Video Production as a Pedagogical Tool

For 21st Century Learners:

By

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A thesis submitted in partial fulfillment of the requirements of the degree of

MASTER OF ARTS
in
LEARNING AND TECHNOLOGY

We accept the thesis as conforming to the required standard

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May 2014
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Dedication

This thesis is dedicated to the memory of Richard Mrazek PhD. who started me on this journey. I endeavor to embody the motto he personified; It is through action we translate knowledge into wisdom.
Abstract

This document and accompanying hour-long documentary video https://www.youtube.com/watch?v=j5cghA6zWQg looks at the efficacy of the video production process as a teaching and learning tool with pre-service teachers as an alternative to writing traditional papers. The research shows that integration of a TV news-story format and easy-to-use Cloud-based and tablet-based technologies present solutions to challenges reported in past research and encourage pre-service teachers to incorporate the technique in their future classroom. It is the journey students experience when creating the TV news-story that provides pedagogical benefits to learners as they research subject matter; interview those directly involved with the issue; visit locations; see the issue first hand; and synthesize the material into a short succinct two-minute TV news-story. This research demonstrates there is a significant increase in student engagement in the subject matter and willingness to integrate video as a learning tool in their future classrooms.
Acknowledgements

I would like to thank wife Sherri for her love, encouragement and support both emotional and professional during this adventure; and the rest of my family for giving me up for two years as I completed this goal. I would also like to thank the 2012-14 MALAT cohort for their continued academic and personal support during this scholastic voyage. I would like to recognize the faculty and staff at Royal Roads University and my supervisor Liza Ireland Ph.D for supporting this non-traditional thesis and guiding me through the process. I would like to express my gratitude to Wade Luzny, Luba Mycio-Mommer Ph.D and Randy Mcleod at the Canadian Wildlife Federation for their support of this research and the folks at the University of Lethbridge, in particular Dean of the Faculty of Education Craig Loewen Ph.D, my teaching partner Robert Runté Ph.D, and research consultants Mary Runté Ph.D, Doug Orr and Victoria Holec. Finally I would like to thank Lethbridge College for their continued support of my professional development both as a teacher and a learner.
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Chapter One: Study Background

Introduction

Integrating technology into the classroom will only be successful if the classroom teacher is comfortable with the technology (Bates & Sangra, 2011). Research on the state of technology in higher education has shown that “without a more professional approach to training faculty in teaching and learning, technology is unlikely to be used to its full potential” (Bates & Sangra, 2011, p.186). This research sought to discover whether or not the process of creating video TV news stories will help fourth-year Bachelor of Education students to engage in subject matter, increase retention of that material, and ultimately adopt the practice into their future classrooms. This research will also contribute to existing research focused on the efficacy of the video production process as a learning and teaching tool. Hofer and Swan (2005) state “Digital moviemaking offers an opportunity to harmonize the use of technology to support student-centered pedagogy and unique disciplinary approaches rooted in discipline-specific pedagogy” (p 104), meaning that video production can be taught as an area of study, but it can also be used as a technological tool to learn about other areas of study. There are many benefits to working with video production in the classroom, but the challenge teacher educators face is to seek ways that can encourage education students to become more familiar and comfortable with the video production process so they will effectively assign and evaluate student work utilizing video technology in their future classrooms (Girod, Bell & Mishra, 2010; Kearny & Schuck, 2004, 2006; Hofer & Swan, 2005, 2006;).
This is a nontraditional thesis in the form of an hour-long video documentary, which can found at the following link: https://www.youtube.com/watch?v=j5cghA6zWQg.

This formal thesis document accompanies the video documentary to fulfill the academic requirements of thesis submission. The video should to be viewed in conjunction with this document.

**Background**

After 30 years of producing video for broadcast, corporate and educational clients, I understand the power of video as an educational tool. Through some of my films, students have met Nepalese porters and Sherpa guides leading an Everest expedition to the top of the world and have seen hidden treasures in the underwater world of the Mesoamerican reef in Mexico. Through video, we can transport an audience to the locations we visit, but nothing can compare to actually being there. Watching videos is a passive experience while creating those videos is immersive as students are engaged in the subject matter they are filming, and as they visit locations to speak with the people involved in the story. Many researchers in this field (Kearney, 2012; Toyn, 2008; Hernández-Ramos, 2007) have discovered that these experiences make the content relevant to the learner because “video production facilitated connections to content, student motivation and engagement” (Norton and Hathaway 2010, p 145). If research shows us the pedagogical benefits of the video production process, why are more teachers not utilizing it? In their survey of K-12 environmental educators across the country, Orr, Mrazek & Meadows (2009) asked about their level of adoption for different educational technologies. On a scale of one (being lowest) to eight (highest), video production received an average rating of two. Not a very promising score for a technology that, according to the research, is very beneficial to students.
One of the challenges of working with video production as a curricular activity is to find ways for teachers to incorporate it in assignments that are easily designed and evaluated. Different pedagogical frameworks have been developed and studied. Kearney (2011) has produced research on the use of Idea Videos (or ‘iVideos’) as a way of utilizing the technology in a classroom setting:

“formalized pedagogical frameworks are needed to help teachers leverage these worthwhile outcomes in these often complex, open-ended tasks. Expert teaching and learning practices with DV (digital video) tasks need to be documented in a consistent and reusable form so that they can be adapted to different learning environments” (p.1).

One study on pre-service teacher education noted “participant concern existed around the fair and accurate evaluation of digital video products specifically and design-based products in general” (Girod, Bell & Mirsha, 2007, p27). In that same study, participants also felt that “start-up costs were too great to expect developing digital video to be a common practice in today’s classrooms” (p.27). Researchers trying different interventions and pedagogical frameworks discovered the three main obstacles to video production in the classroom were finding adequate tools to work with, time to do the assignments, and proper teacher education on the video production process (Hakkarainen, 2011; Girod, Bell & Mishra, 2010; Kearney, 2011, 2013;).

Since the summer of 2009, the Canadian Wildlife Federation has held a Summer Institute, bringing teachers from across Canada to learn about the many different environments in our country. I have been fortunate enough to travel with these teachers in 2009, 2010, 2011 and 2013, teaching them video production skills they can take back to their classrooms. Each year
they were tasked with creating short videos about their week by interviewing scientists and locals about the environment they live in. Each year, as technology has improved, the task has become easier, and each year, teachers have shared what works best for them in the classroom. We found that much of the time was spent on the technology, so that process should be standardized. We also found that there was no easy-to-follow instructions or structure to the video and there was too much room for interpretation, which usually meant it took too much time to write the story. In 2013, based on this feedback, I trained teachers to use iPad minis to shoot, write and edit their videos about their trip to Nunavut. I also structured the video to resemble a news story with specific components to include. The feedback from these teachers was very positive, as they found the structure easy to understand and the technology, although a little quirky sometimes, easy to operate. This was the field test for my research.

Research Questions

Kearney (2011) found using video production as a pedagogical tool and teacher adoption of the technology in the classroom can increase student engagement. What separates this research from others is the introduction of the TV news story format and the Cloud-based and tablet-based technology process. Data was also gathered on content engagement and retention and teachers’ adoption of this process in their future classroom.

In order to discover if the introduction of the TV news story format and emerging video technology will be effective in the classroom I posed the following question:

What are the benefits and challenges of integrating a short TV news-story format, while utilizing Cloud-based and tablet-based video production technology, for assigning and evaluating classroom projects at the post-secondary level?
I was also interested in comparing past research findings with the findings from this investigation, so I included two more sub-questions to address these areas of inquiry:

1. How effective is the video production process for increasing engagement in and retention of subject matter for senior education students?

2. After being involved in this case study, what issues will senior education students consider when deciding if they will integrate the video production process into their future classroom assignments?

**Definition of Key Terms**

- **B-roll**: Supplemental or alternate footage intercut with the on-camera interview or to visualize the audio voice-over in the news feature. This footage will show the issue to the audience and how the Issue Expert and Issue Frodo (explained below) are affected by or relate to whatever the issue is.

- **Cloud-based technology**: Also known as Cloud Computing, it “refers to applications and services offered over the Internet. These services are offered from data centers all over the world, which collectively are referred to as the Cloud” (Techterms, n.d., definitions section, cloud computing, para.1). For the sake of this research we will be utilizing the Cloud-based video editing website wevideo.com.

- **Editing**: The process of selecting and connecting interview segments, footage, voice-overs and standups in a way that effectively tells a story. This process will be completed either through Cloud-based or tablet-based technology in the post-production phase.
• **Host:** The position performed by the student responsible for completing the news feature. The host will complete the research and pre-planning in the pre-production phase, hold the microphone and perform the interview in the production phase, write the voice-over, record it with their voice and edit the feature in the post-production phase. They will work with a camera operator in the production phase and ask for assistance when necessary in the editing phase. This person may also be called the reporter or producer of the feature.

• **Issue Expert:** This person can credibly speak about the issue preferably from an unbiased position. This could be a researcher, government official, educator etc. If the issue expert speaks about the issue with a clear bias, then a second issue expert should be included in the feature to balance the information being presented. This person will do an on-camera interview with the host about their connection to the issue, and we will also see b-roll of them being affected by the issue.

• **Issue Frodo:** Named after the Lord of the Rings character who struggles through three films to complete his task. The Frodo is the person in our news feature that we as the audience can relate to and care about. This person will be affected by whatever the issue is being investigated in the news feature. It is up to the students completing the assignment to select someone, preferably another student, who the audience will care about and will give other students reason to connect with the video. This person will do an on-camera interview with the host about their connection to the issue, and we will also see b-roll of them being affected by the issue.

• **On-camera interview:** These will be recorded on a video camera with the Issue Frodo and Issue Expert(s) and are part of the production process. It takes a two-person crew to
complete the interview, one to operate the camera and the other to be the host who will hold the microphone and ask the predetermined interview questions. The host will ask follow-up questions based on the answers given.

