



The Role of New Media in Communicating and Shaping Older Adult Stories

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Abstract. Older adults are finding new ways to communicate their stories and one way is through digital storytelling. This study examined a selection of ten older adults' digital stories to explore how they used multimedia in their stories. It was found that older adults use media in different ways to express their life narratives. The stories either followed the narration across a lifespan or centered around a single event. Stories often brought the topic into a reflection on life as a whole. Images were used to display historical pictures of people and places, or they were used in more implicit expressions such as visual metaphors. A further examination of a reflective journal of one individual's process in creating the digital story, and the multimedia choices used, was also examined. The visual and aural choices made by the participant suggest that they were made to enhance the story; however, the media appeared to simultaneously shape the participant's understanding of their story. The act of putting images and sound together with a life narrative can serve not only to enhance the story, but to shape its telling and the storyteller's understanding.

Keywords: Digital storytelling · Older adults · Multimedia · Lifelong learning Reflection

1 Introduction

Storytelling is a crucial part of our lives. It has a long history of playing an important role in how we learn, communicate, and perceive our life [1]. Each event we experience could be segmented into a small story within the larger story of who we are. These life stories help to form our identity and allow us to make meaning of the world and our place within it [2]. Older adults may benefit from reflecting upon life and sharing these stories; for example, sharing stories may increase self-awareness [3]. Sharing a life narrative serves as an opportunity to reflect upon an experience, and the telling of the experience may reshape the memory and the meaning of the events [4].

Within a technological society, there are many possibilities for expressing life stories with new media. Multimedia can be used and can play a role in how storytellers convey themselves. The advantages of using multimedia for storytelling range from having a digital platform to share stories easily, to layering with different artistic expressions that create diverse moods and meaning [5]. New media also provides an opportunity to share

stories with a larger audience [6]. Furthermore, information shared through an audio-visual approach can be more effective than text based [7].

Older adults are increasingly using technology in communication, including telling snippets of life story through social media and other platforms. Recently, the Pew Research Center [8] reported that 34% of seniors use social media in the United States, including such platforms as Facebook, Twitter, and Instagram. Furthermore, younger seniors, particularly those that are more affluent and highly educated, have similar rates of technology ownership and use to those under 65. However, there is still a significant digital divide for those seniors not within this category. Using new media as a form of communication and expressing their story could be important to allowing older adults' stories to be heard, and it may help to facilitate intergenerational connections [9]. Further, a multimedia approach may allow for diversity and depth of narrative expression.

One form of new media story that has risen in popularity is digital storytelling. Digital storytelling is a layering of visuals, narrative, and sound that are combined in a digital platform and presented as a short film [10]. The current project examines ten older adults' digital stories created during an 8–10-week course. It aims to explore the different approaches older adults take to layering images, sound, and narrative. This paper also examines one participant's reflective journal during the course to explore the process of choosing and reflecting on multimedia choices.

1.1 Narrative Knowing

Various researchers and theorists have explored the role of narrative in our lives and its role in shaping understanding and identity (e.g. 1, 2, 11). For example, Bruner [11] takes a distributed intelligence perspective on knowledge arguing that “cultural products, like language and other symbolic systems, mediate thought and place their stamp on our representations of reality”. Our experiences, and the meaning we form from them, are often organized into a narrative structure [11]. Bruner [11] outlines a series of features present in the narrative construction of reality.

1. *Narrative diachronicity*: Narrative events occur over time. However, this sense of time is characterized by the significance of the event and how the storyteller decides to frame it.
2. *Particularity*: Narrative includes a particular event; however, the particulars also may have some generic aspects.
3. *Intentional state entailment*: Characters within a narrative have specific intentions (beliefs, values, desires, etc....) that they act with within a specific environment.
4. *Hermeneutic composability*: Narratives are constructed from a series of events that are interpreted as a story with meaning.
5. *Canonicity and breach*: A story usually requires a breach of the normal set of events; thus, something interesting should happen.
6. *Referentiality*: Narratives are only a representation of a reality; they are narrative “truth”. Therefore, they don't need to be exactly true, but they must appear believable.

