How Digital Storytelling Can Be Used in Postsecondary Instruction:

A case study of ds106, an online course at the University of Mary Washington

By

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Table of Contents

Abstract

Digital storytelling has existed since the early 1990s and has since been adapted for use in various educational settings. With changing technologies and pedagogical techniques, the traditional definition coined by the StoryCenter of a true story as one told using video, voice over, audio, and images does not fit today's digital culture. Classrooms and storytellers are moving to a more diverse definition of digital storytelling that incorporates different forms of media and focusing on a range of stories beyond personal, non-fiction ones. New ways to engage students and spark interest in course content while teaching valuable skills are consistently in demand for educators; digital storytelling could be a tool for postsecondary instructors or other levels with alteration. Guided by the narrative paradigm and the theoretical perspective of connectivism, the research examined a case study of publicly posted student work for indications of favourable reactions of digital storytelling assignments, characteristics that interest learners, and levels of student engagement to help improve future digital storytelling pedagogy. This Capstone project explores various forms of digital storytelling through the case study of an open access online undergraduate class taught at the University of Mary Washington nicknamed ds106 from January to April 2022. Three assignments spread out over the semester were evaluated using qualitative deductive content analysis techniques for reaction, effort, completeness, and deadline adherence. Inductive coding was used for topics of student submissions and tones used in both submissions and peer comments on the identified assignments. It was discovered that within this course, students reacted most favourably to assignments where they were given creative freedom and where they were provided opportunities to revisit and improve their own work. As the case study only included 17 students' work, interpretations are not widely applicable, but observations and resources will benefit digital storytelling facilitators.

Chapter 1: Introduction

Technology has made it easier for people to express themselves through various forms of digital media, including audio recordings, film, and graphics. A special kind of expression that can incorporate some or all these mediums while telling a story is called digital storytelling (DS or DST). DS began as a movement in the early 1990s through an organization known today as the StoryCenter, however today DS is used in more ways than what the founders originally taught.

What started as a movement for people to share their personal stories has evolved into a tool and process for purposes as varied as mental healing and self-expression, political activism, promotion, historical preservation, and other uses, including education. Digital storytelling is about "harnessing technology to empower people with limited multimedia skills and resources to tell and share powerful stories from their own perspectives and in their own words" (Fisanick & Stakeley, 2020, p. 2). We can learn about ourselves, the world, or a specific topic during the creation and sharing of digital stories. In the context of education, digital storytelling's diverse uses can be applied to most topics and has been used in both the social and physical sciences as well as the humanities. Some disciplines are easier to link DS to curriculum, such as language or history classes, as these are already courses in which we are sharing stories. Media and technology classes can use DS to learn new tools, but if instructors think creatively, they can use DS for just about any class they teach.

As a teaching resource, DS is powerful and can help students create personal connections with the subject matter, explore their own ideas, develop research and critical thinking skills, and learn important technological skills including research, audio recording, video editing and sharing digital media.

This Capstone research paper will aim to discover how DS in its various forms can be used in the field of education. I will explore these issues through a qualitative case study of the use of digital storytelling in an online post-secondary course known as ds106 using a narrative paradigm and the theoretical lens of connectivism. Specifically, I will conduct a deductive content analysis of teachings, assignments, and student work with the goal of exploring student assignments and responses to digital storytelling in an educational context. The Research Question (RQ) guiding my capstone is:

1. *How do students respond to digital storytelling assignments in a postsecondary online course setting?*

I hope that by researching this question, I will not only improve my own DS facilitation, but assist other instructors who are considering using it as well.

The ds106 course began at the University of Mary Washington under the official name of "Computer Science Course in Digital Storytelling, CPSC 106". The online course was made publicly available in 2010. Since ds106 began, it has attracted people from around the world to participate in the class through assignments, feedback, and other activities in order to practice creativity through technology (Groom, 2010a). Students enrolled at UMW can receive credit for the class, but the public is able to take part for their own enjoyment. Although the public contributions are interesting, my research will primarily focus on the pedagogy, learning resources, and student assignments used in the ds106 course at UMW.

Over the years, students have developed an online community around ds106 including a radio station, an online TV station, websites, and social media accounts such as The DS106 Daily Create (Levine, 2012; Owens & Levine, 2012). Students complete weekly assignments,

such as blog posts and digital stories, which are made publicly available on their personal blogs and backlink to the course website.

Since the course started in 2010, there have been numerous offerings of ds106, including some at other universities who partner with the website. Not all links associated with the course are still active. Some information related to course offerings may not be complete for various reasons, such as students not renewing their blog domains, expired links, or other technical glitches. Therefore, in this Capstone I will primarily focus on material collected from the most recently offered class: UMW Spring 2022, taught by Professor Paul Bond (Bond, 2022a).

The course objectives are stated on the ds106 website:

- Develop skills in using technology as a tool for networking, sharing, narrating, and creative self-expression.

- Frame a digital identity wherein you become both a practitioner in and interrogator of various new modes of networking

- Critically examine the digital landscape of communication technologies as emergent narrative forms and genres (ds106, 2010b)

These objectives align with my own motivations for incorporating DS into my teaching, so it will be interesting to see how the course content and assignments align with this philosophy. In studying this course offering as a case study, I also wish to explore:

2. *What common themes are present in assignment outlines that received positive feedback from students?*

3. *How do students engage with each other in the online course?*

These questions, along with my primary research question will help me gain a better understanding of how educators can use digital storytelling to engage learners and teach them

new skills. These skills include not only technology use, but also communication skills that can benefit their careers, such as interacting with classmates and giving feedback, as well as providing students with a creative outlet.

Background

The practice of creating digital stories and using them in the classroom was first introduced to me as a graduate research assistant while working with Dr. Rob McMahon, Associate Professor in Media and Technology Studies at the University of Alberta. Dr. McMahon had been working on the Piikani Cultural and Digital Literacy Camp (2018-2023) for several years before I joined his research team. One of my duties was to assist another team member with curriculum design. In my assistant role, I learned about a form of storytelling using digital media that was being taught to youth at the summer camp: digital storytelling.

The camp included content regarding overall storytelling and who owns the right to tell stories among other concepts. Dr. McMahon has published research regarding the camp, its processes, outcomes, and impact on the community (McMahon, 2020). One of those impacts being that the program taught youth how to write, plan, record, and edit their own digital stories about their lives, their culture, and their community. Being a part of the curriculum design and reading about how impactful DS can be is what sparked my interest in making it the focus of my academic research.

As a postsecondary instructor myself, I want to learn more about how digital storytelling can be used in educational settings so that I can apply it in my own future classrooms for student engagement. I believe that DS assignments can help students make personal connections to classroom content and learning outcomes by applying them to real world situations. You can

learn more about my interest in this topic by watching the digital story in Figure 1 that I created

for the Graduate Teaching and Learning Program, Level 4 at the University of Alberta[1].

As a college instructor, new ways to engage with learners are always welcome. My areas

of instruction – communications and marketing – provide many opportunities to use a tool like

DS. Students could create a digital story and submit their script and bibliography in place of a

traditional paper, for example. But, to include DS in my classroom effectively, further research

on best practices and seeing examples of how other instructors have incorporated it into their

curriculum will be beneficial. Conducting a case study on a postsecondary class like ds106 that

includes multiple forms of DS will provide not only several examples of traditional video DS

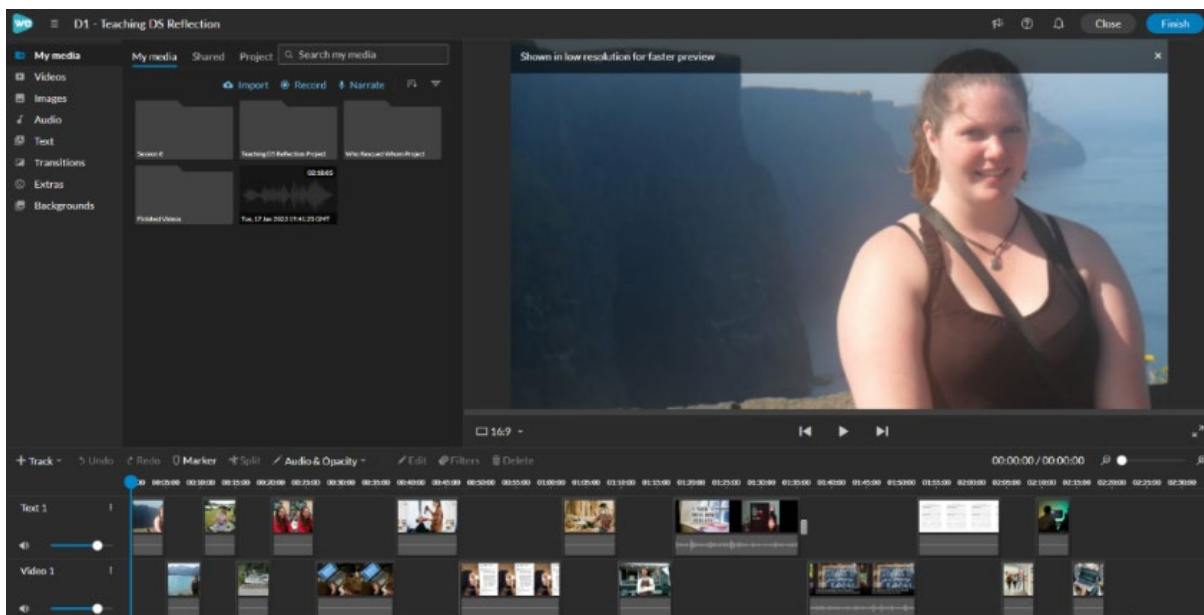assignments, but other forms such as standalone audio, text or images as digital stories.

FIGURE 1

Chapter 2: Literature Review

Methodology

My introduction to digital storytelling as a graduate research assistant meant that a lot of my supervisor's previously completed work. Some of the articles and books he used are where I started my search, particularly after viewing the references within those articles.

The primary starting point for me was the StoryCenter and looking at Joe Lambert's work as he has published several books on DS. I also enrolled in a couple of free online webinars from the StoryCenter, along with two paid courses. One of these courses taught participants how to create their own story, while the second taught instructors how to facilitate the creation of digital stories in a safe and non-judgemental environment. These courses focused on the story circle model of DS[2] and pressed ethical practices in the facilitation process. The textbook for the course has become a primary source of information for my research, but it was one of the later pieces that I added to my literature review.

Prior to gaining access to some of Lambert's works, I discovered a range of articles and books dedicated to making and teaching digital storytelling through the University of Alberta Library's online catalogues. I also searched the catalogues available through my employer, Durham College, and several public libraries in Alberta and Ontario.

My main obstacle was finding sources that specifically related to teaching DS in my area of instruction. I wanted to find research related to my primary teachable subject, communications, but it did not seem to exist. As communications is a core class for college students and is increasing at the top of employability skill lists, this is a gap in scholarship that

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[2] The story circle model will be discussed further under the subheading "Using digital storytelling in the classroom: The digital storytelling creative process."

should be addressed. I was able to find sources on marketing and language instruction, which are other subjects I teach, and they share characteristics with communications, so this research was useful to me. When I broadened my focus even further to humanities and the social sciences, the potential pool of research to draw from was much larger, but still not quite what I was looking for. Finding sources related to teaching English, history and even teacher training was easy. I found many articles and studies that were about using DS to engage multilanguage or English as second language learners, mostly elementary students, with some resources on adult learners as well. I tried several databases, including a few that I learned about from a research class textbook: *Succeeding with Your Literature Review: A Handbook for Students* (Oliver, 2012). These were open databases that do not require an account. Given the free access, I was a bit hesitant about the quality of the work I might find, but there seemed to be a lot of academic articles related to my interests. There is a movement to make more academic research freely accessible, and I was able to benefit from this phenomenon. Even with checking multiple databases, nothing seemed to focus on the exact area of interest for me; however, I hope that my work can help to fill that gap.

The time and resource constraints for this research project mean that I cannot directly explore a specific situation of using digital storytelling in my own communications classroom, but it allowed me to focus on learning best practices used by other instructors. I wanted to study a current class using DS to see what the best practices were so that I could learn how best to incorporate it into my future classrooms. However, without the partnership of a communications instructor to observe, I was at a loss on how to accomplish this. Qualitative research interviewing instructors who had used DS in the past was one possibility, but I wanted to also see student reactions. I was prepared to settle for instructor interviews, and I continued my literature review.

As my research progressed, I encountered the mention of a course called ds106 while reading *The New Digital Storytelling: Creating Narratives with New Media*, second edition, by Bryan Alexander who referred to the course as representing "an astonishing amount of creativity and energy" (2017). Alexander also posed the question of ds106 being a "movement", rather than a project. This course intrigued me, so I conducted my own internet search of ds106. I found that ds106 is a university course that moved to online instruction in 2010 and has since transformed into a Massive Open Online Course (MOOC) with thousands of regular participants. What I found changed the course of my research as this was an ideal case study for my interests. This class through the University of Mary Washington is taught online with all class materials, student projects, and communication open to the public. Being able to see how the students interacted with the topics, assignments, and each other is exactly what I wanted to explore. I can see how a teacher uses DS to engage with learners and teach them new storytelling, technology, and media skills at a postsecondary level.

To support my case study of digital storytelling in an online course setting, there are several areas of background research which need to be properly addressed. These include researching what digital storytelling is, how it can be used, how it can be applied in education, best practices, faculty resources, and assignment types. With this focus, I started searching for instructional guides and pedagogy around digital storytelling in classrooms. I focused on postsecondary classes, but some research for younger students was still rich in information, as was some research for non-traditional instruction like community classes.

Narrative Paradigm

The narrative paradigm, made popular through the works of Walter R. Fisher, is based on the foundation that humans are natural storytellers. We create meaningful communication

through story and reporting events to each other. "The world is a set of stories which must be chosen among to live the good life in a process of continual recreation" (Fisher, 1984). As human beings, we need to choose what stories to tell, listen to, and share that create meaning in our lives. "The narrative paradigm sees people as storytellers-authors and co-authors who creatively read and evaluate the texts of life and literature. It envisions existing institutions as providing 'plots' that are always in the process of re-creation rather than as scripts; it stresses that people are full participants in the making of messages, whether they are agents (authors) or audience members (co-authors)" (Fisher, 1985). The narrative paradigm is a meeting of *logos* and *mythos* as one concept in the narrative space. There is logic and knowledge in stories, but there are also ideas that "cannot be verified or proved in any absolute way, including metaphor, values, gesture, and so on" (Fisher, 1985). Stories are creations of the human imagination, real or imagined.

Storytelling is more than just sharing information; it is self-expression. "Personal narrative simultaneously is born out of experience and gives shape to experience. In this sense, narrative and self are inseparable. … We come to know ourselves as we use narrative to apprehend experiences and navigate relationships with others" (Ochs & Capps, 1996). Storytelling is arguably about both intrapersonal and interpersonal communication depending on the subject and purpose of the story. Sometimes we need to share a story to truly understand ourselves and for those around us to comprehend the impact of whatever the event had on us. The act of sharing does not have to be a singular medium. Narratives can use multiple forms of communication such as visual representation, nonverbal communication (gestures, facial expression, etc.), and physical activity combined with talk, song, or writing (Ochs & Capps,

1996). In the case of digital storytelling, we can use images, video, music, voice, and text to convey a tale.

Connectivism

While researching DS and education, I found multiple sources mentioning a newer learning theory called connectivism. Coined by Siemens in 2004 (Siemens, 2017), this conceptual framework explores the integration of chaos, network and complexity, and self-organization theory to address the gap in education principles that we experience in the digital age:

> Connectivism is driven by the understanding that decisions are based on rapidly altering foundations. New information is continually being acquired. The ability to draw distinctions between important and unimportant information is vital. The ability to recognize when new information alters the landscape based on decisions made yesterday is also critical. (Siemens, 2017)

For today's world, being open to learning things on a regular basis is vital to education and career success, as is recognizing that the world is always changing and new information is constantly being discovered, created, and shared. Locating, accessing, deciphering, and putting new information to use is a necessary skill: "Connectivism asserts that knowledge and learning knowledge are distributive i.e. they are not located in any given place, but instead consists of networks of connections formed from experience and interactions between individuals, societies, organisations and the technologies that link them" (Goldie, 2016, p. 5). Not all knowledge is digitized, but the more information that is shared, the larger the pool of information grows, which is accessible through connected networks.