- **Pre-production phase:** This phase includes: developing the original story idea around an issue, researching the issue for background information and local impacts, determining appropriate issue expert(s) and an issue Frodo to do on camera interviews and b-roll, arranging for a time, place and camera operator to record each of the on-camera interviews and b-roll.

- **Production phase:** This phase is where all the video is recorded for the story. This phase will involve both the host and camera operator and will include recording b-roll, on-camera interviews and in some cases, the host’s standup (explained below).

- **Post-production phase:** After the on-camera interviews and b-roll is recorded, the host will select the interview clips to be used, maximum 20 seconds each, write the script, record the voice over and edit the story. In some cases the standup is also recorded in this phase.

- **Standup:** During this section we see and hear the host give the audience some information pertinent to the issue being presented in the feature. This can come at the beginning, in the middle, or at the end of the feature. In many cases it is best to do the standup at the location where the b-roll has been recorded so there is an appropriate background behind the host to refer to. It may be completed after the script is written in the post-production phase, as the host may not know what they want to say in the standup until after the complete script is written. To record the standup the host and camera operator are required.
• **Senior education student or pre-service teacher:** This is a fourth-year education student at the University of Lethbridge

• **Tablet-based technology:** The process of recording footage, on-camera interviews, standups and voice-overs, writing the script and editing media for the story on an iPad mini utilizing the Voddio app from Vericorder Inc.

• **Writing:** Part of the post-production process. The writing process is completed once the on-camera interviews are recorded by choosing the appropriate interview clips and connecting them in a logical order by writing an effective voice over. The voice over will be recorded and integrated into the news story during the editing process.

• **Voice-over:** Also known as narration, this is spoken by the host of the news story. This is audio recording only, and footage is added in and edited to match up what is being said in the voice-over with what we are seeing on the screen.
Chapter Two: Literature Review

This research looked at the efficacy of the video production process as a teaching and learning tool with pre-service teachers. To avoid duplicating past research and to understand what knowledge had been compiled in that research, a literature review was undertaken. I have compiled findings in the areas of educational research with pre-service teachers as they are the target audience for utilizing the findings of this research in the future; activity theory, the theoretical framework that integrates participants and the tools used by the community to complete tasks; the efficacy of video production in the classroom which was my original interest in this research; and two emerging technologies, mobile and the Cloud used in completing video assignments.

Educational Research

Pre-service and in-service teacher research. The modern teacher research movement started in the 1980’s and has been criticized for inconsistent approaches to epistemology and methodology (Cochran-Smith & Lytle, 1999). Cochran-Smith and Lytle (1998) stress although there are challenges with current practices, teacher research is extremely important as:

“It is now widely documented that teachers play a central role in the fate of virtually every educational reform agenda; consequently the nature and extent of pre-service teacher education and in-service professional development opportunities for teachers are receiving more and more attention at the local, state and national levels” (p.32).

Gathering knowledge on teaching practices is used to offer teachers training and professional development, improve teaching environments and practices, reform curriculum, and work for
social change (Cochran-Smith & Lytle, 1998, 1999; Rearick & Feldman, 1998; Ronnerman, 2003). Research has not been limited to in-service teachers in their classrooms. Price & Valli (2005) have also looked at pre-service teachers as change agents in their own environments suggesting “careful study by teachers of the conditions and contexts of their work will help them learn about and change practice in ways that fit their unique teaching settings” (p. 44). Including pre-service teachers is important because “Pre-service teachers should be provided with opportunities to experience and create their own agendas for change and to analyze and reflect upon the purposes, goals and consequences of their practices” (Price 2001, p. 45). Researchers also continue to include these pre-service teachers in research as a way of integrating new or updated classroom practices through this next generation of educators (Kearney, Pressick-Kilborn & Maher, 2012; Dickenson & Summers, 2010; Harris, Mishra, Koehler, 2009). This research used that same strategy to understand if participants will utilize video production in their future classrooms.

Technology training. During the past decade, advancements in technology have forced educators to find ways to integrate what students are using outside of the classroom into day-to-day curriculum. Teacher education in many cases has lacked technical specificity as Harris, Mishra, and Koehler (2009) argue “that the kinds of professional knowledge required of teachers for technology integration are the same, irrespective of whether one is teaching middle school science, high school social studies, or elementary language arts” (p. 395). This one-size-fits-all method of technology training also ignores the inherent differences in the pedagogical approach to teaching different content in different contexts (Harris et al., 2009). In the 1980s, the term Pedagogical Content Knowledge (PCK) was presented by Shulman (1986) to recognize the interconnectedness between what teachers teach and how they teach it. In the past decade the
academic community has realized the importance of connecting technology to the pedagogy and content knowledge (TPACK or TPCK) in the education of teachers. Koehler & Mishra (2007) assert that, “developing TPCK is a multigenerational process, involving the development of deeper understandings of the complex web of relationships between content, pedagogy and technology and the contexts in which they function” (p 1). The three areas of knowledge; technology, pedagogy and content and their interconnectedness (see Fig 1.) are at the core of their framework.

![Diagram of TPCK]

*Figure 1. (TPCK) includes the integration of Technological, Pedagogical and Content Knowledge to better understand the relationship between the three areas of knowledge.*

Koehler et al. (2007) assert that just adding technology skills to the existing traditional education training focusing on content and pedagogical knowledge, as seen in the top center

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overlap (see Fig. 3), is not enough for effective instruction as “de-contextualized, didactic approaches that merely emphasize the acquiring of technology skills are unlikely to succeed, since they do not address difficult but crucial relationships between technology and content, and technology and pedagogy” (p.743). Koehler et al.’s (2007) framework also stress the importance of not just technology, pedagogy and content knowledge, but the four overlapping areas of knowledge; technology and pedagogy, technology and content, and most importantly the center of the framework, technology, pedagogy and content knowledge or TPACK.

**Video production training for teachers.** Kearney, Pressick-Kilborn & Maher (2012) utilized the TPACK model as a framework for instructing pre-service teachers in the video production process working with science curriculum and proposed “the restructuring of professional learning experiences for pre-service teachers to allow increased levels of technology integration in their academic programs with an emphasis on authentic problem solving and design-based projects such as learner-generated video projects” (p.1). Girod, Bell & Mishra (2010) have looked at design-based teacher education where pre-service teachers would design a video artifact that was authentic, efficacious and expressive to be used in the classroom, while engaging them in the process of digital video production. Girod et al. (2010) stated:

“It is true that we must prepare new teachers for success in the 21st century, but perhaps we should simultaneously be helping them to see a path toward a new future where learning is centered on seeing the world differently, through lenses of important and powerful ideas. The production of digital video seems to engage teachers in analysis of what really matters in teaching and learning and challenges them to design tools (powerful videos) that motivate, inspire, and transform students” (p.28).
Hung, Keppell and Jong (2004) took this design-based research strategy and employed project-based learning using digital video with pre-service teachers. This collaborative process focused on creating a digital artifact to be uploaded to the web. Hakkarainen (2011) found these pre-service teachers were conflicted between focusing on the technical aspects of the video production and the content being discussed in the video artifact. Hung et al. (2004) used the project-based learning model to teach video production as an area of study, but Kearny & Schuck (2006) focused on the utilization of video as a tool to present other subject area content, not as an area of study. That research concluded there are many pedagogical benefits to using the video production process as a teaching and learning tool for other subject matter.

Activity Theory

This research includes the integration of technology, content, and learners in the creation of a video artifact because these elements work together as a single unit, not as separate components. Activity theory was first conceptualized by Vygotsky (1978, 1986) and involves a subject, which could be an individual learner, an object like a task or activity, and a mediating artifact, which could include a tool, law, a book or a computer (see Fig. 1). Activities are based on subjects utilizing a mediating artifact to transform the object into an outcome. This initial concept gave Jonassen & Rohre-Murphy (1999) an alternative to traditional ways of looking at learning and thinking where individuals being studied were not separated from the environmental context where the learning occurred. The theory integrates tools or mediating artifacts that are specific to the environment where and when the activity takes place. Nardi (1996) has used activity theory as a framework for human-computer interaction (HCI) research, recognizing that “technology use is not a mechanical input-output relation between a person and a machine; a much richer depiction of the user's situation is needed for design and evaluation” (p 1).
Figure 2. Vygotsky’s Basic Activity Theory diagram portrays the elements involved in transforming an object into an outcome.²

This first generation of activity theory (see Fig. 1) only considered the individual and the larger community in which they exist. Engestrom (1987) introduced the community into the model to create an activity system (see Fig. 2) which included relationships between the object and the community, which are mediated by the division of labor (who does what in the community), and a relationship between the subject and the community, mediated by rules designed by the community and followed by the subject within that community.

![Activity System Diagram](image)

Figure 3. The Activity System built upon Vygotsky’s Activity Theory by adding the community and relationships with rules and division of labor within the community.³

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In the teaching and learning community, activity theory challenged early mentalistic and idealist views on gaining knowledge that suggested one must gain knowledge prior to performing an activity (Jonassen & Rohre-Murphy, 1999). Activity theory “posits that conscious learning emerges from activity (performance), not as a precursor to it” (Jonassen & Rohre-Murphy, 1999, p.62). Ross and Lee (2007) suggest if teachers understand this, it can become an effective strategy in the classroom because “when children choose the motive of activity, they also become emotionally engaged and that learning, which is an expansion of one’s action possibilities, is a by-product of the pursuit of motives and goals” (p.187). Engestrom (1987) suggests that an activity system is always in flux and continually working through contradictions when something new is added to it.

In this research project, activity theory was specifically incorporated and visualized in the accompanying video documentary. In relation to figure 3, the subject is the learner; the tools are the video production technology being used by the subjects to create the object, which is the video artifact. Students and teachers in the classroom followed the rules of that community in the division of labour to create the video artifact. Before iPads were introduced into the education community, there were no rules on how to use one or job descriptions for teachers instructing classes with this new technology. These contradictions are continually being resolved to develop the community.

