions, the instructional videos, as well as the interaction with colleagues and the facilitator, this case study methodology helped shed light in the phenomenon of online learning within the older adult cohort, in a digital storytelling course.

2.6.5. Trustworthiness

The credibility of the qualitative results drawn from the project was strengthened by the process chosen to analyze the data collected, and my personal involvement with all participants during recruitment, as well as with the original face-to-face course.

First, the process of data triangulation of multiple sources contributed to trustworthiness. The data encompassed three sets of written questionnaires and a recorded Skype interview, and uncovered major overlapping themes (Creswell, 2012; Shenton, 2004).

Second, the multiple interactions of I with all participants when they were recruited created the opportunity to build trust. This bond was strengthened with myself taking the role of the facilitator through the constant email feedback, requested Skype sessions and the final Skype interview (Emmel et. al., 2007; Moen, 2006).

Finally, my involvement as a facilitator to a number of face-to-face courses provided him with valuable experience on how to interact with the older adult cohort (Silva & Nunes, 2010; Hawthorn, 2006; Tullis, 2004).

2.7. Instructional design

The educational lens encompassed literature regarding four following sections: (1) the written instructions, (2) the instructional videos, (3) the tone chosen for all instructional material, and (4) the role of the facilitator.

2.7.1. Written instructions

The first factor taken into consideration for designing the written content was how the formatting would appear on the screen. Font type, size and color, as well as background color were considered in order to maintain a pattern that provided participants with a smooth and easy-to-scan experience (Carmien and Garzo, 2014; Miño, 2013; Weinschenk, 2011). Moreover, line spacing between phrases and the location of text describing images placed inside the modules' sections on the learning management platform Canvas were also considered (Campbell, 2015; Pernice et al., 2013; Ligons et al., 2011). Finally, the distribution of written content within the modules' sections was considered, in order to make the entire scanning process intuitive and automatic, so that participants would not miss out on any piece of information for not scrolling the screen as expected (Silva et al., 2015; Carmien and Garzo, 2014; Pernice et al., 2013; Nunes et al., 2012).

The second factor taken into consideration was the structure guidelines that compose a story, so that participants would have a foundation on which they could develop their narrative, without depending exclusively on feedback from colleagues and the facilitator to determine whether or not their story presented all facts clearly and cohesively. Lucy (2017) suggests three sources of inspiration that can be intertwined when defining the plot of a story that serve as foundation for a personal story: (1) values, (2) skills, and (3) talents.

Lambert (2010) further proposed that, for the development of a story, it should fall into one of eight story types, contain six key structural elements, and follow five plot stages from beginning to end. The eight story types are: (1), a story about someone important, (2) a story about an event in the author's life, (3) a story about a place in the author's life, (4) a story about something that the author did, (5) a story about accomplishment, (6) a recovery story, (7) a love story, and (8) a discovery story. The six structural elements are: (1) setting, (2) plot, (3) character, (4) conflict, (5) point of view, and (6) theme. Finally, the five plot stages are: (1) exposition, (2) rising action, (3) climax), (4) falling action, and (5) resolution.

2.7.2. Instructional videos

The design of the instructional videos encompassed three visual and one audio aspects that the literature on the subject considers as effective.

The first visual aspect was the placement of the link on the learning management platform Canvas, so that participants would easily locate it and access it. The choice for the font style, size, color, and location was considered (Nielsen, 2013; Wirtz et al., 2009; Hawthorn, 2006).

The second visual aspect was to maintain a pattern of the narrating voice always mentioning the location of the mouse cursor (Carmien and Garzo, 2014; Kerber, 2012; Czaja and Lee, 2007) and describing the button or action to be taken (Eagleman, 2011), including the number of mouse clicks (Kascak and Sanford, 2015; Carmien and Garzo, 2014).

The third visual aspect was that, in order to maintain the same pattern of visual movement while instructing participants, the introductory overview of what each instructional video was going to cover, narrated PowerPoint animations were created (Pernice et al., 2013; Affonso de Lara et al., 2010; Arch and Abou-Zahra, 2008). The animations provided participants with the total number of steps that should be followed to accomplish the task (Kascak and Sanford, 2015; Nunes et al., 2012). The animations also summarized with images and drawings the video editing process to be carried on, so that participants would connect concepts possibly abstract to them up to that moment with their reality (Campbell, 2015; Jahn and Krems, 2013). Finally, in order to situate participants in the sequence of steps, the step number would continuously appear highlighted on the top of the screen (Czaja and Lee, 2007; Hart et al., 2008; Plaza et al., 2011; Hawthorn, 2006).

As for the audio aspect, the volume of the narrating voice was increased in the final editing process, so that the maximum volume was uncomfortable to me (36 years old at the time), which would guarantee that even participants with potential hearing loss

could increase the volume of the instructional video and hear the instructions without any problems (Mitzner et al., 2015; Carmien and Garzo, 2014).

2.7.3. Tone chosen

The importance of the written instructions and the instructional videos throughout the course was not limited to the delivery of the adapted face-to-face course content (e.g., story structure guidelines and video editing instructions) and how they were presented (Kascak et al., 2015; Silva et al., 2015). They were also important to how participants were guided from one module to the next. That is because the facilitator did not have an active voice through live sessions, or recorded videos to guide participants from beginning to end (Phiriyapokanon, 2011; Silva & Nunes, 2010). Thus, the adoption of a cheerful and informal tone was the key element to connect all instructional materials, while serving as encouraging abstract persona who guided them.

2.7.4. Role of the facilitator

The role of the facilitator in the project was chosen to be active once participants showed progress in the proposed activities (which were to be published in the modules' forums), rather than the voice to encourage them to take the first step before every new activity, which led to all instructional content to be available from the beginning (Miño, 2013; Stößel, 2012). Participant autonomy was considered in the design, which led to the establishment of individual weekly emails sent from the facilitator with encouraging and constructive feedback, always starting by summarizing the participant's progress (Campbell, 2015; Phiriyapokanon, 2011; Wilkinson, 2011; Hannafin et al., 1999). These emails were also aimed at helping participants keep track of which activities had been accomplished (Carmien and Garzo, 2014; Miño, 2013; Affonso de Lara et al., 2010).

In addition to email feedback, the facilitator also provided Skype assistance by using the screen share tool of the software to guide participants during the video editing portion of the course. The supportive bond that the Skype session created allowed participants to lose the fear of making mistakes and embarrassing themselves by publishing a defective activity on the forums, or even not being able to complete the

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activities (Hill et al., 2015; Raymundo and da Silva Santana, 2014; Arch et al., 2008). The constancy of the encouraging feedback in the weekly emails was paired with a reminder that the participant could always request for Skype assistance, in order to provide them with the assurance and tranquility that, if necessary, they did not need to feel the fear of making a mistake (Estabrooks et al. 2011).

2.8. Summary

Stories define and give meaning to a person's life, be it personal, someone else's or fictional (Loe, 2013; Christiansen, 2011). Research indicates that some of the cornerstones of online courses are (1) instructional content scaffolding, (2) learning technologies serving as Mindtools, and (3) social interaction through learning communities.

Scaffolding of the instructional content assures continuous support to learners throughout the entire course (Jonassen, 1999). The learning technologies should serve as Mindtools that allow participants to learn instructional content with them, instead of from them (Jonassen et al., 1998). As interactions with course instructor and participants are directly associated with learner's perceptions of satisfaction in online courses, it is vital to create a design that makes them feel as part of a learning community (Swan, 2002).

The creation of activities that foster educational and social connectedness outcomes within older adults, while also improving their well-being is of great importance to establish bonds between current and future generations (WHO, 2015).

A digital storytelling course provides older adults with the possibility of connecting with not only with colleagues, but friends and family, through the production of an artifact with the potential of enormous impact to viewers and producers themselves (Lambert, 2013). Research on digital storytelling for older adults has shown that it is a powerful tool to foster increase in well-being due to social connectedness, and increase in lifelong learning intentions due to the introduction of new technologies in a pleasurable context (Hausknecht & Kaufman, 2018).

The extension of a digital storytelling course for elders to the virtual world has enormous potential to generate a borderless learning community of people sharing their interest for connecting with others who have would also like to tell their life experiences and lessons learnt, as well as sharing their interest for the continuous learning process that technology provides.

Chapter 3.   Adaptation of the course design

3.1. Introduction

The original SFU Elders' Digital Storytelling course is the research product of Drs. David Kaufman, Michelle Vanchu-Ororsco and Simone Hausknecht (see Hausknecht, Vanchu-Ororsco and Kaufman, 2016a; Hausknecht, Vanchu-Ororsco and Kaufman, 2016b; Hausknecht, Vanchu-Ororsco and Kaufman, 2017). It was designed based on research-informed practice, which combined information from the StoryCenter.org, the Digital Storytelling Cookbook (Lambert, 2010), previous digital storytelling research (Robin, 2008), in addition to creative writing and film approaches to multimedia practices.

The adaptation of the Elder's Digital Storytelling course to the learning management platform Canvas is the research product of the Master's candidate Diogo Fagundes, under the guidance of Drs. David Kaufman and Robyn Schell. It was designed based on the original face-to-face course curriculum, my experience as a facilitator of a number of face-to-face courses, and the online learning design experience of Drs. Kaufman and Schell.

This chapter first explains the choice made of the video editing software WeVideo for both the face-to-face course and the online course. It moves on to present a summary of the face-to-face course curriculum, and then details the design choices made to adapt it to its fully online version, hosted on the online learning management platform Canvas. It also presents the theoretical background that supported the design choices.

3.2. Software

During the development of the original face-to-face course, several video editing software programs were reviewed by the researchers for their constraints and affordances. The main reason why the online video editing software WeVideo was chosen is because

it is browser-based, which means that it can be accessed on any computer (Windows or Apple) with an Internet connection. And, considering that many participants would feel stimulated with learning a new technology, the researchers concluded that it would be best if participants had the option of continuing to work on their digital stories after the weekly meetings, as well as creating new digital stories after the course was concluded. Another consideration was that the software is relatively 'user friendly' and the licences for educational use are relatively inexpensive.

The software contains stacked horizontal timelines, where the user can place images, Mp3 audio files and Mp4 video files (Figure 3.1.), therefore creating a layered media sequence that plays at the same time. Just like a song is the layered media sequence of different instruments and voice, a digital movie adds images to the equation.

In addition to the practicality of participants being able to access their accounts from any computer with Internet connection without the need to download the software, it offers a paid yearly upgrade license package for a number of different accounts. Once upgraded, the user of the account has access to a vast stock of free soundtrack music, images and video samples. It also allows participants to create videos longer than the standard five-minute length, and cancels the large WeVideo water mark on the corner of the screen. The research team obtained upgrade licenses for a number of accounts; whenever a new course began, the participants would have their accounts upgraded by the course coordinator.

Figure 3.1.   WeVideo software
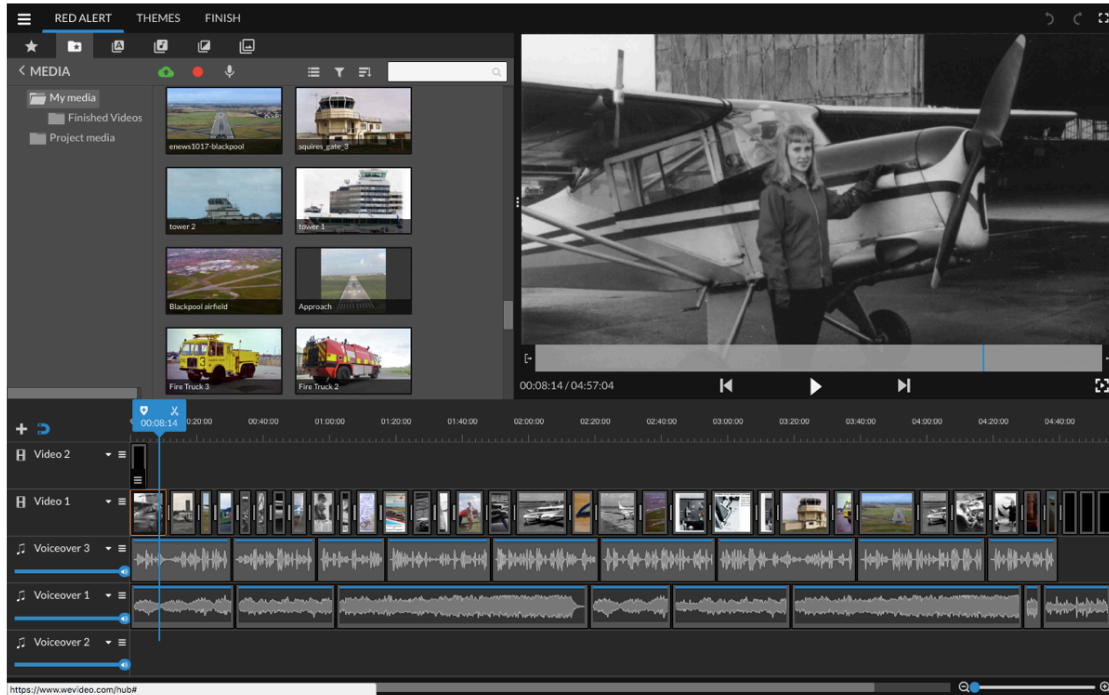
3.3. Face-to-face course

The theoretical foundation of the face-to-face course was designed based on a constructivist learning approach, which stimulates participants to interact, build knowledge, share experiences and receive feedback from both the facilitator and colleagues (Jonassen, 1999). These guiding principles determined the creation of a course with two integrating phases (writing the story and digitizing the story), in order to provide participants with examples, theory and exercises, as well as opportunity to build social connectedness. The course was offered throughout ten weekly meetings (Table 3.1.) of two hours, under the guidance of a facilitator, and a co-facilitator. The facilitator conducted the entire course and activities. The co-facilitator was responsible for providing assistance to the facilitator and participants. As part of the research group of Dr. Kaufman, I fulfilled the role of the facilitator in a number of courses in Greater Vancouver.

In addition to the 20 weekly hours of work during the meetings, participants were expected to work on their stories (including the processes of writing and selecting images) for approximately two hours a week, based on the instructions and feedback provided throughout the course, until Week 5. Therefore, the total amount of time dedicated to the course was expected to be 30 hours.

Phase one was comprised of Week 1 to Week 5, and aimed at helping participants to become storytellers. Phase two was comprised of Week 6 to Week 10, and aimed at teaching participants how to use WeVideo to create their own digital stories, through one-on-one sessions with either the facilitator or the co-facilitator.

During phase one, the facilitator proposed group activities designed to stimulate participants to remember and reflect on past experiences, in order to choose the one to be turned into a digital story. All the activities were conducted with the support of a laptop containing PowerPoint slides shown on a screen projector. The presentations contained written information on slides, Mp3 audio recorded stories, and Mp4 digital stories. In addition to these exercises, they learned about what constituted a story arc, and key elements for the development of a story, so they could think of a personal story and write it down in a well-structured and linear way. As the writing of their stories progressed, they had a series of opportunities to share their ideas and read their drafts out loud to receive feedback from the facilitator and colleagues. When their stories were ready, participants learned how to create a storyboard. In this exercise, they were encouraged to separate their personal photos to be digitized, and to think about extra images that they wished to use.

During phase two, socialization opportunities for participants became more limited, because they attended scheduled one-on-one instructional sessions for 30 minutes with the facilitator or co-facilitator, working exclusively on their digital story. However, as feedback from colleagues was stimulated throughout the previous phase, participants were encouraged to continue doing so, since there were always two participants working at the same time in the classroom. Also, from the very beginning of the computer sessions, participants were encouraged to take notes if desired, as some of

them had their own computers at home and would like to continue working on their digital stories after the class.

Table 3.1.   Weekly Activities – Face-to-face course

Session	Activity
Week 1	Introduction to the course, course objectives, schedule and instructions on how to contact the facilitator and co-facilitator. Activity for participants to pair up and introduce each other to their colleagues. Activity to show two digital stories to participants. Activity for participants to share their impressions about the digital stories shown. Introduction to the eight types of stories list.
Week 2	Activity for participants to choose an object and share their observations about it. Introduction to the six elements of a story list. Introduction to the five plot stages of a story list. Activity for participants to listen to two Mp3 audio stories and identify the six elements of each story and their five plot stages.
Week 3	Introduction of the seven elements of a digital story list. Activity for participants to watch a digital story and identify its seven elements. WeVideo demonstration. Activity for participants to read their personal story out loud and receive feedback from colleagues, facilitator and co-facilitator.
Week 4	Activity for participants to read their reviewed personal story out loud, while the facilitator times them. Activity for participants to identify the five plot stages on their colleagues' personal stories and provide feedback.
Week 5	Activity for participants to watch an Mp4 video on the importance of images to digital stories. Introduction of the four imagery types list. Demonstration of how to find images on the Internet. Introduction of storyboard template to be used in the participants' personal story. Activity for participants to watch an Mp4 digital story, then see its storyboard template filled out. Activity for facilitator and co-facilitator to digitize participants' printed photos and images.
Week 6	One-on-one with the facilitator or co-facilitator, where participants learn how to create their personal WeVideo account and record themselves reading their personal story out loud.
Week 7	One-on-one with the facilitator or co-facilitator, where participants learn how to upload their digitized photos and find extra images on the Internet.
Week 8	One-on-one with the facilitator or co-facilitator, where participants learn how to assemble all uploaded images to match the narrative recording, according to their storyboard.
Week 9	One-on-one with the facilitator or co-facilitator, where participants learn how to choose available music and sound in WeVideo and adding them to their digital story.
Week 10	One-on-one with the facilitator or co-facilitator, where participants learn how to add visual transition effects between images, add an appearing story title on the screen and credits, and publish the digital story.

3.3.1. Week 1

In the first week of the course, the facilitator stimulated participants to partner up and get to know a little bit about each other, before introducing their pair to the rest of the group. Then, the facilitator proceeded to present the outline of the entire course, and finally showed two examples of digital stories. After showing the stories, the facilitator encouraged participants to comment what they thought about the stories, in order to fortify social connectedness.

During the discussion, the facilitator asked participants how they would classify the stories watched. For instance, whether the participants considered the stories to be happy or sad, if they contained a message of overcoming difficulties and achievements, or if they talked about lessons learned. The discussion would lead to the facilitator presenting a list (Table 3.2.) of eight types of story (Lambert, 2010), encouraging participants to think about their personal experiences, and under which type of story these experiences could be classified.

Table 3.2.   Types of stories

The story about someone important	Character stories center on a person who's touched you in a deep way. Often, these stories reveal as much about the narrator as about the subject of the piece. Memorial stories pay tribute to someone who passed away but left a lasting impression.
The story about an event in your life	Travel stories — stories about a personal journey or passage — can be effective if they result in the narrator being transformed by the experience in some way.
The story about a place in your life	Our sense of place serves as the focal point of a great many profound stories.
The story about what I do	People find value in their work, hobbies, or social commitments and can weave wonderful stories from their experiences in each.
Accomplishment stories	Achieving a goal, graduating from school, or winning an honor can easily fit into the framework of the desire-struggle-realization structure of a classic story.
Recovery stories	Sharing the experience of overcoming a tragedy, challenge, or personal obstacle is an archetype that always has the potential to move audiences.
Love stories	We all want to know how someone proposed, met a spouse, experienced the birth of a first child, or came to terms with a parent. Exploring these kinds of relationships helps affirm our own.
Discovery stories	These stories probe how we uncovered a truth or learned how to do something.

At the end of the class, the facilitator asked participants to bring some photos or objects that reminded them of a personal experience for an activity on the following week. The facilitator reminded participants that, if they already had a specific event in mind that they wished to turn into a digital story, the photos or object did not have to be related to it necessarily.

3.3.2. Week 2

In the second week of the course, the facilitator began the class by asking participants to arrange the chairs in a circle and place their photos or objects on a table, so their colleagues could pick up one item randomly and tell the others which personal story was evoked by the chosen item. Once all participants shared their stories, the facilitator asked the person who brought the item to share the actual story behind it. This activity was intended to stimulate participants to go home and realize that they were surrounded by the memories contained in their personal belongings. Their belongings could not only evoke a glimpse of memory, but they would begin to reflect on which type of story this memory would fall under, and the life reflections that it possibly evoked.

In the following activity, the facilitator played two Mp3 audio short stories. After playing the stories, the facilitator presented Lambert's (2010) six elements that make a good story (Table 3.3.), and the five plot stages of a story (Table 3.4.).

Table 3.3.   Elements of a story

Setting	What does the listener/viewer need to know about place, time, weather conditions, social conditions, mood?
Plot	What happens? Beginning, middle and end.
Character	Who is in the story? What does the audience need to know about them?
Conflict	Necessary to make an engaging story. It could be a personal struggle (an inner battle), a physical struggle (a fight), societal (not allowed to work as a woman), any internal or external opposition that the character faces.
Point of View	In the digital story, you are the story teller. You may be telling it about yourself or someone else.
Theme	What is the meaning behind the story? What is the story wanting to tell the audience about life?

Table 3.4.   Plot stages of a story

Exposition	This is the start. It sets up your story with the background information – Who are the characters? Where are you? When?
Rising Action	The event that lead up to your climax. What obstacles present themselves, what happened that created the situation?
Climax	This is the peak of the story. The main excitement, the main event, or point of change.
Falling action	The events, feelings, thoughts, etc., that happen after the climax. How did they contribute to the resolution?
Resolution	The end of the story. Was it resolved? How did the events change the person, the situation, the direction of life, etc.

As a group exercise, the facilitator asked participants to identify the six elements of the stories and their five plot stages. This activity aimed at providing participants with a template that allowed them to see how every story follows well-defined structures (e.g., beginning, middle and end linearity), and that these structures helped not only the audience to understand the story and appreciate it, but that they also guided the author in the writing process.

3.3.3. Week 3

In the third week of the course, the facilitator showed a digital story produced by one of the first participants to take the Elder's Digital Storytelling Course. Her story contains all the seven elements of digital storytelling (Lambert, 2010), and, for this reason, the facilitator presented these seven elements (Table 3.5.) on the following PowerPoint slide, and encouraged participants to identify them in the digital story seen.

Table 3.5.   Seven elements of digital storytelling

Point of View	What is the main point of the story? What is the perspective of the author?
A Dramatic Question	A key question that keeps the viewer's attention and will be answered by the end of your story.
Emotional Content	Serious issues come alive in a personal and powerful way, connecting the audience to your story.
The Gift of Your Voice	A way to personalize your story to help the audience understand the context.
The Power of the Soundtrack	Music or other sounds that support and embellish your story.
Economy	Using just enough content to tell your story without overloading the viewer.
Pacing	The rhythm of your story. How slowly or quickly your story progresses.

After the activity of identifying the seven elements in the digital story watched, the facilitator logged into their WeVideo account and did a brief demonstration of:

1. how to record their voice reading out loud a short story of only a few phrases long,

2. uploading three digitized photos to the account,

3. matching the photos with the specific parts of the recorded story,

4. adding available soundtrack music from WeVideo that matched the theme of the story (happy, funny and upbeat),

5. adding fading transitions between the images,

6. adding the story's title on the screen in the first few seconds,

7. adding the final credits at the end, and

8. publishing the digital story.

The entire process took approximately 25 minutes. Participants were not encouraged to take notes, much less memorize any of the steps, as the facilitator clarified before and after the demonstration that it was merely to show them the entirety of the process, and that they would have five weeks to do the process, during the one-on-one sessions.