When applied to digital storytelling, connectivism is a way for us to understand the vitality of the work that digital storytellers contribute to education and society. Every story told adds to the information accessible through databases, networks, etc. The main exception to this rule is when individuals choose to not share their work, but since they learned something from the creation process, there was still information transferred - it was simply that the person was teaching themself.

What is digital storytelling?

Sharing our stories is easier today due to technological advancements that are more user friendly and available to the public. Not only can we tell our tales, but we can also be someone's audience via YouTube, blogs, and other online platforms. Digital storytelling is one way that we can share our experiences and inform people, but what exactly is it?

The history of digital storytelling begins with what is now called the StoryCenter, a California-based organization that started teaching people how to express themselves using video, voiceover, and audio in 1994. It was founded under the name "San Francisco Digital Media Center" by Dana Atchley; a media producer and interdisciplinary artist; Joe Lambert, a local theatre producer; and Nina Mullen. Four years later, the centre moved to Berkeley and was renamed the "Center for Digital Storytelling", but the name was shortened to "StoryCenter" in 2015. Since its inception, the organization has helped thousands of people tell their stories through public workshops, partnerships and presentations, making people rethink the art of storytelling and its power in creating change (StoryCenter, n.d.-a). The StoryCenter is the pioneer of the DS movement, and the foundation they created has been adapted for many purposes over the last few decades.

While some countries were introduced to DS from StoryCenter directly, or created

programs based on the model, not everyone uses it the way that Atchley, Lambert and Mullen

designed. The uses are broad and ever evolving as digital tools emerge or are improved that are

user-friendly or more accessible. As technologies change, so does DS and its foundational

purpose and uses. However, founder Joe Lambert has not always been a supporter of other uses

for DS:

> The expansion of the digital storytelling moniker into broadcast, into the greater field of
>
> educational technology, into practices as diverse as its use as a tool for evaluation and
>
> research, or for marketing purposes, has stretched the concept and values of our work to a
>
> thin, superficial veneer. (Lambert, 2009, p. 82)

The movement's evolution is largely outside of his control. It will keep changing, as it should:

"Digital storytelling uses computational power to attempt human contact. It would be a surprise

if we got that right first time; but a pity if we stopped trying" (Hartley & McWilliam, 2009).

Hartley and McWilliam mention several observer downfalls to the DS movement in *Story*

Circle, including: it is too sentimental in form and naively self-centred, the design is too

institutional in nature, the movement does not receive a large enough audience to make a

difference, and there is too much attention on self-expression for 'serious' work or knowledge

growth to be achieved (2009). The authors encourage people to see these perceived weaknesses

as a call to action rather than be subdued by them.

There are other critical views on DS such as Lundby (2008) who writes that even though

the StoryCenter's movement is largely followed around the world, it does not mean that their

process or principles are sustainable. "Personal stories do not just happen; they are constructed.

Some aspects are brought to the fore while others are kept hidden" (Lundby, 2008). If people are

unwilling to share their stories, then the practice dies. To me, this does not seem like a reasonable conclusion as humans are natural storytellers and use narrative to communicate. However, issues could arise if StoryCenter does not update their model to adapt to new technologies.

Originally, the StoryCenter's version of the DS process started with a writing prompt, followed by a script, storyboard, voiceover, images, video clips, and background audio, which were edited together to create the final video product that the creator could share with other people. Today, digital storytelling is much more than that. Everyday people have access to the technology to create their own digital stories, and they are not all following the StoryCenter's guidelines. For example, TikTok, Snapchat, Instagram, and other social media platforms allow users to create short, often meaningful, videos with their cell phone camera and a few taps on the screen. While these are not the traditional definition of DS, in my opinion these users are still creating digital stories.

Digital storytelling as a term is also used in content marketing, which is not the aim of this research, but needs to be mentioned to avoid confusion of the two titles. There are several marketing resources that outline ways to create "digital stories" to engage one's social media followers. This style of content, also referred to as "social storytelling", "is all about conversations, shared activities and networking about ordinary people and influencers and their community" (Mueller & Rajaram, 2022). People are more likely to engage with a business' content if a story is attached to it, which is why content marketing is so effective and popular. However, "digital storytelling" for marketing is not the focus on my research, so I will be using the term in reference to creations for personal reflection and stories.

How is digital storytelling used?

Digital storytelling is a medium that can be used in many multiple ways for various purposes. While my research is focused on education, there were other fields using the technology for purposes like historical preservation, personal reflection, and mental health or healing. For example, the StoryCenter hosts events focused on healthcare workers sharing their experiences during the pandemic, newcomers' stories about their homeland, along with other focus groups. The three themes identified are by no means all encompassing, but these were the prominent ones I noticed from not only the StoryCenter, but other agencies that offer digital storytelling workshops or are incorporating it into their organization.

With the foundation of using digital storytelling as a tool for reflection, preservation, and healing, we can start to build ideas around how else the technology might be applied in different settings. The Historic Nova Scotia project, for example, has started using digital storytelling as a way for people to learn the history of the province online from different, and often underrepresented, perspectives. The project is a platform for communities to share their history with the world in a more accessible way that can also be used as a teaching tool (Gillis & Murray, 2019). Digital storytelling is a way for people to share information, which is how we learn, so applying this technology to classroom settings is a natural progression.

Digital storytelling is also used to help people share traumatic stories in a safe environment. Sometimes these stories are created as part of a workshop and are only seen by the creator or the workshop attendees, but the videos may also be shared with the public. One example is the StoryCenter's Silence Speaks program (StoryCenter, n.d.-b), which gives voice to human rights and other issues like female genital mutilation/cutting (FGM/C), a practice that is still used in some cultures today. Giving the victims of FGM/C a medium to tell their experience,

such as the video "My Body Belongs to Me - by Zahra Qaiyumi" is described as a powerful tool

for awareness and healing (StoryCenter, 2023).

A unique app, WITO, uses DS to engage with Generation Z users entering the workforce

that may lack experience. The app allows them to create stories based on a prompt for various

transferable skills such as teamwork. As this is a primarily individual use for DS, it does not

have the community aspect: "WITO's method of storytelling is in effect one of self-regulated

learning. Users plan and then produce, reflecting upon personal experiences and communicating

meaning from those experiences through an iterative process" (Henrickson et al., 2022, p. 1582).

As WITO is a commercial use of DS, the community aspect is not enforced, but users can share

their stories on social media platforms to get feedback if they wish. This innovative use of DS to

help young people find employment is admirable and is using DS in an entirely new way.

As social media and new technologies evolve, there are other uses emerging for DS. With

the popularity of sharing pictures and short videos on Instagram, TikTok, Facebook and

YouTube, variations of self expression range from sharing truth about one's culture (Nova,

2014), to weight loss journeys and health struggles (Reed, 2015), to sharing significant or

nonsignificant life events. There are no defining rules that say sharing a cooking video on social

media, for example, is not a DS. So, it could be argued that most of the content on social media

can (loosely) be classified as digital storytelling.

How has digital storytelling been used in education?

For some disciplines, it is easier to imagine how an educator could incorporate digital

storytelling into their classroom such as English or media courses where storytelling and

technology are already present, yet DS is being used in all types of classrooms, from humanities

to mathematics. In a webinar with the StoryCenter, examples for various disciplines were shared,

such as having math students create a story about their feeling of discomfort with math. This could be a prompt for them to share why they feel they are not good at math, their fears, or a time when math made them feel intimidated (McNair & Myers, 2021). Using DS in this manner can help students identify an emotion, like anxiety, and work through it in a creative way. Not only does this activity give them a personal outlet for the emotion, but they learn new skills that will help them with their future career as a student and beyond.

There were several examples of research being completed on using digital storytelling for English as a second language learners, or multilingual learners as they are now called. These students can sometimes make better connections with the new language they are learning if they apply it their own lives, which is exactly what DS allows them to do. I located several examples of DS in English language classrooms ranging from elementary learning to postsecondary students, including pre-service teachers (Castillo-Cuesta et al., 2021; Humphrey et al., 2021; Tajeri et al., 2017). The DS use for educators was of particular interest to me, as there is pedagogy that could be applied to future classrooms for other disciplines.

Using digital storytelling in the classroom: The digital storytelling creative process

Benefits of using digital storytelling include teaching skills such as using technology, reflection, writing, editing, critical thinking, teamwork, and verbal communication among others. This list could be added to depending on how the teacher chooses to create the assignment and which form they choose to focus on. It can also be used for engagement with new content to promote deeper understanding of key learning points. Students may also learn research skills while creating a story, which is a life skill.

There are various forms of DS today that could be used in education, and there are different approaches to creating digital stories. Aside from the traditional video of two to three

minutes, there are also options like visual or dramatic art, dance, podcasts, audio recordings or silent slideshows. Narratives can be expressed in many forms, so being open to possibilities where students can use their creativity in other ways is beneficial to an inclusive learning environment. For example, a student may not be comfortable using their voice, so they create a slideshow with key words and images. Or if a student is a tactile learner and wants to do something physical, they can record themselves dancing to express their thoughts and ideas.

There are several free online tools instructors can use to help guide students along their creative journey. A website called "Educational Uses of Digital Storytelling", was created in 2004 by faculty members and graduate students in the Learning, Design and Technology Program at the University of Houston College of Education, and it is a wealth of resources. The website includes a "How To" page that breaks the digital storytelling process down further with several side tabs. The first tab, titled "Get Started with Digital Storytelling" outlines eight steps, as identified by Samantha Morra (Morra, 2013; University of Houston College of Education, 2004).

The process of digital storytelling developed by Morra (2013) is illustrated in Figure 2. The process begins with a story idea that gets fleshed out through a series of six steps involving exploration, script writing, planning, assembling, and putting it all together. The seventh and eighth steps are where the storytellers share their work with others for feedback and reflection (Morra, 2013), which can restart the process. Even when they are broken down this way, making a digital story can be very stressful for students, and a great deal of finesse needs to be used during this process. DS creation is emotional, and people tend to get attached to their work, so if feedback is thoughtless or cruel – with or without intention – it can have dire effects on the individual's psyche.

If you compare Morra's process (as presented in Figure 2) to the process used by the StoryCenter, there are some differences. The StoryCenter breaks the process into seven steps (Lambert, 2013), which are brilliantly paraphrased here:

- Owning Your Insights: What story do you want to tell? Why is this story important? Why is this story important now?

- Owning Your Emotions: What emotions does your story prompt you to feel?

- Finding The Moment: What was/were the moment/s when things changed? Were you aware of any changes at the time?

- Seeing Your Story: What images do you imagine correspond with your story? Why?

- Hearing Your Story: What sounds, in addition to your own voice, might correspond with your story? Why?

- Assembling Your Story: What structure might help you most effectively communicate your story?

- Sharing Your Story: How might you present your story to others? For example, will it speak for itself, or will you introduce or paraphrase it? (Henrickson et al., 2022, p. 1580)

FIGURE 2

Another approach to creating digital stories is described in Joe Lambert and Brooke Hessler's *Digital Storytelling: story work for urgent times*, sixth edition (2020) They outline steps in detail for potential facilitators, including tips for helping creators dig deeper into their stories to find the main points so they can narrow their tale to a few minutes. "Less is often more, both in descriptive detail, and in the formality of language" (Lambert & Hessler, 2020, p. 75). Writing as you speak is a common word of advice from Lambert as it can help one's audience feel part of the journey rather than writing with a professional or academic tone.

One additional step that the StoryCenter's process includes, which Morra's eight steps could benefit from, is the use of a story circle. This part of the process helps storytellers dig deeper into the meaning/interpretation of a digital story with the aid of their peers and a facilitator. It should be used close to the beginning of the DS creation process. Sometimes the participants come to the circle with several ideas they are considering, or they may have a draft script to share. As facilitators, there are aspects of story circles that need to be addressed before entering into the process, including (1) clarity of ground rules, (2) protecting the storyteller, (3) focusing discussion of the story, (4) time management, (5) shaping process of feedback, (6) identification of broadly applicable lessons, and (7) closing summation and encouragement (Lambert & Hessler, 2020).

Step one is a chance for the facilitator to outline the expectations of all group members and how the story circle will be run. Some of the rules for the story circle might include confidentiality, not interrupting, keeping feedback positive and constructive, among others. Step two is making sure the storyteller knows they are in control, they can share what they feel comfortable sharing, and that their time allotted can be used however they wish, which can be them talking about their idea the whole time or leaving time for feedback. Keeping the

discussion on topic can be challenging, but as step three implies, it is necessary to focus on the story being discussed. Each storyteller is given a set amount of equal time to share their ideas, so step four is important to stick to. Having a designated person other than the facilitator keeping time may be useful. Step five is a reminder that the facilitator, whether they are a teacher or not, is not the ultimate authority in giving feedback, and they can defer to the rest of the group's ideas, or they may not have feedback to give at all. Applying a general idea such as focusing back on the StoryCenter's seven steps is the purpose of step six. The final step, seven, is a way to close out the story circle feedback for each person by thanking them and giving recognition for their bravery in sharing a personal story with the circle. This thank you might be a chorus from the group rather than only from the facilitator (Lambert & Hessler, 2020). (Lambert & Hessler, 2020).

The story circle concept can be applied to most classrooms, but there could be limitations if there is one teacher and many students. Breaking the class into teams and wandering the room can be an effective way to facilitate a story circle. Using this technique in an online classroom can be beneficial as breakout rooms also allow students a level of safety since only those in the breakout rooms are listening.

As an online participant in a StoryCenter program in Summer 2022 and Winter 2023, I found that the story circle was a helpful and motivating technique as it allowed brainstorming and story development in a judgement free arena. However, I was taking this class with other adults, and recognize that in a high school or post secondary classroom, some students may be reserved about sharing their thoughts while others may be too enthusiastic. As an instructor, making sure that everyone has a chance to share what they are comfortable sharing is vital to the success of such an exercise.

A document developed for the Kean University Digital Storytelling Conference (Barrett, 2005) demonstrates the links between DS and other classroom learning and engagement that are instrumental in creating a positive and successful DS classroom assignment. As seen in Figure 3, there are four pedagogical techniques that converge through DS. This figure was used for a research proposal where Barrett (2005) wished to explore situations where DS is successful in supporting deep learning, student engagement, and taking ownership of work. As an instructor, the links between these four education pillars via digital storytelling is appealing for many reasons. A few popular characteristics could be that there is less writing than a formal essay, students are able to be creative, and there are many opportunities for interpersonal communication through feedback and learning new technology together.

FIGURE 3

Assignment ideas involving digital storytelling

The possibilities for using digital stories in a classroom are vast. In a language course, for example, an assignment could be for students to retell a story with their own twist using the foundations of a digital story: visuals, video, voice, music, audio and text, or a combination of any of them. Barber (2016) used the 1938 *The War of the Worlds* radio drama as the foundation for a project of this nature where students had to edit the broadcast down from one hour to ten minutes. They had creative license to change the original narrative however they pleased.

Student interpretations ranged from the invasion being real with a government coverup, to aliens having lived on Earth for a long time. This assignment, which was for an English class, not only engaged the students' creativity, but also taught valuable lessons about editing and narrative (Barber, 2016). Barber also reflects on the four types of stories, identified by Maxine Alterio and Janice McDrury that can be used for learning: expressive, strategic, reflective, and transformative, explaining that all four could be used for DS assignments (Barber, 2016).

An educational technology website also has some resources and ideas for using DS in humanities classrooms. EdTechTeacher focuses most of their content on using DS for history classes, but their ideas could be used for language, civics, or geography classes. Their suggestions include:

- Create a virtual tour of a country or historical place.

- Create a public service announcement on an important local or world issue.

- Simulate an interview of a historical character.