Constructivist learning environments (CLEs) are well suited to activity systems. CLEs are activity oriented, utilizing tools and knowledge available within the community environment to construct individual knowledge (Aplin & Ponnappa-Brenner, 2007; Jonassen & Rohre-
Murphy, 1999). This instructional design model utilizes discourse between learner and teacher and more importantly, learner and other members of the community to help them adopt and/or alter the practices accepted by the community (Aplin & Ponnappa-Brenner, 2007; Jonassen & Rohre-Murphy, 1999). This strategy was employed in this research as I look for how it may have been effective, as well as for contradictions and tensions in the classroom community during performance of the activity, video production. These insights provide insights into opportunities for development and improvement of the process.

**Efficacy of Video Production as a Pedagogical Tool**

**Video in the classroom.** Researchers have been studying the area of video production as a pedagogical tool since the 1990s (Grahame, 1991; Jonassen, Grabinger & Harris, 1991). In those early years, much of the discussion revolved around the challenges presented by the technology and less about the content being presented (Hofer & Swan, 2005, 2006; Shewbridge & Berg, 2004; Kearny & Schuck, 2004, 2006). Though there were many technical challenges, including camera availability, incompatible video formats and unstable computer editing software, Shewbridge & Berge (2004) noted one pedagogical benefit in:

“its ability to motivate students to explore their topic and themselves. Production is hard work, but it’s fun and students find the experience exhilarating and inspiring. Educators can harness this power and create imaginative learning opportunities for their students”

(,p.39).

Hofer and Swan (2006) report that student engagement increases as “the creation of student-produced films also provides opportunities for students to engage more deeply in the subject
The efficacy of video production as a classroom activity seems clear, but research suggests the need for a pedagogical framework that is easy to assign and evaluate (Kearney, Roberts & Jones, 2012).

**Pedagogical formats.** Many different approaches to video production in the classroom have been researched. Jonassen, Peck and Wilson (1999) took a constructivist learning approach to the video production process. This is appropriate as “constructivists stress the need for students to reflect on their experiences in order to build meaning from them” (Shewbridge & Berge, p. 36, 2004). Jonassen et al. (1999) presented techniques to use video as a feedback mechanism for students needing an objective point of view of their own on-camera performance, and found it was an effective method for students to see their videos through the eyes of their audience. There have been new pedagogical frameworks for integrating video production into the classroom including iVideos (Wong et al., 2007) and Digital Storytelling (Kearny & Schuck, 2004). Blackall, Lockyer and Harper (2011) teamed up with Apple Computers, the Australia Government and WIN Television, to design and implement an educational program in which students analyze, create and share digital video news. The focus of *Making News Today* was to promote the “student adoption of ethical stances in the journalistic process and the implications for the use of this project in developing ethics, values and citizenship as part of the curriculum process” (pg1). This case study was part of a values-based education movement in Australia focusing on creating a video artifact on ethics as an area of study. Researchers reported that students learned to approach the subject matter with respect, responsibility and understanding (Blackall, Lockyer & Harper, 2011). These new pedagogical frameworks are enabling teachers to integrate video production into a curriculum-based activity in order to realize the benefits of higher levels of engagement in the subject matter (Bull & Bell 2010; Shewbridge & Berge, 2004;

In order for students to realize the benefits of the video production process in the classroom, research began to focus on not just the students, but the teachers as filmmakers as well. Wong, Mishra, Koehler and Siebenthal (2007) introduced idea-based videos or iVideos to build on “the metaphor of teachers as filmmakers, an idea that highlights how teachers and filmmakers both strive to create powerful experiences for their audiences” (p. 181).

These powerful experiences can engage audiences and students in the subjects being presented, but how do teachers evaluate these videos? Kearney, Jones and Roberts (2012) studied the production of iVideos with pre-service teachers and found Digital Video (DV) “tasks remain challenging to document and enact. iVideo tasks are typically open-ended and somewhat ill-defined and involve high levels of creativity and consideration of aesthetics” (p.119). As a result, evaluation of a student project becomes a challenge (Girod et al. 2007). While research (Girod et al. 2007) suggests scoring guidelines as a step in the right direction, other researchers have found arts-based projects a challenge to evaluate because of the subjective manner of the art form (Norton & Hathaway, 2010, 2012; Wong, Mishra, Koehler & Siebenthal, 2007).

Researchers have also looked at whether pre-service teacher education in the video production process will translate into adoption of the technology in their classroom activities, training their students to also create videos. This expectation is not always realistic. Hernández-Ramos (2007) expressed concerns about the likelihood of pre-service teachers adopting the practice of video production in their classrooms after a video production workshop by stating:

“It must be acknowledged that these kind of short, intensive experiences by themselves
are unlikely to turn future teachers into users of technology in their classrooms, despite
the fact that the vast majority of participants report high levels of satisfaction and
motivation to learn more about digital video” (p.39).

In light of this research, my approach was to teach the video production skills over a semester.
This was done so the pre-service teachers in my class could understand how they could design a
similar long-term classroom experience for their future students, making it easier to integrate the
video assignment.

Emerging Educational Technologies

It is difficult to find a comprehensive definition of an emerging educational technology.
Veletsianos’ (2010) definition is: “tools, concepts, innovations, and advancements utilized in
diverse educational settings to serve varied education-related purposes” (p.17). The Horizon
Report (2008) announced grassroots video as their top emerging technology for the year with a
time of adoption set at one year or less. The report’s authors state, “Video papers and projects
are increasingly common assignments. Student-produced clips on current topics are an avenue
for students to research and develop an idea, design and execute the visual form, and broadcast
their opinion beyond the walls of their classroom” (Horizon Report, 2008, p. 11). Since then,
video has become ubiquitous as low-cost camera solutions, including smartphones and video-
sharing websites like YouTube, have made it possible for anyone to shoot and share videos with
the rest of the world (Kolas, Helge, Eide, Nordseth & Solsem, 2012; Cheng, Lai, Wang & Liu,
2010; Kim, 2012). Learners are expecting the technologies they use outside of the classroom to
be reflected in the classroom as well (Johnson, Adams & Cummins, 2012). As the skills that
employers will value in the coming years are also evolving, “schools must be transformed in
ways that will enable students to acquire the sophisticated thinking, flexible problem-solving, and collaboration and communication skills they will need to be successful in work and life” (Binkley, Erstad, Herman, Raizen, Ripley, Miller-Ricci & Rumble, 2012, p. 18).

The Horizon Report (2012) has listed mobile apps and tablet computing as the top two technologies to watch during this past year. One must be careful with predictions as Kim & Bonk (2006) reported that less than five per cent of teachers felt that tablets would have a significant impact in the future. The availability of tablets is increasing as “Educational institutions around the world are investing in the infrastructure that supports mobile access, sponsoring programs that provide devices to students who do not already have them, and commissioning custom mobile applications to serve their communities” (Johnson et al., 2012, p. 16). There is a dearth of research on iPads and mobile apps in the classroom, but what is available shows increased student engagement and potential for its integration into the classroom (Ried & Ostashewski, 2011; Alyahya & Gall, 2012; Martin, Ostashewski, & Dickinson-Delporte, 2013; Deimer, Fernandez & Streepy, 2012; Cavanagh, 2013). During research on iPads and digital story-telling, Reid and Ostashewski (2011) suggest the functionality and proliferation of apps, including over 20,000 educational apps now available, make the iPad “the proper combination of mobile tool and connected device for the classroom to meet the needs of 21st century learners” (Alyahya & Gall, 2012, p.1665).

Cloud computing is being considered by the educational community as it “will likely have a significant impact on teaching and learning environments” (Ercan, 2010, p. 938). This is new technology, but the little research that is available shows there are many advantages to Cloud computing. These include no infrastructure or software maintenance fees, services are
scalable and in many cases free to students and teachers, which may be very attractive in a time of deficits and budget cuts (Britto, 2011; Dong, Zheng, Yang, Li & Qiao, 2009). Common Cloud computing applications include Google docs, Wikis and Dropbox. As with most Cloud-based applications, students can work collaboratively from any computer with an Internet browser anywhere in the world (Liu, Li & Maddux, 2012). Tech Crunch writes about Wevideo’s usability, “…integrating with Facebook, Instagram, Dropbox, Flickr, and Google Drive, users will be able to easily import their existing media content where it lives on the Internet, rather than having to upload it all over again” (Lawler, 2013, para. 4).

Summary

Past research has documented the benefits of using video production in the classroom for both the students and teacher, but it also shows how both pedagogical frameworks and technology have created challenges for teachers looking to adopt this strategy. This research investigated if integration of the news-story format and easy-to-use technologies will find solutions to those challenges and encourage pre-service teachers to incorporate the technique in their future classroom. Engestrom (1987) writes “In important transformations of our personal lives and organizational practices, we must learn new forms of activity which are not yet there. They are literally learned as they are being created” (p. 138). Effective classroom strategies utilizing technology continue to be a challenge for teachers educating 21st century learners. There is a dearth of available research in this area as “Several of the most respected technology-education researchers have identified large domains in which little or no quality research exists, and have pointed in general to the need for more qualitative research to fill these voids” (Foster, 2002. p. 42). The video production process as a pedagogical tool is one of these areas where voids exist. This action research looks at how the research participants and I can create a system
that will work for teachers in their classrooms. To create this system I must first collect and analyze valid, credible data.
Chapter Three: Conduct of Research Study/ Methods

Methodology

In order to answers my three research questions;

1. What are the benefits and challenges of integrating a short TV news-story format, while utilizing Cloud-based and tablet-based video production technology, for assigning and evaluating classroom projects at the post-secondary level?

2. How effective is the video production process for increasing engagement in and retention of subject matter for senior education students?

3. After being involved in this case study, what issues will senior education students consider when deciding if they will integrate the video production process into their future classroom assignments?