For the final activity, the facilitator asked participants to partner up and tell each other any ideas that they had for their digital stories. After giving time for participants to talk to each other, the facilitator asked to each one of them to share their idea or ideas

with all colleagues. If a participant shared more than one idea and seemed unsure about which one to choose, the facilitator asked the others to voice their preferences, in order to motivate them. Once all participants shared their stories, the facilitator asked them to bring a rough draft of their stories for the following week.

3.3.4. Week 4

In the fourth week of the course, the facilitator showed the five plot stages of a story on a PowerPoint slide and asked each participant to read their story draft out loud, so their colleagues could identify the stages, provide feedback on what they liked about the story, what they would like to see added and what could be made clearer. While each participant read their story, the facilitator would time how long the story took. After each participant finished reading their story and their colleagues provided their feedback, the facilitator provided their own feedback, and suggested tweaking alterations, in case the reading lasted for longer than 8 minutes.

At the end of the class, the facilitator asked participants to continue working on their stories, try to incorporate any feedback received, and bring the reviewed version for the following week. The facilitator also asked participants to bring photos they wished to have digitized and included in their digital stories.

3.3.5. Week 5

In the fifth week of the course, the facilitator led participants through a process of understanding the importance of images to their digital stories, in order to help them begin the process of building their own storyboards. Most importantly, the activities proposed aimed at making participants understand that the images appearing as they narrate each part of the story do not need to be personal photos, but images that they believe to transmit the essence of that situation. Thus, the facilitator also introduced the process of using the Internet to search for free images.

Initially, the facilitator showed a short Mp4 video of a person talking about how they are transported to lived experiences when looking at personal family photos, some of

them taken by themselves, and some passed down by their parents. After the video, the facilitator showed a PowerPoint slide (Table 3.6.) with the four imagery types list (Lambert, 2010), which presented the conceptual ideas formed by the spectator, according to the type of images seen.

Table 3.6.   **Imagery types**

Explicit Imagery	Imagery that is direct and means exactly what it is, a viewer does not need to interpret the image.
Implicit imagery	Imagery that represents or implies something other than the direct meaning of the image. Juxtaposition and visual metaphor are two types of implicit imagery.
Juxtaposition	By placing an image beside another to show how it is the same or different, you are juxtaposing the images. An example is a kitten being shown with tissue paper in an ad. Another example would be telling a story of poverty and having an image that shows the nearby wealth.
Visual metaphor	When you use an image to convey a meaning that is something other than what is being said, you are using a visual metaphor. For example, you might say and "then it happened" and use the image of a bird flying free. You would be using the picture to show the idea of suddenly gaining freedom from something versus saying "then it happened – I was free."

The next activity was aimed at assuring participants that, if they did not have personal photos to cover all points of their stories, the facilitator would help them use the Internet to find extra images labelled for non-commercial reuse. In this activity, the facilitator stimulated participants to think of an image which they would like to show in their digital story, but did not have it. The facilitator chose one image mentioned and, using the Internet browser in the laptop connected to the screen projector, searched for the image using the Google Images browser. The search was refined by choosing the search tools that restricted results only labeled for non-commercial reuse, and explained to participants about the importance of not infringing any royalty rules. At this point, participants were reassured that the entire process would be done with the assistance of the facilitator or the co-facilitator during the one-on-one sessions in the following week.

After showing participants that they could think freely about which images they would like to include at each part of their story, the facilitator showed a sequence of PowerPoint slides containing an example of a blank storyboard template (Figure 3.2.), and the same template filled out with the images and parts of the script of a short digital

story to be watched right after. The facilitator played the Mp4 digital story on the screen projector, then returned to the PowerPoint slides with the filled-out storyboard templates, in order to reinforce what had just been watched. Finally, participants were asked to fill out their blank storyboards until week 7.

Figure 3.2.   Blank storyboard template

<div style="border:1px solid black;">

SFU Elder's Digital Storytelling Course

Digital Storytelling Storyboard

Each box represents one slide in your digital story. Describe the image that you already have or would like to search for, and the soundtrack music that should be playing while the image appears. Then, write down the . The more you plan ahead of time, the easier it is to create your digital story. Copy as many storyboard boxes as you need to plan your digital story.

Image *(describe the image)*:

Audio *(music, sound effects)*:

Narration *(the actual text that you would record to accompany this slide)*:

Image *(describe the image)*:

Audio *(music, sound effects)*:

Narration *(the actual text that you would record to accompany this slide)*:

Image *(describe the image)*:

Audio *(music, sound effects)*:

Narration *(the actual text that you would record to accompany this slide)*:

</div>

The last activity was conducted by both the facilitator and the co-facilitator, who used their mobile phones to take digital pictures of the personal photos brought by participants. The digital images were saved on the facilitator's flash drive, and a copy was saved in separate flash drives given to each participant, as a gift for taking part in the course. In their flash drives, a copy of the blank template was also saved, in case they needed more than four pages. Participants were asked to bring their flash drives every week until the end of the course, when their final digital story would be saved in it.

At the end of the class, the facilitator and the co-facilitator scheduled one-on-one sessions with participants, in order to make sure that they received at least 30 minutes (or more, if there were less than eight participants) of individual instruction. The sessions were scheduled in a sequence of two participants arriving at every 30 minutes to work with either the facilitator or the co-facilitator. Since WeVideo is an online software, participants' personal accounts could be accessed from any device. Thus, participants were told that they could bring their own laptops if desired, but laptops would be brought for the course, in case they did not have their own. Finally, participants were told that they were welcome to bring their own device and continue to work on their digital story. However, after their individual scheduled one-on-one, the facilitators would not interrupt their current sessions with the next participant to answer questions, otherwise it could disturb the learning process of the participant currently being assisted.

3.3.6. Week 6

In the sixth week of the course, participants arrived at the scheduled time for their one-on-one WeVideo session with either the facilitator or the co-facilitator. In their very first video editing session, participants were taught how to access the WeVideo software website, so they could create their personal accounts. Upon creation, the facilitator or co-facilitator emailed the participant's login to the course coordinator, in order to have the account upgraded.

After creating their personal account, participants learnt how to access the recording option in WeVideo, which used the built-in microphone on the laptop, and record themselves reading their stories out loud. This recording process was very

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important for the participants to visualize their voices in a horizontal timeline on the screen. They were told that this timeline was the basis of their story, and that they would add the visual aspects along that line.

Finally, participants were asked to bring their finished storyboards, so they could upload their digitized photos saved in their flash drives, and search for extra images on the Internet in the following week.

3.3.7. Week 7

In the seventh week of the course, participants arrived at the scheduled time for their one-on-one WeVideo session with either the facilitator or the co-facilitator. In this session, participants brought their storyboards ready, which made it easy for them to define which images were already in digital form, and which images they would need to search for in the Internet. First, participants learnt how to upload the digitized photos from their flash drives to their WeVideo accounts. Then, they learnt how to access Google Images to conduct a search for the desired images, by applying the filter that only showed images labeled for non-commercial reuse, so their digital stories would not have any royalty infringement. When they found an image that matched their expectation for the specific part of the storyboard, they learnt how to save it to their flash drives. If the image search was needed, they also learnt how to create a separate Word file to be saved in their flash drives, where they registered a brief description of the image, and copied the URL where the image had been found. Later, the URLs were copied and pasted on the digital story's final credits.

For the following week, participants were asked to bring their storyboard again, in order to arrange the images in a timeline that accompanied the voice recording timeline.

3.3.8. Week 8

In the eighth week of the course, participants arrived at the scheduled time for their one-on-one WeVideo session with either the facilitator or the co-facilitator. Since all images were uploaded to their WeVideo accounts, participants learnt how to use their

storyboards as guides to assemble the sequence of images, by dragging them from the uploaded images file to the image timeline located on top of their voice recording. When placing the image on the timeline, they learnt how to increase or decrease its length, so it was shown on the screen during the determined part of the narrative.

3.3.9. Week 9

In the ninth week of the course, participants arrived at the scheduled time for their one-on-one WeVideo session with either the facilitator or the co-facilitator. This week, participants learnt how to use the available music and sounds (e.g., doorbell or telephone ringing) from the WeVideo media stock, add it to a timeline below the narrative, and regulate the volume, so it would not be louder than the recorded voice track. It was necessary for the participant to take their time in the process of choosing the soundtrack, as it was an important element to set the mood of the narrative, and they could choose different soundtracks for each part of the digital story.

3.3.10. Week 10

In the tenth week of the course, participants arrived at the scheduled time for their one-on-one WeVideo session with either the facilitator or the co-facilitator. During the last week's session, participants learnt how to add visual transitions (e.g., fading in and out) between the images, so there would not be an abrupt flash when a new image appeared on the screen. Then, participants learnt how to add the title of the digital story appear and disappear on the screen at the beginning. Finally, they learnt how to add the final credits at the end of the digital story and, if there were any extra images retrieved from the internet, they also learnt how to copy and paste the URL for each image from the Word file saved on their flash drive to the credits.

Once all elements of the digital story were ready, participants learnt how to publish it on their WeVideo accounts and download it to their flash drives. In addition to creating an Mp4 video file of the digital story, WeVideo also created a link, which can be accessed from anywhere, and access the digital story stored in the participants personal

account. Thus, participants learnt how to copy and paste the link in the Word file saved on their flash drive, so they could email the link to friends and family.

3.4. Online course

The adaptation of the face-to-face course to its fully online version used instructional content scaffolding (Jonassen, 1999) in order to ensure that the concepts and skills to be learnt were taught through written instructions and instructional videos that matched the participants' reality and needs. By designing the instructions to gradually introduce and reinforce each new concept, participants would be provided with the necessary support to build their own knowledge, before the support was replaced with new information. Like the original face-to-face course, the design of the online version was also comprised of two integrating phases (story writing and story digitization). The online course was available for participants on the learning management platform Canvas for a period of ten weeks.

The instructional material was organized in weekly modules (entitled Week 1 to Week 10), which were subdivided into sections. The modules contained an average of three sections. Each section contained only one concept to be learnt or activity to be completed by participants. This format minimized clutter and allowed the written instructions to be grouped with white spaces to ensure a clean layout (Silva et al., 2015; Romano-Bergstrom et al., 2013; Strengers, 2012).

In the course introduction, participants were told that the time estimated for the activities of Week 1 to Week 4 would be about two hours per week, and about four hours from Week 5 to Week 10. Therefore, the total amount of time dedicated to the course would be approximately 38 hours, depending on their dedication.

Phase one, from Week 1 to Week 5, helped participants to become writers, by providing them with theoretical writing structures (e.g., what constitutes a story arc and the key elements for the development of a story), and through activities that stimulated their creative and analytical skills based on the theoretical writing structures provided.

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Phase two, from Week 6 to Week 10, taught participants how to use WeVideo through instructional videos, in order for them to turn their written story into a short digital movie.

In phase one, participants went through a series of activities adapted from the original face-to-face course, where they were presented with written instructions, accompanied by images, Mp3 audio (e.g., audio narrated short stories) files and Mp4 video files (e.g., short digital stories). All the written instructions, accompanying material, as well as every short example story that I developed contained an informal tone and used scenarios or events that rang true to the older adult cohort (Silva & Nunes, 2010). The informal tone was friendly and spoke directly to the reader, as if they were reading notes written by a personal friend in a simple sentence structure and in active voice, avoiding technical terms as much as possible (Kascak et al., 2015; Silva et al., 2015; Phiriyapokanon, 2011).

Every module of phase one contained a forum for participants to post what they had produced on the weekly activity. The forum post was the way found not only for me to control individual participation, but also to stimulate social connectedness (Hawthorn, 2006), by encouraging participants to provide positive feedback on their colleagues' posts.

In phase two, like in the face-to-face course, opportunities for socialization among participants became limited, because the activities were focused on the editing of their personal digital stories. From Week 6 to Week 8, there were no forums where they could post comments and communicate with colleagues. They only received feedback from the facilitator, who could also be contacted at any time via email or schedule a Skype session.

This division of sections comprised the scaffolding learning process, which provided participants with several examples, theory on how to write and structure a story, activities to exercise their writing abilities, and opportunities for social connectedness through forum posts. The distribution of the course content was based on the original ten-week format of the face-to-face course (Table 3.7.).

Table 3.7.   Weekly Activities – Online course

Section	Activity
Course outline	Course introduction, objectives, schedule and instructions on how to contact the facilitator. WeVideo demonstration video.
Week 1	Introduction to the concept of legacy. Activity for participants to introduce themselves to colleagues. Introduction of the three sources of inspiration for a story list. Activity for participants to share a personal experience with colleagues containing elements from the sources of inspiration list.
Week 2	Activity for participants to create a short story about a given picture. Activity for participants to listen to three Mp3 audio stories and share their personal impressions about one of them with colleagues. Introduction to the five plot stages of a story list. Activity for participants to share the first draft of their personal story and receive feedback from colleagues and the facilitator.
Week 3	Activity for participants to watch three Mp4 digital stories, choose one and define its five plot stages.
Week 4	Activity for participants to review the first draft of their story and share it once more to receive feedback from colleagues and the facilitator. Activity for participants to time themselves reading their personal story out loud. Activity for participants to turn their personal story into a script.
Week 5	Activity for participants to select the images to be used in their digital story. Written instructions on how to digitize printed photos. Activity for participants to turn their script into a storyboard. Video instructions on how to find images on the Internet.
Week 6	Video introduction to WeVideo. Video instructions on how to create their personal WeVideo account. Video instructions on how to upload digitized images to WeVideo.
Week 7	Video instructions on how to record the voice reading the story out loud.
Week 8	Video instructions on how to add the digitized images to the recorded narrative. Video instructions on how to add visual effects to the assembled digitized images. Video instructions on how to add a digital title at the beginning and end credits at the end of the digital story.
Week 9	Video instructions on how to add a soundtrack to the digital story. Publishing the digital story. Activity for participants to share the published digital story with colleagues.
Week 10	Activity for participants to provide feedback on colleagues' shared digital stories.

By accessing the learning management platform Canvas, participants were initially taken to the homepage (Figures 3.3. and 3.4.), which introduced the study developed by SFU, and showed the Internet link to a digital story produced in one of the face-to-face courses and an Internet link to a brief demonstration video on how the video

editing process would take place on WeVideo. Both Mp4 video files could be accessed through Internet links to the hosting website YouTube.

Figure 3.3.   Canvas homepage 1
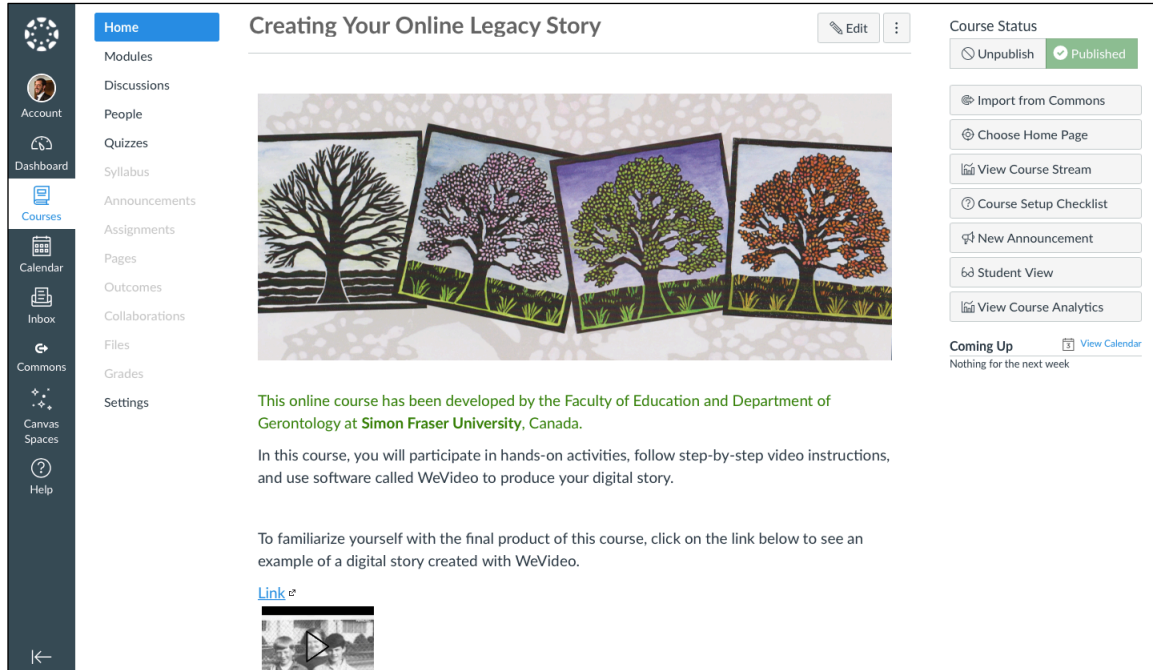
Figure 3.4.   Canvas homepage 2
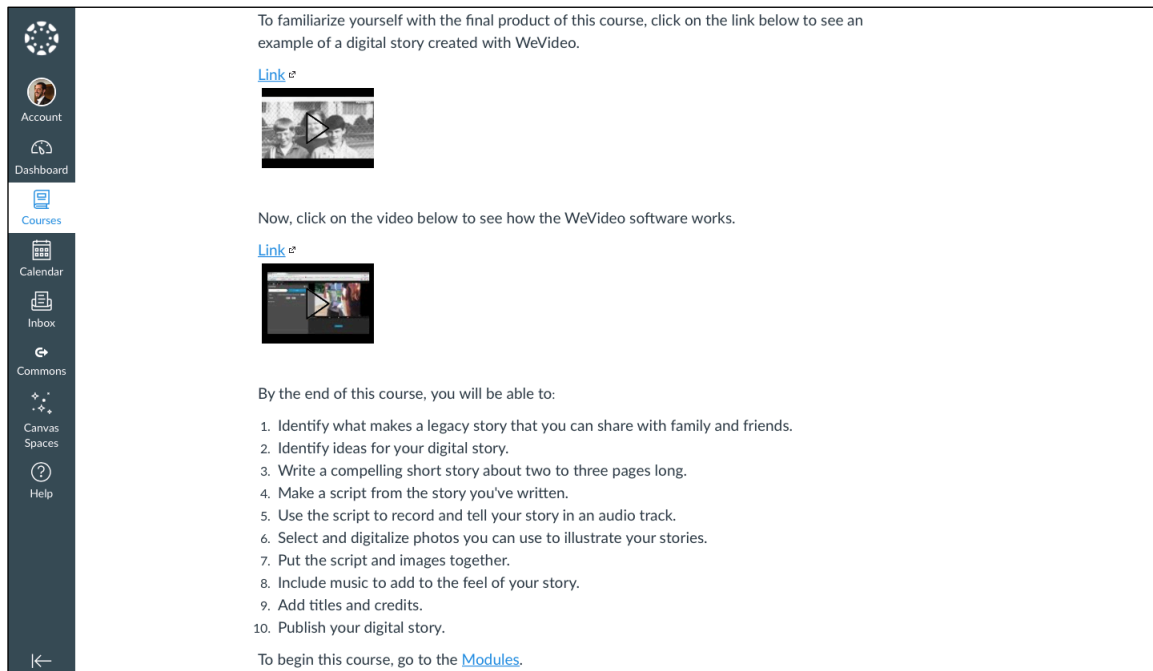
At the bottom of the homepage, participants were instructed to click on the button that led them to the weekly modules, where all the instructional content was distributed. Figure 3.5. shows participants' view of the modules, including the Course outline module. Figure 3.6. shows the sections of Week 1.

Figure 3.5.   Canvas weekly modules page 1
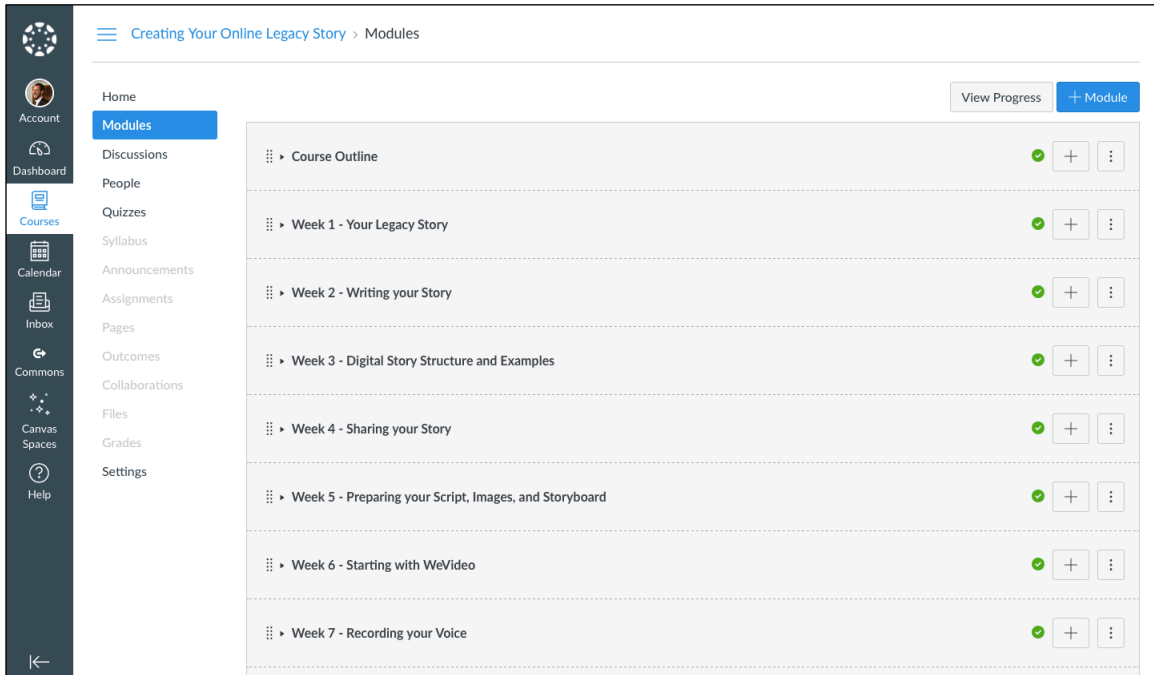
Figure 3.6.   Canvas weekly modules page 2
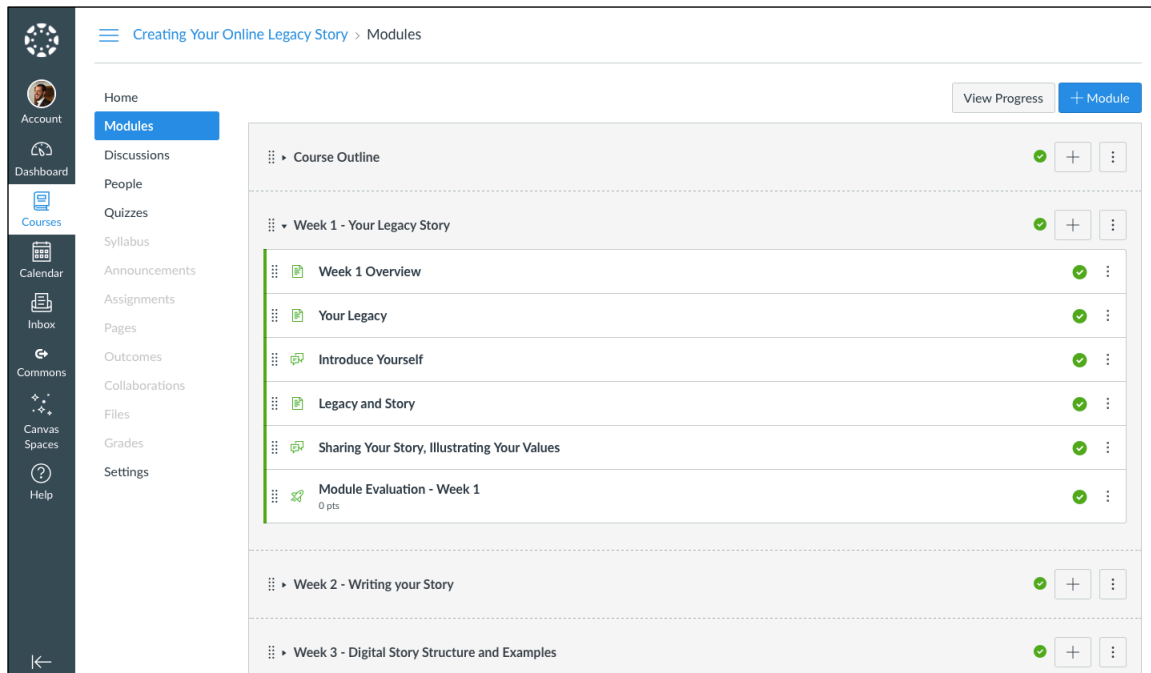
The course outline module contained five sections: (1) course introduction, (2) course objectives, (3) course schedule, (4) how to contact the facilitator, and (5) the pre-questionnaire for the research.