- Simulate a debate on an historical topic, such as the Bill of Rights.

- Create a presentation based on images of local artifacts and architecture.

    (EdTechTeacher, 2014)

These ideas lend themselves easily to most humanities classes and would allow students to engage with content in new ways while allowing them to explore the creative benefits of DS and learning technological skills. There is also one mention on the webpage of demonstrating a scientific concept through code with Hopscotch (EdTechTeacher, 2014), but there are no further details about how this idea could be executed in a classroom setting or assignment. The previously mentioned website by the University of Houston (University of Houston College of

Education, 2004) provides more helpful information for instructors starting to use DS for the first time.

      To help instructors and students develop their DS assignments, a popular starting point is the use of a template. This allows students to fill in the blanks and is a less stressful form of writing for some students. Introducing the template as an optional tool can help those with writer's block avoid the anxiety of staring at a blank word document while allowing creatives to use it as a topic guideline. A popular and simple template is *Where I'm From*, a poem by George Elle Lyon (2010). In fact, there is also a movement for people to write their poems and share them online, many of which are made into digital stories. Another popular template option is *These Hands* from the StoryCenter (Lambert & Hessler, 2020, p. 115). It read like a Mad Libs activity where the writer inputs nouns and adjectives to complete the story, but it is written in such a way that it allows the writer to be self-reflective and open without being overwhelmed. See Appendix A and Appendix B for copies of these two templates, and Appendix C for a template I created for use in my future marketing classes.

      For a teacher new to using DS, a template is a good starting point to create for a class assignment, or as a personal exercise they can use to make their own story. Teaching any activity which you have not completed yourself makes little sense and is very difficult as you cannot answer some questions students will have. As my former writing studies professor once told me: "when your students write, you write." The same principle should be applied to digital story creation.

Chapter 3: Methodology

Introducing the Case Study: Computer Science Course in Digital Storytelling, CPSC 106 (ds106)

Now that I have situated my topic in relation to existing literature, I turn to focus on the research design for this Capstone study. My research consists of a case study, which is a way for researchers to explore a specific event or complex issue through in-depth analysis of one or more cases. Case study research allows the focused convergence of quantitative and qualitative data to better understand a phenomenon and has been used in educational research. For example, evaluative applications can be used to "assess the effectiveness of educational programmes and initiatives" (Zainal, 2007, p. 1). Studying education techniques using a case study approach allows for the evaluation of important qualitative data that could otherwise be overlooked, which is why this is the best fit for my research. I am also interested in examining a specific case in depth to learn best practices, limitations and other factors associated with the design and application of digital storytelling in a specific setting, in this case, an online post-secondary course. While quantitative analysis is outside the scope of this research project and does not aid in answering my research question, there is a possibility of quantitative data arising from my work.

There are three commonly known categories of case studies: descriptive, exploratory, and explanatory (Yin, 2009). However, there are other categories such as interpretive and evaluative case studies (McDonough & McDonough, 1997), and intrinsic, instrumental and collective types (Stake, 1995). The direction of my research will be towards an exploratory claim using online published text and multimedia data drawn from an online digital storytelling course. My case study research will consist of a content analysis of data collected from publicly available student

assignments, and my interpretation and analysis of the findings based on knowledge gained from the literature review using the narrative paradigm and connectivism as a guide.

My research is a case study of an online course, "Computer Science Course in Digital Storytelling, CPSC 106" at the University of Mary Washington, also known as ds106. ds106 has been offered to students at UMW for over a decade, and so the course materials and resources have presumably improved over time. Specifically, I will conduct a qualitative content analysis of data drawn from a recent course section taught by Professor Paul Bond from January to April, 2022 (Bond, 2022c). While the course was found from the main ds106 website, there is a separate link to go to the website Professor Bond uses to teach (Bond, 2022b). There are also hyperlinks for each student's website where they publish their weekly assignments, reviews, and tag their classmates' work, creating backlinks.[3]

This course is offered to first year students and is treated as an elective by other faculties, making the student pool varied. This could benefit this research as the findings may apply to students beyond those in computer science. For example, one enrolled student states they are interested in teaching as a future career, and another is Pre-Med studying Biomedical Sciences (Berrios, 2022a). While applying the findings from this case study to all students is likely not possible, finding best practices and seeing how students from different academic disciplines engage with multiple assignments will be useful in learning how instructors adapt and apply DS in diverse classrooms. I recognize that this course (and associated data) is specific to online classrooms, and so may not apply to courses taught in other formats, such as face-to-face. However, as many instructors learned during 2020 and beyond, digital education teaching

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[3] The link to this course is available at: https://thisweekin.ds106.us/.

techniques and technologies can often be incorporated into in-person/face-to-face, online and hybrid instruction.

Through my case study analysis of ds106, I hope to gain insight on my primary research question: *How do students respond to digital storytelling assignments in a postsecondary online course setting?* Students' level of engagement varies throughout a course and can rise or dip for different assignments that they find interesting. To explore my RQ, I will examine differing levels of engagement among students in ds106 by analyzing their enthusiasm levels for three assignments completed at different points during the semester. This involves looking for signs of engagement in the punctuality and quality of their assignments. I will look for common themes present in assignments that received positive feedback from students, the tone and language (such as blog posts), and participation in giving peer comments.

To answer my research questions, I will use a modified version of the steps for content analysis outlined in *Applying Content Analysis to Web based Content* (Kim & Kuljis, 2010) . Since they successfully applied their steps to a case study comparing blogs written in the United Kingdom to those in South Korea, I feel their practices will translate well as a guide to support my analysis of digital storytelling assignments.

Kim and Kuljis based their work on Neuendorf's (2002) nine steps of content analysis, as illustrated in Figure 4 (below), which is an easy to follow flowchart interpretation they created (Kim & Kuljis, 2010, p. 285). Step one is explained earlier in this section, and I will use the remaining steps as a guide for my analysis, with some alterations.

Based on these guidelines, my case study research design involved collecting student assignment data and then analysing it using deductive content analysis. This involved several steps: 1) identifying the data set; 2) collecting the data; 3) sorting data for analysis; and 4)
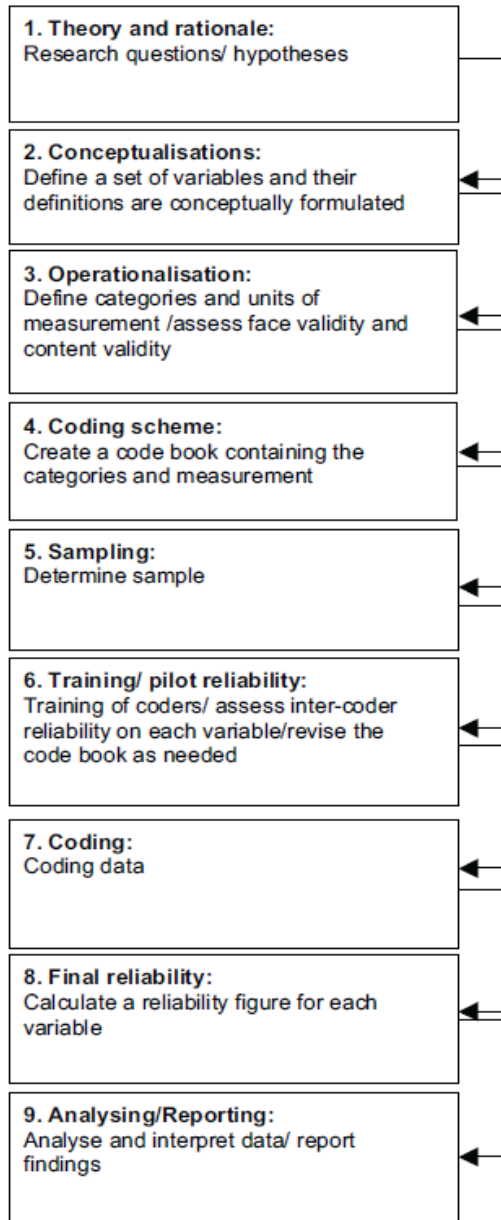
performing data analysis using a deductive content analysis technique. These steps are explained in detail below.

1. Theory and rationale:
Research questions/ hypotheses

2. Conceptualisations:
Define a set of variables and their definitions are conceptually formulated

3. Operationalisation:
Define categories and units of measurement /assess face validity and content validity

4. Coding scheme:
Create a code book containing the categories and measurement

5. Sampling:
Determine sample

6. Training/ pilot reliability:
Training of coders/ assess inter-coder reliability on each variable/revise the code book as needed

7. Coding:
Coding data

8. Final reliability:
Calculate a reliability figure for each variable

9. Analysing/Reporting:
Analyse and interpret data/ report findings

FIGURE 4

I chose deductive content analysis because I want to explore digital storytelling instruction through the narrative paradigm and connectivism. Since the deductive approach relies on coding schemes guided by theory (Orphanidou & Kadianaki, 2020), it fits with my goals of looking at particular data for themes, perceived student reaction to assignments, and other areas of interest in this case study in a way that is informed by my theoretical interests in connectivism and the narrative paradigm. I am particularly interested in identifying patterns within the dataset. Qualitative researchers, "seek patterns as somewhat stable indicators of humans' ways of living and working […] since patterns demonstrate habits, salience, and importance in people's daily lives (Saldana, 2015). The patterns that interest me the most are around levels of student engagement, as I hope to learn about DS as a learning resource in an online classroom setting so that I can improve my own teaching. I want to identify what tools and techniques are useful and enjoyable for students. I see DS as a form of instruction that should increase student engagement through creativity and one that should excite students, so if a style of assignment is perceived to have low engagement, I do not want to

repeat the exact assignment in my classroom. In contrast, adopting a high engagement assignment presents an opportunity for me to add it to my portfolio of potential future assignments.

<div align="center">Identifying and collecting the data set</div>

First, I identified the data set. I began by downloading information about ds106; although the syllabus was not available[4], I collected details about the course. These include: the ds106 Participant Handbook, the Quick Start guide, and About ds106 (ds106, 2010b, 2010a, 2010b). These pages provided me with an overview of what ds106 is and what students will explore in the class: "it is our responsibility to interrogate the term digital storytelling within the cultural context of our moment. This means each of you will be experimenting with your own digital platform for storytelling, as well as placing yourself within a larger narrative of networked conversation on the internet at large" (ds106, 2010b). The primary data I am formally analysing for this research are the student assignments. Students are required to create their own websites to host their assignments and link it back to www.ds106.us to populate in the website's feed. Backlinks between classmate reviews are also required, so everything is linked together and creates a sense of community within the course or a social network.

The course runs for 15 weeks, including a spring break for one week, so there are 14 weeks of assignments to choose from. I chose three assignments as my formal data set, chosen to reflect three stages of the course: starting point, progression, and final accomplishments. These weeks will be Week 2 (January 14 to 21, 2022), Week 9 (March 11 to 18, 2022), and Week 13 (April 8 to 15, 2022). The Week 2 assignment (to be called Assignment 1) was a starting point for the students, and involved completing five Daily Create exercises. Daily Create is a website

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[4] There is a broken link at https://ds106.us/docs/Syllabus_Spring_2013 with an Error 404 message saying the content cannot be found.

that was launched in 2012 in support of the ds106 online community to inspire making art every day (Owens & Levine, 2012). It uses Twitter to post its prompts (Levine, 2012); users reply to tweets and include the daily hashtag to join the conversation. As this is on a social media platform, its participants are around the world. The Week 9 (referred to as Assignment 2) assignment involved students engaging in a reflection of their past work in the course. As described in the assignment instructions:

> This week, you should pick two assignments you've already completed and significantly revise them, improve upon them, or remix them with something else. This is an opportunity to spend more time on something you might have rushed through before or to bring a new twist to an assignment you've already done and enjoyed. Share your revised work and tell us why you reworked them, what you reworked, and how you feel about the process. Tag this ds106rework. (Bond, 2022b)

Finally, the third assignment I analysed was the final project in the class (labelled Assignment 3). Students were instructed to communicate something that is important to them, that they felt the world needs to hear. This could be done using any of the media forms taught throughout the course: writing, image editing, photography, audio, and video work, preferably a combination of several that will work together to share the student's message. Students were encouraged to work together on this assignment but were allowed to complete it individually if they wanted to. This final assignment was a week-long project (equivalent to five regular assignments or fifteen stars worth of assignments in the assignment bank (ds106, 2012)). There was no length requirement (Bond, 2022b) This lack of specificity in assignment instructions could lead to interesting results and is reminiscent of the StoryCenter's open topic philosophy in a lot of their workshops. Some

have themes, but usually storytellers are encouraged to simply pick a topic they want to explore.

Professor Bond did something similar here.

There are some limitations to selecting a data set from a course that ran a year ago.

Primarily, some of the student websites no longer exist. Of the 28 total student websites listed on

Professor Bond's course section page of the ds106 website (Bond, 2022a), there are two websites

that are not accessible on the web, one was a duplicate, and another two I was able to locate

using the Internet Archive Wayback Machine, which are not complete copies and have a lot of

broken internal links. There is one student who appears to be a participant in the ds106 MOOC,

not the UMW course, so this website has been excluded. Five websites did not contain any class

information or only had the first assignment, which could mean the students dropped the course.

One blog only contained information about a different class, so it is possible the student was in

ds106 and deleted their class work, or they also may have dropped the class. Finally, one website

contained assignments completed in the summer semester, so they must not have participated in

the section this case study focuses on. Given the websites inaccessible during the time of data

collection and those deemed unusable, there are 15 remaining student websites that can be

studied, plus two I collected using the Wayback Machine that have limitations.

Sorting data for analysis

After selecting my data set and collecting the data, I began sorting the data set in

preparation for analysis. I started by creating a list of the student websites in a Google Sheets

document and labelling them with a number followed by the student's first name (if known) ex.

6-Cece, and 1-Bird, which may or may not be a real name (See Figure 5). Since these materials

are publicly posted already, there is no expectation of privacy/anonymity from the students. I

also created a column to identify any broken websites. At this point, I was encouraged to consult

with a technical librarian who suggested saving the accessible websites as .wacz files. This file

type can be opened and browsed just like a regular website using https://replayweb.page/. The

software to create the .wacz files would not work for me, no matter how many people tried to

help me. In the end, the librarian saved the websites for me into a shared Google Drive folder,

and I downloaded them. This step should have been completed earlier in the process of my

research as I may have been able to access, locate and save more student data, but some data is

simply inaccessible now due to broken links. A few websites were located using the Wayback

Machine, and I put those links into my Google Sheet, but they are not complete copies of the

websites. Since starting to collect data, I have come across at least one website that was taken

down, so the .wacz files have already been an essential tool. After completing this step, I had a

total of 17 student assignments in my data set.
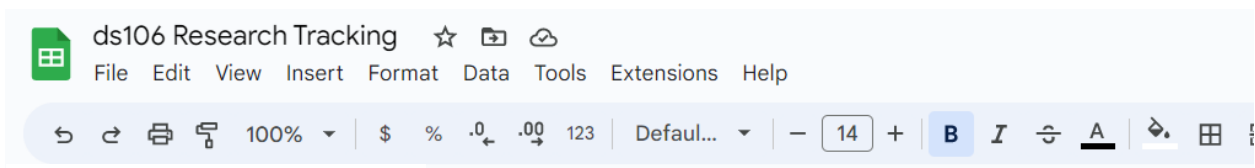
FIGURE 5. LIST OF STUDENT WEBSITES.

	Broken	File Name	URL
7		2-Zoe	https://digitalstorytelling.worldempress.net
8		3-Amy	https://web.archive.org/web/20220626075045/https://amymcmanama.com/
9		4-Aisling	http://aislingberri.com/
10	x	5-Erin	https://web.archive.org/web/20221003103948/https://ds106.erincaine.com/week-1/about-me/
11		6-Cece	http://cpsc106.ceciliachianese.com/

Performing data analysis: Coding Scheme

Several codes will be used to categorize the data collected from the three ds106

assignments chosen for the study. A screenshot of the coding table I used can be found in

Appendix D. Separate aspects of the assignments may involve some duplicates of coding

categories. For example, Assignment 1 contains five "Daily Creates" that all need to be

examined and coded. The five days from Monday, January 17, 2022, through Friday, January 31, 2022, will be differentiated by Roman numerals starting at I on Monday. In Assignment 2, students revisited two former assignments for improvement, which will each need to be individually coded under VI and VII. Finally, in Assignment 3 the students were given the option of using several media to say what they thought the world needs to hear; the coding process will need take this into consideration, so each story will be numbered starting at VIII.