I utilized a number of different research methodologies and learning theories. Experiential learning (Kolb, 1984; Dewey, 1934; Lewin, 1942); activity theory (Engeström, 1987; Vygotsky, 1934; Jonassen & Rohre-Murphy, 1999); action research (Lewin, n.d.; Avison, Lau, Myers & Nielsen 2004; Marrow, 1969; Noffke & Stevenson, 1995; Rearick & Feldman, 1998) and case study (Tellis, 1997; Yin, 2009; Gay & Airasian, 2000; Gerring, 2004; Kalof, Dan and Dietz, 2008). The over-arching research utilized action research methodology, but this research took an in-depth look at just one facet: a case study on pre-service teachers training in the video production process.

**Experiential learning.** Kolb’s (1984) assumptions that “Knowledge is best conceived as a process, not in terms of outcomes” (p.26), is the basis for this researcher’s assumption that the
real pedagogical benefit of creating a TV news feature is the learner’s experience in performing
the steps that are involved in the video production process. Kolb’s Experiential Learning Model
(1984) was born out of Lewin’s techniques for action research. Four stages guided this theory:
congrete experience; observation and reflection; formation of abstract concepts; and testing
information of concepts in new situations. Dewey (1938) identified many of these same ideas in
his model, which states that experience is “trying to do something and having that thing
perceptibly do something to one in return” (p. 2). Kolb’s (1984) theory proposes that ideas are
not fixed or immutable, but are constantly being redefined by new experiences. Transformative
learning occurs if the experience created is genuine (Dewey, 1916). This research looked at how
experiencing the issue by visiting the location and meeting and recording people affected by the
issue they are exploring in their TV news-story will increase their engagement in the subject
matter, thus creating genuine experiences.

Activity theory. Activity theory was originated by Lev Vygotsky (1978, 1986) and was
further developed by Engestrom (1987). This theory contradicts the assumption that learning
should come before an activity related to that learning, instead suggesting that conscious learning
comes through the performance of the activity (Jonassen & Rohrer-Murphy, 1999). Activity
theory argues that our consciousness is constructed by the world around and includes notions of
intentionality, history, mediation and collaboration (Nardi, 1996). We are what we do, and what
we do is embedded in a social matrix that includes people and artifacts, including tools and
language. Activity theory is more concerned with what people do, and why they do it. It looks
at artifacts as mediators of human thought and activity (Engeström, 1987). This theory focuses
on the activities performed by members of the community and provides a framework for the
development of Constructivist Learning Environments (CLEs) (Jonassen & Rohrer-Murphy,
1999), as “It focuses on the interaction of human activity and consciousness within its relevant environmental context” (p.62). I used activity theory in a CLE as recognition of this interaction between humans and technology in the activity of creating a TV news story. Activity theory allows for introspection and revision of that activity as contradictions and tensions arise (Ross & Lee, 2007). This “in the community” framework integrates well into action research methodology.

**Action research.** Kurt Lewin is referred to as the founder of action research and set out his first ideas on what he considered practical experiences in 1934 (Marrow, 1969), concluding “No action without research; no research without action”. Action research recognizes the benefits of making academic research relevant by testing theories with the people who may benefit from the practical application of those theories. Action research is an iterative process, much like Lewin’s and Dewy’s experiential learning models (Kolb 1984), where data from an experience is gathered, reflected on, revised and tried again with new information gathered. Avison et al. (2004) incorporated this methodology, usually in qualitative studies, by considering the research subjects in the design of the research and utilizing their input in coming up with solutions to the problem or question being studied. Feldman and Rearick (2005) categorized reasons why teachers would be involved in action research as political, personal and professional, which “include staff development and adding to the knowledge base for teaching. The action leads to shared knowledge and to the improvement of the academic and social curriculum” (Rearick & Feldman, 2005 p.335). This methodology was utilized so that practice will inform the research, and the research will inform practice. These research findings will enable me to make adjustments to this structure and technology and develop further case studies to test those changes.
Lewin (1946), stated, “Socially, it does not suffice that university organizations produce new scientific insight. It will be necessary to install fact-finding procedures, social eyes and ears, right into social action bodies” (p.38). Lewin based much of his methods and principles on Dewey’s (1916) progressive education philosophy (Adleman, 1993). This predominantly qualitative research methodology empowers the community under the microscope by utilizing their input in the identification of problems and exploration of solutions (Aldeman, 1993; Avison, Lau, Myers & Nielson, 1999). Action research was seen as a “means of systematic inquiry for all participants in the quest for greater effectiveness through democratic participation” (Adleman, 1993, p.7), as opposed to traditional autocratic coercion (Lewin, 1946). Action research can “transcend mere knowledge generation to include personal and professional growth and organizational and community empowerment (Herr & Anderson 2005, p.1).

Action research is particularly popular in education research because it “focuses the professional development and improvement on the classroom or school level, where teachers have their greatest expertise and effect” (Gay & Airasian, 2000, p. 594). One caution is that these research findings will not always be applicable to all classroom settings so it is important that teachers look at the findings from their own context (Gay & Airasian, 2000). In order to research pedagogical frameworks teachers can use, they require access to educators and a classroom where discovery can take place. Educational action research, which is described by Gay and Airasian (2000) as “teacher-initiated, school-based research” (p. 593), can be used to inform teaching practices by conducting research within the context of the teaching environment. The study of video production as a pedagogical tool, as stated in the literature review, has had a number of interventions in a number of locations and contexts in different K-12 and post-secondary classrooms around the world. Each one of these studies has contributed to the
knowledge base of this topic. I have considered those findings from previous studies, and learned from and improved on the techniques presented in those studies when designing this research.

**Action research project.** I chose TV news stories as a pedagogical framework for this case study because most secondary students are familiar with them and they incorporate multiple perspectives. They are also non-biased in nature, accrediting information presented to the people interviewed in the story, not to the student presenting it. This is a visual medium so students were also encouraged to get out of the classroom, meet with people and film location shots integral to their story. News stories can also be easily formatted so students and teachers have an easier time planning, executing and evaluating these video assignments.

Through this action research I also investigated how effective tablet-based and Cloud-based technologies are for video production. As mentioned earlier, Cloud-based technologies or Cloud computing enables students to access applications and data storage in an on-line environment. The advantage to this is that teachers and students do not need specific video editing applications on their classroom computers as the application can be accessed and operated through an Internet browser on any computer. Data, in this case video and audio files, is uploaded to and stored in the “Cloud” as well so it doesn’t matter what computer the participants were working on, as long as they had a computer with a browser, they could access their video files and projects. The other advantage to Cloud-based editing is the opportunity for collaboration. Multiple students could be working on the same video project from anywhere. Ercan (2010) suggests that:
“Cloud computing is becoming an adoptable technology for many of the organizations with its dynamic scalability and usage of virtualized resources as a service through the Internet. It will likely have a significant impact on the educational environment in the future” (p.1).

The service I used in this case study is from We Video (wevideo.com). This Cloud-based application was used for all the editing functions required to complete the TV news-story, all video recording was performed on whatever camera students had available to them.

The second technology I introduced to participants is tablet-based video production. According to the New Media Consortiums 2012 Horizon Report, the recent development of inexpensive tablets for the classroom “enhance learning experiences in ways simply not possible with other devices. High-resolution screens allow users of tablets, such as the iPad, to easily share content with each other and pore over images and videos on the screen” (Johnson, Adams, & Cummins, 2012, p.7). I utilized the Voddio app by Vericorder Inc. on the iPad mini to record video and audio, write the script, edit, add text, and upload to Youtube. This all-in-one turnkey system enabled the student teachers to minimize the video production equipment needed to complete their classroom assignment. The Voddio App is free, but to send the finished video to YouTube or a dedicated server the app will cost $9.99 (2013 prices). This case study was about introducing a pedagogical framework and low-cost technology options so learners can focus more on the content of the story, not the technology needed to complete it.

The class was divided in two and students worked with one of two technological processes; tablet-based video production or Cloud-based video production. They worked in pairs to utilize these skills, technologies and the template to complete a two-minute video news story on a topic
of their choice that focused on issues around technology in the classroom. There were two other assignments in this course; one was a written assignment and the other, an oral presentation. The video project was the final assignment, which was evaluated using two rubrics created for this assignment (see Appendix A). The assignment took up to 15 hours to complete. This is a simple video production process. Veteran TV reporters do at least one news story every day. This was not an arduous process and is very doable over a few weeks as an assignment. The average time frames required to do this assignment are:

- Two to three hours to research background information and line up interviews
- One hour for each on-camera interview depending on travel time
- Two to three hours to shoot b-roll and standup depending on travel time
- Two to three hours to select interview clips write the story and record voice over
- Two to three hours to edit the story

The utilization of the TV news story structure along with tablet-based and Cloud based technologies were incorporated into this case study. As action research is an iterative process, future case studies with different populations in different classroom will contribute to a larger wealth of knowledge aimed at giving teachers practical technological tools to use in their classroom.

**Case Study**

I have embedded this action research methodology within a larger case study as it will enable me as a teacher to look for better ways to integrate video production in the classroom with the research participants, while at the same time, collect data on their experiences. Gerring (2004) stated, a case study is “research design best defined as an intensive study of a single unit (a relatively bounded phenomenon) where the scholar’s aim is to elucidate features of a larger
class of similar phenomenon” (p. 341). This case study gave participants the opportunity to develop skills in video production through the classroom instruction; while together I looked for ways to better integrate it into future classroom activities. Case studies are designed to bring out the details from the viewpoint of the participants by using multiple sources of data gathered with multiple methods (Tellis, 1997; Yin, 2009; Gay & Airasian, 2000).

Yin (2003) listed six sources of evidence for data collection in the case study protocol: documentation, archival records, interviews, direct observation, participant observation, and physical artifacts. During this research, I utilized documentation in the form of a research journal, keeping track of thoughts and adjustments during the action research stage. I also employed focus groups with the research participant during and after the production process, interviews with the co-facilitator of the course, direct and participant observations, and physical artifacts. Due to the nature of this intervention, the artifacts are in a digital form. I also included survey instruments to round out the multiple sources of data to increase the study's construct validity (Yin, 2003).