Written information design

The choice of font style or spacing (Arial, 1.5) for all modules could not be altered on Canvas, only the size, color and whether it would be in bold or italics. I chose to maintain a pattern of size 14, black and would only use bold, all caps or colors to emphasize information (Carmien and Garzo, 2014; Miño, 2013; Weinschenk, 2011). Every chunk of information was separated by one line of space to make eye scanning easier. The choice for the background color was plain white and, whenever an image was displayed, the text describing it would be placed before it, never on top of it (Campbell, 2015; Pernice et al., 2013; Ligons et al., 2011).

Vertical scrolling was avoided as much as possible, even though it did not create the possibility of participants missing out on information located at the bottom, because the command button that led them to the next section was placed beneath it. Thus,

participants had to scroll down in order to move on to the next section or module. Also, participants were not at risk of missing out on information by not scrolling horizontally, because Canvas does not offer this option (Silva et al., 2015; Carmien and Garzo, 2014; Pernice et al., 2013; Nunes et al., 2012).

Facilitator's presence

Initially, the online course was designed in a way that participants would be able to finish it without the guidance of a facilitator. The initial goal was based on the idea of finding out whether or not the course could be offered widely to the public. The absence of the facilitator and the fact that participants could complete the activities in their own pace within the stipulated ten weeks would allow them to enroll from anywhere, at any time, without the normal constraints associated to the face-to-face course (e.g., a minimum number of people enrolled, and matching time schedules of all parties involved). Thus, all the content was made available from day one (Miño, 2013; Stößel, 2012), instead of gradually releasing the sections of each week, and the email contact of the facilitator was displayed in every week's overview in case participants had questions.

The solution encountered was also the first barrier to the goal, since the platform was originally designed for facilitators to release the modules at a scheduled time, which they can program it or do it manually. When a new module is made available, Canvas automatically sends out an email notification. However, the gradual release of new content is the way how participants normally know where they have been last, provided that they follow the schedule. Canvas does not contain a tool which informs participants where they have been last, every time they log in again (Carmien and Garzo, 2014; Miño, 2013; Phiriyapokanon, 2011). So, the only way for participants to know was to either personally keep track by taking notes or verify each weekly forum to find out where they posted last.

In order to avoid the possibility of participants feeling lost, each new weekly module began with a summary of what had been accomplished so far (Affonso de Lara et al., 2010). It was believed that, after logging in, participants would most likely go the first section of a module, even if they were not certain about which ones had already been

concluded. This design plan worked with the three participants recruited for the pilot test phase. During the field test phase, on the other hand, after the 13 recruited participants completed all activities of Week 1, only two participants continued completing the activities within the following week. Thus, I decided to begin emailing participants separately every week with encouraging feedback about their personal development in the activities (Campbell, 2015; Phiriyapokanon, 2011; Wilkinson, 2011), and offering online help through Skype software. The choice for emailing participants separately instead of posting feedback on the forums was taken because I did not want to break the already established pattern of the facilitator not being present on Canvas.

To receive Skype assistance, participants were instructed to email the facilitator with possible dates and times to schedule the online meeting. The decision to offer online help was taken in order to provide participants with a sense of security before taking any actual actions on Canvas or WeVideo that would make them afraid of embarrassing themselves or even deleting important information by mistake (Hill et al., 2015; Raymundo and da Silva Santana, 2014; Arch et al., 2008). The part in the email that offered online assistance explained that Skype contained a screen sharing option, which allowed participants to actually show the problem they were facing to the facilitator, instead of describing it.

Instructional videos design

In order to teach participants how to use WeVideo, I created a series of instructional videos comprised of a brief animated PowerPoint introduction and screen captures of a digital story being edited (Figures 3.7. to 3.9.). The screen capture option of the software QuickTime Player was used to record the animated introduction, as well as WeVideo being used to edit a fictional story. The fictional story, entitled The Pie Eating Champion, was also created by me to be used as the tool that exemplified all scaffolding stages, until it became a digital story. The recordings were then edited with my narrating voice and a low volume instrumental soundtrack. The Internet link to each instructional video was always placed one space below the end of the written instructions, using a blue

Arial 14 font, in order to ensure that the clicking target was big enough, and to maximize the clickable area (Nielsen, 2013; Wirtz et al., 2009; Hawthorn, 2006).

Figure 3.7.   Instructional video for WeVideo 1

Figure 3.8.   Instructional video for WeVideo 2

Figure 3.9.   Instructional video for WeVideo 3
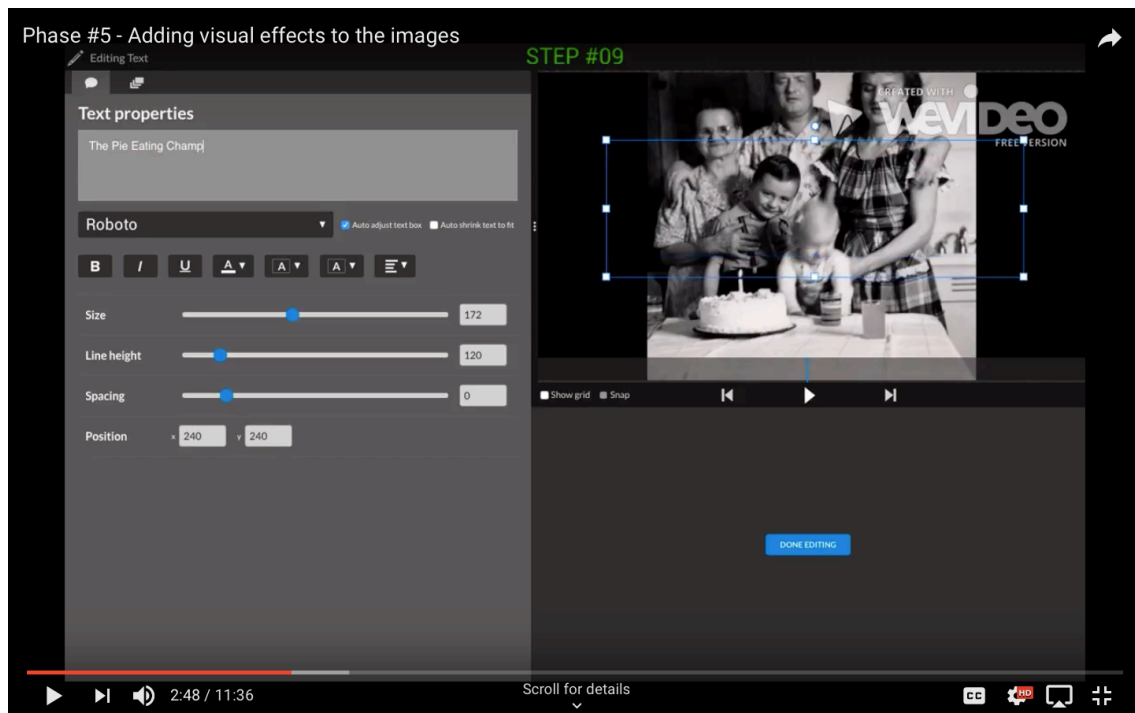
The volume of the final version of each instructional video was configured to be controlled by the participant to make sure that, if turned to its maximum volume, it could be heard by participants with hearing disabilities (Mitzner et al., 2015; Carmien and Garzo, 2014).

Because I am of Brazilian nationality, the inevitable accent was noticeable in the instructional videos' narrating voice. The accent could have presented a problem for native English speaker participants or participants who were not used to the specific Brazilian accent (Mitzner et al., 2015; Charness and Boot, 2009). However, given my previous experience facilitating a number of face-to-face courses and not having any problems being understood, the accent in the instructional videos was not seen as possibly incomprehensible at times. The rhythm adopted to narrate the instructions was based on my interactions during the face-to-face course interactions, using a soft, steady and continuous tone.

Although Canvas allowed me to make sure that the screenshot layout was uncluttered by selecting the font and background colors, and distributing the information as desired, that was not possible with WeVideo. This was seen as a possible problem, since WeVideo's screenshot layout colors tend to be dark and full of commands. And, what was easily dealt with at the face-to-face courses, by having facilitators simply pointing at the command on which the participants should click, could not necessarily be done with the homemade nature of the instructional videos' recording process. The software QuickTime Player did not allow the mouse pointer size to be altered, highlighted or to have a tracking effect added to it, which meant that all instructional videos displayed a normal size white mouse pointer moving on a dark layout screen as the digital example story was being edited on WeVideo. In order to prevent possible problems of the older adult cohort having difficulty to scan the screen and follow the commands being done by the mouse cursor (Carmien and Garzo, 2014; Kerber, 2012; Czaja and Lee, 2007), I maintained a pattern of always describing the screen location of every command button to be clicked on (Eagleman, 2011), describing the color and shape of all command icons to be clicked on (Kascak and Sanford, 2015), and mentioning

whether participants should use a single or double click for the command (Carmien and Garzo, 2014).

The fact that WeVideo's screenshot layout was naturally cluttered prevented subtitles to be added, or an option of closed caption for participants to also rely on a written source of instructions as they watched the instructional videos (Chisnell et al., 2006; Hawthorn, 2006).

The PowerPoint animations that initiated the instructional videos (Figures 3.10. to 3.13.) contained very few words displayed on each slide and used as many images as possible to illustrate the activity to be performed in the lesson, so participants would understand the goals in a direct and succinct manner (Pernice et al., 2013; Affonso de Lara et al., 2010; Arch and Abou-Zahra, 2008).

Figure 3.10.   Instructional video for WeVideo 4
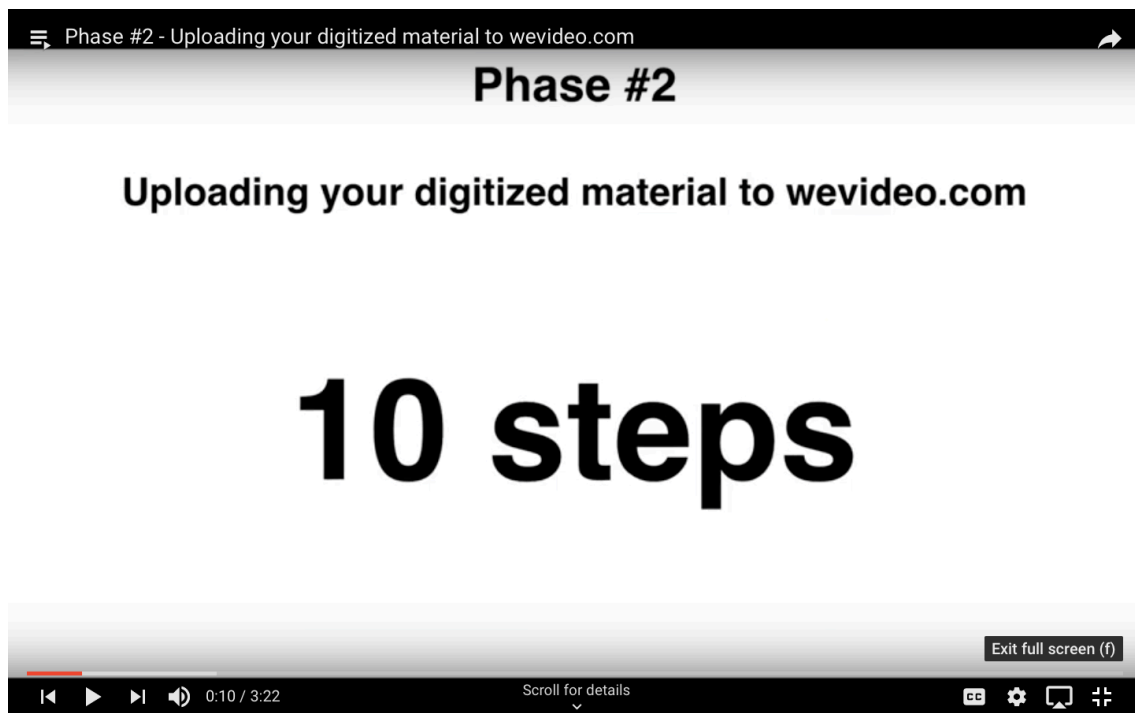
Figure 3.11.   Instructional video for WeVideo 5
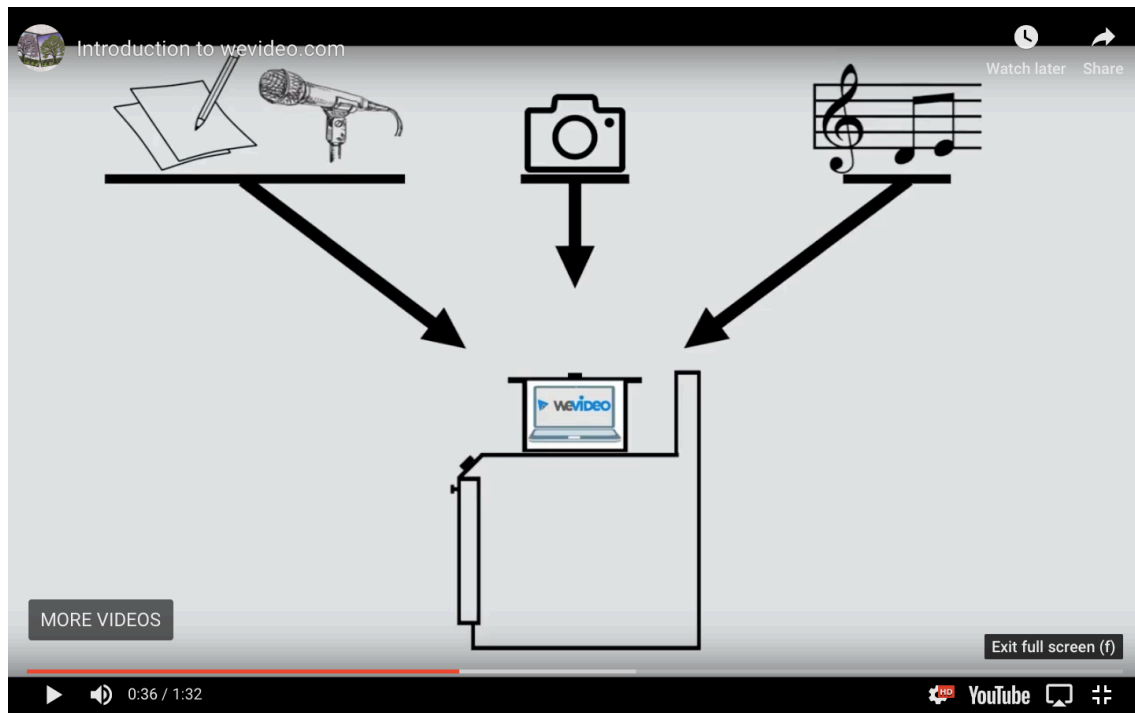
Figure 3.12.   Instructional video for WeVideo 6

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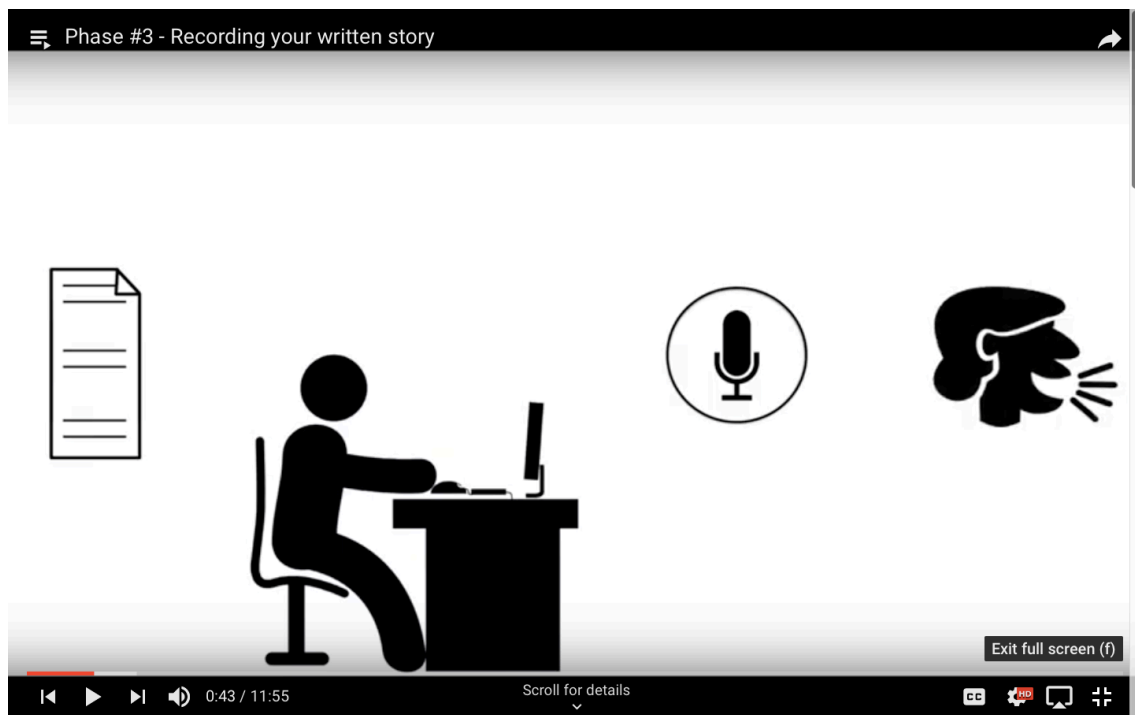
Figure 3.13.   Instructional video for WeVideo 6
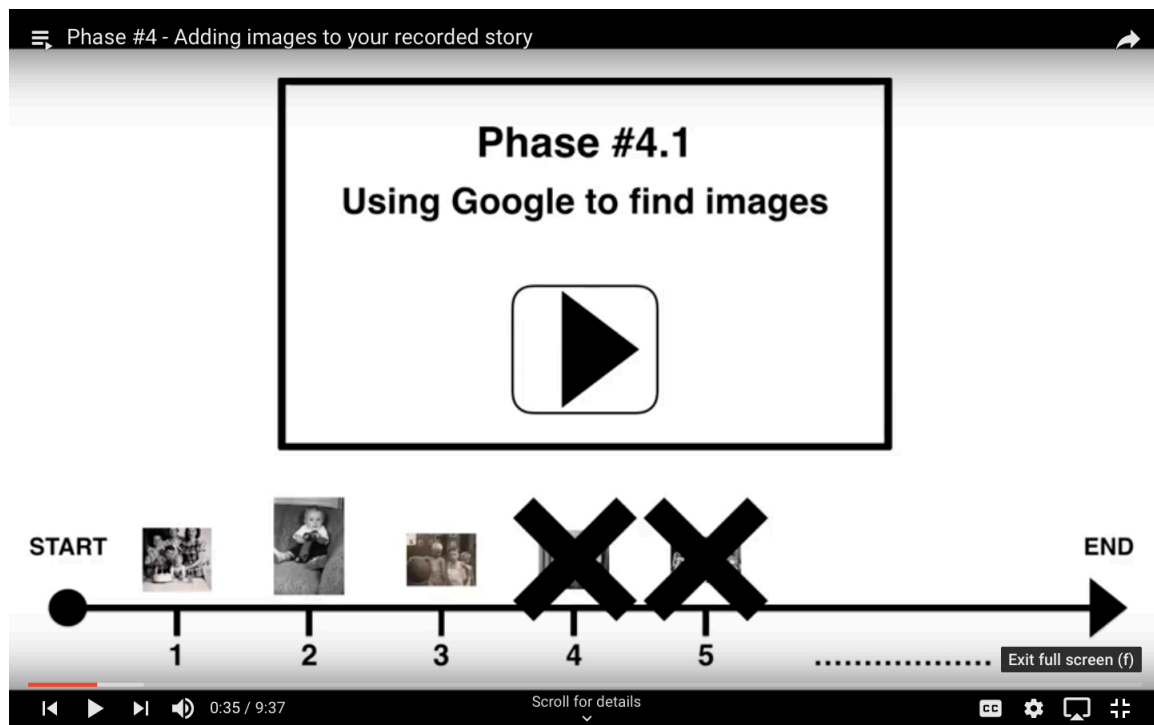
The animation always announced the goal of the lesson (e.g., using Google to find images), then informed the number of steps to be followed (Kascak and Sanford, 2015; Campbell, 2015; Jahn and Krems, 2013; Nunes et al., 2012), and finally showed illustrations that summarized the process before initiating the actual screen capture of WeVideo being used. Once the video editing tutorial began, the step number would appear continuously on the top of the screen in a highlighted large font to stand out (Czaja and Lee, 2007; Hart et al., 2008; Plaza et al., 2011; Hawthorn, 2006). Thus, participants were able to know exactly how many steps were missing to accomplish the task at all times. The average length of the videos was of seven minutes long, with an average of 10-15 steps to be followed.

One problem found during the design of the instructional videos was that WeVideo is an online software, which means that its layout, location of command buttons and features could be changed at any point without prior notice. Luckily, no changes were made within the days that I was recording them, and very few layout changes were made during the two test phases of the course. The small changes noticed

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did not prevent participants from seeing the same screen on the instructional videos and on their personal WeVideo accounts. However, participants were constantly reminded in the weekly feedback email from the facilitator that, in case they experienced any difficulties with their account, they could schedule a Skype session. The decision to reinforce the Skype assistance instead of simply announcing possible changes on WeVideo that could bring them problems was made in order to provide them with a sense of security instead of tension.

3.4.1. Week 1

The overview section of Week 1 explained to participants that they were going to (1) learn more about the concept of legacy storytelling, (2) introduce themselves in the module's first forum, (3) learn about the three sources of inspiration according to author Robb Lucy (2017), and (4) share a personal experience evoked by the three sources in the Module's second forum, not necessarily related to the story that participants wished to turn into a digital story.

In the following section, participants were presented with a brief introductory text, aimed at immersing them into the idea of creating a digital story to register their own legacy. And that this legacy would not only enhance their own lives, but also the lives of the people who cared about them.