The first set of codes are designed to examine overall reception and completion of the assignment. I identify if the student completed their work fully, partially, or not at all using the labels 'complete', 'partial', or 'incomplete' (C, P or I). I will also label whether the work was submitted by the deadline with a simply 'yes or 'no' (Y or N) categorization.

The second set of codes delves into the level of effort seen in the assignment. I recognize that my assessment of this data is subjective; as I am looking at content generated by students without having any contact with them (or the course instructor), and so there is a level of interpretation here which I will lean on my experience as an instructor to evaluate. In my experience, one can tell if a student spent time on their work based on the quality of the end product. In the case of ds106, the product is a combination of a multimedia creation and a write up about the process of making it. In my coding process, a well thought out description partnered with a product that shows a level of creativity and dedication of time will receive a higher rating on the coding scale. In contrast, a short description with writing and grammar errors accompanying an unstructured assignment will receive a lower rating. The coding labels for level of effort are: 'high', 'moderate', and 'low' (H, M or L).

The medium used will be coded: 'audio', 'image', 'video' or 'text' (AU, IM, VI or TX).

Another set of coding labels will be aimed at determining the student's apparent reaction to the assignment as 'favourable', 'neutral', or 'unfavourable' (F, N or U). This is arguably the most important coding in this Capstone research as it will help me assess the level of student engagement in digital storytelling assignments. However, I recognize that this set of codes is also subjective; my assessment of student reaction will rely on my teaching experience and some intuition as I will not have the option to ask the opinions of students or instructor directly. In my coding scheme, a 'favourable' reaction means a clear example of excitement evident in their writing such as enthusiasm in explaining how they completed the assignment or what they learned, a 'neutral' reaction is no clear excitement or dissatisfied comments, and an 'unfavourable' reaction means that there is clearly little effort, or the student may have written that they did not enjoy the work.

Finally, I include an open coding category that will evolve as the coding process is completed; this category will be used to code aspects related to tone, topics, and technology. Specific codes will emerge inductively from my analysis of the data. Generally, "tone" will be an evaluation of the emotional tone used in the write up for each assignment and may include labels such as "professional", "uplifting", "conversational", etc. "Topics" focus on the topics covered in the assignments and could vary from **popular culture** and **film** to **history** and **advocacy**. In my analysis of these codes, I will be looking for patterns of topics to see what the student chose to create. Topical choices could be reflected in a student's other assignments or across the peer group. Finally, "technology" indicates what type of technological tool(s) the student used to create the assignment. This will need to be coded on an ongoing basis since students may have Audacity or a smartphone app for audio editing, WeVideo or iMovie for video editing, Photoshop or Canva for images or many other online or software-based tools that they are

comfortable with. This coding category may be blank for some assignments as not all students specified what tool(s) they used to complete an assignment in their writeups.

Along with coding the assignments, I will analyse content from online comments posted by the students on each other's work. This will be completed for each student to see what their posts looked like. As this was done throughout the semester, I will narrow the scope of my analysis to comments written on classmates' work for the three assignments included in my main data set. When coding student comments, I will be looking for several items: positive feedback, constructive criticism, tone, and community building aspects. For the purposes of this research, "community building" will include activities such as conversation starters. I will use an open, inductive coding process for these student comments – the specific codes, categories, and themes that I identify will be drawn from the data. My analysis of these student comments will allow me to evaluate the engagement between students.

There are some limitations to my data analysis. There is a small data set (only 17 student assignments); therefore, this research is not generalizable. Most of the codes I am using – while informed by my research questions and the literature review – are nonetheless subjective and rely on my personal interpretation. As noted above, this subjective limitation is connected to the study's focus on written/digital content; I have no direct involvement with students. For these reasons, the Findings and associated Discussion should be considered despite these limitations.

Chapter 4: Findings and Discussion

This chapter discusses the findings of my data analysis and reflects on them in the context of the research literature. Coding the 17 websites deemed relevant and accessible to my research took approximately 20 hours total: four hours of planning and 16 hours of data analysis and entry. The planning step included the creation of three additional Sheets in the original Google Sheets document I used to list the student websites seen in Figure 6.

The additional Sheets include a data entry sheet with student names/websites across the top of the page and the categories of coding for each assignment along the side of the sheet, as seen in Appendix D. As data entry progressed, I added a row to paste student feedback copied from each assignment blog so that it was all in one place and easy to find for each student. The contents were pasted under the student who wrote the comment so I could easily code the feedback they had given to their classmates later via comments or Tweets. This extra row made it easy for me to see the comments and code any present themes they contained later to assess community building and social interaction between students.

A second Sheet presented the data differently. It was a mirror of the data entry sheet with the labels flipped to have the assignments along the top and student names on the side (Appendix E). I thought having the two options for viewing data might help support the content analysis. The third Sheet is a summary of the static data options, meaning the deductive codes identified in Chapter 3, as seen in Table 1.

Table 1 is colour coded to show the overall completion, deadline adherence, and reaction for each assignment and its parts. For completion: green in complete, yellow in partial and red is

incomplete. For deadline adherence: green is yes and red is no. For reaction: green is favourable,

yellow is neutral, and red is unfavourable.

TABLE 1

Assignment 1	21-Jan-22			
Was the assignment completed?	C, P or I	13	2	1
Did the student meet the deadline?	Y/N	14		1
How much effort was put in?	H, M or L	2	12	1
Reaction I	F, N or U	7	7	1
Reaction II	F, N or U	9	4	2
Reaction III	F, N or U	7	8	0
Reaction IV	F, N or U	11	4	0
Reaction V	F, N or U	11	3	0
Assignment 2	18-Mar-22			
Was the assignment completed?	C, P or I	14	1	0
Did the student meet the deadline?	Y/N	14		1
How much effort was put in?	H, M or L	6	9	0
Reaction VI	F, N or U	13	2	0
Reaction VII	F, N or U	11	3	0
Assignment 3	15-Apr-22			
Was the assignment completed?	C, P or I	16	0	0
Did the student meet the deadline?	Y/N	10		6
How much effort was put in?	H, M or L	15	1	0
Reaction VIII	F, N or U	14	1	0
Reaction IX	F, N or U	5	0	0
Reaction X	F, N or U	2	2	0

Assignment 1: five "Daily Creates" exercises

For Assignment 1, we can see that most students completed their work fully and on time, with two partial completions and one missing assignment. The missing assignment appears to be a late enrollment as their blog's first entry is January 25, 2022 (Emma, 2022). Only one student missed the due date and posted their Daily Create work on Saturday, January 22, 2022, a day late (D'Albis, 2022a). Another variable to note is that the two websites only accessible via the Wayback Machine did not contain assignment content for any of the three assignments upon closer inspection. One website, by Erin Caine (Caine, 2022), had to be removed from the main data set. Fortunately, the other website, *In the words of LC* (Cooper, 2022a), was indeed missing content, but it had a link to the student's Twitter profile (Cooper, 2022b) where the five Daily Create exercises were posted.

Assignment 1 contained five Daily Create exercises, which were coded individually and labelled using Roman numerals. As the students did not all do the same exercises, the coding does not completely align. If I were to recode the Daily Creates assignment, I might label them more specifically so that all of Monday, January 17, 2022, Daily Creates ended up in the same row. A few students started on the previous Saturday or Sunday, so their five exercises do not match up with rest of the class who started on Monday. However, I do not think the misalignment of Reaction I coded for Saturday, Sunday or Monday with Reaction II being pushed up or back a day depending on the student, is much of a problem.

The overall impression from students was that they enjoyed the Daily Creates. There were 45 out of 74 favourable reactions (60.81 %) across all assignments coded. Ty writes, "I realized that these daily creates could serve as an opportunity to express my creativity and humor freely. The assignment started to feel like less of an assignment as I began having more and more

fun each day" (Ty, 2022). Assignment 1 had 26 neutral reactions (35.14 %), which were coded as such when students did not specify a like or dislike of an assignment. This involved subjective interpretation: they were often coded due to a lack of information rather than a clearly stated neutral reaction. This is one of the barriers to content analysis; I do not have the opportunity to ask the students directly if they liked or did not like an assignment, so I must judge their reaction based on their blog entry or their Tweet. The unfavourable reaction included three student exercises, which were mostly an impression of apprehension or confusion about the assignment rather than clear dislike. For example, Katie writes: "@ds106dc #tdc3658 TBH I don't understand it either, so here's my best guess" (Reif, 2022a, 2022b), shown in Figure 6.

Most media chosen for the first assignment was image (72.97 %) with some text (25.68 %) and one video (1.35 %). This is not surprising as Daily Creates are meant to be short bursts of creative expression that allow participants to spend fifteen to twenty minutes at a time on an assignment (Owens & Levine, 2012). Creating videos in this short time is difficult for most people unless they are very adept at shooting, editing, and posting videos to social media. The only video was a GIF submission of a Lego rocket ship being built that was found online, not created by the poster (D'Albis, 2022a, 2022b). The text submissions were Tweets in response to some of the exercises like "For today's TDC... #tdc3659 #ds106 Big Book Needs a Title? http://dlvr.it/SHKnjY"

FIGURE 6

(ds106 Daily Create, 2022a). There were no audio submissions for Assignment 1.

I found the level of effort noted in this assignment was mostly in the middle range. I coded 12 student's exercises as medium effort; this was determined by a lack of creativity and simple design or editing such as a few pictures that appeared to be made in programs with capabilities like Microsoft Paint. I think this likely has a lot to do with this assignment being completed at the start of the semester; effort levels rose for Assignment 2 and peaked for Assignment 3, but the specifics of those will be discussed under those assignments. Students were likely just starting to open up in a class that pushes you to be creative, which is pushing boundaries for a lot of people. One student showed a low level of effort (Hanning, 2022), while two students clearly put a lot of thought into their work (Berrios, 2022a; Cooper, 2022b).

Next, I coded the tones used in Assignment 1 (see 274 codes identified in Appendix F). Some of the dominant tones in students' written work were "humour" (31), "sarcastic "(18), "conversational" (15), and "fun" (10). There were also multiple codes for tones including: "direct" (8), "formal" (7), "informal" (7), "literal" (6), and "reflective" (5). These observations suggest that the class saw Assignment 1 as an opportunity to have fun and did not approach their writing with the academic and formal tones that might be reflected in other classes. The assignments themselves also tended to be on the humorous or sarcastic side, with only a few students taking the tasks literally. As humour is subjective, I coded them generally. Some jokes were not funny to me but might be to classmates. One of the students that looked at the assignment literally is a mature student that is learning some of these technologies for the first time (Jenny, 2022), but seemed to loosen up as the week progressed.

Topics in Assignment 1 were similar to the codes for tone, but since there were so many codes, I decided to group them into 15 smaller groups as seen in Appendix G. The overarching topic groupings are:

TABLE 2

Topic Group Names	Working Definitions
Entertainment	Pop culture, movies, and other forms of human entertainment
Education	Relates to any level of schooling or obtaining knowledge
Mental Health	Mental health issues; Usually involved raising awareness
Civic Life	Political driven topics
Artistic Details	Techniques used in story creation
Humour	Topics that were meant to make the audience laugh
Violence	Forms of fighting, kills, etc.
Nature	Natural world such as animals and scenery
Abstract	Non-physical concepts like 'ironic'
History	Past events in society and for individuals
Currency	Spending money; Business
Human Life	Relationships, and life experiences
Physical World	Common objects or things such as toys or building
Consumables	Anything that is ingested or put into humans
Emotions	Clear demonstrations of a feeling

For Assignment 1, the dominant topics were **humour** (23), **human life** (18), **entertainment** (16), and **artistic details** (14). Specifically:

- Humour (23/79 or 29.11 %)

    o humour (11), gag (5), satire (2), dark humour, fun, joke, fraud calls, and mocking (1 each)

- Human Life (18/79 or 22.78 %)

    o family (3), future, parents, relationships (2 each), adulting, friendship, growing up, homesick, life, parental traits, bonding, adventure, and sleep (1 each)

- Entertainment (16/79 or 20.25 %)

    o Pop culture (8), fairy tale (4), gaming (2), Lego®, and poetry (1 each)

- Artistic Details (14/79 or 17.72 %)

  o Art (6), cartoon (4), abstract (2), dark, and retro (1 each)

The dominant topic of **humour** is not surprising, and it reflects the popular tones of **humour** and **sarcasm** used by many students. There were 11 students that used **humour** in general with five also using some kind of **gag** in their post, such as one about a popular commercial for Flex Tape ® (Ty, 2022). The **human life** topic group included three posts about **family**, and two each about **future**, **parents**, and **relationships**. As these are relatable topics in everyday life, the popularity of these concepts in Daily Create exercises is understandable. Eight posts under **entertainment** were about **pop culture** in some form, and four were about **fairy tales**, specifically regarding the @MagicRealismBot exercise. This exercise was interpreted in two ways; students either wrote a story or created a picture explaining a tweet by the bot. Several student responses were related to the Daily Create for January 19, 2022 (Celia, 2022; Cooper, 2022b; ds106 Daily Create, 2022b; Reif, 2022a). Other students made their Daily Create from something else the bot had tweeted on its profile, resulting in weird and entertaining images as seen in Figure 7 (Ty, 2022) and Figure 8 (Foster, 2022b) below. The **artistic detail** section was dominated by the **art** mostly for the bot creation where students made a piece of art in response to a tweet from the bot.

Overall, Assignment 1 was regarded as a fun introduction and a chance to be creative. The overall impression was enjoyment and fun for the Daily Create exercises. As an instructor, a low stakes task like this one is a great way to 'break the ice' for the rest of the semester as it lets students get creative, be silly, and try new things.

FIGURE 7

FIGURE 8

Assignment 2: remixing two assignments

The next assignment, Assignment 2, was an opportunity for students to rework two

pieces they had previously submitted in ds106. Interestingly, very few assignments were chosen

by multiple students; one duplicate was a Vogue magazine cover (Berrios, 2022a; Star, 2022).

All students completed the assignment that I was able to access, but one only remixed

one previous story, not the two required for the assignment. A different student submitted their

remix assignment late.

The level of effort for this assignment was harder to code as it depended on a few

variables: the blog writeup, the end product, and how much effort was spent on improving the

work. Nine of the 15 assignments were a medium level of effort, which were usually ones that

did not change much of their original work, or they did not approach the assignment from a new perspective. Six students were coded as high levels of effort due to the time they clearly spent improving their work. Compared to the previous assignment, the level of effort increased from only two assignments showing high levels of effort to six for Assignment 2. That growth is a good sign for the course as student engagement rose. None of the assignments were low effort for Assignment 2.

The reaction for Assignment 2 was overwhelmingly positive, and I coded all but five as favourable. The remaining five were coded as neutral due to either a lack of detail in the student's post or a lack of excitement in their wording. For example, RJ chose to distort and use filters on previously edited images for their remix assignment but was unhappy with the results. The wording did not indicate that the coding should be unfavourable because RJ wrote: "Not liking stuff is a pretty important part of the creative process, so I'm not worried about that" (RJ, 2022a). There is still a level of exploration and openness in this statement, so I coded a neutral reaction to the remix assignment. There were no unfavourable reactions coded for Assignment 2 as it seemed that all students enjoyed reworking their paste stories to some extent. Even when there was minimal content in the student's write up, there were signs of effort in the assignment that indicated some level of positive engagement with the work to warrant a neutral response. There were no obvious mentions of dislike, for example, that would lead me to code an unfavourable reaction.