Kalof, Dan and Dietz (2008) suggest case studies are effective tools when examining how a program or intervention will work in a specific context before applying it in a broader context. Schmidt, Baran, Thompson, Mishra, Koehler & Shin (2009) found when researching the use of video production in the classroom, that case study methodology is an effective way of finding solutions to practitioner challenges in the classroom.

**Population Sample**

The population I researched with was pre-service teachers. This population will have already had classroom experience in a previous internship and are preparing for a teaching
career, so they were able to look at the content from the perspective of a student and a teacher. I used a purposive sampling (Kalof, Dan & Dietz, 2008) strategy to find a unit of analysis that will, “accurately reflect the population in which they are interested” (p. 41). All the participants were senior education students enrolled in Education 4391 for the Fall 2013 semester at the University of Lethbridge. This course was taught by Dr. Robert Runte and focused on innovative educational technology in the classroom. I taught a portion of this course, focusing on the video production process as a learning tool. These participants were given instruction and a template for researching, shooting, writing, and editing news stories as an assignment.

**Ethical Considerations**

I provided classroom instruction to all participants enrolled in Education 4391 regardless of whether they consented to be part of the research project, but there were some ethical issues to be considered. In keeping with the Royal Roads ethical practices policies, the following procedures were put in place to protect the rights of the participants. Students were recruited for this research by a third party not associated with the research project and the identities of the students were sealed from me until the marks for the course were submitted and the Dean of the Education Faculty had signed off on them.

All potential participants were informed that their participation was voluntary and they could withdraw from the research at any time. The identities of those who withdrew were not made available to me until completion of the course. All on-line survey data was also sealed and not accessible by me until the marks for the course were submitted and the Dean of the Education Faculty had signed off on them. A third party not associated with the research facilitated both focus groups. A two-person video recording crew recorded the event and I was
not in the room when the focus groups took place. The video recordings of the focus groups were stored on a password-protected computer drive and not accessible by me until the marks for the course were submitted and the Dean of the Education Faculty had signed off on them. These procedures ensured that the right of voluntary participation was not jeopardized by coercion, manipulation or undue influence and the action research project was not influenced by knowledge of who the research participants were.

The consent forms (Appendix B) included consent to participate in the research project and consent to be videotaped during focus groups and classroom time while they worked with the template and technology. They also consented to having their images used, as this non-traditional thesis is a video documentary. This hour-long video will be used for educational and promotional purposes to encourage other teachers to use the process in their classroom and hopefully benefit from the findings of this research. The participants also benefitted from being the subjects of this documentary. It enabled them to understand how the subjects of their video assignment would feel when they were filming them, so they could be more empathetic to their position in the story. They also had the opportunity to watch me videotaping them, which allowed them to model my behavior when shooting their assignments. In the video documentary and this document, students will be referred to by their first names only as all participants have also consented (Appendix B) to the use of their first name or an alias. Four students preferred to use an alias. The exception was the instructors and industry partners who consented to their images and full names to be used.

Data Collection

Both quantitative and qualitative strategies, or mixed methods, were used to gather data on the participants’ experience over the semester (Appendix C). Quantitative research methods
produce “quantifiable, reliable data that are usually generalizable to some larger population” but it can also “decontextualize human behavior in a way that removes the event from its real world setting” (Weinreich, 1995, p. 2). Qualitative research methods allow the researcher to explore reasons for the quantitative data and give more meaning to the numbers by “describing the reality of the participants in their own, unique context (Gay & Airasian, 2000, p. 204).

Employing both these methods was important in gathering valid and credible data. Quantitative data was collected from online surveys including a pre-test and post-test, an engagement survey when handing in each assignment and from marks for the participants’ final assignment. Qualitative data was collected through participant reflections when handing in assignments, two focus groups and individual interviews. Field notes were also utilized to describe the setting and the participants, and to give context and a narrative structure to the events that took place in the classroom through the action research phase. These researcher reflections also helped me to understand my own potential biases, so as to avoid imposing these on this research.

During the first week, participants took a short demographic survey to provide some personal background (see Appendix D). They were also asked to complete Fleming’s VARK questionnaire www.vark-learn.com (Fleming, N, n.d., Questionnaire section) to understand their learning preferences. The acronym VARK stands for Visual, Aural, Read/write and Kinesthetic. Hawk and Shah (2007) quote Fleming stating that VARK categorizes instructional preferences because “It is focused on the different ways that we take in and give out information”(p. 6). This information was helpful when looking for understanding of how participants’ learning preferences may affect their perceptions of video production, which favors those with a visual and kinesthetic learning preference. During the first class participants also took the pre-test about their knowledge and adoption of video production in their classrooms (see Appendix E).
The post-test was taken by participants at the end of the course. These identical before-and-after questionnaires were completed online utilizing Survey Monkey and enabled me to make comparisons “across time in an effort to estimate the effects of an intervention” (Mark & Reichardt, 2009, p. 184).

As mentioned earlier, there were two other assignments in the Education 4391 course, one text based, and one oral presentation in addition to the one utilizing video. When submitting each assignment, students completed a short introspective paragraph on the merits of the assignment and an online questionnaire (see Appendix F) to measure their engagement level in that assignment. Schlechty’s (2002) level of engagement scale has been adapted to be a self-reflective tool for the participants to measure their engagement in the assigned task.

The above questionnaires with the exception of the VARK questionnaire utilized a six-point scale instead of the traditional five-point Likert scale. I wanted to force the participants to make a decision either agreeing with or disagreeing with the statement posed. That way the neutral or no opinion option was not available, as there is some evidence that “social desirability bias arising from the respondents desire to please the interviewer … can be minimized by eliminating the mid-point category from Likert scales” (Garland, 1991, p. 4).

During the course of study, participants took part in focus group discussions (see Appendix G) after the second and third stages of the video production process to see if this instructional strategy is effective, and could be implemented as a strategy in their future classroom. Stewart, Shamdasani & Rook (2009) stated focus groups are particularly effective in stimulating in-depth conversation about a topic and are “uniquely well suited for quickly identifying similarities and differences among people” (p. 590). This strategy enabled the
participants to openly share their feelings and ideas about the classroom activities with their peers.

Due to ethical concerns stated earlier I was not in the room during the recording of the focus groups. I employed a moderator with focus group experience from the Faculty of Management at the University of Lethbridge. She utilized a semi-structured interview technique in order to elicit some consistent themes from the participants. These questions were based on the main and secondary research questions stated earlier. Questions were also added by the interviewer, based on how each focus group progressed as “these additional questions, not scripted beforehand emerge out of the interview itself or the conversation occurring around the predetermined questions or themes” (Sheppard, 2008, p. 145).

Throughout the video assignment, I observed the participants working in teams to write, record video, edit and present their video news stories. Yin (2009) states that “direct observation is one of the most distinctive features in doing case studies” (p. 261), and is one of the most common methods of qualitative and quantitative research. These observations are important when giving a third person account of the classroom activities. Student interactions with each other and the technology gave context to information provided by the participants in focus groups, interviews or through online surveys. It was also important to look at the classroom as one Activity System, not separate units of investigation as stated earlier in the literature review (Engestrom, 1987). I considered: how the teams divided up the jobs needed to complete assignments; what rules and regulations they followed; and how they interacted with the tools, the technology and the news-story template to complete the activity and realize the desired outcome. Direct observations of the classroom enabled me to look for contradictions in the process, and see if the participants were able to resolve them, to improve how the video
production process can be used in the classroom effectively. These observations were written in a “factually operational tone” (Yin, 2009. p. 262) as a way of documenting what transpired in each of the classroom sessions, without adding my own interpretations.

**Data Analysis**

Once the Education 4391 course was completed, and all the marks had been approved, I began to analyze the quantitative and qualitative data collected. To begin analyzing the qualitative data I input the surveys, focus group and interview transcriptions into the qualitative research software program, NVivo to assist me in developing categories and patterns in the data. Nodes were constructed which include technology, news story structure, engagement, classroom activities and adoption. I took an inductive approach to categorizing the data, adding new categories as multiple occurrences of new information dictated (Gay & Airasian, 2000).

Quantitative data was collected from the online surveys. The pre and post-test data was entered into an Excel spreadsheet, and I performed a paired sample t-test, to determine if there is a significant difference between the means for the group over a period of time. I also compared the data from the different assignments’ engagement surveys to see how participants felt about working on different kinds of assignments and whether the students’ learning styles or demographics had any bearing on those preferences. Although I didn’t analyze the assignment content, I included their assignment grades to see if there is a correlation between grades, type of assignment and their engagement level. Quantitative data was triangulated with the qualitative data by comparing multiple sources of data across participants, and across time (Gay & Airasian, 2000). Tellis (1997) also suggests “the need for triangulation arises from the ethical need to confirm the validity of the processes” (p. 2). Both credibility and validity of the research
findings increased as the multiple sources of data reported similar information (Kalof, Dan & Dietz, 2008).

This data collection and analysis process enabled me to discover challenges with my existing framework and make improvements on the pre-service teacher learning experience.
Chapter Four: Findings

As stated earlier, my research questions revolved around content engagement and retention and teacher implementation of this video production process in the future. The findings of this non-traditional thesis can be found in the accompanying video documentary, but the following is an executive summary of those findings.

Engagement and retention

Similar to past research, this study showed that when video production is used in the classroom, engagement in the subject matter increases. I found that students were engaged in three different ways; classroom instruction, assignment relevance, and community interaction.