7. *Genericness*: Narratives can be classified into a genre to guide our understanding of human difficulties.
8. *Normativeness*: Stories, although they deal with a breach of the norm, are essentially about social norms.
9. *Context sensitivity and negotiability*: Narratives that are told undergo a negotiation between the readers perspective and background knowledge and the storyteller's version. This partially happens through an understanding that the story is context dependent and the reader agrees to suspend disbelief.
10. *Narrative accrual*: Narratives are cumulative, one leads to another. In the case of life narratives, the life story does not consist of a single event but is gathered from many stories.

1.2 Multimedia Storytelling

The way in which we share and understand story is constantly changing within a world that is driven by new media. Throughout history, storytelling has been multimodal in its expression [12]. However, storytelling no longer only occurs while sitting around the fire using our body and expression to portray meaning, but it also occurs over and with technology. Multimedia is not new as a tool for storytelling, but with each generation and with each expansion of technology new ways of communicating life narratives arise. For example, with the invention of slides came the social activity of the slide show, where individuals would invite guests over and go through a series of photographs. These could be related to holidays or other events; thus, the slide presenter would tell a story using the images as a guide.

While including images in storytelling can be seen in slide shows, picture books, and photo albums, today's new media communication is increasingly including photos in social media storytelling, such as Instagram and Snapchat [13]. At the present time, much of this activity takes place online through social media and other sites. Users will often post photos, with brief descriptions of meaning or events. Yet, social media as a way to publicize a personal story has met some resistance by older adults [14]. In a study by Xie et al. [14], they found the main barriers were related to privacy issues; however, these attitudes changed with a course designed around social media use.

Music has also been used as a vehicle to tell a story. Many of the structures seen within musical compositions can be considered comparable to those within a plot structure of a story [15]. Within the romantic era, composers would often have a story to be read or imagined that accompanied the musical score, creating a story with an emphasis on sound. With new media, music within narrative presentations (such as film and video games) often contributes to a large proportion of how we experience music today [16]. It is often a distinct part of the understanding of new media storytelling.

Using new media to combine images, sound, and narrative into expressions of life narratives expand many of the creative and communicative options for older adults. Creating stories with new media gives older adults a voice and allows them to be content producers, sharing their understanding of the world to multiple audiences [6]. The different multimedia pieces bring with them different representations of and for reality and knowledge [17]. Thus, choosing the visual representations of story and the musical

accompaniment requires a consideration of what the storyteller wants to highlight. In a study by Subramaniam and Woods [18] that used digital stories to engage six older adults with dementia, it found that the multimedia layer, particularly music, was very important to sharing their life narratives. Furthermore, a study by Hausknecht et al. [19] found that older adults also increased digital literacy skills through the act of telling their stories on a multimedia platform. In a further analysis of focus group interviews, they found that older adults gained valuable depth in story expression through including the multimedia layer [20]. A multimedia approach to storytelling may provide older adults with opportunities to explore meaning and re-imagine life narratives.

1.3 Research Questions

1. In what ways do older adults incorporate multimedia into digital stories?
2. What is the process involved in choosing multimedia components?

2 Method

Over a two-year period (2014–2016), multiple offerings of an 8–10-week digital storytelling course for older adults were implemented. A selection of ten older adult digital stories were chosen from different groups who attended one of the offerings. The stories were analyzed for specific content and examined how older adults used multimedia elements in the creation of their stories. In the second part of the analysis, one story was chosen to examine in depth. The analysis of this story examined a reflective journal that was kept during each week to develop a more thorough understanding of the storyteller's process in choosing different multimedia to represent their story.

2.1 Participants

The participants ($N = 10$) were chosen from a range of participants from different iterations of the digital storytelling courses. The researcher selected ten representative digital stories to analyze, examining choice of story and multimedia aspects. Story selection was based on choosing from a range of age groups (all participants selected were from ages 55–95), with a sample from each decade and from different courses. Over half of the participants in our study were immigrants and most were female. One participant was chosen who had completed a detailed reflection journal of their process. This in-depth example of the process of choosing media was from a female immigrant in her 70s.