Participants would then move on to the next section, where they presented themselves in a post on the module's first forum. The section contained encouraging words that asked participants to tell others about themselves and their interest in digital storytelling in a few words, in addition to a short explanation on how to create a post on the forum and a link to an instructional video showing how to make a post.

Once participants introduced themselves, they moved on to the following section, where they learnt about the three sources of inspiration (Lucy, 2017) that serve as foundation for a personal story: (1) values, such as bravery, calmness, friendliness etc., (2) skills, such as teaching, self-reliance, calmness etc., and (3) talents, such as swimming, acting, knitting etc. Each of the sources and their respective examples were

presented in letters with font colours different from the original black colour used for the instructions throughout all sections. The values were followed by a written short story that was announced as being an example of bravery, teaching and swimming. I created the fictional story with the sole purpose of providing participants with an example of what was expected in the following section: a short story written in an informal and personal tone, with logical timeline of beginning, middle and end. The story told the experience of a fictional character who, as a child, developed a fear of water after almost drowning in a pool. Later, he decides to take swimming lessons to overcome his fear, as his child keeps asking him to go to a public pool.

Finally, participants moved on to the last section, where they were asked to share a personal experience in the module's second forum, based on the three sources of inspiration. The instructions reinforced that the experience did not need to contain examples of all three sources, and that it would not necessarily be the one that was going to become their digital story. The instructions also encouraged participants to provide positive feedback on their colleagues' posts.

3.4.2. Week 2

The overview section of Week 2 explained to participants that they were going to (1) participate in an activity to stimulate their story writing skills in the module's first forum, (2) participate in an activity to stimulate them to think about the aspects that make a good story in the module's second forum, (3) learn about the five plot stages of a story, and (4) post the first draft of their personal story using the five stages of a story plot as guide in the module's third forum.

The following section contained the first activity, which stimulated participants to let their minds loose and think about a story that could be fictional or reminisce on personal experiences, based on one of four given pictures showing people in a variety of scenarios (a man face-to-face with a giraffe, children skipping waves on a beach, a grownup learning how to ride a bicycle, and a couple having dinner on the edge of a cliff), then post it in the module's first forum. In order to give participants a push, the first picture had an example of what was expected: a short story in only three or four

sentences. The example story used a happy and informal tone to tell the experience of a professional photographer who befriended a baby giraffe while photographing in Africa, Years later, the man was recognized by the animal, while visiting the same location.

Participants would then move on to the next section, where they were asked to listen to three Mp3 audio story examples (accessed through links to an external hosting website), and to pay attention to the speech pattern of each narrator, as well as their personal narrating styles. Upon listening to all three, participants were asked to choose their favorite one and explain the reasons why they believed it was a good story in the module's second forum. The instructions also encouraged participants to provide positive feedback on their colleagues' posts.

Once participants posted in the module's second forum, they moved on to the following section, where they were presented with the five plot stages of a story (Lambert, 2010). The definition of each stage was the same used in the face-to-face course. However, they were followed by an example short story, which I created to serve as basis for all the processes that would culminate into the creation of the participants' digital story. The example short story was entitled The Pie Eating Champion, and presented the reminiscence of a fictional character who, as a child, learns that his grandmother had won a pie eating contest. By joining the contest, he acquires from her a taste for baking pies, which is concluded in his reflections to be what motivated him to go to culinary school and, later, open up a bakery.

Finally, participants moved on to the final section, where they were presented with Lambert's (2010) eight types of story, with the same definitions used in the face-to-face course. Following the definitions, participants were asked to use all the structural elements provided and the examples to stimulate them, in order to think of the personal experience that they wished to turn into a digital story, then post its first draft in the module's third forum. The instructions also encouraged participants to provide positive feedback on their colleagues' posts.

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3.4.3. Week 3

The overview section of Week 3 explained to participants that they were going to (1) watch three examples of digital stories produced in the original face-to-face course and (2) participate in an activity to fixate the five plot stages of a story by posting on the module's only forum.

The following section contained the first activity, which asked participants to watch three digital stories produced in earlier face-to-face Elder's Digital Storytelling courses. The three stories were presented in order of complexity (i.e., length, variety of soundtrack songs used, number of photos shown and even pieces of Mp4 video files showing one of the narrators). Participants were told that the purpose of the order (from simple to complex) was to show that their digital story did not need to be complex in order to have quality, since the structure of how the story was told was the most important element. The Mp4 video files were accessed through links to an external hosting website.

Once participants watched all three digital stories, they moved on to the last section, where they were again presented with the five plot stages of a story (Lambert, 2010), and asked to choose one of the stories, so they could identify the stages and post them on the module's only forum. The instructions also encouraged participants to provide positive feedback on their colleagues' posts.

3.4.4. Week 4

The overview section of Week 4 explained to participants that they were going to (1) review their story draft to make sure that it contained essential structural elements, (2) participate in an activity to estimate the time length of their story, (3) post their final story draft after the activity on the module's only forum, and (4) learn how to turn the final draft into the script for their digital story.

The following section contained a brief text encouraging participants to revisit their current story draft, in order to make sure that the beginning, middle and end were

clearly defined, and that all five plot stages were covered. If they were happy with the result, they should first participate in the activity at the following section, and then post it in the module's only forum, so their colleagues could provide them with feedback.

The activity in the next section asked participants to use a watch to time themselves, while reading their story draft out loud. They should do so three times, in order to have a strong sense of the length of their digital story, and also think about which rhythm made them more comfortable reading.

Before asking participants to post their final draft in the module's only forum, along with the time taken to read it out loud, the instructions suggested that they should consider shortening the draft, if it lasted for longer than six minutes. Once again, they were encouraged to provide positive feedback on their colleagues' posts.

Finally, participants moved on to the activity of turning their draft into a script (Figures 3.14. to 3.16.). This activity's instructions asked participants to separate their story at every two or three phrases and leave one line of space between them, so they could to describe the images to be shown during that part of the narrative. The instructions also suggested that participants printed this script, as it would facilitate their reading during the recording process.

It is important to mention that I had already worked as a facilitator in a number of face-to-face courses and was aware of the complexity of the recording phase, especially because the recording process used to be done all at once, which made participants need to keep track of the time mark where each specific image was to appear. Thus, in Week 7, participants were asked to record each part of the scrip separately, which created a recording timeline comprised of sequenced chunks of audio. This way, it became visually easier for participants to place the images on the upper timeline and define the exact length that each one of them should last.

Figure 3.14.   Week 4 - Turning the draft into a script 1

Figure 3.15.   Week 4 - Turning the draft into a script 2

Figure 3.16.   Week 4 - Turning the draft into a script 3
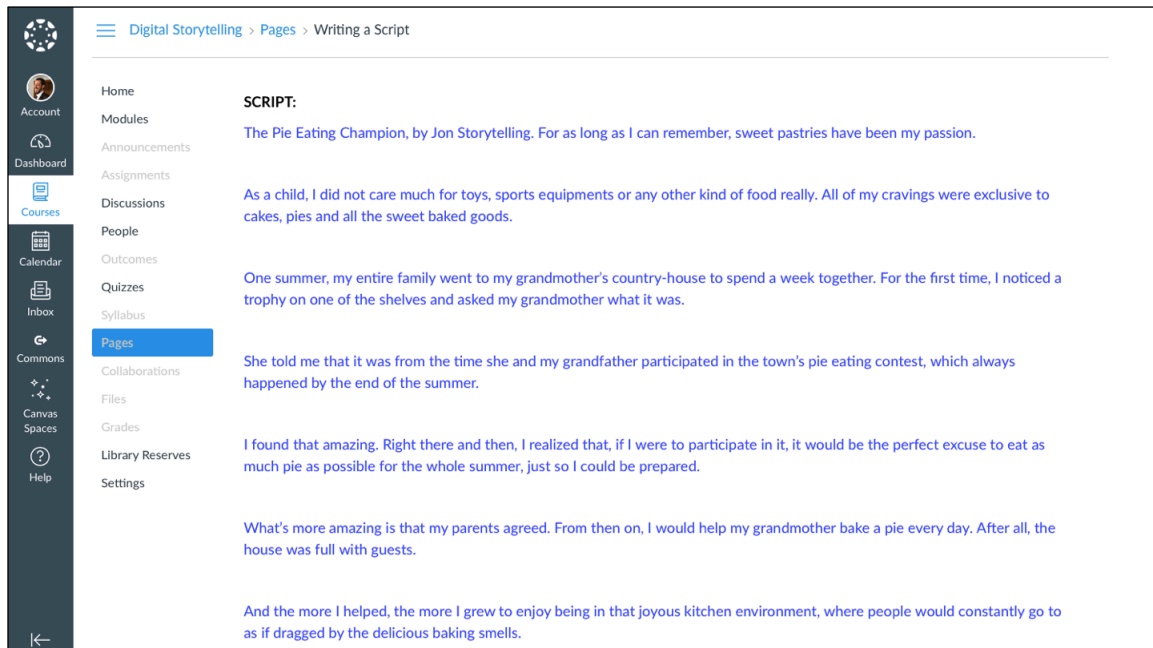
3.4.5. Week 5

The overview section of Week 5 explained to participants that they were going to (1) select the images for their digital story, (2) learn how to digitize printed photographs using a smart phone, (3) learn how to turn their story scripts into a storyboard with the selected images, and (4) use Google Images to find extra images if necessary.

The following section explained to participants that their digital story was going to be composed of three key elements: their narrating voice, the images chosen and the soundtrack music. They already had their script ready to be recorded, so now it was time to select their images. The instructions continued to suggest participants to go through their photo albums, picture frames and digitized photos in their computers, and assured that the last section would be of great help, in case they did not have a specific image that was key to the story.

Once participants selected their images, they moved on to the next section, where they had access to two versions (Apple and Windows systems) of a downloadable PDF manual (Figures 3.17. and 3.18.) to digitize printed photos with a smart phone and send them to a computer. As I created the manual, it used the same tone used in all the

instructional materials contained in the course. The manual followed a sequence of phases that were summarized at the beginning, and led users through a step-by-step process, from looking for boxes of photos and newspapers cut outs, to properly positioning the photo in order to photograph if with a smart phone, send it to their emails and save them in their computers. During the creation of the manual, I tried as much as possible to include a photo of a person performing the action to be followed, so participants would count no only on the description, but also on the visual aspect of the directions (Leung et al., 2010; Stößel, 2012). The page layout of the manual was horizontal, and each step used an entire page, so users could place it right next to the computer screen and flip each page as they concluded a step. This layout also provided the maximum visualization of the actions proposed, because many of them were print outs of computer screen shots showing users how to download the emailed digitized photos, from their emails to their computers.

Figure 3.17.   Week 5 – Digitizing images manual 1

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PHASE ONE
DIGITIZING YOUR PHOTOS WITH A SMARTPHONE
AND SENDING THEM TO YOUR EMAIL

You are going to create a video for your story, so the more images, the better. Go through your photo albums, frames sitting on the coffee table or hanging on the walls.

Look for the newspaper cutouts that you have kept too. It is important for you to see all the images available and think of the events in your life that you want to tell people.

Once you have decided which photos to use, we suggest that you use a smartphone to digitize them. Why a smartphone? Because they can take pictures, record videos and send everything to your computer easily!

Since the sequence of steps tend to be very similar for most smartphones, we first present the steps for the Apple brand, the iPhone. Then, we present the same steps for the Samsung brand, because the shapes and commands on the screen are very similar to other brands, such as Sony, Motorola etc.

If you have an iPhone available, follow steps **#01** to **#08**.

If you have any other brand available, follow steps **#09** to **#15**.

Figure 3.18.   Week 5 – Digitizing images manual 2

After digitizing their photos, participants moved on to the following section, where they learnt how to turn their story scripts into a storyboard with their digitized images. The instructions in this section provided participants with a visual example of what was expected to be accomplished (Figures 3.19. and 3.20.), and explained that their storyboard would be comprised of their story script with the images they wished to appear, as their voice narrated each part. The example used The Pie Eating Champion story, and suggested that they printed their script while looking at the digitized images on the computer screen, so they could write down the number or description of the images under each part of the script.

Figure 3.19.   Week 5 - Turning the script into a storyboard 1
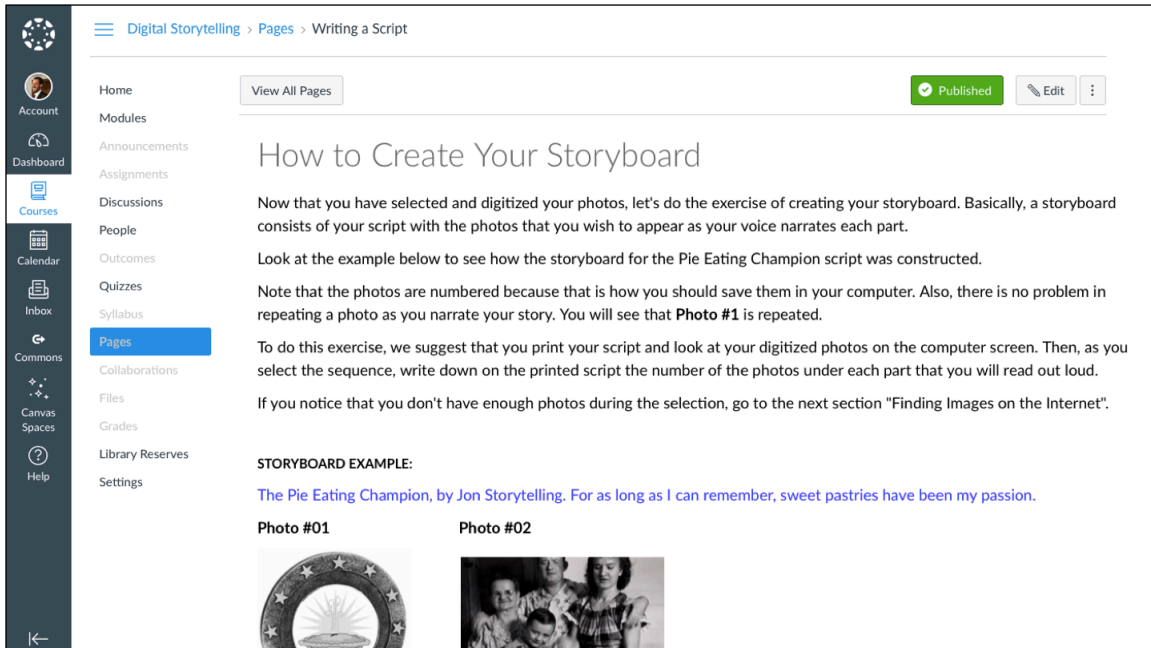
Figure 3.20.   Week 5 - Turning the script into a storyboard 2
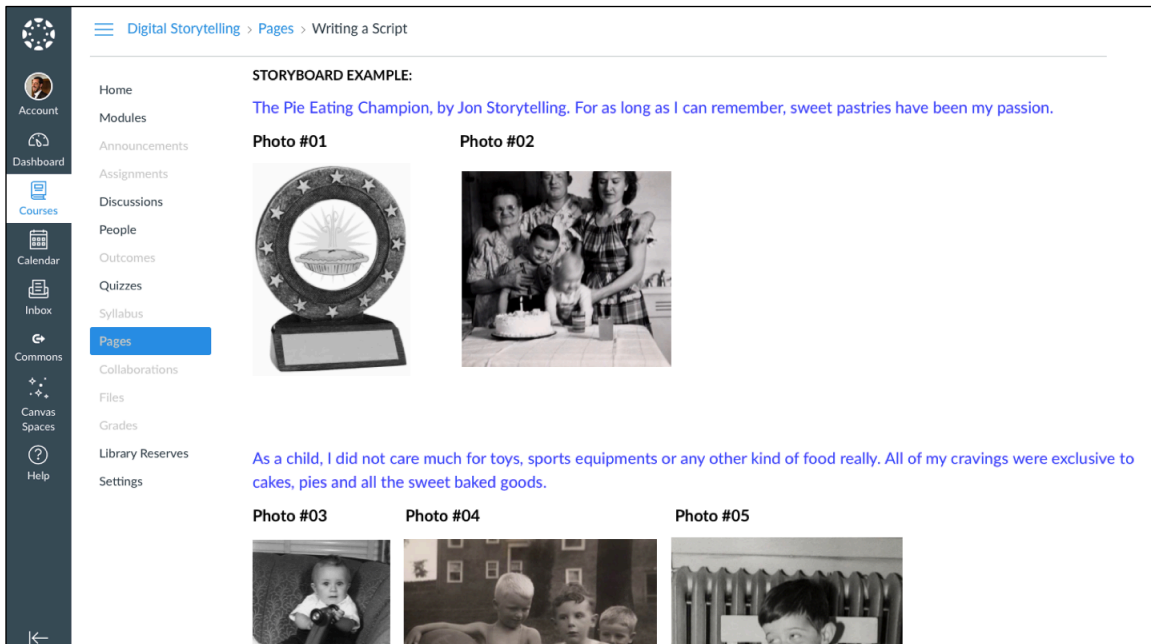
Finally, participants moved on to the last section, where they were presented with the first instructional video that I created, which taught them how to use Google Images to find any images that they wished to include in their digital story. This activity was

purposely placed after participants had created their storyboards and realized which images they did not have, but found essential to be included. The instructional video taught participants how to (1) access the Google website, (2) do an image search with a specific and brief description of what they wished to find, (3) select the tools that filtered the results to show only images labelled for non-commercial reuse, (4) download the desired image to their computer, (5) save the URL of the downloaded image, (6) create a Word file with the numbered URLs, with the image titles, and (7) create a folder on their computer store all downloaded images. The last step explained that the folder with the images would be used in one of the activities of the following week, when they sent those images to their personal WeVideo account.

3.4.6. Week 6

The overview section of Week 6 explained to participants that they were going to (1) watch an instructional video that explained how WeVideo worked and how they were going to use it to create their digital story, (2) watch an instructional video on how to create their WeVideo account, and (3) watch an instructional video on how to upload all digitized images from their computer to their WeVideo account.

The following section provided participants with an overview of the entire process that they were going to go through in the following weeks. I created the video using animated PowerPoint slides. The PowerPoint presentation was recorded as it transitioned on my computer screen while I narrated it.

Once participants watched the first video, they moved on to the next section, where they were instructed to watch the instructional video and follow the steps to create their own WeVideo account. The written instructions in this section explained that creating a WeVideo account would be much similar to creating an email account, and that they could use their personal email address as login. However, participants should not use their email password, as they would have to provide the facilitator with the login and password chosen, in order to have the account upgraded.

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Finally, participants moved on to the last section, where they learnt how to upload the digital images from their computer to their WeVideo account. The written instructions in this section, as well as the instructions in the instructional video, did not use the word *upload*. Instead, the word *send* was used, in order to adapt the language to participants who were possibly not computer literate.

3.4.7. Week 7

The overview section of Week 7 explained to participants that they were going to (1) go over the written instructions on how to prepare themselves to record their digital story narrative, and (2) watch an instructional video that showed them how to record themselves reading their script out loud on their WeVideo account.

In the following section, the written instructions explained to participants that their voice recording would be the smooth narrative guiding the viewers, as the images transitioned on the screen. And, in order to prepare for the recording process, they should first do the exercise of reading their script out loud for at least three times, and timing themselves, so they would recapture the rhythm and tone of the narrative with which they were more comfortable. They were also reminded that they were going to record each part of their script separately, therefore they should not rush through the lines.

Once participants completed the suggested exercise, they moved on to the last section, where they were instructed to watch the instructional video on how to use their WeVideo account to record themselves reading each part of the script out loud.

As mentioned on 3.4.4. Week 4, participants were instructed to create their scripts in a way that the recording process would be done in separate segments. This process would later help them visually where each digitized image would be placed along the WeVideo horizontal timeline, according to their storyboard. The purpose of this process was not detailed in the written instructions or the instructional video. Participants were simply given the instructions as they watched The Pie Eating Champion example story being recorded, so they could follow the same numbered steps on their own.

3.4.8. Week 8

The overview section of Week 8 explained to participants that they were going to (1) watch an instructional video that showed them how to add their digitized images to each recorded segment of their narrative, and (2) watch an instructional video that showed them how to add visual effects to the sequenced images.

The written instructions on the following section explained to participants that the instructional video provided was going to show them how to retrieve the digitized images on their WeVideo account, place them on the horizontal timeline above their recorded segments and adjust the length of the images, so they would appear for desired time, according to their storyboard.

Participants would then move on to the section, where they watched the instructional video that showed them how to add the digitized images to the horizontal timeline above the recorded segments and adjust the length of each image, by following the steps being applied to The Pie Eating Champion example story.

Once participants finished adding all digitized images to cover all recorded segments of their story, they moved on to the last section, where they watched an instructional video that showed them how to (1) add the written story title, which appeared and faded away on the screen for approximately three seconds on top of the first digitized image, (2) add fading in and out transitions between every digitized image, and (3) add the ending credits after the sequence of narrative and digitized images, which contained the author's name and the URL of any extra image retrieved from the Interned.

3.4.9. Week 9

The overview section of Week 9 explained to participants that they were going to (1) watch an instructional video that showed them how to add a soundtrack to their digital story, by selecting one or more available free music samples from WeVideo, (2) watch an instructional video that showed them how to publish their digital story on their WeVideo account, download it to their computer and save the Internet link which led viewers to

their digital story stored on WeVideo, and (3) post the Internet link to their digital story on the module's only forum, so their colleagues could watch it.

The written instructions of the following section, explained to participants that the instructional video was going to show them how to select a music soundtrack which captured the perfect tone of their story, by listening to each free Mp3 song available on their WeVideo account. The instructional video was also going to show them how to select the one or more desired songs, place them on a timeline below the recorded narrative segments, and adjust the volume, so that the soundtrack would loud enough to accompany their voice without disturbing the quality of the narrative. Once again, the instructional video used The Pie Eating Champion example story as the example that showed the proposed steps being applied.

Participants would then move on to the next section, where they watched the last instructional video of the course, which showed them how to publish their digital story on their WeVideo account, download the file to their computer and save the Internet link that took viewers to the online WeVideo location where their digital story was stored. The instructional video explained to participants that, instead of emailing their friends and family the actual Mp4 file containing their digital story (which could be too heavy to be uploaded and, therefore, would not be sent), they could simply send the Internet link generated by WeVideo, once the publishing process was concluded.

Finally, participants moved on to the last section, where they were instructed to copy the Internet link to their digital story and publish it on the module's only forum. The written instructions encouraged them to add to their post some words explaining what made them choose to tell that story in particular and why it was important to them.

3.4.10. Week 10

The overview section of Week 10 contained a congratulatory text, which praised participants for completing their first digital story and for not only registering a piece of their life legacy to the world, but also for creating a bonding vehicle to bring their family and friends together, by showing a piece of themselves that people might have never been

aware of. Then, participants were instructed to move on to the last section, where they could post comments on their colleagues' digital stories.

As participants moved on to the last section, they were presented with the written instructions that asked them to watch all digital stories posted on Week 9's only forum, then post their opinion about each one of them on Week 10's only forum. The written instructions reminded participants that, just as they decided to share a personal story, so did their colleagues, which meant that they, too, had awoken feeling that might have been asleep for a long time.

Chapter 4.   Methods

4.1.   Introduction

The study explored the perceived experiences, challenges and benefits experienced by older adults who participated in one of the two offerings of the online digital storytelling course. This chapter presents the methods used to collect the qualitative data and how the data was analyzed.