Compared to Assignment 1, favourable reactions increased by 21.95 % for Assignment 2, indicating that students reacted more favourably to the second assignment chosen for this research. Possible reasons for the rise in positive reaction from students could be a familiarity with editing technology, becoming acquainted with their creative sides, or a general appreciation

of this assignment's instructions. All these motivations may play a part in students increased

favourability towards Assignment 2 on some level. Allowing students to improve upon

previously submitted assignments usually is met with appreciation in my classes, so my instinct

is that the remix style of the assignment played a large factor in the favourability score.

More than half of the 29 remix assignments were images (16 or 55.17 %), with the

remaining assignment split nearly even at five audio, four video, and four text resubmissions. A

notable change made by a few students was that their original work may have used a different

media than their remix. For example, Jenny's original assignment was a collage of calming

pictures, but the remixed version was a video with each image staying on screen for twelve

seconds while a calming melody from freesound.org plays. Her description of the assignment

explains that the first time she completed this assignment, she did not know about Canva or

websites with free audio, and so she wanted to use her new skills to create a calming one-minute

video (Jenny, 2022). Another example is Taytu, who remixed an audio assignment into a text one

and wrote a haiku for her best friend: "You're always there for me // Whenever I call or

whenever I text // Grateful to call you bestie" (Star, 2022). Most of the class used the same

medium, but several changed their direction during the remix activity, often to something more

personal. For example, Ty's assignment "A Story In Alphabet" challenge refocused on racism:

"Absolutely biased, color determines everything. Forever grieving, hopeless injustice, just killing

like my neighbors oughta perish. Quiet realizations sometimes turn up, very wistfully.

Xenagogue youth, zealous" (Ty, 2022). There were other students that took a more personal

approach. Celia explains that for her remix of "If I Could Live Anywhere", she wanted to dig

deeper for a more reflective answer. She revisited a novel about the happiest places in the world

and decided they were not for her because often people in those places fixate too much on

happiness. Celia decided that living on a beach in a small town in North Carolina that is close to her family was really what she wanted. She explained that her answer evolved because of deeper thought and that the class was giving her a different perspective (Celia, 2022). This growth and new thought process was interesting to see in not only Celia's work, but many other students' as well.

The tone for Assignment 2 was "reflective" for 38.71 % of submissions, which is to be expected given that it was a chance to revisit previous work and improve on it. Some of the same tones from Assignment 1 also carried over. These included tones like "conversational" (54.84 %), while other trends like "formal" and "explanatory" rose to 25.81 %. The number of "informal" codes doubled to 16.13 %. Patterns of "exploratory" tones reflected students trying something different or using a new tool to alter their work. "Enthusiastic" (12.90 %) was a nice tone to see rise in popularity, as did accomplished and "uplifting" tones (6.45 %). Since these patterns are in relation to an assignment completed in week 9 in the second half of the semester, we can assume students had learned the basics and theory about text, image, audio, and video digital stories. Given the timing, "accomplished", and "exploratory" tones are expected (and reflected in data analysis). "Enthusiastic" and "excited" tones stem from "accomplished" and "exploratory" and were usually detected in the same posts. One of the tones that decreased was "fun", which was 12.67 % for Assignment 1, but fell to 6.45 %; while "humour" dropped off entirely from 39.24 % in Assignment 1 to 0 % in Assignment 2. There were a lot more "reflective" tones present for the remix assignment where the student revealed something about themselves or their thoughts, opinions, and interests. The overall impression from the analysis was that students felt comfortable enough at this point in the semester to really show their

personality – sometimes a little too informally such as using slang, which was noticed in one

blog (Celia, 2022).

At the same time, there is an increase in the professional or formal nature of the

assignments. Some students used "professional", "formal", and "direct" tones (Emma, 2022;

Reif, 2022a), which accounted for 25.81 % of the coded tones. There could be varied reasons for

this such as that this is simply how they write. Without asking the students, their reasoning

cannot be determined. It can be noted; however, that Katie Reif was one of the most engaged

students for this assignment and commented on four other students' Assignment 2 blogs using

more "informal" tones, so if Katie was not feeling comfortable enough to use informal tones in

her own work, she was using complimentary and informal tones with her feedback.[5]

Coded topics for Assignment 2 were more varied than Assignment 1, and this is likely

because students could choose any two previous assignments to rework. There is a lot of freedom

in ds106 as Professor Bond allowed students to choose from the Assignment Bank regularly, and

there are 1,041 assignments created for and by ds106 students and participants as of March 21,

2023 (ds106, 2012). Therefore, it can be assumed that there were hundreds of assignments for

Professor Bond's ds106 section to choose from for the original assignment. It is more surprising

to find duplicates for the remix of Assignment 2 than there is to find different ones. As such,

some of the topics for these projects include:

- Entertainment (18/31 or 58.06 %)
  - Pop culture (4), music (2), animated movie, apocalypse, books, concert, gaming, motivational posters, sci-fi, poetry, paintings, social media, sports, and Zoom (1 each)

---

[5] Peer feedback will be discussed at length under its own heading.

- Human Life (13/31 or 41.94 %)

    o   Friendship and life (2 each), body image, change, daily life, future, life decisions,

        family, summer camp, origin story and relationships (1 each)

- Nature (10/31 or 32.23 %)

    o   Nature (3), animals (2), beach, flowers, night, seasonal, and weather (1 each)

- Artistic Details (10/31 or 32.23 %)

    o   Art (3), black and white (2), film noir, reverse video, sketch, realistic, and

        distortion (1 each)

As the topics are so different, finding patterns within them is difficult. Each student approached

this assignment in a unique way, and so my coding for topics does not reveal many patterns aside

from a relation to entertainment and life as a point of inspiration. An overarching topic might be

better identified as self-improvement or growth as this assignment allowed students to revisit and

improve their own work, or in some cases discover that their first drafts were better. This

creative leeway was a chance for creative expression and exploration that is hard to categorize.

Assignment 3: final project

The third assignment I chose to analyze was the final project for ds106 as this was a

culmination of everything the students had learned throughout the semester. It was also an open

assignment without a lot of rules or a template from Professor Bond, so students could let their

imaginations run wild.

If Assignment 2 was any indication of how varied work was for this class, Assignment 3

reached another level of diversity. All students completed the assignment (although two websites

were inaccessible). Luckily, one of the students, Lindsay, completed their final project with a

partner, so I can still make observations on their work through Celia's website. This was the only partnership within the class, as all other students chose to work independently.

Professor Bond's instructions for this assignment were a bit more flexible for the due date. He wrote that if a few more days were needed, submission after Friday, April 15, 2022 was alright (Bond, 2022b). Many students took this opportunity, which is why my coding has six lates. All 16 students whose work I can access completed the final project.

The level of effort for final projects was high for all but one student. I coded RJ's video about what art means to them as a medium level of effort as the write up had little to no enthusiasm behind it, nor did the video which was rather short compared to similar final projects. The impression I received from reading the blog was that they wanted to explore a controversial topic ambiguously without really expressing an opinion. The end credits are also placeholders, which shows a lack of attention to detail (RJ, 2022b). The excitement seen in classmates' work is not present.

The remainder of the class were engaged in their final projects and their passion was evident in not only the end products, which clearly took a lot of time, but in the enthusiasm of their explanations. Reactions, tone, and topic were complicated to code as some students submitted one final product while others told their story in multiple pieces. For this reason, Reaction VIII is coded for all students, but IX and X are not present for all students, as I applied them to each medium in their work. For example, a student whose project was presented as a single video (Nelson, 2022) was categorized as a video, but another student that created a subdomain with nine chapters of a story incorporating pieces of text, image and video was coded as three separate pieces for medium, reaction, tone, and topic (Hanning, 2022).

Overall, video was the most common medium for Assignment 3 at 12 of the 26 coded pieces or 46.15 % (see Table 3). Several students worked with audio and created images that they combined into one video (Jenny, 2022; Nelson, 2022). Text was half as popular at 6 pieces (23.08 %), there were five images (19.23 %), and three audio submissions (11.54 %). I found it interesting that video rose in use over the semester as Assignment 1, the Daily Create exercises, only had one video that was a GIF, and only four people used it in Assignment 2, but nearly half of the final projects were videos. The text submissions accompanied other mediums with the one exception being Taytu's story (2022). There was one student who mostly completed their assignment using images with a short GIF for social media (Ty, 2022). Two students completed their assignments using solely audio (Emma, 2022; Foster, 2022a).

TABLE 3

Mediums for ds106 Assignments						
	Assignment 1 (74 assignment sections)		Assignment 2 (29 assignment sections)		Assignment 3 (26 assignment sections)	
Image	54	72.97 %	16	55.17 %	5	19.23 %
Text	19	25.68 %	4	13.79 %	6	23.08 %
Audio	0	0 %	5	17.24 %	3	11.54 %
Video	1	1.35 %	4	13.79 %	12	46.15 %

There were only three neutral reactions out of the 40 projects/project pieces that I coded; the rest were favourable. One of the neutral reactions was RJ's project about art, with the other two being aspects of Lindsay and Celia's project about protecting the ocean. The first part of their environmentally driven project showed a lot of emotion, but some of their images that were posters, photo collages or social media posts, lacked the passion witnessed in the video. There was also a short poem that seemed like more of an add-on and was missing the excitement of the video: "protect and respect // You need to do your part now // take a stand" (Celia, 2022). Lindsay and Celia's final project would have received a higher reaction coding without the

disjointed image and text additions. They may have been trying to include all forms of media

they had learned during the class, but it did not add to the project in my opinion; sometimes less

is more. As for the overwhelmingly positive reaction to Assignment 3, this was easily coded as

many students clearly stated how much they enjoyed their final project in their write-up like

Cece who wrote: "I wanted this project to be something that people could actually use in the

future (or now) and so I did my best to make it look visually appealing, interesting and filled

with good, useful information. This is something I am proud to have finished" (2022a). I

specifically chose this student as my example for favourability in Assignment 3 because her

previous reactions to Assignment 2 were one neutral and one favourable, while Assignment 1

reactions were four neutral and one favourable. She completed all of her work on time with

moderate effort, but the reactions were lacking indication of engagement or excitement until

Assignment 3. She enjoyed making her final project – a TikTok account of tips for new

graduates (Cece, 2022b) – so much, that she voiced her desire to continue posting, though there

have not been any new posts since April 12, 2022. The rising engagement and favourability seen

in Cece's work indicated that ds106 was able to build and retain student interest over the

semester. Katie and Emma are also examples of this to lesser degrees, but Emma is harder to

track as she missed Assignment 1 (Emma, 2022; Reif, 2022a).

Tones remained largely "conversational" (14/29 or 48.28 %), but also less "informal" for

the final project than Assignment 1 and 2 at only 6.89 %. Maybe these projects were viewed on a

more serious level than the previous assignment as students used more descriptive and specific

writing techniques in their blog entries. This could indicate a rising level of professionalism

throughout the semester, but I feel that more assignments would need to be analyzed to make any

conclusive findings. "Explanatory" (7/29 or 24.14 %) and "excited" (5/29 or 17.24 %) were the

next highest tones detected, usually expressed in the blog explaining their work and the

processes they used to make their assignment. These tones were followed by less present tones of

"enthusiastic", "formal", "mysterious", "personal", and "professional" at 3/29 or 10.35 %).

These were partially seen in the projects and partially in the blog about the project. The

"mysterious" tone, for example, was applied to a student who told stories that involved things

like suspected murder and conspiracy (Zoe, 2022). "Engaged", "political", "informal", and

"reflective" were each used twice by students (6.90 %). The "political" tones were the most

interesting. A few students chose to chare a story about advocacy or awareness; one project

about LGBTQ+ rights and the other about drug abuse (Emma, 2022; Ty, 2022). Interestingly,

one student also used "apologetic" tones as they felt that their work was not completed to the

best of their ability given time constraints and technology problems (Reif, 2022a). Jenny also had

a "proud" tone where she explained her happiness at trying something new (Jenny, 2022). In all,

the overall impression for Assignment 3 was positive, and I think it showed growth in the class

that the most common codes were "conversational", "explanatory", and "excited" as this

indicates a class that is comfortable with writing their posts, who can explain how they

completed the work and why it is important to them, as well as excitement in their

accomplishments.

   The topics for Assignment 3 were incredibly varied. They included:

- Entertainment (13/29 or 44.83 %)
    - music (3), magic, sci-fi, and pop culture (2 each), books, instrument, movies, and Taylor Swift (1 each)
- Violence (11/29 or 37.93 %)
    - mystery (6), violent and vigilante (2 each), and murder (1)

- Civic Life (9/31 or 29.03 %)

  - Advocacy, political (2 each), awareness, cultural, debate, LGBTQ+, and outsider (1 each)

- Abstract (9/31 or 29.03 %)

  - Conspiracy (2), comparison, creepy, forbidden, help, interpretation, opinion, and tips (1 each)

I found the entertainment topic being the top category for Assignment 2 and 3 rather interesting as it was third for Assignment 1, behind humour and human life. The violence category was zero for Assignment 1 and one for Assignment 2, and surged to 11 for Assignment 3, mostly due to murder mystery and sci-fi assignments by Bird and Zoe (2022; 2022). Their assignments also included multiple mediums, which were all part of the mystery topic. This may have skewed the results in this direction, which is why the third and fourth topic categories are so relevant. Civic life includes several subtopics as noted above, and they span more than just two students' projects, making them a better indicator of the overall work for this ds106 class. There are multiple students who used their final project to say something regarding changes they want to see in the world, whether it was about ocean conservation (Celia, 2022), drug abuse (Ty, 2022), LGBTQ+ rights (Emma, 2022), or being an outsider (Berrios, 2022a). This final project gave students a voice to share their passion and what they believe in, which is a powerful outcome for any student, especially young people.

Some of the final projects that were especially interesting to me were Jenny's music history lesson on music inspired by WWI Flying Aces (Jenny, 2022), Taytu's story about a teenager who gets into a car crash (Star, 2022), Ty's drug abuse awareness campaign (Ty, 2022), and Katie's futuristic clone video with 3D effects (Reif, 2022a). These were all excellent pieces

that stayed in my mind long after I viewed, read, listened to, or watched them. They may not have been the highest graded projects – that remains unknown – but they are ones that showed a great deal of passion, growth and ingenuity in their planning and execution. That being said, the student's work that truly exhibited a voice for sharing something personal and used traditional DS storytelling techniques in Assignment 3 is Aisling's reflection of growing up as a first-generation immigrant (Berrios, 2022a). Aisling explained that she restarted her final project halfway through the week, "because I realized that it didn't mean enough to me" (Berrios, 2022a). Instead of her original idea, she scrounged the internet for images that reminded her of her childhood in hopes of explaining what it was like to grow up in the early 2000s as a Hispanic American. She created a shorter video than others', but one that leaves a powerful impression.

> I grew up in Houston, Texas with Spanish as my first and only language, surrounded by an entire community that only spoke Spanish. Whenever my parents moved us into a white community in order for me to be able to get better education, the challenge of having to learn English hit me like a bus. It was like listening to static all day, every day. I couldn't understand anything throughout all of kindergarten up until the end of elementary school. Even then, my English was still poor. (Berrios, 2022a)

Aisling does an incredible job explaining how difficult her childhood was. The digital story she made is called *Growing Up As A Hispanic Immigrant* (Berrios, 2022b). It is a 40 second video that begins with a woman speaking Spanish overlaid with images that remind Aisling of her childhood such as candy and classrooms, which transition to Bob Ross talking about how everyone can paint, overlaid with images of a college acceptance (see Figure 9 for a screenshot of the video and a YouTube link(Berrios, 2022b)). There is no personal voiceover, but this video is a great example of the power DS can have in someone's life. The narrative paradigm and

connectivism are both present in this story as Aisling added to the collective information by

telling a story that only she can tell: her upbringing and the challenges she faced while learning

English.

FIGURE 9

The other final projects are different examples of the various forms DS can take today, but this story is closest to the StoryCenter's original definition of the concept.