2.2 Summary of Course

Each offering of the course was an 8–10-week digital storytelling program for older adults and was offered through centers, care homes, and libraries across Metro Vancouver. The design of the course used principals from creative writing, film, and suggestions from the Digital Storytelling Cookbook [10]. The course consisted of two

phases, the first being focused around writing story and the second focused on the digital aspects and creating a digital artifact. The theory behind the design was to give learners an understanding of, and practice in, creating a solid story they are happy with, that can be shared and explored within a group setting before participants were in front of a computer adding the digital aspects [19]. This was important to the social and emotional benefits that a shared story experience might have [19]. However, within the first half of the course, participants were shown various digital stories and given information on choosing imagery and music. They were then required to create a storyboard, so although they were not necessarily on the computers initially, they were encouraged to continually consider their story in terms of its multimedia representation (For details on the course see [19, 21]).

2.3 Analysis

The ten stories chosen were analyzed for story topic, temporality of story content, visual and aural choices. Bruner's framework [11], outlined earlier, was also considered in the analysis; specifically, regarding *narrative diachronicity* (also called temporality here), *particularity and genericness* (genre and content), *canonicity and breach* (adversity/conflict), *hermeneutic composability* and, *intentional state entailment*. This analysis was done through watching each of the stories and making notes on these aspects. For the analysis of the process of the one story, the reflective journal was used to understand the process of choosing different multimedia aspects. The findings in the journal were scrutinized with the digital story to form a better understanding.

3 Results

Stories ranged from three to eight minutes in length. Each story was a fully developed piece that used photos and some form of sound.

3.1 Story Analysis

Temporality and Content of Digital Stories. The ten stories were examined for their temporality, whether the narrative expanded over a lifetime, a specific time (e.g., childhood) or a single event (Table 1). As Bruner [11] points out, narrative diachronicity can be very different from our sense of time; however, the events are understood as how they relate over a point in time. The current set of stories are written by older adults; and thus, they had extensive options for the time of life they wanted to focus on. Stories that took place across a persons' life tended to have a specific theme that tied the stories together; for example, a love of dance, a pen, a person (grandparent), or a place. Within these stories, the older adult storytellers often started with a comment on childhood, and then continued through to adulthood, and concluded with thoughts of their current selves. However, the common theme tied each of these moments together over the narrative timeline.

Table 1. Story topic and temporality

Category	Topic	#	Example items
Adversity in story	Family	1	Challenging family relationships
	Health	2	Overcoming health issues or looking after someone else who has a health problem.
	Gender	3	Being a female widow and needing to challenge roles (women as a coach, as a worker)
	Race	3	Struggles of immigrant minority as a child
	Fear	1	Fear of robber and physical harm
Story across time	Main event	4	Baseball game, Robbery, Fixing a boat over summer, piano recital
	Across specific time	3	The effect a childhood place had on life as adult, growing up in China town and an influential person, living with a family as a student
	Across time	3	Dance as a constant passion from childhood to adulthood and how it helped overcome health issues A pen given in childhood and its significance across time, memories and reflection on grandmother

Where the individual told a specific story about an event, it often focused on a point in their adult life where there was a breach in the normal set of events and something exciting was happening; for example, a baseball game where the other team attempted to cheat, struggling to fix up a boat after a husband's death, and a robbery. However, even if the focus was on a single event, the storyteller included a reflection about the story's current meaning to their life. Interestingly, in our sample, the oldest participants chose this form of narrative.

Story Type. Narratives incorporate both genericness and particularity [11]. Within "The Digital Storytelling Cookbook", Lambert [10] discusses the genericness of personal stories that digital storytellers often tell, such as a story about someone important (character stories, memorial stories), a story about events (adventure story, accomplishment story), a story about a place, a story about what a person does (recovery story, love story) and a story about discovery. However, when analyzing the ten stories within the study, they rarely fit in one category alone.

The stories all displayed a breach to normal events and often incorporated overcoming some form of adversity or challenge (Table 1). When the stories were about other people they often discussed the challenges that those individuals overcame. Most of the stories focused on, or in the very least touched upon, moments of hardship encountered and how these were overcome. The challenge of such aspects as race and gender were often seen within the stories of the past. Only one of the ten stories focused on a humorous event that did not highlight overcoming adversity; however, it had a clear rising action and tension and breach of normal events (in a humorous way).