4.2.   Case study research framework

The case study methodology for qualitative inquiry proposed by Stake (1995) was used to develop the qualitative research design of the study. The choice for this methodology was made because it is not only a good choice for researches wishing to study a phenomenon occurring within a specific context, but also because it illuminates the phenomenon to draw insight from multiple sources (Baxter & Jack, 2008).

According to Stake (1995), case studies are divided into three categories, (1) intrinsic, (2) instrumental, and (3) collective, yet a combination is normally expected, as one case tends to extend itself to more than one category. An intrinsic study is normally carried out to explore one specific phenomenon, which is distinguished from others by its uniqueness. An instrumental study, on the other hand, chooses a particular case in order to obtain a broader understanding of a phenomenon. The collective study explores multiple cases simultaneously or sequentially in order to, initially, gain a general understanding of the phenomenon through the thematic of each case. Then, a cross-case analysis is conducted to find overlapping themes from all cases, which results in a deeper understanding of the phenomenon.

Considering that the phenomenon analyzed in the study was the experience of multiple older adults taking a fully online digital storytelling course, the case study was

collective, because each participant represented a case, and they were simultaneously explored.

4.3. Ethics

The ethics approval was obtained from the SFU Office of Research Ethics Board (Appendix A) prior to the beginning of the research. Dr. David Kaufman is listed as the principal investigator for the ethics application at SFU with Diogo Fagundes as the SFU collaborator.

4.4. Consent and recruitment

4.4.1. Consent

Consent was obtained at the beginning of the study, during recruitment (Appendix B). Participants were provided with the option of redrawing from the study at any point, and were given complete disclosure about how, where and when their digital stories would be used in the study. Participants were also informed that, if they wished to withdraw or modify anything that they shared in the study, including their personal data, they could do so at any time.

4.4.2. Participant information

Participants

The participants recruited for the study were adults aged 65 years and older. The only exception was a caregiver aged 36 years old. I decided to include her in the study because of her line of work, as she could provide insight on working with older adults to produce a digital story following instructions on a learning management platform. A total of three participants were recruited for the pilot test phase, and 13 participants for the field test phase. Participant's demographic information is presented in Chapter 5 - Results.

Sample Size

The sample size for the pilot test phase reflects the choice of a small number of participants. This choice was made because, in addition to analyzing participants' experience in taking the course, I wanted to determine how well they would navigate through the instructions in the learning management platform, and possibly find possible flaws in the design, so the field test phase would be ready for a larger number of participants. The sample size for the field test phase reflects the availability of participants I was able to recruit. The number of participants provided a satisfactory sample for the qualitative study, which was six completers out of 13 participants.

4.4.3. Recruitment

The recruitment process for the study took place in Greater Vancouver, B.C. The process for the pilot test phase was conducted by email invitation sent to personal acquaintances of the researchers involved in the study, and to a caregiver who had previously contacted the research group. The participants were contacted throughout the month of November, 2017.

Recruitment for the field test phase took place during the months of January and February, 2018, in two physical locations where the face-to-face course had been previously offered, and within the SFU 55+ Program classes at the time. The two locations are the retirement residences Kiwanis Manor at 959, 21st Street, West Vancouver, BC, V7V 4Y3, and Kiwanis Lynn Manor at 2555, Whiteley Court, North Vancouver, BC, V7J 3G9. The SFU 55+ Program classes are offered at the Harbour Centre campus, at 515 W Hastings Street, Vancouver, BC, V6B 5K3.

For the recruitment at the two retirement residences, the Property Manager of the Kiwanis North Shore Housing Society was contacted via email. The email contained an invitation latter with the details of the study (Appendix C), a letter of permission to be signed by the location's management (Appendix D), and a request to put up a poster (Appendix E) on the social areas, in order to announce an information session, a week before the announcement.

For the recruitment within the SFU 55+ Program classes, the Program Coordinator was contacted via email. The email contained the invitation letter with the details of the study, the letter of permission to be signed by the location's management, and a request to distribute a flyer (Appendix F) to students attending the 55+ programs. The printed flyers were delivered to the Program Coordinator, who divided them among the instructors. The instructors distributed the flyers to their adult learners.

4.4.4. Payment/Reimbursement

The information poster and flyers announced a draw of three $100 prizes to participants who concluded the field test phase of the course. Given the small number of participants who concluded the field test phase (the six participants out of 13), an email was sent to them asking for their consent to split the total of $300 into six gift cards. They all agreed, and the gift cards were sent to them.

4.5. Data collection

4.5.1. Stages

The collection of data comprised a sequence of four stages (Figure 4.1.), that are described below. All four stages were completed in each of the two course offerings: the pilot test phase and the field test phase. The pilot test phase lasted for 10 weeks (December 8, 2017, to February 13, 2018) and the field test phase lasted for 15 weeks (April 2, 2018, to July 10, 2018).

Figure 4.1.   Data collection stages

Stage 1	Recruitment and completion of demographic data and background information found in the introductory module of the online course.
Stage 2	Completion of questionnaires at the end of each module.
Stage 3	Digital story rubric upon course completion.
Stage 4	Post-course Skype interview.
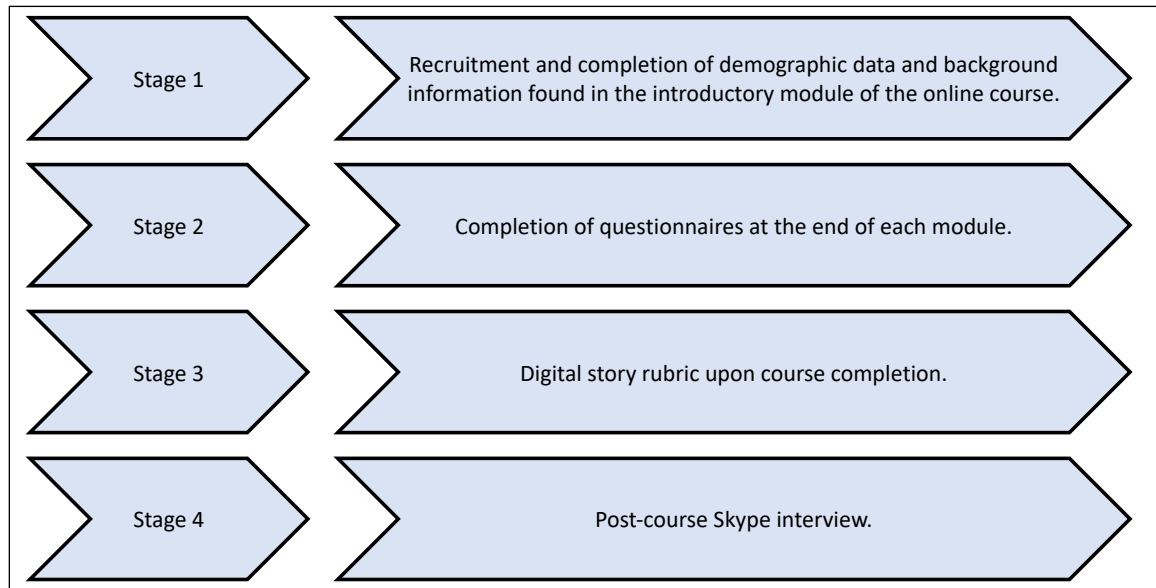
Stage 1

　　After receiving ethics approval, recruitment was conducted in two retirement residences where the face-to-face course had been previously offered, and through flyer distribution to students enrolled in the SFU 55+ Program, in addition to email invitations to personal acquaintances of the research group's members in the pilot test phase. Upon recruitment, participants were given access to the learning management platform Canvas through an email link. Once they signed up, the introductory module asked them to fill out the pre-questionnaire, containing the demographic and background information questionnaire.

Stage 2

　　During the second stage, participants completed the written instructions questionnaire and the instructional video questionnaire at the end of Modules 1 to 9. At the end of Module 10, they completed the course evaluation questionnaire.

Stage 3

　　When all participants from each test phase concluded the modules and posted their digital stories, I applied the digital story rubric to assess if all expected elements that comprise a digital story had been achieved in each participant's final production.

Stage 4

Once all digital story rubrics were applied at each test phase, individual Skype interviews were conducted and recorded. All participants were previously informed about the recording process during recruitment and reminded of it before the beginning of their interviews.

4.5.2. Instruments

The study used a total of six instruments: (1) the pre-questionnaire (Appendix G), (2) the written instructions questionnaire (Appendix H), (3) the instructional videos questionnaire (Appendix I), (4) the course evaluation questionnaire (Appendix J), (5) the digital video rubric (Appendix K), and (6) the post-course guided interview questionnaire (Appendix L).

Pre-questionnaire

The pre-course questionnaire was used in order to gather demographic information, which included the frequency with which participants used computers, their level of computer skills, if they had ever used a video editing software before, and if they had ever taken an online course before.

Written Instructions questionnaire

The written instructions questionnaire was comprised of three Likert scale questions and three open-ended questions. The Likert scale questions asked participants (1) if they found the course material easy to follow, (2) if it clearly explained what they were expected to do in the module, and (3) if the activities in the module helped them develop the necessary skills to create an interesting digital story. The open-ended questions asked participants (1) what they liked best about the module, (2) what they liked least about the module, and (3) how the module could be improved.

Instructional videos questionnaire

The instructional videos questionnaire was comprised of six Likert scale questions and two open-ended questions. The Likert scale questions asked participants (1) if the video was helpful, (2) if the images in the video were easy to follow, (3) if the voice

narrating the instructions was easy to follow, (4) if the instructions in the video were easy to follow, (5) the level of confidence to complete the activities proposed, after watching the video, and (6) the frequency with which they paused and rewind the video. The open-ended questions asked participants (1) the number of times that participants had to watch the video to complete the tasks, and (2) what could be changed to improve the video.

In module 5, the instructional videos questionnaire contained two extra Likert scale questions and one open-ended question regarding a manual that taught participants how to digitize their own photos. The two Likert scale questions asked participants (1) the instructions in the manual were easy to follow and (2) how helpful the manual was. The open-ended question asked participants what could be changed to improve the manual.

Course evaluation

The course evaluation questionnaire was comprised of five Likert scale questions and five open-ended questions. The Likert scale questions asked participants (1) how they would rate the process used to guide them in writing their own stories, (2) how they would rate the software to create their digital story, (3) how they would rate the course's level of difficulty, (4) how they would rate the level of satisfaction with the course, and (5) if they would recommend the course to a friend. The open-ended questions asked participants (1) if they used help at any point in the course and, if yes, from whom and in which module, (2) what they liked best about the course, (3) what they liked least about the course, (4) how the course could be improved, and (5) if the participant would like to add anything else.

Digital video rubric

The digital video rubric was comprised of four Likert scale questions to be answered by me about each participant's final production. The questions asked if (1) the participant developed their own legacy story applying the principles and elements of storytelling, (2) the participant developed their own legacy story in the form of a digital story, using appropriate images in the WeVideo software, (3) the participant developed their own legacy story in the form of a digital story, using appropriate audio in the

WeVideo software, and (4) the participant developed their own legacy story in the form of a digital story, using appropriate visual effects in the WeVideo software.

Guided interview questionnaire

The guided interview questionnaire was comprised of eight questions that asked participants (1) to tell about their experience in taking the course, (2) what they like best about the course, (3) what they like least about the course, (4) if the written instructions clearly explain what they had to do for each module, (5) if the instructional videos clearly explain what they had to do for each module, (6) if the design of the instructions was enough to instruct them throughout the modules, or if they felt insecure with the absence of a person explaining face-to-face, (7) how the course could be improved, and (8) if they wished to add anything else.

4.6. Data management

4.6.1. Recordings, transcription and data storage

The Skype guided interviews were recorded using QuickTime Software, which allows recording the computer's audio while using Skype software. The recordings were transcribed and then coded using NVivo software for qualitative research.

4.6.2. Participant confidentiality measures

All personal data collected from participants, such as email, phone number and email addresses are not considered as being confidential. However, the information will not be release to the public and is being kept confidential. The demographic information, Likert scale answers, open-ended answers, interviews' recordings and transcriptions were anonymized, and can only be accessed and analyzed by the research team. The anonymization was done by referencing participants after their demographic information was collected (e.g., Participant 1). These references replaced their names in the data. When the qualitative data is published, the participants' identities and their personal information remain confidential. All audio recordings were immediately erased upon transcription and numbered reference. All questionnaires' answers, interview

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transcriptions, information contacts and the study's consent forms were kept secured in a locked flash drive, accessed only by password, in a secured cabinet inside Dr. David Kaufman's office for the period of four years, after which they will be destroyed. All participants who completed the course were asked if they wished to share their digital stories with a public audience. The participants who agreed chose to sign a separate release form.

4.7. Data analysis

The data collected compiled two main groups: (1) participants' demographics and Likert scale choices, and (2) open-ended answers and guided interview answers.

4.7.1. Demographic and Likert scale

The results from participants' demographics and Likert scale choices were entered into an Excel document. After the data was complete, a separate Excel document was created to clean the data for participants who had not completed the course, and then verified for any irregularities. The final document contained data from only nine participants in total.

4.7.2. Open-ended answers and interviews

Under the guidance of Dr. Robyn Schell, the results from the open-ended answers and guided interviews were verified using the six steps of thematic analysis proposed by Braun and Clark (2006), in order to identify, analyze and present themes within the data.

Initially, the results were entered into an Excel spreadsheet document, then moved to a second spreadsheet to clean the data for participants who had not completed the course, and finally verified for any irregularities. The process of each step is described below.

Step 1 - Familiarization with the data

Once the Excel document containing the data from all nine participants who concluded the course was created, both Dr. Schell and I analyzed the answers by reading through all of them, in order to become familiar with the responses, and making notes about the most evident themes.

Step 2 - Coding

When I became familiar with the results, an initial categorization for the main themes was organized and turned into codes using Excel columns with titled headings, such as *story structure* and *social connectedness*. For every theme that emerged, a new column was added. This process was initially applied separately to the results of each module questionnaire, in addition to the post-course evaluation and interview.

Step 3 - Searching for themes

All the theme columns were compared to cross reference, so themes could possibly be separated or merged. The final theme columns were then transferred to NVivo, so the main themes could be noted.

Step 4 - Reviewing themes

After all main themes were noted in NVivo, they were transferred to a Word file and reviewed by Dr. Schell, in order to establish agreement on the themes and determine if any of them should be split up or merged.

Step 5 - Defining and naming themes

The names of the themes were finally concluded upon review of the two researchers. The names are mentioned in Chapter - 5 Results as the final classification of findings emerged from the analyzed data.

Step 6 - Writing up

The results in Chapter - 5 Results were presented in the form of brief summaries that introduce each theme, followed by selected quotes taken from the open-ended answers of the questionnaires and the transcribed Skype interviews.

4.7.3. Trustworthiness

In order to strengthen the research results, I established trustworthiness through triangulation of multiple sources of data collection, as they increase the credibility of qualitative data accuracy (Shenton, 2004).

The triangulation involved the use of questionnaires applied throughout the course and post-course, one-on-one Skype interviews. The results from each source allowed me to support the findings from the thematic analysis, which looked for the major themes that overlapped (Creswell, 2012).

The fact that I was the person to establish first contact with participants during recruitment, as well as the facilitator and post-course interviewer, allowed prolonged observation and engagement (Moen, 2006). Moreover, the constant feedback provided to participants through individual email and Skype assistance were key to the process of building trust with participants (Emmel et. al., 2007).

Also, it is important to mention that, by the start of the study's pilot test phase, I had already been involved in the face-to-face courses as a facilitator and the project's coordinator. Thus, the engagement with the environment of the research added credibility to the study (Silva & Nunes, 2010; Hawthorn, 2006; Tullis, 2004).

Chapter 5.   Results

5.1. Overview of the data collection process

The data collection process involved administering the following instruments at the end of each module:

- Module 1 - demographic questionnaire.
- Modules 2 to 4 - written instructions evaluation questionnaire.
- Modules 5 to 9 - written instructions evaluation questionnaire and instructional videos evaluation questionnaire.
- Module 10 - course evaluation questionnaire.
- Post-course rubric administered by me to assess participants' digital story.
- Post-course Skype / Phone interview.

The results were taken from the nine participants who concluded the course, three in the pilot test phase and six in the field test phase. The three participants from the pilot test phase were personal acquaintances of the researchers involved in the study. They agreed to participate because of personal interest in the course and because they were willing to find possible flaws in the design. The field test phase had a total of 13 participants recruited. Of the seven who dropped out, four provided feedback via email as to why they had not moved past Module 1. All claimed that the volume of work expected did not match their time schedules.

5.1.1. Overview of the results

Throughout my experience as a facilitator in a number of face-to-face courses, it became clear to me that story structure, interaction with colleagues and facilitator's guidance are the three essential elements that provide participants with an experience that touches on a personal level not only them, but their colleagues, friends and family as well. By providing participants with a set of structure guidelines on which they can rely during the writing process, and with the assuring guidance of a facilitator when learning a

new technology, they feel confident enough to let their creativity bloom. And, as this feeling of agency and creativity flourishes, the stimulus to interact with colleagues inserts them into a group that shares the same experience, thus magnifying the depth of the experience. Moreover, these elements are the foundation of what this project set out to accomplish: to foster lifelong learning and social connectedness in an age where people are increasingly relying on technology to interact with each other.

The results indicated that the design of the SFU Elder's Digital Storytelling course in an online learning management platform was successful in: (1) guiding participants through the process of choosing a personal story, writing it down in a structured way, and using WeVideo to turn it into a digital story, (2) providing facilitator assistance to participants in order to make them feel supported and stimulated, and (3) fostering social connectedness by encouraging participants to interact with colleagues on the forums.

All nine finishing participants expressed appreciation for the course design in both the open-ended questionnaires and the Skype interview. The nine participants comprised two groups: those who did not request assistance from the facilitator and those who did. While participants from the former found that the instructional material provided them with the necessary tools to produce their digital story, participants from the latter only requested assistance during the video editing phase. Interestingly, all of them shared the opinion that the story structure guidelines and the feedback provided from the facilitator and colleagues were key to their writing process.

Every one of the digital stories produced not only checked all the technical requirements from the post-course rubric, but they also contained a message of self-reflection. It is important to highlight that none of the evaluative instruments measured the type of story produced. However, all the Mp3 and Mp4 example stories, as well as the written example stories provided throughout the modules, contained messages of self-reflection. The choice for this type of story was purposely made in order to encourage participants to reflect upon lessons lived and learned, instead of simply telling a story that they witnessed or heard. In addition to that, the choice for this type of examples was

made because, in the original face-to-face course, the facilitator and co-facilitator were able to stimulate participants to add personal reflections to their story when providing feedback. Whereas the online course was originally designed to have no facilitator interaction unless requested, I considered it to be of extreme importance that the instructional material indirectly guide participants towards choosing a personal story containing self-reflection.

5.1.2. Results classification

As explained in subsection 4.7. Data Analysis, the organization of all data collected was done by using NVivo software, in order to group participants' open-ended answers into themes. A total of seven themes were created based on the frequency with which participants' answers touched on the same theme (e.g., social connectedness). And, because in some cases the answers about the same theme encompassed a broad range of opinions, some of the themes were subdivided into categories (e.g., appreciated the facilitator's assistance, wished the facilitator posted feedback on the forums for all colleagues to see, or did not require any assistance from the facilitator). Table 5.1. presents all themes and their respective categories. The categories were listed from positive aspects to the aspects that need reviewing.

Appendix M presents the summary of the findings from each data collection instrument, according to the themes and categories established.

Most of participants' quotes regarding the categories of each theme are presented on Appendix N.

Table 5.1.   List of themes and categories

Themes	Categories
Written instructions	The guidelines and examples helped the writing process.
	Appreciation for the guidelines, examples and instructional videos.
	Appreciation for the informal tone of the written material in general.
	Request for more examples that evidence the guidelines.
	Appreciation for scaffolded guidelines in small portions and reinforcement in different scenarios.
	The variety of exercises helped the writing process.
	Appreciation for going through personal photos.
	Appreciation for creating the storyboard.
Video instructions	Instructional videos helped the video editing process.
	Large number of steps per video considered problematic.
	Size and definition of screen shots showing the video editing process considered problematic.
	Tone and rhythm of narrating voice considered problematic.
	Lack of written version of the steps to be followed in the instructional videos considered problematic.
	Technical terms considered problematic.
	Technical knowledge expected considered problematic.
	Suggested a FAQ list.
	Suggested separate advanced video editing instructions.
WeVideo	Software would not work in certain Internet browsers.
	Differences between the screen shot layout of the instructional videos and the online accounts' considered problematic.
	Software's clustered table of commands considered problematic.
Canvas	Lack of platform tools to track participants' progress considered problematic.
Time required	Time necessary to complete the activities proposed in Module 5 considered problematic.
	Felt that the entire process of writing their personal story and digitizing it was more complex and took longer than expected.
Lifelong learning	Appreciation for being the agents responsible for creating their own productions.
	Feeling of accomplishment for the final production.
	Plans to produce more digital stories.
	The course experience stimulated lifelong learning.
Social connectedness	Connection with colleagues on the forums was supportive and stimulating.
	Colleagues' progress on the forums' posts stimulated the writing process.
	Appreciated the facilitator's Skype assistance.
	Appreciated the unexpected impact of the process of creating a personal digital story on themselves.
	Appreciated the unexpected impact of the process of creating a personal digital story on family and friends.
	Joined the course to register their legacy to the family.
	Appreciated the design of the course for allowing them to complete it without the facilitator's assistance.

Themes	Categories
	Appreciated the unexpected impact of interacting with colleagues on the forums.
	Did not request facilitator's assistance.
	Requested facilitator's assistance through email between Modules 1 to 4.
	Requested facilitator's assistance through Skype between Modules 6 and 7.
	Absence of facilitator's presence on the forums considered problematic.
	Lack of specific guidelines on how to interact with colleagues on the forums considered problematic.
	Lack of guidelines on the importance of constant posts on the forums considered problematic.

The following subsections (5.1. to 5.6.) present the Likert scale answers and the open-ended answers from each instrument used for data collection. The open-ended answers are presented on tables, according to the aforementioned themes and categories, then exemplified by direct quotes from the participants. These tables, along with the results from the Likert scale answers, show the design elements created for this course that were effective, and the elements that need to be reconsidered.

Table 5.2. presents a summary of the overlapping findings from the open-ended questions of all instruments.

Table 5.2.   Overlapping findings

Themes	Category
Written instructions	The guidelines and examples helped the writing process.
	Appreciation for the guidelines, examples and instructional videos.
Video instructions	Large number of steps per video considered problematic.
	Tone and rhythm of narrating voice considered problematic.
	Lack of written version of the steps to be followed in the instructional videos considered problematic.
	Technical terms considered problematic.
	Technical knowledge expected considered problematic.
WeVideo	Software would not work in certain Internet browsers.
	Differences between the screen shot layout of the instructional videos and the online accounts' considered problematic.
Time required	Time necessary to complete the activities proposed in Module 5 considered problematic.
	Felt that the entire process of writing their personal story and digitizing it was more complex and took longer than expected.
Lifelong learning	Appreciation for being the agents responsible for creating their own productions.
Social connectedness	Connection with colleagues on the forums was supportive and stimulating.
	Lack of specific guidelines on how to interact with colleagues on the forums considered problematic.
	Lack of guidelines on the importance of constant posts on the forums considered problematic.
	Absence of facilitator's presence on the forums considered problematic.

5.2.   Demographic questionnaire

The demographic and background questionnaire assessed participants' age, gender, computer literacy and usage frequency, and if they had taken online courses before. Tables 5.3. and 5.4 show the results.