There were a few other personal reflection final projects, but most of

them were varying levels of fiction or retellings of other stories, including historic events. Does

fiction fit into the true nature of DS? I would argue that it can. There are always personal

reflections in someone's writing and pieces of their own experiences that enter the story in some

way. As Fisher states: "human communication in all its forms is imbued with *mythos*-ideas that

cannot be verified or proved in any absolute way" (1985, p. 87). If fiction fits into the narrative

paradigm, then is should certainly be considered a form of DS.

<div align="center">Peer feedback</div>

There was not a lot of peer feedback evident on any of the ds106 student websites, and

since I cannot access the LMS system used by UMW, I have no way of knowing if other forms

of feedback were used. This is interesting to me because a key aspect of digital storytelling is

sharing stories and getting feedback during the creation process. The story circle, for example, is

all about taking turns as a group and sharing your ideas and brainstorming with your peers to

help make your story richer. However, this core ideal of sharing while creating digital stories

from the StoryCenter did not appear to be present in ds106 (at least from the data that I could access). This does not mean it does not exist, but it was not clearly identified during my content analysis of the three student assignments. What I was able to find were comments made on some students' work. As these comments were not on every assignment, nor did every student write a comment for all three assignments, I can assume that it was not mandatory to do so.

Of the feedback I collected, nine students posted comments on their peers' work for Assignment 2, four of whom also posted comments for Assignment 1. No one commented on their classmates' Assignment 3 projects. All nine students made comments that were positive and conversational to their classmates. The primary tone was complimentary (7 students, including both sets of comments for Bird and Wade) with secondary tones being engaged (6 students in Assignment 2), and helpful (Zoe and Wade in Assignment 1). There were also a couple of comments that were encouraging (Jenny and Wade), and these ones stood out the most to me because they hint at community building within ds106. The comment made by Wade in Figure 10, below, was especially encouraging towards Jenny's Assignment 2. Bird was complimentary and positive in their comment (Jenny, 2022). This interaction is interesting as it shows potential community building. Creating a sense of community within a course is important, especially for online classes because students are largely working alone. When there is a group of individuals that feel comfortable with each other, they tend to form bonds where they can work together easier, collaborate, and build durable workplace skills for future workplaces such as team building and interpersonal communication.
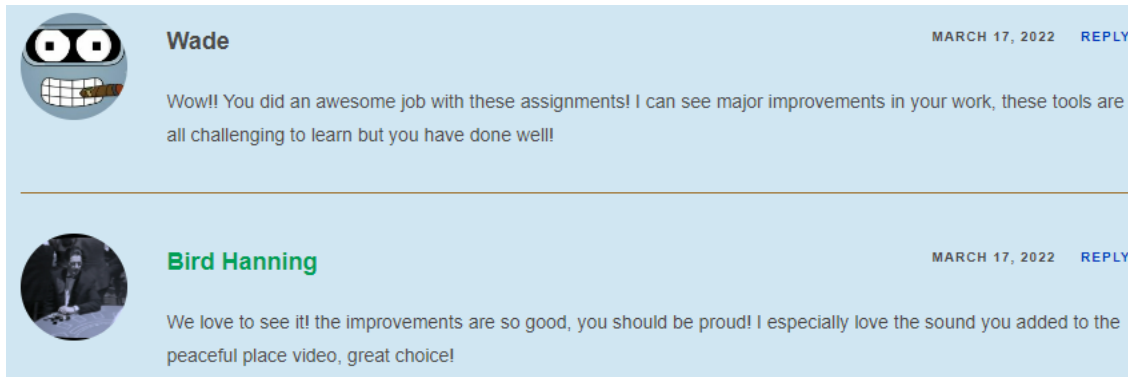
FIGURE 10

While the encouraging posts were interesting, there are other ones to explore further such as helpful comments. There were a couple of them, such as Celia's blog for Assignment 1 that mentioned needing better photo editing programs as she was using Microsoft Word and Snapchat. Her plea for help in finding affordable editing software was mentioned in both the body of her blog and in the concluding sentence. Zoe commented on the blog where to find better options (see Figure 11 (Celia, 2022)), including ones available through the university. Not only does this show that students are reading each other's work, but they are engaging and helping each other, another sign of community.
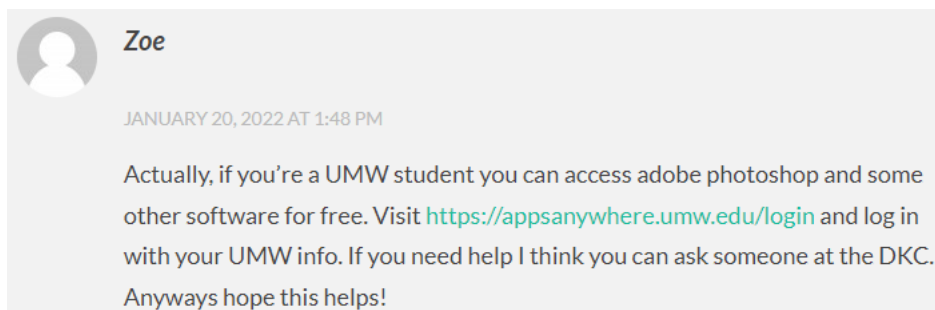
FIGURE 11

A blog post by Amy summed up the positive affects of commenting on your peer's work. She shows her desire to help her peers: "I would like to be more active by commenting on more blog posts in the future, because I think (at least for me) when others comment it helps me get more confident so I'll produce more/better work" (Amy, 2022). Aisling also expressed her enjoyment at connecting

with others using comments on her Assignment 1 blog: "I definitely felt a lot more connected to my peers after that, rather than just seeing them as other "posts" on the same website, I was able to really see them as other peers with intricate thoughts and ideas that they are putting into their website, just like me" (Berrios, 2022a). The desire to help and engage with others are traits that start the process of community building. Having students like Amy and Aisling in online classes makes things easier on the instructor as well since they are willing participants that want to communicate with their peers.

Unfortunately, there was not many comments I could use for a content analysis to determine if the Spring 2022 section of ds106 was able to successfully create an online community, but there are indications that some sort of bond existed between the students as all the comments were positive and written in a conversational tone. A further analysis of peer comments made during the entire four months of the course, rather than just on the three assignments I chose to focus on, would create a larger data pool that could lead to more significant conclusions.

Student learning and growth

The content analysis demonstrates there is a notable difference in student work as the semester progressed which was not only interesting to observe, but also rather empowering as an instructor to see. The students went from being unsure and taking the Daily Create exercises rather literally to personalizing their remix assignments to telling a story about something they cared about in different and exciting new ways. Each student had their own level and speed of progression, but they all appear to have learned something from ds106.

While looking through the student websites, there were some students who were clearly already strong with using technology, but some were very unsure, such as Jenny, who was

returning to school after having a military career and running a bed and breakfast for several

years (Jenny, 2022). There were no indications of any other students who were mature, but there

were still a few that mentioned their lack of skill with technology or that they were unfamiliar

with creative expression or creating art and were excited to try new things. As an undergraduate

student, this class would have been appealing to me as an elective for the same reason: an

opportunity to be creative.

I also noticed a lot of blog titles regarding the amount of work and time they had to

dedicate to the class, which makes me think that if I were to teach a similar course at the college

level, I would redesign things a bit, so students were not so stressed. In the end, most students

met the deadlines for the assignments I tracked, so perhaps the workload was not too large for

university students. Some of the titles and comments I noticed could just be superficial

complaints and nothing of consequence.

A final note on technology

While it is not a primary focus of my research, I would like to note that there were a

variety of technologies used to complete assignments. For example, in Assignment 1, students

were just starting their DS journey, and some were not confident with editing software yet. They

began the course using Microsoft PowerPoint, Canva, Photoshop, and PicsArt while

experimenting with websites like AI Art Generator https://hotpot.ai/art-generator. Throughout

the semester, students' comfort with technology grew and they used additional programs like

iMovie, Audacity, and Minecraft for Assignment 2, along with website such as Soundcloud and

online GIF makers. Assignment 3 was at the end of the semester once they had practices for a

few months on several tools, so the choices for this assignment were vast. Most students chose

multiple mediums to complete their final assignment, or they combined them, such as editing

audio then importing it into video editing software. A few of the additional choices for

Assignment 3 include OpenShot Video Editor, Final Cut Pro, and 3D Room Designer. My

reasoning for tracking technology was to give myself and other instructors a potential list of tools

that we can try ourselves to see what our students might prefer to use. For example, students

without internet access would need software that does not rely on connectivity, or students

familiar with technology may be able to handle more detailed and complex editing available on

media industry grade applications.

Relating back to my research questions

Now that the deductive content analysis is complete, with some inductive content

analysis for tones and topics, I will revisit my primary and secondary research questions.

My primary RQ guiding my capstone was: *How do students respond to digital*

storytelling assignments in a postsecondary online course setting? Given that my content

analysis included coding for perceptions of student reactions for each assignment and its

subsections, I believe this question was addressed. I learned that the levels of favourable

reactions to student assignments grew over the term of the semester. Assignment 1 took place in

week two when students were still getting settled into the course, so it was to be expected that of

the 74 assignment sections, there would not be 100 % favourability. However, as demonstrated

in Table 4, 60.81 % favourability was a good start to the semester with 35.14 % neutral and 4.05

% unfavourable reactions. Assignment 2 was just past the halfway mark for the course and saw

an increase to 82.76 % favourability out of the 29 assignment sections with 17.24 % neutral and

0 % unfavourable. The numbers climbed even higher for Assignment 3, which was during the

second last week of ds106, with 87.50 % favourability for the 24 assignment sections. The

remaining 12.50 % assignment section reactions were neutral reactions, and none were

unfavourable. I believe this steadily climbing rate of favourability for assignments is a significant

indication that given exposure, students will increasingly enjoy DS related assignments in an

online postsecondary course setting.

TABLE 4

Reactions for ds106 Assignments						
	Assignment 1 (74 assignment sections)		Assignment 2 (29 assignment sections)		Assignment 3 (24 assignment sections)	
Favourable	45	60.81 %	24	82.76 %	21	87.50 %
Neutral	26	35.14 %	5	17.24 %	3	12.50 %
Unfavourable	3	4.05 %	0	0 %	0	0%

The first of my secondary RQs was: *What common topics are present in assignment*

outlines that received positive feedback from students? If we look at the assignment with the

highest positive feedback, Assignment 3 (the final project) was the most well received by the

students. For this assignment, Professor Bond had students think about their final project several

weeks before the due date and write a blog about their ideas. He also built up the assignment by

allowing them to use whatever medium they chose. In his *Final Project: We'll have a fantastic*

time blog post, Bond wrote that students should use their final project to communicate something

important to them that it is important for the world to hear. He also wanted them to put in the

appropriate amount of work so they would be proud of it and want to show off their work to

everyone they meet. He added that the project should showcase what they had learned through

working with various media over the course of the semester (Bond, 2022b).

Given both the open instruction and creative tools students were allowed to use, these

instructions could have been overwhelming for students; yet most of the class embraced the

challenge. This could be due to the pedagogical technique of introducing the assignment early,

maybe students had a lot to say, or they simply wanted to show off what they had learned.

Whatever each student's motivations were, I believe they all tackled the challenge with enthusiasm and produced engaging digital stories that were told in a variety of styles. In particular, I found Wade's (Nelson, 2022) final project video exploring making his own music and Aisling's (Berrios, 2022a, 2022b) video about her childhood to be powerful stories that showed a lot of vulnerability and personal growth. These two students' work were the best demonstrations of DS assignments in my opinion.

Assignment 2 was also well received and deserves mention as it was an interesting opportunity for students to revisit two pieces of their past work and improve or remix them into something new. The pedagogy of having students improve their own work and resubmit it can be useful as a teaching tool because students can utilize feedback gained from their instructor, and others, to better their work and further their learning. They can correct mistakes, spend additional time on their assignment, or look at it in a new and creative way. Therefore, the logic behind Assignment 2 to better one's work is one that can be utilized in not only teaching DS, but other classroom settings as well.

My other secondary RQ was *How do students engage with each other in the online course?* The student feedback section in this chapter relates to this question directly. Unfortunately, due to a lack of data with only nine students writing comments – four for Assignment 1 and 18 for Assignment 2 – there are few conclusions to be drawn for how ds106 students engaged with each other in the online course. There would need to be a more extensive content analysis of comments across the course to draw any real insights. However, I did observe that students spoke to each other with respect, in a conversational tone, and were supportive of one another through advice and encouragement.

Chapter 5: Conclusions

In the course of this Capstone project, I have improved my understanding of useful practices for DS facilitation, and I hope other instructors will find some key takeaways from my research helpful in their pursuit to better their practices. A few of the lessons I learned while completing this research are that digital storytelling has an open definition and is not as clear cut as the StoryCenter's definition of a personal story told in video format with video, images, audio, and voiceover elements. Students in ds106 use image, text, audio and video or a multimedia creation to tell their stories, some of which are just as personal and self-reflective as video projects from StoryCenter workshops. In fact, while coding mediums, I discovered that of the 74 assignment sections for Assignment 1, only one was a video GIF, accounting for just 1.35 %. Video submissions accounted for 13.79 % of submission sections in Assignment 2. Video was the top medium choice for Assignment 3 at 46.15 %, but that is still less than half. While video is the focus for the StoryCenter, it is clearly not the primary medium choice for all digital storytellers.

This reflects developments in the field and practice of DS, which has taken on its own meaning apart from what Dana Atchley, Joe Lambert, and Nina Mullen began teaching in 1994. Now, technology has evolved, and people have new and accessible tools that allow them to play with all forms of media without the complication of physically cutting video. Now, it is a click with a mouse using free online software or tapping our finger on our smartphone screen to cut and move video clips around a timeline, and that is just how video has been simplified for editing. There are so many other tools and a vast array of possibilities for people to create their own narratives, that putting a set definition of just video on DS is limiting the creation of many other stories that would add to digital knowledge and connectivism. Connecting these

observations to the narrative paradigm, I learned that sharing our life experiences, thoughts, and

opinions through story is a natural human action and these stories are not limited to *logos*. Our

stories can be a mixture of *mythos* and *logos* as I observed in ds106, especially in students' final

projects. There is an element of personal reflection somewhere in fiction, so DS should not be

restricted to only telling personal stories. Sometimes telling a story through fiction is just as

impactful and freeing for the storyteller as being factual. As an instructor, I plan to encourage my

classes to use fiction if they choose in their stories.

The theoretical lens of connectivism also connects to my findings and provides several

lessons that I plan to add to my teaching. A focus on student feedback arose in several aspects of

ds106, such as providing students opportunities to comment on each other's work. I thought that

the support students gave each other helped build a feeling of community, and this is an

important part of any schooling. Classes that create connections between students tend to

produce better collaboration and teamwork, which are crucial skills for students to learn. I also

plan to allow a resubmission of stories like Assignment 2 as I feel that revisiting one's work after

receiving feedback is a powerful learning tool often overlooked in today's education system.

This is usually due to time constraints in making sure the curriculum is fully delivered or because

instructors may not have the time to mark an assignment twice; however, careful course planning

could alleviate these barriers. Planning DS assignments before the semester begins would allow

me the flexibility of a second submission, and I think this would benefit students and improve

their learning experience. The better work they produce, the more they learn and contribute to

society's "database" of knowledge as connectivism refers to it (Siemens, 2017)[6], so giving

students the opportunity to reimagine or perfect something is important.

Thus far in my career, I have not made use of the story circle technique, but I plan to do

so in the future and use it multiple times during the storytelling creation process so that students

can share a draft of their story at a more finished stage to get feedback on it. Shared knowledge is

an important part of connectivism, as "new information is continually being acquired [and] the

ability to draw distinction between important and unimportant information is vital" (Siemens,

2017). The acts of both giving and receiving feedback play into this educational theory as

students will be sharing their knowledge when giving feedback. Students also choose what

feedback is important or relevant to them. Feedback is valuable from not only instructors, but

peers as well. Therefore, I plan to incorporate it into all my classes in some form. Usually,

students are given a mark for how relevant and helpful their feedback is to their peers. I teach

them to include both positive and constructive feedback that is descriptive, not one-word

comments like "good" or simply writing "no mistakes". Quality feedback is important in the

classroom and in the workplace, so any chance to practice this skill is beneficial to students.