All stories had intentional state entailment [11], in that the intentions of characters were clearly displayed regardless of their role. Most stories incorporated people in their lives who are important. However, the extent that this was done depended upon the story

events and topic. It also depended on how important the people were to the meaning of the story. Thus, in cases where the story was what Lambert [10] might call “a story about someone important” there was a heavy focus on the person and the meaning the person brought to the storyteller’s life. For example, in one story told by a man who immigrated to Canada as a child, the story was based around a prominent figure in the community that he admired.

In instances where the storyteller was the main character, the emphasis was less on the person or people and more on their value to the story of self. For example, in one story a woman discusses her love of dance and struggles with health, yet an older women’s dancing group (and those within it) are important to her recovery. Within another story, the antagonist of the story who bet the woman she couldn’t fix her boat became the motivation for her doing so. The focus was on the accomplishment of the storyteller; however, the accomplishment was not possible without the challenge or support of the other person.

3.2 Imagery and Sound as Media

The ten stories were examined for the storyteller’s choice of photos. Some of the decisions on photo choice were dependent on whether the participants had personal photos available or whether they had to find or create these. Within the courses, there is a day designated to discussing, and giving examples, of implicit and explicit information through photo choice. For example, when narrating about a person, did the person use a picture of that person (explicit representation); thus, the photo was a literal representation of what the person narrated. On the other hand, if they used implicit imagery, the participants used images to represent something other than the literal meaning of what they were saying within the narration; for example, an image of a dark cloud to represent a feeling of depression.

All participants used images such as photos of their family, places, objects and childhood memories that they were discussing. This type of imagery was the most common imagery used. These photos often enhanced the impression of time and the history of the people within them or provided a visual of the noun they were discussing. All participants had at least one photo of themselves during the time period described. There was one participant who used photos that were almost all explicit to the story. Where participants did not have a photo, they sometimes drew a picture; for example, one participant drew a map and took a photo of this to show where they were talking about.

Most of the older adults combined both styles of visual representation. Thus, they layered the narratives with photos of family, places, and objects that were mentioned in the story, but also used symbolic photos to represent different emotions and moods, such as a tree when discussing growth. Occasionally participants used videos or moving images within the story, but this was less common. Digital storytellers were taught a number of editing techniques. All of the participants used the zoom in and zoom out feature on at least one photo. This may be due to the ease of creating this effect or that it was taught early on.

Sound as a Medium. Music was used in most stories; however, the amount it was featured varied (Table 2). In some designs there was only a single song that was featured, giving the story a sense of consistency whereas in other stories there were music shifts. Most of the musical shifts coincided with a change in the mood of the story; for example, an upbeat song was used when a person had a life breakthrough. Occasionally, music was used as a part of the narrative; for example, in a story about a piano recital, a variety of piano compositions were used throughout the narrative, yet when the storyteller mentions *twinkle little star* then the music turns to *twinkle little star*. Where storytellers used varied music throughout, they seemed to use moments of silence to emphasize serious points within the story. One storyteller didn't use music but included sound effects.

Table 2. Visuals and sound used

Category	Number	Example items
Imagery, photos, visuals	All	
– Explicit	10	Photos of people, houses, places
– Implicit	9	Photos that act as visual metaphors such as a dark cloud for depression
Videos	3	Video of dancing and water twirling, lights, bike
Music, sound	All	
– No music	1	
– Music (single song)	2	One song or theme creating consistent mood
– Music (varied)	8	Music varies throughout, creating varying moods
– Sound effects used	5	Airplane, seagulls, background voices

Sound effects were not used as often, but still played a specific role in some participants' stories. When they were used, they were often used to bring the listener/viewer to a particular place. For example, discussing a gathering and using background voices as if at a party, seagulls when discussing an event on the harbour, and the sound of an airplane when talking about immigrating as a child.

3.3 A Study of the Process of Working Through Multimedia Story Creation

A case study from one of the stories was conducted examining process based on weekly reflective journals and the digital story created. Each week in the course session, participants were asked to reflect upon specific aspects of creating a story. In this instance, an elder storyteller kept a journal of the process. The researchers examined the story and journal to determine the participant's process.

Story Details. The story spans over a lifetime starting with a focus on the storyteller's grandmother and childhood memories and ending with a reflection upon her role as a grandmother. Throughout, the story explores the idea of the storyteller's perspective as a carefree child, her mother's perspective, her grandmother's perspective, and finally her perspective as a reflective older adult. In her journal, she comments on the process

of needing to re-explore her relationship to, and understanding of, her grandmother. She commented “I’d had only negative reflections of grandmother, but thanks to this project, my thoughts of her have been tempered by adult recollections and reflection”.