Table 5.3.   Participant demographics

Themes	Category	Frequency (n)
Sex	Female	9
	Male	0
Age	Total	9
	35-39	1
	60-64	0
	65-69	4
	70-74	4
	75-79	0
	80-84	0
	85 or older	0

Table 5.4.   Technology report

Themes	Category	Frequency (n)
Computer use frequency	Less than once a month	0
	Once a month	0
	Once a week	0
	A few times a week	1
	Daily	8
Computer skills	Very poor	0
	Poor	0
	Fair	1
	Good	2
	Very good	6
Used video editing software before	Yes	2
	No	7
Taken online course before	Yes	3
	No	6

5.3. Evaluation of written instructions questionnaire

From Modules 1 to 9, participants were asked to answer the written instructions evaluation questionnaire at the end of each module. The questionnaire was comprised of three questions and three open-ended questions.

Because of the difference in the content of the written instructions in Modules 1 to 4 and Modules 5 to 9, the results from this questionnaire were presented in two groups.

While Modules 1 to 4 relied on written instructions that guided participants through the process of writing their own story, Modules 5 to 9 only contained a brief and general description of what participants were going to learn in the instructional videos.

5.3.1. Modules 1 to 4

When participants evaluated the course material, it was revealed that all nine either *agreed* or *strongly agreed* that the course material was easy to follow, that it clearly explained what they were supposed to do in each module, and that the activities in each module helped them to develop the skills needed to create an interesting digital story.

Table M.1. (Appendix M) presents a summary of the participants' responses to the open-ended questions.

Written instructions

Most participants claimed that the guidelines and the examples provided were important to their writing process. They appreciated the tone used in the instructions that explained each guideline, in the exercise activities, as well as in the example short stories.

One participant mentioned the importance of seeing the proposed guidelines evidenced in stories, and later expressed that there should be a broader range of examples:

> *I found it helpful to see some examples of other digital stories to see what works well, and what to avoid. None of the stories was perfect and that made me feel less self-conscious about doing my own story. (Participant 7)*

> *I think it would be helpful to show one or two more examples of stories and analyze them to show the 5 stages. (Participant 7)*

The process of scaffolding new information in small portions and reinforcing it through repetition in different scenarios was appreciated, as participants claim to have helped them to better structure their personal stories. They also enjoyed the activities proposed and expressed the importance of them to their writing process.

Social connectedness

Participants appreciated seeing the progress of colleagues on the forums' posts and claimed that it worked as a stimulus for writing their own stories. However, they found a lack of specific guidelines regarding the frequency with which the posts should be done, and how they should interact.

One participant pointed out the fact that the lack of constancy of the posts at each module disrupted the sense of the group progressing through the course together:

> *There seems to be no one else that has completed this module yet, so there is no interaction with the other storytellers. (Participant 9)*

Two participants presented possible solutions to increase the frequency of posts on the forums. The comments suggest their own expectations regarding content:

> *Create a sense of play or latitude in the postings of stories. Or have deadlines? I'm not sure why there are no other posts than my own and we are already into week 3 of the study. (Participant 5)*

> *Maybe emphasize more that people need to read other`s work and make constructive comments about how to improve. The tendency is just to say that we enjoy each other`s stories, but it is helpful to have comments about how we could make our stories even more interesting. (Participant 7)*

As previously mentioned in chapter three, the course was originally designed for the facilitator to provide feedback or help upon participants' request. As participants in the field test progressed throughout the modules, the quantity of posts on the forums and the completion of tasks decreased. In order not to break the initial pattern established, I decided to provide feedback and encouragement by emailing participant separately, instead of using the forums. This absence of the facilitator's presence on the forums was pointed out by two participants:

> *Some feedback from a facilitator especially if you are the first to post the exercise, as the other participants haven't caught up yet. (Participant 4)*

> *I would like to see the facilitator comments of the stories. I think the comments from other course participants are nice, but don't give any direction on how to improve the stories. (Participant 9)*

5.3.2. Modules 5 to 9

The results revealed that, with the exception of one participant, all others either *agreed* or *strongly agreed* that the course material was easy to follow, that it clearly explained what they were supposed to do in each module, and that the activities in each module helped them to develop the skills needed to create an interesting digital story.

The one participant whose answers did not match the others, either checked *no opinion* or *disagree* in the three Likert scale questions, from Modules 7 to 9. The open-ended questions did not reveal the reason why this particular participant checked these options. However, she provided detailed feedback in the open-ended questions about the instructional videos, where she suggests more interaction with the facilitator, in order to compensate the lack of detailed written instructions.

Table M.2. (Appendix M) presents a summary of the findings from the open-ended questions.

Written instructions

Participants expressed enjoyment in the processes that involved the definition of the storyboard, especially because of the nostalgia experienced and the fact that the activity made them feel like their digital story was taking shape.

Time required

The time taken to complete Module 5 was pointed out as being problematic:

> *Just need to allow more time to complete [Module 5], as it has taken much longer than any of the other modules so far. (Participant 7)*

Lifelong learning

As the video editing instructions progressed, participants showed appreciation for the feeling of being the agents responsible for how their movies evolved:

> *The experience of putting it all together, it was exciting and a great opportunity. (Participant 6)*

Participants also mentioned the sense of accomplishment experienced after concluding the course and the feeling of empowerment for being able to create more movies on their own:

> It's exciting to be adding final steps and knowing that, with practice, I can do more videos on my own. Perhaps I'll tell about the adventure of being lost in Calcutta at night. (Participant 8)

5.4. Instructional videos evaluation questionnaire

From Modules 5 to 9, participants were asked to answer the instructional videos evaluation questionnaire at the end of each module. The questionnaire was comprised of seven questions and one open-ended question.

In addition to these questions, the instructional videos evaluation questionnaire in Module 5 contained three extra questions about the manual that showed participants how to digitize old photos. There were two Likert scale questions and one open-ended question. Because of the additional questions, I found that it would be best if the results from the instructional videos and the results from the manual were presented separately.

5.4.1. Instructional videos

The results from the Likert scale questions revealed that all participants watched the instructional videos. The average frequency with which they watched each video was between two to three times at every new module.

Most participants claimed to have paused or rewind the videos *occasionally*, and to have felt *somewhat confident* or *very confident* to complete the activities proposed after watching the videos. Also, most participants *agreed* or *strongly agreed* that the videos were helpful, and that the images in the videos were easy to follow.

While most participants *agreed* or *strongly agreed* that the instructions and the voice narrating the videos were easy to follow, two participants *disagreed* or had *no opinion*. Their open-ended answers stated that the monotone and slow rhythm of the

narrating voice made the instructional videos uninteresting and tiresome. Of these two participants, only one of them requested for Skype assistance from the facilitator.

Table M.3. (Appendix M) presents a summary of the findings from the open-ended questions.

Video instructions

Participants expressed appreciation for how the instructional videos provided them with the necessary skills to complete the tasks, and also for how the design of the instructions for each segment would allow them to re-edit at any point:

> *The video provided good information about how to place and time your photos. I did not have enough photos, so it was nice to know how to search for ones that we were allowed to use. (Participant 3)*

> *I enjoyed making the recording and appreciated the fact that the recording was broken down into short segments, so that it was easy to re-record anything that didn't turn out right. (Participant 7)*

Participants found that the number of steps to be followed in each video could be problematic, as the total number may seem overwhelming. They also found that the tone and rhythm of the narrator's voice lacked enthusiasm and made the process boring.

Since they had been used to following written instructions up to Module 4, participants mentioned that the instructional videos lacked a written version of the steps, which they could follow while editing their own movies. They claimed that the notes would allow them to re-watch the videos just because they had missed one step:

> *I would find it very helpful if there had been an accompanying text to follow step-by-step, which I could have printed instead of the process of going back and forth. (Participant 8)*

The size and definition of the screen shots that showed the software in use were mentioned as problematic, because some of the features would appear too small on the screen, and the layout colors were considerably dark.

A few computer skills expected from participants were mentioned as being more advanced than predicted. However, no participant contacted the facilitator informing that they could not move on with the course due to lack of computer knowledge.

WeVideo

One participant mentioned the fact that WeVideo did not function properly in some internet browsers. This specific detail was explained in the introductory instructional video on how to access the software, yet the comment suggests a need for reinforcing of the information throughout the modules, not only in the instructional videos, but also in the written instructions:

One participant mentioned the differences between the WeVideo's online layout and the layout showed in the instructional videos, and suggested a solution:

> *As this is a web-based program changes can be made any time, so it's probably best to avoid instructions like hit the fourth button on the right, as this could now be the fifth one down. (Participant 4)*

5.4.2. Manual for digitizing photos

Of the nine participants, only two claimed to have used the manual. They either *agreed* or *strongly agreed* that the instructions were easy to follow and found the manual *helpful* or *very helpful*. Neither suggested improvements.

5.5. Course evaluation questionnaire

After the completion of Module 9, where participants published their digital stories, they moved on to the final module of the course. In Module 10, they were encouraged to comment on their colleagues' digital stories and asked to answer the course evaluation questionnaire. The questionnaire was comprised of five Likert scale questions and five open-ended questions.

The results from the Likert scale revealed that eight participants rated the process used to guide them in writing their own stories as *good* or *very good*, with the exception of one participant who rated the process as *fair*. All participants rated the software used to

create their digital stories as *good* or *very good*. Six participants rated the level of difficulty of the course as *easy* or *just right*, and three participants rated it as *difficult*. All participants rated their level of satisfaction with the course as *satisfied* or *very satisfied*, and all of them would recommend the course to a friend.

Table M.4. (Appendix M) presents a summary of the findings from the open-ended questions.

5.5.1. Open-ended answers

Written instructions

Participants expressed appreciation for the guidelines that defined the structure of a story and for the examples provided. They also appreciated the texts presenting the overview of each module:

> *I am beyond impressed with the end result of this course. I think it is laid out clearly, which helped me write my story and complete my project in a timely manner. (Participant 3)*

> *The creative process of writing a story. (...) I particularly like the modules on what makes a good story. (Participant 5)*

Video instructions

Given the fact that many participants concluded the course without requesting assistance, one of these participants suggested a FAQ list, and another suggested instructional videos with more advanced editing content:

> *A FAQ dealing with tech issues would be useful for people who are doing this on their own. (Participant 2)*

> *It would be great to have a more advanced version [of the instructional videos for the software]. (Participant 7)*

One participant suggested that people with little computer skills were consulted during the development of the instructional material, and two participants reinforced that the instructional videos lacked a supportive written version.

Lifelong learning

Participants appreciated the feeling agency for producing their own movies and expressed interest in creating more:

> *I plan now to make lots more videos as a way to document my life and that of others. I am grateful for the tools to do this in my retirement. It is such a gift. (Participant 5)*

> *I like learning a new tech skill, I hope to use it for other projects, and stories. (...) Often when I try to learn new tech skills, it is by YouTube and I get frustrated and give up, or yell at my computer. Or if I get help from my own kids who usually feel it is easier to just do it for me. (Participant 9)*

Social connectedness

The connection with colleagues on the forums and with the facilitator was appreciated, because it served as a supportive bond for going through the course:

> *I enjoyed the supportive comments from everyone, including [the facilitator] and the other participants. We all had good points and weak points in our movies, but the positive atmosphere throughout the course was very encouraging and makes one want to do some more of these digital stories. (Participant 7)*

All the participants who received Skype assistance expressed how the interaction with the facilitator served as stimulus and gave them the confidence to use WeVideo. One participant mentions how the interaction with the facilitator also helped her to give more flow to her story:

> *This individual instruction was amazing, as he encouraged me to do each step on my own. (...) He also coached me in storytelling continuity. This allowed the pictures, and story to jive, and to make sure there was a connection to me, and to my kids who I will share this with. The story/picture connection will also allow people not connected to me to have a good idea of the adventure for me, and in turn for my mother. (Participant 9)*

Participants who were determined to register their legacy declared that the main reason for it was so their families could know more about them:

> *Having something that I can share with my family that I created out of my own words, pictures, and music. (Participant 7)*

> *Being able to leave tangible memories to my family is a pleasure. (Participant 8)*

> *This is a good way to share my stories/legacy with my kids and now grandchildren. (Participant 9)*

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Of the nine participants, four claimed not to have used help at any point of the course. All five participant who used help claimed that it came from the facilitator. Of these five participants, four requested Skype assistance between Modules 6 and 7, where they are expected to create their WeVideo accounts and to record themselves reading the stories out loud. Only one participant requested assistance via email, in Module 2, regarding the length of her story.

The absence of the facilitator's presence on the forums was reinforced as being problematic, and that the facilitator's feedback would have been more useful if posted publicly:

> *More online facilitator interaction with the students. (...) Some of the things that may have been shared with individual students by email, if shared in the group, would benefit everyone. (Participant 9)*

The lack of specific guidelines on how to interact with colleagues on the forums was reinforced:

> *I was disappointed that there was not more engagement on the forum. (...) Encourage participants to post without fear of being inappropriate, or some other kind of prompting. (Participant 5)*

5.6. Post-course digital story rubric

Once all participants had published their digital stories, the rubric was used to verify if the productions had met the four pre-requisites that composed a good digital story. By applying the rubric, I verified that all digital stories produced *completely* met the four pre-requisites.

All nine digital stories produced their own legacy stories applying the principles and elements of storytelling presented in Modules 1 to 4. All participants used appropriate images in their digital stories. All participants used appropriate audio in their digital stories. And all participant used appropriate visual effects in their digital stories.

5.7. Post-course interview

After all participants concluded their stories and answered all the questionnaires contained on the platform, they were asked to take part in a personal interview via phone or Skype to be recorded and transcribed. All participants agreed and were interviewed within the two weeks following the conclusion of the course.

The interviews followed a guided questionnaire of eight questions. Many of the points mentioned by participants in the open-ended questions of the previous questionnaires were reinforced in the post-course interview.

Table M.5. (Appendix M) presents a summary of the findings from the open-ended questions.

5.7.1. Interview answers

Written instructions

Participants reinforced their appreciation for the guidelines used to define the structure of a story, as well as for the examples provided:

> I liked the way it was all do this, do this, do this. You could focus. The modules would lead you through the process step-by-step. I appreciated the structure. It made me a lot more careful thinking about what's important. (Participant 3)

> The examples were great that went along with the sessions. When I first started out, I thought I have no idea of what I was going to say. But I was helped how to write the story. It became very interesting especially the part that said choose a part of your life and write about it. Don't use the whole thing. I thought, ah, this is the part that I find exciting. (...) They gave me permission to actually choose that, my love of water. (Participant 6)

Video instructions

One participant referred to the introductory overview at each instructional video, which announced the number of steps to be followed. According to her, the total number in some of the videos could be overwhelming, even though the actions were considerably short:

I thought oh, good grief, how am I going to remember all these? But in fact, some of them were so minute that it was just the details. It didn't matter because you could always go back and look up. But at first, I felt, oh, yeah, that's an awful lot for one video. (Participant 4)

Two participants mentioned the tone and rhythm used to narrate the instructional videos as being too slow. One of them also believed that the narrator's accent could be a possible problem, even though she claimed to not have any problems understanding the instructions:

The voice was too slow. (…) That made it harder to understand, I think, because for me it got slow enough that I kind of lost the train of thought. (…) You speak English very well, but you do have an accent. (Participant 7)

I think [the narrator's] accent is very light in my opinion. It's very understandable. That wasn't the issue. It was the monotone thread. (Participant 9)

Participants reinforced the fact that the instructional videos lacked a supportive written version, in order to find specific information easily after having watch it for the first time. They also mentioned that the level of computer skills expected did not match theirs at some points:

In the video, all of a sudden [the facilitator] takes all of the files and puts them in, but doesn't explain how you might do that. (Participant 3)

[The instructional video] assumed that I knew how to set up a file, which I didn't. Okay, how do I set up a file? (Participant 8)

WeVideo

Two inherent factors of WeVideo software were mentioned by participants as being problematic. The unscheduled layout changes in the commands resulted in the screen shots in some instructional videos not matching what participants visualized in their accounts. Also, the software's cluttered table of commands, which could seem overwhelming to first time users:

Canvas

Participants mentioned the lack of platform tools that tracked their progress. Interestingly, one of them suggested a possible solution:

Kind of like Facebook, you can like something (…) Just to know you read it. (…) I would see a story and say it's great work or I like your story or stuff, we just assume

maybe no one else read it. (...) And even for myself, sometimes I'm like, hey, wait
a minute, did I read this one? (...) In Module 1, once you completed it, you got
Module 2 (...) that kind of progression. (Participant 9)

Time required

Participants mentioned the time that the overall course required was longer than expected. The instructions in the course outline stated the stipulated time to completion (two to four hours weekly for the duration of ten weeks). While, participants from the pilot test phase completed the course in time, most participants from the field test phase completed the course in 15 weeks. The reason for the delay is discussed in chapter six.

Social connectedness

The interviews revealed that participants joined the course with mainly two goals: to register their legacy and to experience new activities.

A point that was reinforced is the fact that participants who were determined to register their legacy declared that it was for their families:

My initial goal was to do a project that allowed me to share some of my
information about my life with my children, and to learn new technology.
(Participant 9)

Participants who joined the course to experience new activities claimed to be impressed by the end result, how they had been impacted by reminiscing, and the unexpected reactions of friends and family:

I started off thinking of it as the kind of story you tell at the dinner table. Also, the
chance to reflect on my life, and it brought me closer to [husband's family
members]. I sent it out to [husband's family members] and a couple said, oh, I had
no idea. But that was such a nice story. (Participant 2)

The end result actually. I kind of had the idea of how it might come together. In my
head I was picturing basically a PowerPoint. But it came together so nicely, like
my mom cried. (Participant 3)

Of the nine participants, four concluded the course without requesting assistance from the facilitator. In the interviews, all of them answered that the design of the course had been enough to instruct them throughout the modules, and that they had not felt insecure with the absence of a person explaining face-to-face. Of these four, two claimed to have preference for reading and looking for information by themselves:

I spend my life working online so the idea of not having somebody in the room doesn't bother me particularly. But I do like instructions that work, so it depends on the person. (Participant 2)

I don't think there was anything that I needed. I mean, outside support with like [the facilitator] encouraging me during my story, which was helpful. Other than that, I think it was pretty good. (Participant 3)

Of the five participants who requested help from the facilitator, four were very emphatic about the importance of establishing connections with the facilitator. One of them mentioned that the Skype session was key to not make her feel frustrated with the difficulties found in using a new technology during the video editing part of the course:

What I liked best was the interaction with the facilitator just because it gave me the ability to learn the skills that I was frustrated with trying to work with on my own. (Participant 9)

One of the five participants who requested help mentioned that, initially, she had no interest in socializing, and that her main goal was to learn a new skill. However, as she read the colleague's forum posts, her opinion about the importance of interacting with them was significantly changed:

I would skip over anything that I thought did not apply to learning the actual skill. (...) I'm just wondering if the value could have been explained to me. The value of interacting with others. I wasn't interested in other people's stories because I did not anticipate the value. (...) We're learning more than just a skill. We're learning about human nature and we're learning about other people's lives, how they affect us, how they were affected. (...) There are so many heart-warming stories there that now I realize I would have missed a great deal if I just stuck on the task. This process can be very inspiring if you delve into human nature. (...) And this is also sharing wisdom. (Participant 8)

The same participant mentioned that, to her, the course was an activity that fostered lifelong learning:

I'm also learning Mandarin because, at our age, we can get lazy, physically, mentally, emotionally lazy. Learning new language stimulates new pathways in the mind, right? And learning something new like this, again, it stimulates. I have to create new pathways in the brain and I think that is a good part of aging. (Participant 8)

The connection with colleagues on the forums was reinforced. One participant mentioned that it triggered her creativity to think about the messages that she wished to transmit in her own story:

> *Some of them definitely were a trigger. (...) I think it was a story about a house. (...) She persevered dealing with this house. (...) The idea of the resilience and the stick-to-itiveness, it was great. (...) You know the part where it was reading other people's stories I found other people's stories to be very interesting. I can't really say I can choose one over the other, but if I had to choose one it would be the one with the woman who learned to fly. (Participant 6)*

Two participants mentioned the lack of specific guidelines on how to interact with colleagues on the forums, and pointed out that the course was dealing with a generation that was not necessarily used to online interaction through posts.

One participant pointed out that the absence of the facilitator's presence on the forums was problematic. According to her, the facilitator's feedback would have been more useful if posted publicly.

5.8. Summary of findings

The goal of this study was to examine the effectiveness of the SFU Elder's Digital Storytelling course material adapted to the learning management platform Canvas, and whether the course would foster digital literacy, lifelong learning and social connectedness within participants.

Regarding the course instructional material, the overall results revealed that the tools which comprised the adapted instructional material were effective in supporting participants to create their digital stories.

In regard to digital literacy, lifelong learning and social connectedness, participants' open-ended responses showed that, by seeing their colleagues' progress on the forums, and receiving feedback and support from both the facilitator and colleagues, participants felt confident as the agents responsible for registering their legacy in a new technological medium. This confidence acquired has made them realize the benefits of being part of an online learning community, which indicated that the course helped foster

digital literacy, lifelong learning and social connectedness. The open-ended responses also revealed that the design of the written instructions was key to the quality of the stories produced. Finally, the open-ended responses revealed the areas of improvement related to the instructional videos design, and to the facilitator's presence on the forums. Table 5.5. shows the various insights resulted from the findings.

Table 5.5.   Insights on main findings

Findings	Insights
Structure guidelines for writing a story are appreciated.	Most participants had never written a well-structured story, much less a personal story. Thus, structure guidelines provided them with a safe support.
Varied examples of short stories evidencing the structure guidelines are appreciated.	As part of the scaffolding learning process, every new concept presented was followed by a new example of the desired outcome (i.e., a short story).
The informal and playful tone is appreciated.	Since the facilitator was not the one to present new information to participants, or the voice that guided them throughout the entire process, the chosen playful tone that spoke directly to the reader (as if written by a close friend) was what gave a personal touch to the written instructions.
Self-reflection theme for every example.	Reinforcing the theme of self-reflection on every example given (written short stories, Mp3 audio stories and Mp4 digital stories), led to participants automatically writing their personal stories around this theme, even without any specific instructions to do so.
Self-reflection digital stories are impactful.	Self-reflection stories had great impact not only on the other participants who read their colleagues' written version on the forums and later saw the digital story, but also on the authors themselves. Self-reflection stories stimulated deeper feedback as well, instead of a basic "that was nice" comment.
Length of instructional videos and number of steps can be overwhelming.	The average length of the instructional videos was of seven minutes long, with an average of 10-15 steps to be followed, which overwhelmed participants. The videos should be broken down, in order to reduce their length and the number of steps per video.
Instructional videos narrating voice was considered boring.	Just like the length of the instructional videos should be shorter, the narrating voice should be faster, enthusiastic, and speak to the participant in the same tone chosen for the written instructions.
The soundtrack in the instructional videos was annoying.	There should be no soundtrack in the instructional videos, as they tend to be repetitive and participants' attention are focused on the task, therefore no soundtrack is necessary.
Instructional videos should have accompanying written instructions.	Participants found difficult to go back and forth between the instructional video and WeVideo. They preferred if they could watch it once, then follow a written version of the steps.