Classroom instruction. Comments from participants showed they appreciated the hands-on classroom instruction experience where they could work with the cameras and editing application during class time. One of those students, Stephanie, stated “I think this project is really engaging at night and so it just makes it a lot more fun, the class isn’t dreadful to come to like a lot of them”. This was high praise indeed from a fourth-year education student. Each task or process was explained and then presented to the students, questions were answered about the task and then students were sent out of the classroom to practice it. Sarah stated this process was an effective way to learn the video production process because:

“I do really like George and the way he instructs us in the class and how it’s more hands-on where he will say, ‘okay this is how you do it go out and practice’ and then he’ll come around and actually give us one-on-one instruction”
Once they had practiced it, they were brought back to the classroom to discuss it and ensure they had a firm understanding of the task. Some students were more comfortable than others interacting with the people they were interviewing, so I enabled them to practice all the procedures needed to complete the assignment in the safety of the classroom before heading into the community. I also found it crucial to provide online video tutorials of the processes involved in completing the TV news story as Emily and the other students relied on them when working on the assignment outside of the classroom, “he had videos of his daughter doing, using the technology and his daughter is like, what she’s in high school and I was like okay if she can do it I can do it. It was really like effective”.

**Assignment relevance.** The research showed it is important to give students choices in the assignment subject matter. Giving students parameters to follow so the content is applicable to curriculum is important but students felt their engagement increased when they were allowed to choose the people to interview and the angle from which the material will be discussed. One student, Brianna felt:

> “the fact that each had our own topics on what we were interested in kind of brought engagement in itself because we were able to do kind of what we wanted and as we pleased and we could contact who we wanted”.

The assignment was also written with their classmates as the audience, not the teacher. This gave them added incentive to produce a better video as they knew their peers would be watching and learning from it.
Community interaction. The research data indicates the most significant impact on students’ level of engagement came from interviewing people who were affected by the issue they were researching. Brooke echoed this notion stating “I really enjoyed learning and listening to what the expert had to say about it, so for me that was the most engaging part, um I actually had to think about what I thought about it before we could even build our story”. Performing interviews on a topic that was important to both the student and the community member gave the subject matter more relevance. It also gave students the opportunity to explore the subject in unexpected ways, as Jane suggested “there is a research component, even though it’s not in the paper, you’re having to think about what it is you want to know about your subject and what goes beyond those questions”. Kirstie stated that even if they didn’t have access to video technology, she would still incorporate the interview process into her future assignments because “it’d be really valuable to just get them out there talking to someone and having them learn about something they’re interested in, in a different way”. This assignment is more than a technological exercise. It is about using the local community as a research resource. This video production process gave teachers and students a pedagogically credible reason to go out into the community and make connections with people they can learn from.

Retention. Data collected from student participants suggests their understanding of the issue they were researching increased due to the processes they performed to complete their TV news story. This concept was confirmed by Brooke who indicated “I feel like I learned a lot and I actually could talk about it right now all of the things I learned from my expert in just watching those videos (...) I think the process is interrelated with the content”. Alfonso indicated it was through the process of writing the story that he retained information because, “by the time you go to edit you know exactly how you’re going to build the story because you know everything that
person said in the interview because you’ve watched it so many times”. Stephanie stated it was her increased engagement in the content that sparked increased retention because, “I’m asking the questions that I would like to know the answers to and I’m actually interested in the information that’s getting relayed back to me”.

The online engagement surveys showed a significant change in the level of engagement students felt between the three assignments (Figure 4). Using a ten-point scale, the average engagement level of the 17 students for the print assignment was 4.8, the oral assignment was 6.6 and the video assignment was 8.1.

![Assignment Engagement levels](image)

*Figure 4. ED4391 assignment engagement levels.*
While the engagement levels increased significantly, the average marks for the three assignments actually decreased marginally (Figure 5), going from an 89.2 percent on the print assignment to 86.8 on the oral assignment and 86.5 on the video assignment.

Figure 5. ED4391 student assignment marks.

TV news story structure

The efficacy of video production as a classroom activity is well documented, but research suggests the need for a pedagogical framework that is easy for teachers to assign and evaluate in a classroom setting (Wong, Mishra, Koehler & Siebenthal, 2007; Kearny & Schuck, 2004; Blackall, Lockyer & Harper, 2011; Kearney, Roberts & Jones, 2012). Since the 1990s there have been many approaches to using video in the classroom but video assignments have typically been open-ended and somewhat ill-defined, and tasks required to complete the assignment were
challenging to document and enact. This research used the TV news story as a presentation format for the pre-service teachers investigating issues around the use of technologies in education, as it is familiar to most students. Abby confirmed this by stating “I think it was easier than another type of video because everyone knows what a news video is. ... We actually went and watched a newscast like we watched a news clip to see if we could model that”, and Alfonso commented:

“I thought the template was good, me and my partner took a look at the template before we started filming and we filmed to what we needed to put into the template it made it pretty easy to create the video”.

The non-linear process of creating a news story is where students must use higher order thinking to evaluate information and synthesize it into a short, succinct story that will introduce an issue and some of its players to an audience. Students were told that the story should be no longer than two minutes and that each interview clip within the story can’t be longer than 20 seconds. At first, many students were frustrated with the limitations, as it made the writing and editing process more difficult. They discovered it was an iterative process of writing, editing and evaluating the core message of their assignment. However, this time constraint was beneficial to both the audience looking for bite-sized information and the students crafting the video, as Melanie commented “in the beginning we had an issue with that but then we’re like you know what, this sentence really has nothing to do with it, you become way more critical of what you’re listening to and what you’re watching”. The other teacher educator also appreciated the shorter timeframe. Dr. Robert Runte stated that, “giving them a five minute window, I am not convinced
that would be a positive thing and I don’t know if I would have gotten better content, because it forces them to get down to their real issues”. There was concern from students about the time commitment to complete this assignment, but once students started engaging with the content they discovered the assignment took 10 to 15 hours outside of class to complete. Once students had completed the assignment they felt this time frame was not unreasonable for an assignment worth 50 percent of their final mark.

Evaluation continued to be a challenge. I used two rubrics designed for this assignment and gave the technical evaluation 15 percent of the final mark and the content 35 percent. This was done to stress the importance of the content over the technical tasks, just as you would in a text-based assignment. Some students felt that because they spent a lot of time learning the technical aspects of the assignment, technology should have a heavier weighting on the mark.

Innovative Technologies

I focused this research around two different technologies; tablet-based video production, and Cloud computing. I did this because both of these options are available to most teachers at little or no cost. Students were randomly selected to use one of the technologies to complete their assignment. Students used iPad mini tablets to shoot, write, edit and distribute the TV news-story, utilizing an app called Voddio, from Vericorder Inc. out of Kelowna, BC. This app is designed for online news reporters so it has all the functionality needed to complete the assignment. Some students felt the learning curve was a little steep to begin with, but once they had some time to work with the app they found it easy to complete the assignment. There were a few technical issues they also discovered but overall it was a positive experience as Abby
commented, “thankfully I got the iPad and so I got to work with what I liked best. Once I got editing it was nice that it was all on one device”.

The second technology researched was Cloud-based video production. This process used students’ own smartphones to record their video, then implemented an app on their phones to upload their footage to the Wevideo Cloud-based editing application. All the editing was completed on a desktop or laptop computer with a compatible Internet browser. Wevideo (www.wevideo.com) is a subscription-based program much like Dropbox or Google drive. The advantages to Cloud-based applications include no infrastructure or software maintenance fees and services are scalable and in many cases free to students and teachers. The students who used this production process enjoyed using their own devices but liked editing on a bigger screen, and Stephanie stated, “if you’re at an interview you don’t have to pack all this stuff with you, you have your phone anyways so I feel like it’s very convenient in that sense” while Kirstie commented:

“Wevideo is good because I, you have your little tiny iPod screen but then go home and put it on my 26-inch monitor and I can bring it up really big and everything is way easier to do with a mouse”.

When students from both groups discussed the advantages and disadvantages of the technologies they felt that neither was better or worse.

Future classroom use of structure and technologies

At the beginning of the semester students were given class time to complete surveys about their attitudes towards technology in education specifically using computers and video to measure any change in these attitudes over the course of the semester. Some of the questions saw a moderate increase in acceptance of video production in the classroom, but there was a
significant increase in confidence using video production (Figure 6) and teaching production skills (Figure 7).

Figure 6. Pre-test and post-test results on student comfort while editing video.
Even though the survey results suggest these participants are interested in using the technology (Figure 8), Hernández-Ramos (2007) has also shown this can be an unrealistic expectation as there are many other factors to consider. Many students identified limiting factors. For example, Kirstie’s interest in using video production in the classroom decreased significantly due to the fact she wanted to teach elementary school, and she felt this structure would not lend itself well to primary-grade students. Other students pointed to the time commitment of learning the technology as a concern, while others like Brooke felt that they would not make the video assignment mandatory because some students, “don’t really want to do something different, they want to make sure that they get a good grade because they want to get into a certain program at university or they need to get into a certain AP class”. Other participants felt that their future students would be more engaged in this kind of assignment.
because there is a broader online audience, not just their teacher. Dr. Robert Runte felt that even though some of the students were hesitant about using this technology in their future classrooms he felt “there’s at least half of them that will probably end up using this if there is an opportunity for them”.

**Figure 8.** Pre-test and post-test results on student interest in using video production in future.
Chapter Five: Conclusions & Recommendations for Further Research

There is evidence that for the vast majority of students, using the video production process increases engagement in their learning. But, as stated earlier, research has shown the consistent challenges to utilizing it in the classroom have been: a pedagogical format easy to assign and evaluate; accessibility to technology; and teacher training. How did this research project deal with those challenges?

Pedagogical Format

The introduction of the TV news story format was valuable to students. They appreciated a structure that was easy to understand and construct but there may need to be some room for variation or creative input from the learner. The assignment could be longer or shorter than two minutes depending on the number of students in the group or the purpose of the assignment. The format should be seen as a starting point, but teachers must be sure that any changes made to the assignment must also be accounted for in the marking rubric to ensure consistent evaluation of all assignments. Like any new pedagogical process, the first time a teacher uses this assignment, there will be more emphasis on the technology and format and less on the content. Subsequent uses will allow teachers to focus more on the content and less on the video production process. Students completed the news story assignment in 10 to 15 hours outside of the classroom, so teachers should be prepared for that.