This capstone research also provided assignment ideas that I plan to explore through the

ds106 Assignment Bank and the Daily Create website. These websites are rich resources for

interactive and fun assignments or activities that could expose students to new media. The

Assignment Bank has separate pages for assignment categories, including visual, audio, video,

design, web, mashup, writing, fanfiction, animated GIFs, 3D Printed, and code (ds106, 2012).

The assorted media exercises or ones open to interpretation could help engage students from a

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[6] Towards the end of my research, I discovered that George Siemens and Stephen Downes created a MOOC at the University of Manitoba dedicated to connectivism called "Connectivism and Connective Knowledge 2011, which I plan to investigate: https://cck11.mooc.ca/.

variety of faculties and would be relatively easily to update each semester as needed.

Additionally, there are new assignments added regularly to the bank, so if one assignment is no

longer exciting, finding a replacement is easy.

Another aspect of the pedagogy I observed and appreciated in this case study was the

open instructions that Professor Bond used in the final project. This type of assignment appeals

to me, but I think I would need to add more structure for it to be successful in the courses I teach

in communications and marketing. I once used DS assignment in a marketing course in 2021 that

was too open, and it overwhelmed students (see the video from Figure 1), leading me to create a

script template for future classes (Appendix C). Smaller assignments such as the project idea

blogs that Prof. Bond had the students write could help them brainstorm and plan out their stories

early. A smaller build up assignment such as a shorter DS using a template, a Daily Create or a

small Assignment Bank exercise could expose students to the idea of story creation before a

larger personal reflection project. This might be a good starting point for courses in my subject

areas. I do not have the luxury of dedicating an entire course to DS, but a few assignments could

fit into my course schedule.

Overall, digital storytelling is a useful tool for instruction and a way for students to

explore their own creativity while engaging in course content. The focus of ds106, at stated on

the website is "part storytelling workshop, part technology training, and, most importantly, part

critical interrogation of the digital landscape that is ever increasingly mediating how we

communicate with one another" (ds106, 2010b). This makes the course a great resource to

explore how to use DS in classrooms and pedagogy that can be applied to other subjects.

Reference List

Alexander, B. (2017). *The New Digital Storytelling: Creating Narratives with New Media--Revised and Updated Edition, 2nd Edition*. ABC-CLIO.

Amy. (2022, January). *Amy's Online Thoughts*. Amy's Online Thoughts. http://amymcmanama.com

Barber, J. F. (2016). Digital storytelling: New opportunities for humanities scholarship and pedagogy. *Cogent Arts & Humanities*, *3*(1), 1181037.

Barrett, H. C. (2005). *Researching and Evaluating Digital Storytelling as a Deep Learning Tool*. Kean University Digital Storytelling Conference. http://electronicportfolios.com/portfolios/SITEStorytelling2006.pdf

Berrios, A. (2022a, January). *Bibi, Porque No Eres Niña Normal?* Bibi, Porque No Eres Niña Normal? http://aislingberri.com/

Berrios, A. [@aisling3535]. (2022b, April 15). *Growing Up As A Hispanic Immigrant* [Video]. YouTube. https://www.youtube.com/watch?v=sBsmxmdX92I

Bond, P. (2022a). *Paul Bond's Spring 2022 ds106*. https://ds106.us/tag/spring22bond/

Bond, P. (2022b). *Weekly Assignments*. This Week in DS106: We Forge Our Tradition in the Spirit of Our Ancestors. https://thisweekin.ds106.us/category/weekly-assignments/

Bond, P. (2022c, January). *spring22bond*. Ds106. https://ds106.us/tag/spring22bond/

Caine, E. (2022, January). *Artistic Thoughts*. Artistic Thoughts. https://web.archive.org/web/20220526212312/https://ds106.erincaine.com/week-2/artistic-thoughts/

Castillo-Cuesta, L. M., Quinonez-Beltran, A., Cabrera-Solano, P., Ochoa-Cueva, C., &

Gonzalez-Torres, P. (2021). Using digital storytelling as a strategy for enhancing EFL

writing skills. *International Journal of Emerging Technologies in Learning (IJET)*,

16(13), 142.

Cece. (2022a). *Cece's Thoughts – cpsc 106 blog*. Cece's Thoughts – Cpsc 106 Blog.

http://cpsc106.ceciliachianese.com/

Cece. (2022b, March 30). *lifeaftercollege2*. TikTok.

https://www.tiktok.com/@lifeaftercollege2?lang=en

Celia. (2022). *CELIA'S LIFE DIGITALLY*. CELIA'S LIFE DIGITALLY.

http://celiashively.com/

Cooper, L. (2022a, January). *In the words of LC*. In the Words of LC.

https://web.archive.org/web/20220127023849/http://lcooper4.com/

Cooper, L. (2022b, January). *Lindsay Cooper @cooper_llindsay*. Twitter.

https://twitter.com/cooper_llindsay/with_replies

D'Albis, B. (2022a, January). *Blog*. Inside Brianna's Mind.

https://ds106.briannadalbis.com/blog/

D'Albis, B. [BriannaDAlbis]. (2022b, January 17). *Blockchain@ds106dc #tdc3658

pic.twitter.com/fxau0u3hzd*. Twitter.

https://twitter.com/BriannaDAlbis/status/1483220367057555459?ref_src=twsrc%5Etfw

%7Ctwcamp%5Etweetembed%7Ctwterm%5E1483220367057555459%7Ctwgr%5E9bcc

7b94b9423c67c67e4787115004fbf4d1ecb8%7Ctwcon%5Es1_&ref_url=https%3A%2F%

2Fds106.briannadalbis.com%2F2022%2F01%2F22%2Fweek-2-summary%2F

ds106. (2010b). *About ds106*. Ds106. https://ds106.us/about/

ds106. (2010a). *ds106*. Quick Start Guide to Ds106. https://ds106.us/handbook/success-the-

    ds106-way/quick-start/

ds106. (2010b). *Your ds106 Handbook*. Ds106. https://ds106.us/handbook/

ds106. (2012). *ds106 Assignment Bank*. Ds106 Assignment Bank. https://assignments.ds106.us/

ds106 Daily Create [ds106dc]. (2022a, January 18). *For today's TDC... #tdc3659 #ds106 Big*

    Book Needs a Title? https://t.co/IazNMy8BXZ. Twitter.

    https://twitter.com/ds106dc/status/1483385437708111872?ref_src=twsrc%5Etfw%7Ctwc

    amp%5Etweetembed%7Ctwterm%5E1483575945709899776%7Ctwgr%5E9bcc7b94b94

    23c67c67e4787115004fbf4d1ecb8%7Ctwcon%5Es2_&ref_url=https%3A%2F%2Fds106

    .briannadalbis.com%2F2022%2F01%2F22%2Fweek-2-summary%2F

ds106 Daily Create [ds106dc]. (2022b, January 19). *For today's TDC... #tdc3660 #ds106*

    Illustrate The Story of a @MagicRealismBot Tweet https://t.co/dsI3ms402b

    pic.twitter.com/z3b335gewi. Twitter.

    https://twitter.com/ds106dc/status/1483749842723618816?ref_src=twsrc%5Etfw%7Ctwc

    amp%5Etweetembed%7Ctwterm%5E1483749842723618816%7Ctwgr%5Ea11d5f89305

    df8efa06a3da76899a234c19bb2c2%7Ctwcon%5Es1_&ref_url=https%3A%2F%2Ftillysi

    sland.com%2Fds106%2Falways-learning-always-growing-always-creating%2F

EdTechTeacher. (2014, April 1). *Digital Storytelling: Tips, Tools, and Examples for Teachers*.

    EdTechTeacher; EdTechTeacher Inc. https://edtechteacher.org/tools/multimedia/digital-

    storytelling/

Emma. (2022). *Exploring Digital Methodologies Everyday!* Emma's Digital Exploration.

    http://emdesignlife.com/

Fisanick, C., & Stakeley, R. O. (2020). *Digital Storytelling as Public History : A Guidebook for Educators* (1st Edition). Routledge.

Fisher, W. R. (1984). Narration as a human communication paradigm: The case of public moral argument. *Communication Monographs*, *51*(1), 1–22.

Fisher, W. R. (1985). The Narrative Paradigm: In the Beginning. *The Journal of Communication*, *35*(4), 74–89.

Foster, O. (2022a). *Olivia Foster – a place for my coursework and projects*. A Place for My Coursework and Projects. https://oliviafoster2.com/

Foster, O. [OliviaF98845588]. (2022b, January 19). *@ds106dc #tdc3660 My response for Today's #ds106 Daily Create is "Wedding rings and cemeteries. That is all." pic.twitter.com/tykilobbaf*. Twitter. https://twitter.com/OliviaF98845588/status/1483848606822117381?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1483848606822117381%7Ctwgr%5E5d79c67748e3bda4511aa9f785a420955ba70421%7Ctwcon%5Es1_&ref_url=https%3A%2F%2Foliviafoster2.com%2Fds106%2Fweek-2-daily-creates%2F

Gillis, R., & Murray, S. (2019). *Historic Nova Scotia: Bridging the Gap with Digital Storytelling*. https://hcommons.org/deposits/item/hc:26919/

Goldie, J. G. S. (2016). Connectivism: A knowledge learning theory for the digital age? *Medical Teacher*, *38*(10), 1064–1069.

Groom, J. (2010a). *A History of ds106*. Ds106. https://ds106.us/history/

Hanning, B. (2022). *String of Thoughts*. A Bird's – String of Thoughts. http://ds106blog.recombinance.com/

Hartley, J., & McWilliam, K. (2009). *Story Circle: Digital Storytelling Around the World*. John

      Wiley & Sons.

Henrickson, L., Jephcote, W., & Comissiong, R. (2022). Soft skills, stories, and self-reflection:

      Applied digital storytelling for self-branding. *Convergence*, *28*(6), 1577–1597.

Humphrey, S., Ngo, T., & Wang, T. (2021). Digital Storytelling and Teachers' Disciplinary

      Multiliteracies. In L. Haas & J. Tussey (Eds.), *Connecting Disciplinary Literacy and*

      Digital Storytelling in K-12 Education (pp. 59–84). Information Science Reference.

Jenny. (2022). *My Artistic Blog Lab for DS 106 at U of Mary Wash*. My Artistic Blog Lab for

      DS 106 at U of Mary Wash. https://jburdflies.com/

Kim, I., & Kuljis, J. (2010). *Applying Content Analysis to Web-based Content*. *18*(4).

      https://doi.org/10.2498/cit.1001924

Lambert, J. (2009). Where it all started: The center for digital storytelling in California. In J.

      Hartley & K. McWilliam (Eds.), *Story Circle: Digital Storytelling Around the World* (pp.

      79–90). Wiley Online Library.

Lambert, J. (2013). *Digital Storytelling: Capturing Lives, Creating Community*. Taylor and

      Francis.

Lambert, J., & Hessler, B. (2020). *Digital Storytelling: Story Work for Urgent Times* (Sixth).

      StoryCenter.

Landsman, J., & Lyon, G. E. (2017, May 10). *Resources: Permission slip*. I Am From Project.

      https://iamfromproject.com/resources/

Levine, A. (2012, December). *ds106 Daily Create*. Twitter. https://twitter.com/ds106dc

Lundby, K. (2008). Editorial: mediatized stories: mediation perspectives on digital storytelling.

      New Media & Society, *10*(3), 363–371.

Lyon, G. E. (2010). *Where I'm From*. George Ella Lyon, Writer and Teacher.

    http://www.georgeellalyon.com/where.html

McDonough, J., & McDonough, S. (1997). *Research Methods for English Language Teachers*.

    Arnold.

McMahon, R. (2020). Co-developing digital inclusion policy and programming with Indigenous

    partners: interventions from Canada. *Internet Policy Review*, *9*(2).

    https://doi.org/10.14763/2020.2.1478

McNair, M. A., & Myers, A. (2021, March 3). *StoryCenter: Online Public Workshops*. Digital

    Storytelling for Educators, Zoom. https://www.storycenter.org

Morra, S. (2013, June 5). *8 Steps To Great Digital Storytelling*. Transform Learning.

    https://samanthamorra.com/2013/06/05/edudemic-article-on-digital-storytelling/

Mueller, M. E., & Rajaram, D. (2022). *Social Media Storytelling*. Routledge.

Nelson, W. (2022, January). *Blog*. Wade's World – a Wild Wade Appeared!

    https://blog.wadenelson.net/

Neuendorf, K. A. (2002). *The Content Analysis Guidebook*. SAGE Publications, Incorporated.

Nova, S. (2014, November). *Shina Nova (@shinanova)* [Instagram photo]. Instagram.

    https://www.instagram.com/shinanova/

Ochs, E., & Capps, L. (1996). Narrating the self. *Annual Review of Anthropology*, *25*(1), 19–43.

Oliver, P. (2012). *Succeeding with Your Literature Review: A Handbook for Students*. McGraw-

    Hill Education (UK).

Orphanidou, M., & Kadianaki, I. (2020). *A Guide for Developing and Applying a Coding Scheme*

    in Qualitative Media Analysis: Representations of Depression in the Press. SAGE

    Publications Ltd.

Owens, T., & Levine, A. (2012). *The DS106 Daily Create*. The DS106 Daily Create.

> https://daily.ds106.us/

Reed, L. (2015, June). *Lexi Reed (@fatgirlfedup)* [Instagram photo]. Instagram.

> https://www.instagram.com/fatgirlfedup/

Reif, K. (2022a). *About Katie*. Katie Reif. https://katiereif.com/

Reif, K. [KatieReif6]. (2022b, January 17). *@ds106dc #tdc3658TBH I don't understand it either,*

> *so here's my best guess. pic.twitter.com/4w96rwlxew*. Twitter.

> https://twitter.com/KatieReif6/status/1483200408856240130

RJ. (2022a). *My blog*. Just Another WordPress Site. https://iamveryconfused.com/

RJ. (2022b, April 18). Final Meaning. *My Blog Just Another WordPress Site*.

> https://iamveryconfused.com/uncategorized/final-meaning/

Saldana, J. (2015). An Introduction to Codes and Coding. In *The Coding Manual for Qualitative*

> *Researchers* (3rd ed.). Sage Publications.

Siemens, G. (2017). Connectivism. *Foundations of Learning and Instructional Design*

> *Technology*. https://pressbooks.pub/lidtfoundations/chapter/connectivism-a-learning-

> theory-for-the-digital-age/

Stake, R. E. (1995). *The Art of Case Study Research*. SAGE.

Star, T. (2022). *Fearless*. Taytu Star. http://taytustar.com/

StoryCenter. (n.d.-a). *Our Story*. StoryCenter. Retrieved October 29, 2022, from

> https://www.storycenter.org/history

StoryCenter. (n.d.-b). *Silence Speaks*. StoryCenter. Retrieved March 2, 2023, from

> https://www.storycenter.org/silence-speaks

StoryCenter [@StoryCenter]. (2023, February 10). *My Body Belongs to Me - by Zahra Qaiyumi*.

Youtube. https://www.youtube.com/watch?v=uzr7IwpYUv8

Tajeri, M., Syal, P., & Marzban, S. (2017). Enhancing Vocabulary and Writing Skills through

Digital Storytelling in Higher Education. *British Journal of Educational Technology:

Journal of the Council for Educational Technology*, *14*(3), 40–48.

Ty. (2022). *Tilly's Island – Keeping it tropical and topical 24/7*. Tilly's Island – Keeping It

Tropical and Topical 24/7. https://tillysisland.com/

University of Houston College of Education. (2004). *Educational Uses of Digital Storytelling*.

Educational Uses of Digital Storytelling. http://digitalstorytelling.coe.uh.edu/

Yin, R. K. (2009). *Case Study Research: Design and Methods*. SAGE.