Findings	Insights
Technical terms and knowledge should be explained every time.	Even commands such as Copy And Paste should not be used without a brief explanation and the sequence of actual commands to be taken (e.g., select desired text, use the right button of the mouse to choose the option Copy, then use the right button of the mouse again to choose the option Paste on the other location).
Learning management platform keeping track of participants' individual progress.	Because the instructional material was not released on a schedule, participants expected that Canvas informed on which part of the course they had been last, every time they logged on.
Producing a digital story stimulates lifelog learning.	By creating their own digital story and showing it to friends and family, participants experienced an empowering feeling of agency, which made them want to create more on their own. This movement suggested that they will continue to use the Internet on their own to support their future creations.
Forums fostered social connectedness.	The connection formed between colleagues on the forums was considered to be supportive. It was also considered to be unexpectedly inspiring to participants who, initially, were only looking for the learning component of the course.
Forums lacked detailed guidelines.	Participants were only told to provide positive feedback to their colleagues' posts. However, a deeper explanation on how to communicate with colleagues and the importance of sharing and providing feedback is necessary. Perhaps even adding quotations from previous participants on their forum experience, or a short video with participants giving their statements.
Forums lacked the presence of the facilitator providing individual feedback to posts.	By receiving individual feedback about their forum posts via email, participants demonstrated clear signs of engagement and progress. However, a number of participants concluded that it would have been beneficial to read the facilitator's feedback on the forums' posts, so they could all benefit.
Facilitator's Skype assistance was appreciated.	The online one-on-one Skype session with the facilitator gave confidence to participants. The ones who requested it, only needed one session to feel confident enough to continue the course relying only on the instructional videos. It was the importance of the first contact and the notion that, if necessary, they could request it again were the key elements.

Chapter 6.   Discussion and conclusion

6.1. Introduction

Overall the learning design of the SFU Elder's Digital Storytelling online course was highly rated by participants. They declared satisfaction with most of the course's aspects on both offerings and the results have proven to be very positive.

Like the original face-to-face course, the design of its online version stimulated participants to actively engage with colleagues on the forums, and with the facilitator via email and Skype (Swan, 2002).

It is important to highlight that, to reach the desired goals, the original face-to-face course counted on scaffolding throughout its learning process by providing participants with constant support from the facilitator and co-facilitator, in order to support and guide them towards the desired outcome (Jonassen, 1999). And, during the adaptation of the original design, the scaffolding process was applied to the written instructions presenting every new concept to be learned and activity to be performed, in addition to the way how the instructional videos were divided, presented and interconnected to each other. As reported by participants on the questionnaires, this adaptation was highly rated.

The facilitation process, which was initially designed to work on the basis of participant request, was adapted in the very beginning of the second course offering to make sure that all participants were engaged, and on the same schedule. In order to adapt, participants began receiving weekly feedback about their progress and comments about their colleague's progress on the forums' posts, in hopes to encourage communication between them. The weekly emails also reinforced the possibility of participants requesting one-on-one Skype sessions with the facilitator. The possibility was part of the initial design and mentioned throughout the modules' sections, yet I decided to encourage them.

One of the points raised during the original face-to-face course was how to make the design more sustainable in terms of one-on-one time availability for the video editing portion. There, the facilitator and the co-facilitator booked individual weekly sessions with participants to guide them through the steps of using WeVideo. This process seldom resulted in the facilitator and co-facilitator needing to book extra sessions to make sure that participants were gradually mastering the desired video editing skills. The result represented a problem in terms of the project not being sustainable because of time limitations, which is an important aspect, when it comes to turning research on older adults into practice (Estabrooks et al., 2011). The problem of time limitation seemed to be considerably dealt with in the online adaptation deign. All participants who requested the Skype sessions felt the need to do so at the very beginning of the video editing process. Every one of them only needed one session of approximately one hour. According to their answers on the questionnaires, the session was key to make them feel secure enough to continue exploring WeVideo on their own, using only the instructional videos.

The forums were essential for community building in the online course. They were available from Week 1 to Week 4, then again from Week 9 to Week 10. Participants were asked to post their activities there for the module and were encouraged to provide positive feedback to colleagues. As reported in the open-ended answers of the questionnaires, participants were stimulated by seeing their colleague's progress on the forums and felt encouraged for being part of a community that shared interests. A key factor that was also revealed in their answers regarding the forums was that there was a lack of more specific guidelines about how to interact with colleagues, and how participants missed the presence of the facilitator providing feedback and serving as a mediator. Finally, some participants mentioned that the lack of forums on Week 5 to Week 8 made them feel disconnected from their colleagues. They would only receive feedback from the facilitator via email during that time, as they were focused on the video editing process of their personal digital stories. According to one participant, it would be positive to see others commenting on their progress and difficulties.

A few difficulties were encountered in the course design, all of them related to the technologies used. First, the online learning management platform Canvas usually relies on the facilitator making new content available by choosing the release time. In the course design, however, I decided to make all content (Week 1 to Week 10) available from the beginning, so participants would only have the final stipulated deadline to complete the course and, therefore, would be free to complete the tasks in their own rhythm. The difficulty encountered was due to the fact that Canvas does not have any tools to inform participants where they have been last, every time they log on. According to participants, they would take a long time just to figure out where to continue, and whether they had missed any lessons or activities. Second, the fact that WeVideo is an online software results in the possibility of its layout and command buttons to change overnight without any notice, which can make the recorded instructional videos worthless, depending on the changes. No significant changes were made in the WeVideo platform during the study and no participant mentioned not being able to follow the instructional videos.

This final chapter presents the major findings of the study and their relation to the literature, the study's limitations, the recommendations for future studies and the conclusion.

6.2. Major findings

The results of this study showed major findings in five areas. The major findings from the first three areas indicate answers to the first research question (What are the participant's perceptions and opinions of the learning design regarding the instructional material? For example, do the written instructions and instructional videos support the learning objectives from the participants' perspective?).

The major findings from the fourth area indicate answers to the second and third research questions (Does the learning experience foster social connectedness? and Does the learning experience foster lifelong learning?).

The major findings from the fifth area indicate answers to the fourth research question (What are the participants' perceptions and opinions of the learning design regarding the role of the facilitator? For example, does the presence of the facilitator in a fully online environment support the learning objectives from the participants' perspective?).

1. Written instructions regarding the effectiveness of the structure guidelines provided and the tone employed.
2. Instructional videos, regarding the necessary improvements on their length, tone, soundtrack, technical language, and the creation of an accompanying written version.
3. The effectiveness of the scaffolding process for presenting new content both in the written instructions and in the instructional videos.
4. Lifelong learning and social connectedness, regarding:
   - how the feeling of agency experienced by participants for having registered a piece of their life legacy led them to produce more digital stories and connect with more colleagues;
   - how participants felt encouraged by seeing their colleagues' progress on the forums;
   - how the self-reflection contained in the participants' stories was a key element that made their digital stories impactful to colleagues, friends and family;
   - how these factors suggest that participants completed the course feeling encouraged to take more online courses, produce more digital stories and continue connecting with people using the Internet.
5. Facilitator's role, regarding the effectiveness of personal feedback to participants via email, the effectiveness of the one-on-one Skype sessions between the facilitator and participants to use WeVideo, and the necessary presence of the facilitator on the forums.

The major findings of the five areas and their connection to the literature are presented below.

6.2.1. Written instructions

In this online course, the written instructions were the key element to lead participants throughout the entire process, including the introduction to each instructional

video (Czarnecki, 2009; Robin, 2008). Results revealed that the two major factors related to the written instructions that were responsible for the success of this study were the structure guidelines provided and the tone employed.

Structure guidelines

Most participants praised the importance of the structure guidelines from Lambert (2010) to their writing process. Not only did they give participants a foundation to rely on during the writing process, but they served as a check list which participants could go to after finishing their first draft.

Tone

The playful and informal tone employed in all written material (which includes the instructions of each Canvas section, concepts to be learnt, examples provided and the Week 5 manual) played an important role, because it served as the leading voice of a facilitator who guided participants throughout the entire process. Moreover, the tone was based on my experience as a facilitator to a number of face-to-face courses, therefore it was purposely used to provide participants with the sense of reading directions written directly to them by a person to whom they could relate (Kascak et al., 2015; Silva et al., 2015; Phiriyapokanon, 2011).

6.2.2. Instructional videos

Of the nine participants who finished the course, four did not request any assistance from the facilitator. They only relied on the instructional videos to use WeVideo and create their digital stories. The remaining five participants requested Skype assistance during the video editing part only once, after Week 6 or 7, which shows that they only relied on the videos to complete their digital stories. This information confirms that the design of the instructional videos worked (Jonassen et al., 1998; Bruner, 1996; Bruner, 1991).

Participants' responses to the open-ended questions of the various questionnaires and final interview revealed the five aspects that could be improved in the instructional

videos: (1) length, (2) matching tone, (3) soundtrack, (4) accompanying written instructions, and (5) technical language. The aspects are detailed below.

Length

Participants found that the number of steps to be followed in the videos was overwhelming, as some of them were longer than 15 in total, which resulted in very long videos. According to some participants, the number of steps announced in the beginning of the videos, or the total time displayed could be intimidating if longer than five minutes. Interestingly, they did not mind the total number of instructional videos (seven), and suggested that the longer videos could be divided.

Matching tone and soundtrack

For the recording process of the instructional videos, I used a prepared script and recorded the audio of myself reading it out loud. Then, I recorded my computer screen using WeVideo, according to the steps described in each script. The result was a paused narrative that described the steps in a more instructional than personal tone, which was defined by participants as lacking enthusiasm and personal touch, different to the tone employed in the written instructions. According to participants, the instructional videos were technically helpful, yet lacked a personal touch.

Moreover, since there were silent pauses between the narrated steps, while the screen showed the editing process taking place, I decided to add a low volume instrumental soundtrack in the background, which was pointed by some participants as annoying.

Accompanying written instructions

Because the screen shot layout of WeVideo being used was naturally cluttered, I was not able to add subtitles to the instructional videos, as they would clutter the screen even more. I also did not consider providing a written copy of the steps to be followed (Chisnell et al., 2006; Hawthorn, 2006), as provided in the manual available on Week 5. The absence of the steps in written form was mentioned by some participants, who claimed to have written down the steps on paper themselves in order not to go switch between screens (another technical proficiency that I did not antecipate at the time).

A positive aspect of the instructional videos was the fact that every command to be taken was also described regarding position of the button on the screen, color and/or shape of the button, the amount of mouse clicks etc. (e.g., on the bottom right of the screen, double click on the blue button with an upwards arrow symbol). These guiding instructions were mentioned by participants as being helpful, especially when the screen shot became too cluttered with information (Kascak and Sanford, 2015; Carmien and Garzo, 2014; Eagleman, 2011; Kerber, 2012; Czaja and Lee, 2007).

Technical language

When I was writing the instructional videos' scripts to record myself reading them out loud, most of the technical language commands were briefly explained (e.g., this video will show you how to upload your digitized images to your WeVideo account, which means you will send them from your computer to your account). However, participants still mentioned that the technical language and knowledge expected in some instructional videos was sometimes too advanced for them. For instance, the suggestion to create a file on their computers' desktop to group all the digitized images before uploading them to their WeVideo accounts was mentioned by a participant. According to one participant, the suggestion was made in the video, but it did not show how to do so.

6.2.3. Scaffolding

The adaptation of the original face-to-face SFU Elder's Digital Storytelling course followed the theoretical foundation of scaffolding theory (Jonassen,1999), by maintaining the presentation of new content and division of tasks as close as possible to the original division of weeks within the modules' sections on Canvas. This theoretical foundation was also applied to the presentation of new content and division of tasks in the creation of the instructional videos. Also, every new task to be performed by participants (on Canvas and WeVideo) was always exemplified.

6.2.4. Lifelong learning and social connectedness

In the open-ended questions of the questionnaires, the course evaluation and the Skype interview, participants mentioned experiencing a feeling sense of connection with

a group of colleagues who shared the experienced the same process and shared common interests (Pecorini & Duplaa, 2017; Swan, 2002). In addition to that, they mentioned realizing how impactful it was to read and later watch their colleagues' digital stories to themselves (Bohlmeijer et al., 2007; Birren & Deutchman 1991). One of them even mentioning how unexpected it was. Many of the participants related the impact of the stories on themselves, as well as on colleagues, friends and family, to fact that they contained self-reflection. Rather than narrating events in a timeline about a vacation trip, all participants produced digital stories about personal experiences that led to self-reflection at the end. As mentioned on Chapter 5 Results, there were no direct instructions for participants to write down stories containing self-reflection. However, all written, Mp3 audio and Mp4 video example stories provided purposely contained self-reflection to influence participants.

Also, many of the participants mentioned the strong feeling of agency for having registered a small piece of their life legacy, as it showed not only a side of themselves that was sometimes unknown to friends and family, but it also evidenced the values and traditions passed down to the generations in their families, but that had never been spoken of. Interestingly, all participants who mentioned receiving feedback from family and friends said that they had sent their digital stories via the link generated by WeVideo, thus using the Internet. Moreover, some participants mentioned the positive unexpected reaction from friends and family to their digital stories (Lambert, 2013; Couldry, 2008). Finally, most of the participants expressed interest in producing more digital stories in the future.

These impactful and sometimes unexpected experiences, along with the desire to produce more digital stories, suggest that participants completed this course understanding the benefits of participating in online courses, joining online communities and using the Internet to connect with friends, family and new people who share the same interests (Hausknecht & Kaufman, 2018; Robin, 2015; Baecker et al., 2012; Robin, 2008; Heo, 2009; Barrett, 2006).

6.2.5. Facilitator's role

The open-ended answers of the questionnaires, the course evaluation and the Skype interview revealed (1) how important the positive feedback was to stimulate participants, (2) how the one-on-one Skype sessions made them feel secure enough to use a video editing software for the first time, and (3) how the absence of the facilitator on the forums was seen as problem.

Feedback

As mentioned on 3.4. Online Course, this study initially intended to examine whether participants would be able to produce their digital stories relying only on the instructional material and without any assistance from the facilitator, unless they requested it. Of the nine participants to complete the course, four were able to complete it without requesting assistance. However, the other five participants showed a significant decrease in completing their activities on the forums after Week 2, which led me to decide to contact them via email as the facilitator. The decision not to be present as the facilitator on the forums was because participants had already been contacted via email to receive instructions on how to log into Canvas for the first time, therefore by posting on the forums only after Week 3 could break the pattern.

The visible progress of the five participants after receiving weekly feedback via email suggested that the course design best attains its goals by offering constant facilitator feedback (Campbell, 2015; Phiriyapokanon, 2011; Wilkinson, 2011; Swan, 2002).

Skype sessions

The importance of the facilitator establishing a connection with participants was visible not only in their progress throughout the activities posted on the forums, but also in the confidence that they declared acquiring after just one session of one-on-one Skype assistance, to continue their video editing process relying only on the instructional videos.

Many of them mentioned experiencing a sense of security for having gone through the initial video editing steps with a real person on real time. This sense of

security suggested that a trust bond was created between them and the facilitator, which seemed to be enough to make them feel confident to continue following the instructional material by themselves, because they understood that, if necessary, they could request more sessions (Hill et al., 2015; Raymundo and da Silva Santana, 2014; Arch et al., 2008; Swan, 2002).

Forum encouragement

According to participants, the absence of the facilitator in the sections' forums was considered a problem for three reasons. First, by openly posting feedback on the forums, they would have a sense of the facilitator working as an ice breaker who stimulates them to interact with colleagues. Second, by seeing their colleagues' feedback, they could benefit from the information or would feel free to ask follow-up questions. Third, they would feel comfortable knowing that others could be experiencing similar problems. In addition to the third problem, one participant mentioned that, throughout Week 6 to Week 8 (when they were focused on WeVideo), there were no forums, which made her feel disconnected from colleagues.

6.3. Limitations

The two limitations that arose from this study were related to the particularities of WeVideo software and my time availability as the facilitator. Interestingly, they are connected to each other when it comes to facilitation.

Because WeVideo is a private online software, its layout and commands can be changed at any point without notification, which creates a potential problem for the creation of the instructional videos, or any instructional material for that matter. Luckily, the layout changes carried out in the software during the two courses were not significant enough to make the instructional videos obsolete.

It was a risk which could only be solved by scheduling one-on-one Skype sessions with all participants. However, based on the participants' answers regarding the frequency with which they watched each instructional video, the entire premise of

adapting the course design to a format that allows its broader dissemination and accessibility would be affected. Moreover, none of the data collection instruments assessed the time of the day when participants watched them.

This leads to the second limitation, which was the fact that I was not available as the facilitator during long periods of time. If the online course were to replace the instructional videos for one or more facilitators carrying out one-on-one Skype sessions in the same way as the original face-to-face course, the project would encounter the same issues found in the original design (Hausknecht, Vanchu-Ororsco and Kaufman, 2016a; Hausknecht, Vanchu-Ororsco and Kaufman, 2016b; Hausknecht, Vanchu-Ororsco and Kaufman, 2017). Regarding the time necessary for facilitators to work with participants, digital storytelling is a process which takes a long time and commitment, with an increased time frame or more opportunities to meet being an important issue for future designs (Hausknecht, Vanchu-Ororsco and Kaufman, 2017).

6.4. Future work

Based on the limitations mentioned, it may be worth considering two potential ways of making the online course more sustainable. The first one would be finding different video editing software or even developing one with customized features. The second one would be broadening current research on intergenerational digital storytelling to the online version, since previous studies have indicated its potential in fostering social connectedness (Flottemesch, 2013; Iseke & Moore, 2011).

By identifying other video editing software existing in the market, one should consider what has already been ruled out in the previous research for the face-to-face course in terms of downloadable software versus online. Since the two programs used for this study (Canvas and WeVideo) were accessed by participants using the Internet, I did not have to consider potential problems such as designing instructional material that covered how to download software and its many intricacies. Thus, online tools have, so far, been the best option so far. For developing or customizing a video editing program for digital storytelling, one would benefit from the results of this study.

As to the current research on intergenerational digital storytelling, there could be potential in analyzing the effectiveness of broadening its sustainability and reaching a larger audience if the younger generation were to provide the online one-on-one Skype sessions to the older adults, instead of using instructional videos.

6.5. Conclusion

Having facilitated a number of face-to-face SFU Elder's Digital Storytelling courses prior to the two offerings of its online version, I understood that, be it in the virtual world or in a classroom, the three key elements to providing a pleasurable and impactful experience to participants taking this course are:

1. the scaffolds to introduce the story structure guidelines,
2. the stimulating sense of community felt by participants sharing with colleagues their stories and the experience of going through this process, and
3. the constant support and encouragement from the facilitator

The sense of agency and community that is established during this course provides a lasting impact in its participants (Kim and Merriam, 2004; Jonassen, 1999; Mannell and Kleiber, 1997). This impact fosters in them the desire to use the virtual world to continue to learn and connect with people because they now feel secure enough to venture themselves with a digital tool that produces a product that connects them to people at a distance with a speed without precedent, and shows these people a side of them perhaps never before revealed (Waycott et al., 2013).

Hopefully, this study demonstrated the importance and efficacy of the online SFU Elder's Digital Storytelling course design in fostering social connectedness and lifelong learning among older adults in an era where the Internet is increasingly becoming the new means of communication (WHO, 2015).

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Appendix A.   Ethics approval letter

Minimal Risk Approval – Delegated

Study Number: 2017s0455
Study Title: A formative evaluation of an online digital storytelling course for older adults

Approval Date: 2017 October 27	**Expiry Date:** 2018 October 27
Principal Investigator: Kaufman, David	**Supervisor:** n/a
SFU Position: Faculty	**Faculty/Department:** Education

SFU Collaborator: Silva, Diego
External Collaborator: n/a
Research Personnel: n/a
Project Leader: n/a

Funding Source: AGE-WELL NCE
Funding Title: 4.3 CONNECT-CREATE

Document(s) Approved in this Letter:
- Study Details, uploaded 2017 October 8
- Consent From, uploaded 2017 October 27
- Recruitment Invitation Letter, uploaded 2017 October 27
- Questionnaires, uploaded 2017 October 8

The application for ethical review and the document(s) listed above have been reviewed and the procedures were found to be acceptable on ethical grounds for research involving human participants.

The approval for this Study expires on the **Expiry Date. An annual renewal form must be completed every year prior to the Expiry Date. Failure to submit an annual renewal form will lead to your study being suspended and potentially terminated.** The Board reviews and may amend decisions or subsequent amendments made independently by the authorized delegated reviewer at its regular monthly meeting.

This letter is your official ethics approval documentation for this project. Please keep this document for reference purposes.

<u>This study has been approved by an authorized delegated reviewer.</u>

Appendix B.   Consent form

Title: A formative evaluation of an online digital storytelling course for older adults.

Principal Investigator: Dr. David Kaufman, Professor, Faculty of Education, Simon Fraser University.

Goal: This research project has been funded by the AGE-WELL National Centre of Excellence Project (WP4.3). The goal of this project is to evaluate the design of an online digital storytelling course. This will include collecting data from course participants on the design and their learning experience. This research project has two phases: pilot study of 3-4 participants and field-based evaluation study of 10-12 participants. Data collection methods will include online surveys of participants, and selected post-course interviews.

Benefits of the Study:

The possible benefits are that creating a digital story may enhance the socio-emotional lives of participants, may provide life lessons to others, and may provide evidence that this would be useful to other older adults.

Procedures:

You will complete questionnaires that will take about 15-20 minutes to complete at the start and end of the ten-week Digital Storytelling course.

We plan to place the digital stories on a website for viewing by others who may be interested in the stories created. We also plan to show selected stories at public events. At the end of the course, we will ask you to sign a separate Release Form, giving us permission to use your story in these ways without any identifying information, You are not required to give your permission and there will be no repercussions if you refuse to allow this to be done.

Confidentiality:

All research data will be kept confidential and the identity of the participants will not be reported in the final report, papers, or presentations that will be published after the study has ended. Selected quotations may be provided in reports, papers written for publication, and presentations about this project; however, no names or identifying features will be included in order to preserve confidentiality.

Risks:

There are no risks associated with this study and you can withdraw at any time. The data collected from any participant who withdraws will be destroyed immediately.

Comments and questions can be addressed to the Principal Investigator, Dr. David Kaufman Professor, Faculty of Education

All concerns or complaints can be sent to Dr. Jeffrey Toward, Director, Office of Research Ethics.

By signing this form below, you confirm that you:

1. Understand what is required based on the above information.
2. Understand that your participation is voluntary and you are free to withdraw at any time.
3. Understand the provisions for confidentiality.

Date: _____

Print Name:

_____

Signature:

_____

Appendix C.   Invitation letter

8888 University Drive
Vancouver BC Canada
V5A 1S6
www.sfu.ca/education.html

INVITATION TO PARTICIPATE IN THE ONLINE DIGITAL STORYTELLYING PROJECT

Principal Investigator:
Dr. David Kaufman, Professor, Faculty of Education
Co-Investigators:
Dr. Robyn Schell, Adjunct Professor, Faculty of Education
Diogo Fagundes , M.A. Candidate, Faculty of Education

February 27, 2018

Dear Potential Participant,
We invite you to join us in the Online Digital Storytelling Course for Older Adults project, funded by the AGE-WELL National Centre of Excellence (WP4.3). The purpose of this project is to evaluate the design of the course and the learning experience of those who take the course.