As with other pedagogical strategies, the use of video production as a learning tool will not be equally effective with all students. Some students may have a preference for text-based assignments or are considered to be introverts. They may be more resistant to this process because they will be expected to step outside their comfort zone to complete the assignment. With these students, in particular, it is important to allow them extra time in the safety of the
classroom to practice the steps needed to complete the interview process. Once they start writing and editing they will be more comfortable with the assignment. It may also be advantageous to utilize those students in the class who have video production experience as Teacher assistants to help their classmates with the technical training. This will help teachers manage the classroom time more effectively. It may also be an opportunity to boost the self-esteem of those students who are not typically seen as academic leaders by their peers.

**Accessibility to technology**

In the past, availability of technology was an issue in the classroom. Tight budgets and availability of teachers willing to deal with complicated video cameras and editing software had all but eliminated this technology as a pedagogical option. Utilizing the student’s own smartphone or tablet could put that option back on the table. As students increase their use of personal technology outside the classroom, schools can benefit by looking at ways of increasing this application inside the classroom. Instructing students in college or university to use their own smartphones typically is not an issue, but working with K-12 students will be a different story. The policy for the use of personal devices in schools varies and could be managed at the administrator or board-office level, so teachers may not be permitted to use them in their classroom. There may also be challenges with smartphone compatibility with third-party applications like Wevideo that teachers may have to troubleshoot. As more school districts move toward utilizing tablet technology, iPads, paired with a video production application may be a good option to complete this assignment. It also makes it simpler for teachers to troubleshoot when all the technology for shooting and editing is on one device. Participants in this research found using their own smartphones to record interviews and b-roll very convenient. Those participants who used the supplied iPads to record and edit their story also found the
process very convenient. Although there were some technical issues with the tablet and Cloud-based technologies experienced, most were resolved by the students.

**Teacher Training**

This research demonstrated that pre-service teacher training in a university setting over a semester gave students the time and support to have success with the technology and pedagogical format. As stated earlier, integrating technology into the classroom will only be successful if the classroom teacher is comfortable with that technology and that will only happen once the teacher has had appropriate training. There are still many unanswered questions around teacher training, such as:

- Should it be delivered to pre-service teachers in university or as professional development to in-service teachers?
- Is it better to do a short intensive course over a few days, or spread it out over a semester?

Past research has been done using various approaches but no research has been done to compare the efficacy of the different training methods. This is an area of research that needs more investigation.
Chapter Six: Further Research

Pedagogical Format

This pedagogical format needs to be tested in a junior high and high school classroom to see if it is an effective technique for evaluating students’ understanding of content in different subject areas. The two-minute time limit may be adjusted, along with the marking rubric, to allow for options teachers may find useful like using larger groups of students doing more interviews or doing a profile on a person where an interview from an expert may not be appropriate. Students creating TV news stories on the environmental sciences or social justice areas would have easy access to people and places needed to complete the assignment. It would also be interesting to make the Frodo someone known to the students creating the video. Will they engage in the content more if they know someone affected by the issue being studied? Will they be more engaged in the community they are researching as a result of the assignment?

Accessibility to Technology

In the future, the video technology will be seamless with the content, just as computers are now with text-based presentation methods. Teachers now spend time instructing students in their early years how to use a word processor and then concentrate on how to structure a story or an argument using the rules of the English language. I would like to work with students who bring their own smartphone and tablet technology to the assignment so technology training is limited and I can spend more time working with the pedagogical format and video production techniques to develop engaging audio-visual content.

Teacher Training

The next step is to find out how beneficial it would be to work with two or three in-service teachers and use the same semester-long teaching methodology in their junior high or
high-school classroom. I would also like to develop an intensive course that takes place over a couple of weekends to see if that experience gives teachers enough support to integrate the technique into their classrooms.

**Limitations and Delimitations**

This research was focused on the training and experiences of senior education students in working with the video production process as a viable classroom activity and could be considered a train-the-trainer case study. One of the research questions asks if the students will adopt the technology into their future classrooms, but time did not permit me to ask them whether they did. That is material for another research project in the future. Another limitation is that this research will be used to build on a larger body of work looking at the efficacy of the video production process being used in secondary school classrooms, but I did not use secondary students as participants. As time constraints for the ethical review process were prohibitive, that will be considered for future research. Other researchers have worked with students in this age group but once again, further research with the TV news story format and mobile technology is warranted.

One criticism of the case study methodology is that the findings are typically not generalizable to a larger population base (Foster, 2004). This research looked at the implementation of a unique technological approach and template for utilizing video as a pedagogical tool. Findings may not be generalizable beyond this case study, but they will inform both teachers and teacher educators about options available to them in their classrooms.
Conclusion

In this research I set out to discover if the introduction of the TV news story format and emerging video technology will be effective in the classroom. I did this by asking what the benefits and challenges are of integrating a short TV news story format, while utilizing Cloud-based and tablet-based video production technology, for assigning and evaluating classroom projects. I was also interested in learning how effective the video production process is for increasing engagement in and retention of subject matter for senior education students, and what issues they will consider when deciding if they will integrate the video production process into their future classroom assignments.

This research has demonstrated the introduction of the TV news story template and the use of Cloud-based or tablet-based technologies increased the efficacy of video production as a pedagogical tool with our pre-service teachers. Utilization of students’ own technology like smartphones, tablets and laptops takes the pressure of managing video production equipment out of the hands of already stressed teachers and is in line with the “bring your own device” (BYOD) movement prevalent in many school districts. Schools that have a “no cellphone” policy may be able to use iPads, which many schools are now supplying for student use. The TV news story template is easy for teachers to administer, assign and evaluate, and students found connecting with people in their community more engaging than the solitary activity of writing a traditional paper.

This approach to experiential learning shows great promise and will lead to higher levels of student engagement in content from all subject areas. Teachers have a new model for encouraging students to engage in learning outside of the classroom. This process will give students opportunities to connect with their communities and have a practical, real-world
learning experience. Future case studies with different populations in different classroom settings utilizing action research methodology will contribute to a larger wealth of knowledge aimed at giving teachers practical technological and assessment tools to use in their classrooms.
References


   Educational Action Research, 11(1), 9-22.


**Appendix A**

**Video Rubric (Production: 15%)**

### Basic Video Production Technique Evaluation Rubric

| Names: | ________________________________ |

<table>
<thead>
<tr>
<th>Element</th>
<th>Value</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1 Planning &amp; Scripting</strong></td>
<td>Planning is evident in well structured product. Interview subjects relevant to the issue. Opposing (2) points of view are included. Story has clearly identifiable beginning, middle and end.</td>
<td>Some evidence that planning occurred. Interview subjects are somewhat relevant, but lack clarity or only one view point is presented.</td>
<td>Little or no evidence that planning occurred; or Interview subject(s) not relevant to the issue; or point of view is hard to determine</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2 Camera Function, Composition &amp; Framing</strong></td>
<td>Evidence that all camera functions are understood. Camera angles and placement are varied and add interest to the subject matter; subjects are framed appropriately according to all rules. At least one sequence shot is included.</td>
<td>Evidence that some camera functions are understood but problems exist with camera angles and placement; subjects may be too far away in some cases; subject placement follows rules of thirds; no or weak sequences</td>
<td>Camera functions are poorly understood. Problems exist with camera angles or placement; subjects are too far away; subject placement is awkward or does not follow rules of thirds; no sequences</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3 Editing</strong></td>
<td>Edits are clean, no black flashes and do not distract from the video; edits and are appropriate for the subject matter; text is readable, spelled and formatted correctly; dissolved in and out</td>
<td>Most edits are clean but some are out of place or are distracting; some shots don’t match narration; text is either not readable, not spelled and formatted correctly; or not dissolved in and out</td>
<td>Edits have black flashes, edits not appropriate for the narration and text not used.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>4 Sound</strong></td>
<td>Sound levels are consistent; speakers are easily understood; audio is synchronous with the video; Background sound is used effectively</td>
<td>Sound problems with one of: consistency of levels; clarity; audio synchronization with the video; no background sound</td>
<td>Sound problems with two or more of: consistency of levels, clarity; audio synchronization with the video; no background sound</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>5 Delivery</strong></td>
<td>Evidence that compression processes are understood. File is appropriately sized for the chosen delivery method.</td>
<td>Evidence that compression processes are understood but file is too large or too small for the chosen delivery method.</td>
<td>file is not compressed; or evidence that compression processes are not understood</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments**