Zainal, Z. (2007). Case Study As a Research Method. *Jurnal Kemanusiaan*, *5*(1).

https://jurnalkemanusiaan.utm.my/index.php/kemanusiaan/article/view/165

Zoe. (2022, April). *ASU – The Anti-Shadow Unit*. ASU – The Anti-Shadow Unit.

http://finalproject.worldempress.net/

Appendices

Appendix A

ONE WAY TO LEAD A GROUP IN WRITING "WHERE I'M FROM" POEMS

George Ella Lyon

First, remind folks that we come from experiences, not just locations. We are from our family and its history, from the food we eat, the songs we sing, the houses we live in.

Read "Where I'm From" aloud. Point out that its form is just a list; then invite everybody to come up with different categories of memories in addition to those mentioned above: family sayings, nicknames, hiding places, pets, plants, foods, people's names, place names, religious practices, etc. List them where everyone can see.

Ask everybody to make a list of five experiences they're from, then choose the one that has the most energy for them.

Invite them to take a second look at what they've chosen to see if they can make it more specific, e.g. *I'm from flowers* might be *I'm from daffodils that grew in my best friend's yard*. Have them copy their line on a 3 X 5 post-it to give to you.*

Read these aloud and put them on the board–maybe just as post-its. Then, as a group, look for a first line and a last line. Emphasize that there's no right way to do this, no *one* poem to be written. Just choose what sounds like a beginning and what has an ending feel to it. Then the group plays with how to arrange the others.

Finally, read their poem aloud and set them to writing their own.

NOTES:

I suggest you do this exercise yourself before leading a group. That will open up possibilities and perhaps show you ways you want to adapt the process.

You can do this! Everybody makes lists. The key is not to worry about what you put down, what order it comes in, of whether it sounds poem-like to you. Just get words on the page. Or screen. You might do this in short bursts over several days. (That's what I did.) Then get your pages together, underline the lines you like best, and fiddle with the order. Read it out loud to see how it sounds. Check for places you could zoom in; for example. if you wrote "I'm from the first car I drove" you can bring us in closer by adding

"–a bean-brown '75 Pinto." Above all, have fun. It's your life. It's your writing. You can't go wrong.

*A variant is not to take up the post-its but to choose a random order—by rows, tables, or around the circle—and have them share their lines. You may let it end however it ends or you may furnish an ending line that you wrote as they were working. It's powerful to put your voice where your words are and wonderful to hear the sequence of those voices.

(Landsman & Lyon, 2017)

Appendix B

These hands have held_____ (something delicate),

and lifted_____ (something heavy)

and_____ (something precious).

They have reached down into the earth at_____ (place)

where I felt _____ (natural item/sensory detail),

and the _____ (natural item/sensory detail)

They have worked side by side of _____ (name of

elder mentor or family member), and _____ (another

person)

as _____ (family or personal work tradition)

and _____ (another tradition).

These are the hands that hold _____

_____ (a value or lesson) and

_____ (a value or lesson).

These hands taught me _____

_____ (something you were told as a child about

resilience or endurance).

These hands hold stories. These hands are mine

(Lambert & Hessler, 2020, p. 115)

Appendix C

Digital Storytelling "Mad-Libs" Script

You can use the script below as it is and fill in the blanks, or rewrite sections of it to fit what you want to say, or you can ignore it and write your story in your own words. Any option is fine. To stay in the time range of 90 seconds to two minutes, keep your script between 200 and 500 words. This length will also be dictated by and dramatic pauses you incorporate.

Small businesses are _____ (adjective) to _____ (noun) because
_____

_____
(reasoning).

My favourite small business, _____ (proper name/type), keeps me coming back because _____ (something they do well).

I first heard about this business from _____ (marketing source). I think this style of marketing worked on me because

_____

_____ (explain reasoning).

If small businesses succeed
_____

_____ (explain result).

Unfortunately, sometimes small businesses fail. When that happens_____

_____
(explain result).

As consumers, we can _____ (action ex. shop local) to _____ (adjective ex. help, support, encourage, etc.). This is important because

_____

_____

_____

_(explain result).

Small businesses make a difference in my life, and I plan to continue supporting them by _____

_____ (describe your actions).

Appendix D

Screenshot of data entry sheet for student assignments showcasing a few student blogs coded.

		1-Bird (Rufus)	2-Zoe	3-Amy	4-Aisling
		ds106blog.recombinanc	italstorytelling.worlder	wacz file	http://aislingberri.com/
Assignment 1	21-Jan-22		ng.worldempress.net/un		gberri.com/uncategoriz
Was the assignment completed?	C, P or I	Complete	Complete	Complete	Complete
Did the student meet the deadline?	Y/N	Yes	Yes	Yes	Yes
How much effort was put in?	H, M or L	Low	Moderate	Moderate	High
I: Medium		Image	Image	Image	Text
I: Technology		N/A	Canva	PicsArt	Twitter
I: Tone		literal	playful, opportunistic	apprehensive	direct
I: Topic		retro	fun, animals, gaming	jewelry	family, parents, relationships
I: Reaction	F, N or U	Neutral	Favourable	Unfavourable	Favourable
II: Medium		Image	Image	Image	Text
II: Technology		N/A	MOLDIV app	Canva	Twitter
II: Tone		literal, sarcastic	conversational	fun, creative	humour, sarcastic
II: Topic		mocking, satire	school	adulting	gag, humour, technology
II: Reaction	F, N or U	Unfavourable	Neutral	Favourable	Favourable
III: Medium		Image	Text	Image	Image
III: Technology		N/A	Twitter	PicsArt	N/A
III: Tone		literal, formal	humour, conversational	silly	sarcastic, humour, fun
III: Topic		history	history, humour	immature, political	cartoon, art
III: Reaction	F, N or U	Neutral	Favourable	Neutral	Favourable
IV: Medium		Image	Image	Image	Image
IV: Technology		N/A	ttps://t.co/TBQ76QBJR	PicsArt	N/A
IV: Tone		engaged, enthusiastic	critique, informal	reflective	humour, sarcastic
IV: Topic		abstract	nature	online shopping, money, consumerism, self reflection	travel
IV: Reaction	F, N or U	Favourable	Favourable	Favourable	Favourable
V: Medium		Text	Image	Image	Image
V: Technology		N/A	Photoshop, Pexels	PicsArt	N/A
V: Tone		humour, informal, sarcastic	humour, conversational, sarcastic	fun, creative	reflective
V: Topic		pop culture	animals, humour	homesick, home cooking	personal, history
V: Reaction	F, N or U	Favourable	Favourable	Favourable	Favourable
Content for Student Feedback			Zoe JANUARY 20, 2022 AT 1:48 PM Actually, if you're a UMW student you can access adobe photoshop and some		
Student Feedback			advice, informative, helpful		
Assignment 2	18-Mar-22		unds-of-2-days/ https:/		i.com/assignment-post
Was the assignment completed?	C, P or I	Complete	Complete	Complete	Complete
Did the student meet the deadline?	Y/N	Yes	Yes	Yes	No
How much effort was put in?	H, M or L	High	High	Moderate	Moderate
VI: Medium		Text	Audio	Video	Image
VI: Technology		N/A	ble, Audacity, Soundfist	Gif maker, Photoshop	Photoshop
VI: Tone		sad, poverty, loneliness, outsider, violent	reflective, explanatory, conversational	reflective	conversational, explanatory, honesty, reflective
VI: Topic		outsider, art, killing, protection	creepy	paintings, night	animals
VI: Reaction	F, N or U	Favourable	Favourable	Favourable	Favourable

Appendix E

Screenshot of data reporting Google Sheet with data flipped to easily see assignment details for all students.

| Student | URL | Assignment 1 | Jan 21, 2022 | | | | |
		Completion (C, P or I)	Met Deadline (Y/N)	Effort (H, M or L)	I: Medium (A, V, T, or I)	I: Technology	I: Tone
Sample	Sample						
1-Bird	http://ds106blog.recombinance.com/	Complete	Yes	Low	Image	N/A	literal
2-Zoe	https://digitalstorytelling.worldempress.net	Complete	Yes	Moderate	Image	Canva	playful, opportunistic
3-Amy	https://web.archive.org/web/20220626075045/https://amymcmanama.com/	Complete	Yes	Moderate	Image	PicsArt	apprehensive
4-Aisling	http://aislingberri.com/	Complete	Yes	High	Text	Twitter	direct
5-Erin	https://web.archive.org/	Inaccessible					
6-Cece	http://cpsc106.ceciliachianese.com/	Complete	Yes	Moderate	Image	N/A	humour
7-Celia	http://celiashively.com/	Complete	Yes	Moderate	Image	N/A	informal
11-Jenny	https://jburdflies.com/	Complete	Yes	Moderate	Text	Tweet	fun, conversational, informal
13-Emma	http://emdesignlife.com/	Incomplete					
16-LCooper	https://web.archive.org/web/20220127023849/http://lcooper4.com/	Complete	Yes	High	Image	N/A	fun
17-Brianna	https://ds106.briannadalbis.com/	Complete	No	Moderate	Video	N/A	conversational, curious
19-Katie	https://katiereif.com/	Complete	Yes	Moderate	Text	N/A	fun
22-RJ	https://iamveryconfused.com/page/7/	Partial	Yes	Moderate	Text	Twitter	first-person, reflective, literal
24-Olivia	https://oliviafoster2.com/	Complete	Yes	Moderate	Image	N/A	direct, conversational
25-Taytu	http://taytustar.com/	Complete	Yes	Moderate	Text	N/A	conversational, reflective
26-Tilly	https://tillysisland.com/	Complete	Yes	Moderate	Image	N/A	conversational, informal
27-Wade	https://blog.wadenelson.net/author/admin/	Partial	Yes	Moderate	Image	N/A	philosophical

Appendix F

Tone codes for Assignment 1, 2, and 3. The bright green highlights indicate the most popular tones, the lighter green are significant, and yellow are interesting or borderline significant in frequency.

Tone	Total						Total			Total			
accomplished	0	0	0	0	0	0	2	1	1	1	1	0	0
angry	0	0	0	0	0	0	1	0	1	0	0	0	0
annoyed	2	0	0	0	1	1	0	0	0	0	0	0	0
anxious	0	0	0	0	0	0	0	0	0	1	1	0	0
apologetic	0	0	0	0	0	0	0	0	0	1	1	0	0
appreciative	0	0	0	0	0	0	1	1	0	0	0	0	0
apprehensive	2	1	0	1	0	0	0	0	0	0	0	0	0
caring	0	0	0	0	0	0	0	0	0	1	0	1	0
confused	1	0	1	0	0	0	0	0	0	0	0	0	0
contemplative	0	0	0	0	0	0	0	0	0	1	1	0	0
conversational	15	5	1	5	2	2	17	7	10	14	10	3	1
creative	3	0	1	1	0	1	0	0	0	0	0	0	0
critique	1	0	0	0	1	0	1	1	0	0	0	0	0
curious	1	1	0	0	0	0	0	0	0	0	0	0	0
dark	0	0	0	0	0	0	0	0	0	1	1	0	0
debate	0	0	0	0	0	0	0	0	0	1	1	0	0
descriptive	0	0	0	0	0	0	0	0	0	1	1	0	0
direct	8	2	1	2	2	1	1	0	1	0	0	0	0
educational	0	0	0	0	0	0	0	0	0	1	1	0	0
empowering	1	0	0	1	0	0	0	0	0	0	0	0	0
engaged	2	0	0	1	0	1	1	1	0	2	1	1	0
enthusiastic	2	0	0	2	0	0	4	1	3	3	3	0	0
excited	0	0	0	0	0	0	2	0	2	5	2	2	1
explanatory	4	0	0	2	1	1	8	5	3	7	6	1	0
exploratory	0	0	0	0	0	0	1	1	0	0	0	0	0
fictional	1	0	0	0	1	0	0	0	0	1	1	0	0
first-person	1	1	0	0	0	0	0	0	0	1	1	0	0
formal	7	3	0	0	2	2	8	3	5	3	3	0	0
Friendly	0	0	0	0	0	0	0	0	0	1	1	0	0
frustration	0	0	0	0	0	0	1	0	1	0	0	0	0
fun	10	3	2	2	2	1	2	1	1	0	0	0	0
honesty	0	0	0	0	0	0	1	1	0	1	0	1	0
hopeful	0	0	0	0	0	0	0	0	0	1	0	1	0
humour	31	1	8	6	8	8	0	0	0	0	0	0	0
immature	1	0	1	0	0	0	0	0	0	0	0	0	0
informal	7	3	0	0	2	2	5	1	4	2	2	0	0
informative	0	0	0	0	0	0	1	1	0	1	1	0	0
ironic	0	0	0	0	0	0	1	0	1	0	0	0	0
literal	6	2	1	1	1	1	0	0	0	0	0	0	0
loneliness	0	0	0	0	0	0	1	1	0	0	0	0	0
mysterious	0	0	0	0	0	0	0	0	0	3	1	1	1
nostalgic	0	0	0	0	0	0	1	0	1	0	0	0	0
opinion	0	0	0	0	0	0	0	0	0	1	1	0	0
opportunistic	1	1	0	0	0	0	0	0	0	0	0	0	0
optomistic	0	0	0	0	0	0	0	0	0	1	0	1	0
outsider	0	0	0	0	0	0	1	1	0	0	0	0	0
personal	2	0	0	1	0	1	1	1	0	3	3	0	0
philosophical	2	1	1	0	0	0	0	0	0	0	0	0	0
playful	1	1	0	0	0	0	0	0	0	0	0	0	0
political	0	0	0	0	0	0	0	0	0	2	1	0	1
poverty	0	0	0	0	0	0	1	1	0	0	0	0	0
professional	0	0	0	0	0	0	1	1	0	3	3	0	0
proud	0	0	0	0	0	0	1	0	1	1	1	0	0
reflective	5	2	0	0	1	2	12	9	3	2	1	1	0
sad	0	0	0	0	0	0	1	1	0	0	0	0	0
sarcastic	18	0	5	3	5	5	0	0	0	0	0	0	0
satirical	1	0	0	0	0	1	0	0	0	0	0	0	0
silly	1	0	0	1	0	0	0	0	0	0	0	0	0
slang	0	0	0	0	0	0	1	0	1	0	0	0	0
uplifting	0	0	0	0	0	0	2	0	2	0	0	0	0
violent	0	0	0	0	0	0	1	1	0	1	0	1	0
	79	16	16	16	16	15	31	16	15	29	17	7	5

Appendix G

Topic name groupings for easier pattern identification in Assignment 1, 2, and 3.

Education--	Entertainment	Civic Life--	Humour--
education	animated movie	advocacy	dark humour
graduation	apocalypse	awareness	fun
high school	books	cultural	humour
information	concert	current events	gag
school	fairy tale	debate	joke
UMW	gaming	dialect	fraud calls
	instrument	feminism	mocking
	motivational posters	Kagami Biraki	satire
Abstract	lego	LGBTQ+	
comparison	music	non-profit	
conspiracy	movies	racism	**History--**
creepy	magic	outsider	Flying Aces
criticsm	sci-fi	political	mythology
facts	poetry		history
exploration	pop culture		Norse
forbidden	paintings	**Nature--**	pandemic
help	Taylor Swift	beach	Western
interpretation	social media	cats	WWI
ironic	sports	animals	self reflection
literal	Zoom	environment	
opinion		fishing	
reflective		flowers	**Consumables**
personal	**Violence--**	nature	alcohol
protection	killing	night	cooking
tips	murder	ocean	food
	violent	rainbow	home cooking
	mystery	realistm	
Human Life--	vigilante	pollution	
adulting		seasonal	**Currency**
body image		weather	online shopping
change	**Physical World**		consumerism
daily life	city		money
death	building	**Artistic Details**	support green business movement
friendship	creation	abstract	
future	Iceland	art	
growing up	jewelry	black and white	**Mental Health--**
homesick	space	cartoon	drug abuse
life	landscapes	dark	mental health
life decisions	technology	fictional	relaxation
parental traits	toys	film noir	peaceful
parents	train	distortion	
summer camp	travel	futuristic	
bonding		realistic	**Emotions**
adventure		retro	anger
family		reverse video	immature
origin story		sketch	suprise
language barrier			
relationships			
teenaged driving			
sleep			