The story also took place across various settings. As she is an immigrant, her childhood memories and family history spans over China and Singapore and then the setting shifts to Canada. Although this is not the main focus of the story, it is prominent in her reflections within the narrative of the story as she discusses her grandmother’s Chinese heritage and some of the rituals she remembered her grandmother doing, such as dressing in her Chinese funeral clothes or getting Gua Sha treatments.

Imagery Process and Choice. In this case, the storyteller used both explicit and implicit representations in her choice of imagery to give her story life (Fig. 1). A variety of photos were used throughout, some with symbolic or metaphorical meaning. Other photos were family photos, such as herself as a child and photos of her grandmother and mother. Within her short story a combination of imagery is used. In the reflection journal, she specifically outlines her choices and the meaning she hoped to convey (Fig. 1); for example, a frozen leaf “to represent grandmother, my dry withered memory of her, my cold attitude.”

Images chosen were explicit, implicit or visual metaphors – to express or convey abstract thought, states of mind – e.g.

Black/green abstract spiral – to depict confused mind trying to dig deeper into memory & understand

Balancing rock – something heavy that fell into place & is impossible or difficult to remove, like grandmother being foistered on my parents

Covered female face with only one eye uncovered – to represent women not allowed to speak

Condensation on window – to convey death – grey, grim, forlorn, ending

Frozen leaf – to represent grandmother, my dry withered memory of her, my cold attitude

Dew on single flower – to symbolize a coming to life – my “dead” lifeless grey-coloured attitude to grandmother has come to life with beautiful colour

Fig. 1. Reflective journal image choice

The choice of photos was not simply guided by the story and mood she wanted to create, but while searching for photos they influenced the telling of the story. In one

journal excerpt (Fig. 2), the storyteller describes how as she was searching for photos to use for the story, the images began to shape her story. Choosing the photos seemed to help clarify the structure of the story. She began to play with ideas of juxtaposition and meaning. She describes how her grandmother's absence in family pictures also gave her a deeper understanding of the woman. The two photos of her mother and grandmother side by side in different dress made her consider that "there was a cultural divide between her and my mother" (Fig. 2).

Photographs of childhood:

To some extent, the phrasing & wording of my narrative were shaped by the photos I had.

As I brought them out & studied them, with the memories of grandmother running through my mind, thoughts came. I saw her complete absence in my childhood photos, which reinforced the memory that she was not a part of our family life. This led me to ask why, which led me to the possibility that there was a cultural divide between her and my mother. The photos of the two women, one dressed in the Straits-born/Peranakan attire of sarong-kebaya & the other in traditional mainland Chinese black silk stared at me & brought out this thought.

The photos of me & my own grandkids at the end echoed my childhood photos in the first part of the story & I think, nicely book-ending the details of my grandmother.

Fig. 2. Reflection journal excerpt on photographs of childhood

Music and Sound. The storyteller uses a variety of music to create different moods throughout the digital story, no sound effects were used. Music was used to "reflect and express different moods" within the story (Fig. 3). The storyteller suggests that she uses points of no background music "to give greater significance to the voice and words said" (Fig. 3).

As I went through the music sites, I found and downloaded several pieces which seemed to reflect & express the different moods of my narrative – light, lively music to go with my “carefree childhood” 1st paragraph, then quieter & reflective, then quiet & somewhat “oriental” in tone.

I’d wanted to use sound effects but decided not to, thinking they would make the narrative a little choppy & contrived.

I thought the background music enhances the moods/tones of the various parts of the narrative. I left gaps without music to give greater significance to the voice & words said, & I tried to start the music at significant junctures too.

Fig. 3. Reflective journal on music choice

4 Discussion

Storytellers explored a diverse range of stories that either captured an event within their lives or a more extensive reflection. They often chose stories where the storyteller (or other protagonist) had to overcome some form of adversity. Thus, the canonical breach [11] was evident through one or more difficulties interrupting the norm. Narrative diachronicity [11] was often displayed as either a single event or a theme across many years, usually starting in childhood and ending at their reflection of their current life situation and who they are now.