We are recruiting 10-12 fully retired seniors aged 65 and over to participate in this online digital storytelling course, starting April 02, 2018. The participants will receive an invitation via email to join the course allowing them to access the course hosted on the Simon Fraser University secure learning management platform called Canvas. Participants will complete the course over a 10-week period and produce a short movie of about five minutes about an important moment in their lives. Participants who complete the course and publish their movies will be included in a draw for three prizes of $300 CDN each.

The participants will complete questionnaires that will take about 10 minutes to complete at the end of each weekly module in the course. These questionnaires will include questions about background information, course design, course enjoyment and their learning experience.

Should you require more information about our research study, please don't hesitate to contact me.

Thank you for considering our request.

Sincerely,
Diogo Fagundes, M.A. Candidate, Research Assistant.

Appendix D.   Permission letter

LETTERHEAD OR EMAIL OF ORGANIZATION
MONTH AND DAY, 2018
Dear Diogo Fagundes,
We are pleased to inform you that your research team can conduct the research study An Online Digital Storytelling Course for Older Adults, at our centre, _____.
We have considered the proposal for your study and recognize that its goals are aligned with our mission of serving and enhancing the life satisfaction of our senior clients and that the project will not interfere with our older adults' activities and programs.
We understand that participants will be invited to join a ten-week course and complete questionnaires asking them about their course experience, starting April 02, 2018. Any adult aged 65 years and over and fully retired can participate in the project. This participation is voluntary, and participants can withdraw from the research anytime they wish. The participants will receive an email inviting them to join the course and access secure learning management platform, hosted by Simon Fraser University. Participants will complete questionnaires about their background, course design, course enjoyment and their learning experience. Participants who complete the course and publish their movies will be included in a draw for three prizes of $100 CDN each.
In light of this, we gladly allow your team to conduct the recruitment for the Online Digital Storytelling Course for Older Adults at an arranged venue at the scheduled time of _____.
Should you have questions, please do not hesitate to contact me at _____.
Thank you for including _____(organization)_____in your research.
Sincerely,

NAME
Title

Appendix E.   Information session poster

Online Digital Storytelling Course

Transform Your Written Story into a Short Movie

Draw for 3 prizes of $100 for 3 Movies Created

Take the 10-week Course on Your Computer, Begins March 05, 2018.

Simon Fraser University is running an Online Digital Storytelling Course for seniors 65 years and older in the Greater Vancouver area. To join the course, you should have your own email account, be comfortable visiting internet websites, and if necessary, have a friend or family member with enough computer skills to help you learn how to use a video-editing software to transform your personal story into a short movie.

More than 100 digital stories (movies) have already been created by our seniors so we are confident that you will be able to create yours.

Information Session at the lobby.

February 10, 1pm to 3pm.

Appendix F.   Invitation flyer

Online Digital Storytelling Course

Transform Your Written Story into a Short Movie

Draw for 3 prizes of $100 for 3 Movies Created

Take the 10-week Course on Your Computer, Begins April 02, 2018.

Simon Fraser University is running an Online Digital Storytelling Course for seniors 65 years and older in Canada. To join the course, you should have your own email account, be comfortable visiting internet websites, and if necessary, have a friend or family member with enough computer skills to help you learn how to use a video-editing software to transform your personal story into a short movie.

More than 100 digital stories (movies) have already been created by our seniors so we are confident that you will be able to create yours.

To participate, send an email

Appendix G.   Pre-course questionnaire

Please, answer the following:

Your age:

60 to 64   65 to 69   70 to 74   75 to 79   80 to 84   85 or older

Your gender:

Female   Male

How often you use a computer:

Less than once a month   Once a month   Once a week   A few times a week   Daily

How would you rate your computer skills?

Very poor   Poor   Fair   Good   Very good

Have you ever used video editing software before?

No

Yes (which one?)

_____.

Have you even taken an online course before?

No

Yes

Appendix H.   Written instructions questionnaire

To what extent do you agree with the following statements about your experience with the written instructions of this module?

1. I found the course material easy to follow.

Strongly disagree   Disagree   No opinion   Agree   Strongly agree

2. I found the course materials clearly explained what I was expected to do in the module.

Strongly disagree   Disagree   No opinion   Agree   Strongly agree

3. I found the activities in this module helped me to develop the skills I needed to create an interesting digital story.

Strongly disagree   Disagree   No opinion   Agree   Strongly agree

4. What did you like best about this module?

_____

5. What didn't you like about this module, if anything?

_____

6. How could the module be improved?

_____

Appendix I.   Instructional videos questionnaire

To what extent do you agree with the following statements about your experience with the instructional video for this module?

Did you view the instructional video(s) for the module?

If **yes**, please, answer the following questions.

1. The video(s) was/were helpful.

Strongly disagree   Disagree   No opinion   Agree   Strongly agree

2. The images in the video were easy to follow.

Strongly disagree   Disagree   No opinion   Agree   Strongly agree

3. The voice narrating the instructions was easy to follow.

Strongly disagree   Disagree   No opinion   Agree   Strongly agree

4. The instructions in the video were easy to follow.

Strongly disagree   Disagree   No opinion   Agree   Strongly agree

5. After watching the tutorial, how confident were you to complete the activities proposed?

Not confident   Little confident.   Somewhat confident   Very confident

6. How often did you have to pause or rewind the video?
Never   Occasionally   Often   Most of the time

7. How many times did you need to watch the video tutorial to complete the tasks?
Number:_____.

8. What could be changed to improve the video?

_____

(For module 5 only: Did you use the WeVideo manual?)

If **yes**, please, answer the following questions.

1. (For module 5 only: The instructions in the WeVideo manual were easy to follow.)

Strongly disagree   Disagree   No opinion   Agree   Strongly agree

2. (For module 5 only: How helpful was the WeVideo manual?)

Not helpful at all   Helped very little   Helpful   Very helpful

3. (For module 5 only: What could be changed to improve the *WeVideo* manual?)

_____

Appendix J.   Course evaluation

1. Did you use help at any point of the course? If yes, who helped you and in which module? If no, please, answer I did not use help.

_____

2. How would you rate the process used to guide you in writing your own story?

Very poor   Poor   Fair   Good   Very good

3. How would you rate the software to create your digital story?

Very poor   Poor   Fair   Good   Very good

4. How would you rate the level of difficulty of the course?

Very difficult   Difficult   Just right   Easy   Very easy

5. What did you like best about the course?

_____

6. What did you like least about the course?

_____

7. How could we improve this course?

_____

8. Is there anything else that you would like to add?

_____

9. How would you rate your level of satisfaction with the course?

Very dissatisfied   Dissatisfied   Satisfied   Very satisfied

10. *Would you recommend this course to a friend?*
Yes   No   Unsure

Appendix K.   Digital story rubric

The participants' individual digital storytelling videos will be assessed based on the extent to which the participant was able to achieve the learning objective defined in the beginning of the course, using a scale from 1 to 4, with 4 being highest level of achievement. The rubric criterion is as follows:

(1) Not at all - the learning objective was not achieved.

(2) Very little - the learning objective was achieved minimally.

(3) Partially - the learning objective was mostly achieved.

(4) Completely - the learning objective was fully achieved.

Participant's name and digital story:

_____

1. The participant developed their own legacy story applying the principles and elements of storytelling.

Not at all   Very little   Partially   Completely

2. The participant developed their own legacy story in the form of a digital story, using appropriate images in the WeVideo software.

Not at all   Very little   Partially.   Completely

3. The participant developed their own legacy story in the form of a digital story, using appropriate audio in the WeVideo software.

Not at all   Very little   Partially   Completely

4. The participant developed their own legacy story in the form of a digital story, using appropriate visual effects in the WeVideo software.

Not at all   Very little   Partially   Completely

Appendix L.   Post-course interview guide

1. Tell me about your experience in taking this course?

_____

2. What did you like best about the course? Please, explain why?

_____

3. What did you like least about this course? Please, explain why?

_____

4. Did the written instructions clearly explain what you had to do for each module? (Explain)

_____

5. Did the instructional videos clearly explain what you had to do for each module? (Explain)

_____

6. Was the design of the instructions enough to instruct you throughout the modules, or did you feel insecure with the absence of a person explaining face-to-face? (Explain)

_____

7. How could we improve this course? Please elaborate?

_____

8. Anything else?

_____

Appendix M.   Summary of findings per instrument

Table M.1.   Written instructions – Open-ended questions – Modules 1 to 4

Themes	Category	Frequency (n)
Written instructions	The guidelines and examples helped the writing process.	6
	Appreciation for guidelines being evidenced in the examples given.	1
	Appreciation for the informal tone of the written material in general.	7
	Request for more examples that evidence the guidelines.	1
	Appreciation for scaffolded guidelines in small portions and reinforcement in different scenarios.	3
	The variety of exercises helped the writing process.	4
Social connectedness	Colleagues' progress on the forums' posts stimulated the writing process.	1
	Absence of the facilitator's presence on the forums considered problematic.	2
	Lack of specific guidelines on how to interact with colleagues on the forums considered problematic.	1
	Lack of guidelines on the importance of constant posts on the forums considered problematic.	3

Table M.2.   Written instructions – Open-ended questions – Modules 5 to 9

Themes	Category	Frequency (n)
Written instructions	Appreciation for going through personal photos.	3
	Appreciation for creating the storyboard.	3
Time required	Time necessary to complete the activities proposed in Module 5 was considered problematic.	1
Lifelong learning	Appreciation for being the agents responsible for creating their own productions.	5
	Feeling of accomplishment for the final production.	6

Table M.3.   Instructional videos – Open-ended questions – Modules 5 to 9

Themes	Category	Frequency (n)
Video instructions	Instructional videos helped the video editing process.	4
	Large number of steps per video considered problematic.	2
	Tone and rhythm of narrating voice considered a problem.	1
	Lack of written version of the steps to be followed in the instructional videos considered problematic.	3
	Size and definition of screen shots showing the video editing process considered problematic.	3
	Technical terms considered problematic.	1
	Technical knowledge expected considered problematic.	3
WeVideo	Differences between the screen shot layout of the instructional videos and the online accounts' considered problematic.	1
	Software would not work in certain Internet browsers.	1

Table M.4.   Course evaluation – Open-ended questionnaire

Themes	Category	Frequency (n)
Written instructions	Appreciation for the guidelines, examples and instructional videos.	4
Video instructions	Suggested a FAQ list.	1
	Suggested separate advanced video editing instructions.	1
	Technical terms considered problematic.	1
	Lack of written version of the steps to be followed in the instructional videos considered a problem.	2
Lifelong learning	Appreciation for being the agents responsible for creating their own productions.	4
	Plans to produce more digital stories.	2
Social connectedness	Connection with colleagues on the forums was supportive and stimulating.	4
	Appreciated the facilitator's Skype assistance.	4
	Joined the course to register their legacy to the family.	3
	Did not request facilitator's assistance.	4
	Requested facilitator's assistance through email between Modules 1 to 4.	1
	Requested facilitator's assistance through Skype between Modules 6 and 7.	4
	Absence of facilitator's presence on the forums considered problematic.	1
	Lack of specific guidelines on how to interact with colleagues on the forums considered problematic.	1

Table M.5.   Post-course interview

Themes	Category	Frequency (n)
Written instructions	Appreciation for the guidelines, examples and instructional videos.	6
Video instructions	Large number of steps per video considered problematic.	1
	Tone and rhythm of narrating voice considered a problem.	2
	Lack of written version of the steps to be followed in the instructional videos considered a problem.	2
	Technical knowledge expected considered problematic.	2
WeVideo	Software's clustered table of commands considered problematic.	1
	Differences between the screen shot layout of the instructional videos and the online accounts' considered a problem.	2
Canvas	Lack of platform tools to track participants' progress considered problematic.	2
Time required	Felt that the entire process of writing their personal story and digitizing was more complex and took longer than expected.	3
Lifelong learning	The course experience stimulated lifelong learning.	1
Social connectedness	Connection with colleagues on the forums was supportive and stimulating.	3
	Appreciated the facilitator's Skype assistance.	3
	Appreciated the unexpected impact of the process of creating a personal digital story on themselves.	3
	Appreciated the unexpected impact of the process of creating a personal digital story on family and friends.	4
	Joined the course to register their legacy to the family.	2
	Appreciated the design of the course for allowing them to complete it without the facilitator's assistance.	2
	Appreciated the unexpected impact of interacting with colleagues on the forums.	1
	Absence of the facilitator's presence on the forums considered problematic.	1
	Lack of specific guidelines on how to interact with colleagues on the forums considered problematic.	2
	Lack of guidelines on the importance of constant posts on the forums considered problematic.	1

Appendix N.   Participants' quotes

Written instructions

Regarding the guidelines and the examples provided:

It gave an easy script to follow to build a story. Also, it clarified the importance of sharing life stories. (Participant 1)

I enjoyed learning tools of the art of storytelling, specially creating the storyboard. Organizing the material defied me a lot. (Participant 1)

The values/ skills/ talents framework, which gives something more engaging for a story than just a set of events. (Participant 2)

I liked the example story that you shared. It helped me find a direction for my story, and gave me an idea on how it could flow. (Participant 3)

I am beyond impressed with the end result of this course. I think it is laid out clearly, which helped me write my story and complete my project in a timely manner. (Participant 3)

The process in the design of the module leading up to posting of your story especially the 'what makes a good story' exercise. (Participant 5)

My personal best was the information around the story and how to write the story with the plot of the story and those stages or those developmental stages. That provided me with such a template that was really, really useful. (Participant 5)

The creative process of writing a story. (...) I particularly like the modules on what makes a good story. (Participant 5)

The recap of the 5 plot stages. The difference in the videos and the searching for the 5 plot stages. (Participant 6)

I read the 5 stages and found it useful in refreshing what I used to know."(Participant 8)

Well, I thought the written instructions were very good and very clear. (Participant 8)

I do feel that, at the beginning of each module, the written overview of the modules was well done. It was well written. (Participant 9)

Regarding the tone used in the instructions:

Doing the exercises and learning about the plot of a story. (Participant 1)

Useful analysis of example stories. Good for learning the story stages. (Participant 2)

I found the five plot stages exercise helpful. It has been a long time since I wrote a story, and this helped guide my story. (Participant 3)

It has been an interesting exercise to write more than a few sentences. So often we write a couple of sentences when composing or answering an email. (Participant 4)

The clear instructions and the positive tone. (...) I gained a lot of information from the sample stories, they helped me to craft my personal story. By commenting on them and reading the other comments was very helpful. (Participant 6)

The stories were of human interest and entertaining. (Participant 8)

it was nice to see other storytelling samples. (Participant 9)

Regarding the scaffolding process:

Felling more self-assured to write down my story. (Participant 1)

This gave us another opportunity to break apart a story into five stages, but this time it was someone else's story. It was a helpful exercise. (Participant 3)

Just the right amount of new information. (Participant 4)

The instructions were clear and concise. The Pie Eating story served as a clear example of how I should develop my story. (Participant 6)

Regarding the activities proposed:

Going over the story and reading it [out loud] makes a huge difference in my sense of what works, compared to just writing a draft. (Participant 2)

I think it was helpful to ask us to read the story out loud a few times. It was longer when read it out than it was when I read it in my head. It really helped me think about the story I just wrote. (Participant 3)

Seeing how long it takes to read the text - I would have guessed three minutes when in fact it took five! (Participant 4)

Reading and timing my personal story. (Participant 5) [what she liked best about Module 4]

Regarding the process of creating the storyboard:

Finding photos that I had forgotten about - brought back many memories. Thanks to my mother who cut out photos from the newspapers. My father was also into photography (black and white in those days), and a couple of his are used too. (Participant 4)

Putting together the storyboard. (…) Seeing my photos in my WeVideo account ready to start! (Participant 5)

It was fun gathering all the photos and remembering. I enjoyed selecting the best pictures to illustrate the story. I finally feel that the digital story is really starting to take shape. (Participant 6)

How to add photos is one of the most important components of the storytelling video. I liked learning how. (Participant 7)

I was eager to learn how to add photos. (Participant 8)

Digging old photos and finding extra images in the internet. (Participant 9)

Social connectedness

Regarding the progress of colleagues on the forums and connecting with them:

Reading the other participants stories. They were all very interesting and I look forward to reading more as they are posted. (Participant 4)

I loved initially, especially the posts. Somehow with (Participant5-FC) and myself, I felt there was a connection there, and I think she felt the same, so I really do hope that we can meet each other. (Participant 4)

Being in a group of others participating is both inspiring and challenging. I found myself wondering if I was being 'appropriate' in my posts. (Participant 5)

Peeking into each other's lives and feeling the passion and the accomplishments. (Participant 6)

I loved meeting other participants through their stories. (Participant 8)

I did like sharing of the groups stories. (...) There are huge concerns in the senior population about isolation and loneliness, so the more interaction the class has with each other online, the more connected they will feel with others. (...) We have all shared a special story and now we know a little bit about each other. (Participant 9)

Regarding guidelines on how to interact with colleagues:

Well, the very first one is introduce yourself. (...) I'm not on Facebook, I'm not on Twitter, so I'm not well versed in posting. (...) So, after I posted it, I thought I'm not sure I'm being appropriate. Maybe some script, some content around the forum, something about encouraging people to interact. I guess maybe you have rules for engagement on the forum. (Participant 5)

We were encouraged to read each other's stories, comment on them and interact to that extent, but not enough. It's good for people who are older and maybe not so used to interacting via digital means and more used to having face-to-face encounters. For example, the very last module we were supposed to share comments about the whole course, I think, and I noticed that hardly anybody had said anything. (...) Maybe that's an indication that they didn't understand. (Participant 7)

Regarding the Skype assistance:

This was an awesome learning experience and thank you to [the facilitator] for his unfailing support and technical expertise in assisting with the software. (Participant 5)

[the facilitator] helped me with putting the video together and his instructions were absolutely outstanding. (...) He made me want to do one on my own sometime in the future. (Participant 6)

I would have learned faster with classroom instruction, but the Skype is amazing. [The facilitator's] participation, dedication and patience deserve special praise and honor. (Participant 8)

Regarding participants' interest in registering legacy:

I have taken several online courses before. (...) I liked using the WeVideo technology. It's a nice program. It's fairly easy to use. I enjoyed the idea of writing a story and saving a story to pass down to my kids. (...) The idea of telling a story and telling it in a visual kind of format, that was good too." (Participant 7)

Regarding the impact of the course on participants and on their friends and family:

Expectation of learning how to make a video in a simplified way, but it was much more than merely learning the necessary skills to create a digital story. I thought that, as I get older, the adventures and experiences lose their importance. But the fact of reorganizing memories and trying to understand them from the point of view of life's lessons brought a re-signification of these lessons of life. (Participant 1)

I truly, truly enjoyed being there. (...) I even say this to my brother, actually. (...) He was quite impressed. (...) Which is interesting because his daughter is a graphic designer. When it comes to computers she does everything. They were quite impressed. (...) It revealed something about me that he did not know. (Participant 6)

Lifelong learning

Regarding the feeling of agency experienced by participants:

Choosing sounds. (Participant 2)

I found the music added a nice finishing touch to the video, and it was easy to add. (Participant 3)

Learning a new software program. (Participant 4)

Adding transitions to the photos. It gives a nice flow to the story. (Participant 4)

Putting my own story together, I had no idea I would enjoy it, but I did. (Participant 6)

I enjoyed learning about how to make the video more polished and professional looking. (Participant 7)

Learning. I love learning. All these new skills give me bragging rights in my senior (creative) years. I step out on to my patio and holler, Next! (...) The course is well worthwhile; worth its weight in gold. I am fortunate to have had this opportunity. Bored and lonely seniors? Let's make it mandatory for everyone over 65 to take the Digital Online Storytelling course. (Participant 8)

Regarding the feeling of accomplishment experienced by participants:

Finishing the story! (Participant 1)

The impact of knowing that there is a movie about me. (Participant 4)

Creating the link to my first movie! (Participant 5)

I think when I "hit" publish there was a sense of excitement and then reading the feedback. It felt good to share my story. (Participant 6)

The fact that the project was finally finished and I am now able to share it with family and friends. (Participant 7)

Video instructions

Regarding the effectiveness of the instructional videos:

Video made understanding the upload process quite easy. (...) Quite helpful in teaching how to use the WeVideo recording features. (Participant 2)

I found instructions for narrating very easy to follow and enjoyed the process of putting my script into sound bites. (Participant 5)

Regarding the number of steps on the instructional videos:

Possibly reduce the number of tasks and combine them to less. (Participant 4)

The videos needed to be broken down into shorter videos. (Participant 9)

Regarding the tone and rhythm of the narrator's voice:

[The videos] need (...) more enthusiasm and voice variation. (Participant 9)

Regarding the lack of a written version of the instructional videos:

I paused the video to make a note of the steps, but then realized how intuitive the software was, so really there was no need. (Participant 4)

Having the steps numbered and in text, which I could print and follow would be very helpful. It is my personal confidence level with following digital instructions, since I work better from printed material. (Participant 6)

If you're trying to find something that's embedded in an instructional video it might be harder to find. So, I think written instructions are helpful because sometimes it's really easy to just locate a really specific piece of information that you were trying to find. (Participant 7)

I find it easier to use text as an accompanying guideline. (Participant 8)

If there had been a hard copy or a printout of the steps that were to be taken, then I could have followed through again and watched the video. (Participant 8)

I did have a tutorial session with the instructor on using the WeVideo program. (...) The type of learner that I am, I had to make lots of notes, but my notes made

sense to me, and I could follow them when I continued to work on my own. (Participant 9)

Regarding the screen shot of the instructional videos:

Larger screen shots of WeVideo. (Participant 5)

I thought that the visuals could have been clearer to show where on the screen you actually have to click. (Participant 7)

The screen shots are dark and are hard to watch. (Participant 9)

Regarding the computer skills expected from participants:

The instruction to rename the story is not available, it has to be saved as a new story. (Participant 1)

In the video [the instructor] selects all the images and drops the rest to his folder at once. It might be nice if others know how to select all as well. (Participant 3)

I forgot how to create a folder and it was not explained. (Participant 8)

[The instructional video] assumed that I knew how to set up a file, which I didn't. Okay, how do I set up a file? (Participant 8)

The technical language was sometimes too advanced. (Participant 9)

WeVideo

Regarding the video editing software working on Internet browsers:

Clarify whether other browsers will work with WeVideo. (Participant 2)

Regarding the layout and command changes not matching the instructional videos:

"There was one that I think it was special effects. (...) It didn't tell exactly what you said in the video to what it was now. Well, it could put some people off. (...) But for me it was fine because I don't mind exploring." (Participant 4)

[The instructional videos] didn't always match the version of the software that I was using. (Participant 7)

Regarding the cluttered table of commands of WeVideo:

> *When we're setting everything up, the three, there's the narrative, the background music, the photographs, when it was all on that one screen at once, it's like oh, my God. I wonder if there's any way that you could break that screen up to do, and even practice sessions. (Participant 8)*

Canvas

Regarding the lack of tools to tracked participants progress:

> *Add tools for evaluating the progress achieved in each module. (Participant 1)*

Time required

Regarding the time required to complete the course being longer than expected:

> *It took me longer than I expected because I had no experience writing a memoir at all, and I had no experience with that particular software. (Participant 2)*

> *Clear indication of how much time it might take. I was hoping to suggest it to caregivers. (Participant 3)*

> *I didn't really think about all the steps it went into. I found that there was much more involved in what went into creating a story. It might be helpful to give people an idea how much time a course is going to take. (…) Like fast people have done this course for several hours, especially in selecting pictures. (Participant 5)*