In what ways do older adults incorporate multimedia into digital stories? In this sample of older adult digital stories, a variety of approaches are shown to capture life stories with new media. At times participants seem to focus more extensively on the narration and story element, whereas others played with imagery and film to add depth to expressions. Imagery and sound were incorporated in different ways to emphasize certain aspects of the story or to explicitly show a place, person, or object. This seems to be one of the most important uses of imagery for the storytellers in this study. Memories are often associated with photos and this gave older adults an opportunity to share these within the story format. Many storytellers also used imagery to present a more metaphorical meaning, particularly to give expression to the emotional experience. Music and sound were also used in different ways to highlight meaning. In many of the stories a variety of music was used to show a shift in tone or mood. Whereas, sound effects were used to recreate a specific place or feeling. The use of multimedia seems to allow older adults to communicate with multiple layers of expression within their stories.

In a previous digital storytelling project with immigrant women, Brushwood Rose and Granger [22] found that the multimodal approach to storytelling created unexpected shifts in the original meaning of the story. Within the current paper, this shift in understanding can be seen within the participant’s journal as she works through her

relationship with her grandmother. The storyteller is influenced by the images she finds. As mentioned in her comments, the photos played an integral role in shaping the story, but also reflecting upon the meaning of the story within her life. In the storyteller's description of working through the multimedia story, narrative and imagery begin to play off each other. Whereas the music played the role of enhancing mood and expression.

Within each of the stories, the storytellers often brought the story back to some reflection about self or about life. They seemed to convey a number of messages and lessons learned. The reflective aspects of recounting life histories has a capacity to give the teller an opportunity for self-reflection [3]. The choices made for creating the multimedia story were thought out thoroughly. This seemed to require the teller to continually reflect upon their story and reexamine its meaning to the storyteller's life.

With recounting the story, the storyteller begins to be more than one person at a time and contains a multiplicity [12]. Thus, the storytellers within the study share their reflection on what the story means now to their moral understanding, who they are, or reconceptualization of what the event meant to their life direction. They become the person in the story (another self) and the person they are now. This idea was prominent in the participant's reflective journal and story as she was looking through the eyes of a carefree child, an adult who understands hardships in life, and as a caring grandmother. All of these aspects were brought together in the story; however, the images of her grandmother and reflecting on the different images and music seem to have required the participant to explore all of these multiplicities in detail and give them a visual and a sound.

What is the process involved with choosing multimedia? For the participant examined in this study, the process involved a reciprocity with the multimedia shaping the narrative of the story as much as the narrative being used to choose the multimedia. The participant underwent an extensive process of considering their emotions and the mood they wanted to display. The old photos viewed made them think of their story in relation to the photos representation of reality and form new meaning. Bruner [11] discusses how we narrate our lives within "cultural tool kits" and the symbol system of cultures. It may be that when the narrator is faced with choosing visual and aural material to enhance their story, they must renegotiate their understanding based on the addition of the media. Thus, if narratives are symbolic cultural tools [11] and multimedia also hold representations of and for reality [17], when storytellers include multimedia into their stories, they must negotiate with the new knowledge of that representation.

5 Conclusion and Limitations

This study was a smaller exploratory analysis of a larger project; and thus, it was limited by the number of stories selected to examine. The researcher is planning to conduct a larger study analyzing the stories in further detail. Furthermore, as the older adults were part of a course some of what they included in their stories related to the instruction. It would be interesting to explore the choices of multimedia in online environments where limited instruction is given. Finally, the older adults represented in this study were those

who came to a course held in the community. This eliminates some participants who may be homebound or uninterested in community courses.

Older adults' use of digital storytelling is growing and may be an increasingly beneficial way to express their understanding of their life history. The ways in which they integrate multimedia and use technology differs; however, they tend to use both imagery and sound in thought-provoking ways to enhance meaning. The process as seen in this instance, and others [20], can be very emotionally powerful for the storytellers. Reflecting back upon life can create a situation where the storytellers must redefine their relationship to the story (and in this case, the people within). Furthermore, including multimedia aspects in the retelling and reshaping of the story may have an influence on how it transpires. Creating digital stories may require storytellers to further investigate events and lead to increased depth of understanding as the storyteller must put sound and imagery to their memories.

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