This rubric represents 15% of the course grade

**Total:** /15
# Video Rubric (Content: 35%)

<table>
<thead>
<tr>
<th>Value Element</th>
<th>3 Excellent</th>
<th>2 Satisfactory</th>
<th>1 Needs Improvement</th>
<th>Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course-relevant issue identified, and its relevance to education defined</td>
<td>A significant, timely issue is clearly and accurately defined; audience is alerted to a trend, innovation, or issue with which they were likely unfamiliar; the significance of the issue for education is clearly laid out</td>
<td>An issue is identified but may not be completely and clearly defined; or not entirely timely / new to audience; or the connection to education remains tenuous</td>
<td>An emergent technology or trend is identified, but presented as either unproblematic or inevitable (i.e., reporter succumbs to technological determinism)</td>
<td>X2/6</td>
</tr>
<tr>
<td>Relevant stakeholders identified; more than one viewpoint represented</td>
<td>Differing viewpoints of at least two key stakeholders are fairly represented; commentary makes clear what is at stake</td>
<td>Relevant stakeholders are identified, but stakes may be unclear; or one viewpoint may be given unfair emphasis; or chosen stakeholders may not be most crucial ones</td>
<td>Relevant stakeholders are not identified; or only one viewpoint is represented; or a position is misrepresented</td>
<td>X2/6</td>
</tr>
<tr>
<td>Critical analysis, synthesis, interpretation or evaluation</td>
<td>Analysis, synthesis and evaluation of course-relevant information demonstrates critical thinking</td>
<td>Incorporates appropriate analysis, synthesis, interpretation or evaluation</td>
<td>Analysis and synthesis are logically flawed or inappropriate; or there is reliance on assertion; or the relevance of supporting detail is questionable</td>
<td>X1/3</td>
</tr>
<tr>
<td>Position is taken</td>
<td>A thoughtful statement of position is presented clearly identifying what is at stake if action is or is not taken on the issue</td>
<td>an obvious position is adopted and but may miss deeper implications of the issue</td>
<td>position is not taken, is hard to determine, or is inconsistent with arguments or information presented</td>
<td>X2/6</td>
</tr>
<tr>
<td>originality</td>
<td>Originality, insight, and creativity are demonstrated; the video goes beyond repeating what others have said and contributes something new to our understanding of the topic</td>
<td>A summary of information from variety of sources provides a useful synthesis</td>
<td>An over-reliance on material presented in class or in the assigned readings or predigested from one other source</td>
<td>X2/6</td>
</tr>
<tr>
<td>concise</td>
<td>Video is under 2 minutes; there are no wasted moments in the video;</td>
<td>Video is two minutes or slightly over;</td>
<td>Video is significantly over 2 minutes; or video is too short to accomplish its minimum goals; content is often off point, or</td>
<td>X2/6</td>
</tr>
<tr>
<td>assignment evaluation</td>
<td>Completed</td>
<td></td>
<td>not completed</td>
<td>/2</td>
</tr>
<tr>
<td>Comments</td>
<td>This rubric represents 35% of the course grade</td>
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<td></td>
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</tr>
<tr>
<td>Total:</td>
<td></td>
<td></td>
<td></td>
<td>/35</td>
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</table>
Video Production as a Pedagogical Tool

Video has long been use in the classroom as a teaching tool, but it is a passive non-interactive experience, much like reading a book. Students may retain information from that book, but it is when they synthesize that, and other information in a written paper that the learning happens. The same is true for video. The real learning happens not from watching videos, but from creating them. This research is about utilizing the video production process as a pedagogical tool for the classroom. My name is George Gallant and this research project is part of the requirement for a MA in Learning and Technology at Royal Roads University. In addition to being able to contact the researchers at the above phone numbers, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Chair of the Faculty of Education Human Subjects Research Committee at the University of Lethbridge.

This document constitutes an agreement to participate in my research project, the objective of which is find new pedagogical formats for video production to be easily used in the classroom. It is the classroom teacher that makes decisions about teaching strategy and technology integration into curriculum so acquiring the perspective of in-service and pre-service teachers is paramount to answering the following research questions:

Main Question:

What are the benefits and challenges of integrating a short TV news story format, while utilizing cloud-based or tablet-based video production technology, for assigning and evaluating classroom projects?

Sub Questions:

1. How effective is the video production process for increasing engagement in and retention of subject matter for senior education students?

2. After being involved in this case study, what issues will senior education students consider when deciding if they will integrate the video production process into their future classroom assignments?

The primary outcome of this research to discover if the news story format will make it practical for teachers to assign and evaluate assignments from any subject area using video production as the presentation tool. I will submit my final report, which will include a one-hour documentary, to Royal Roads University in partial fulfillment for a master's degree. I also intend to share a short promotional/educational video of this research experience with teachers and teacher educator to incite other teachers to utilize the process in their classrooms and encourage more research in this area of study.
The researcher will be responsible for instructing participants in video production techniques and for grading technical areas of the final assignment. The ED 4391 course you are currently enrolled in will be delivered to you whether or not you consent to being part of this research project. You are not compelled to participate in this research project as part of the course. The researcher will not know who has or has not consented to being a participant until the completion of the course, as this information will be managed by the course’s primary instructor Dr. Robert Runte. The researcher will not be present during the focus groups or have access to any of the research data until after the Dean of Education has posted student’s final marks.

Participation in this research is completely voluntary. If you decide to participate, you may withdraw at any time by submitting your request to withdraw in writing to Dr. Runte until December 15, 2013 without any consequences or any explanation. If you do withdraw from the study, your data will not be retained or used in the analysis.

The research will take place in November and December of 2013 during the fall semester of Education 4391. Activities will consist of 6 short online surveys; two video recorded focus groups; video taping of classroom activities around the video production process. You will be seen on screen and will be titled during your interviews by your first name only, and if you wish to use an alias, please indicate below. The questions will refer to your knowledge of video production in the classroom and your experiences with it in this course. Information will be recorded through online surveys and on video and, where appropriate, summarized in the body of the final report and one-hour documentary. Online survey data may be housed on a U.S. server and subject to the laws of the U.S. and the Patriot Act.

A copy of the thesis document and the documentary on DVD and a private Youtube channel will be made available to participants. Survey data, raw digital media and focus group transcriptions will be held in the researchers office on a password protected hard drive for five years from the completion of the thesis. This data may be utilized in related research within that five year time period if given consent for use from participants. All raw video and audio data will be destroyed, written notes will be shredded and the edited videos will be archived with Royal Roads University five years after the completion of the thesis.

By signing this letter, you give free and informed consent to be videotaped and participate in this project.
### Appendix C

#### Data gathering schedule and instruments

<table>
<thead>
<tr>
<th>Event</th>
<th>Instrument</th>
<th>Stage (research start week 4 of course)</th>
<th>Qual/Quant</th>
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<td>Vark test</td>
<td>On-line survey</td>
<td>Week 4</td>
<td>Quantitative</td>
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<tr>
<td></td>
<td><a href="#">www.vark-learn.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demographics</td>
<td>On-line survey</td>
<td>Week 4</td>
<td>Quantitative</td>
</tr>
<tr>
<td>Pre-test</td>
<td>On-line survey</td>
<td>Week 4</td>
<td>Quantitative</td>
</tr>
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<td>Assignment</td>
<td>Online survey and</td>
<td>Week 5</td>
<td>Quantitative</td>
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<td></td>
<td>assignment reflection</td>
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<td>Engagement survey 1</td>
<td>assignment reflection</td>
<td>After completing written assignment</td>
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</tr>
<tr>
<td>Assignment</td>
<td>Online survey and</td>
<td>Week 8</td>
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<tr>
<td></td>
<td>assignment reflection</td>
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<tr>
<td>Engagement survey 2</td>
<td>assignment reflection</td>
<td>After completing classroom presentation assignment</td>
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<tr>
<td>Focus group 1</td>
<td>Group interview</td>
<td>Week 10</td>
<td>Qualitative</td>
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<tr>
<td></td>
<td></td>
<td>After photography phase is completed</td>
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<tr>
<td>Assignment</td>
<td>Online survey and</td>
<td>Week 12</td>
<td>Quantitative</td>
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<td></td>
<td>assignment reflection</td>
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<td>Engagement survey 3</td>
<td>assignment reflection</td>
<td>After editing phase is completed, before they present video to the class</td>
<td>Qualitative</td>
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<tr>
<td>Focus group 2</td>
<td>Group interview</td>
<td>Week 13</td>
<td>Qualitative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After videos are presented to the class</td>
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<tr>
<td>Post-test</td>
<td>On-line survey</td>
<td>Week 13</td>
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<td>Researcher observations</td>
<td>Field notes and video recording activities</td>
<td>Throughout the course</td>
<td>Qualitative</td>
</tr>
<tr>
<td>Student video news stories</td>
<td>Evaluation rubric</td>
<td>After course is completed</td>
<td>Quantitative</td>
</tr>
</tbody>
</table>
Appendix D

Demographic information

Age

• Under 25

• Over 25

Gender

• Male

• Female

Why did you select this course?

• University requirement

• University elective

• General education

• Other ________________________________

What is the highest level of pre-service practicum you have completed?

• PS1

• PS2

• PS3

• N/A

Do you already have a post-secondary credential (degree, diploma, certificate)?

• Yes, please specify ________________________________

• No
Appendix E

Pre-test Post-test

Please respond the following statements based on this six point scale

1 strongly disagree
2 disagree
3 somewhat disagree
4 somewhat agree
5 agree
6 strongly agree

1. I enjoy watching videos online
2. I am comfortable working with personal or professional video cameras
3. I am comfortable with computers and tablet technology
4. I am comfortable editing video with computer software or tablet apps
5. I am confident I can teach these new computer editing skills
6. I feel that computers are an essential tool in the classroom
7. I am interested in integrating video production into my classroom
Appendix F

Level of Engagement

On a scale of 1 to 6, how would you rate your level of engagement in this assignment?

- **Authentic Engagement.** This assignment engaged me because the result or product has meaning and value for me.

- **Ritual Engagement.** This assignment has little inherent or direct value for me, but the outcomes or results may have value in a later assignment.

- **Passive Compliance.** This assignment will be done to avoid negative consequences, but I see little meaning or value in the assignment itself.

<table>
<thead>
<tr>
<th>Passive Compliance</th>
<th>Ritual Engagement</th>
<th>Authentic Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Students will also write a reflective paragraph (max 200 words) on the value of this kind of assignment, and if they would include it in their future teaching strategy.
Appendix G

Focus Group Questions

Stage 2 Production: Students will have used camera technology to shoot interviews with subjects and footage of the issue they are researching.

Interview questions:

1. What were the biggest technical challenges you had to overcome?

2. Was the classroom instruction sufficient to equip you for the production stage?

3. How effective are the online tutorials in supporting your learning?

4. Do you feel you retained information learned in stage one to support stage two?

5. Were your interview subjects helpful in completing your tasks?

6. How was involving people (interview subjects) in your assignment affecting it?

7. How did the logistics and shooting schedule work for you?

Stage 3 Post-production: Students will have written their script based on the recorded interviews, recorded the narration and edited together their story.

Interview questions:

1. How effective is the template in guiding story structure?

2. What editing challenges did you experience?

3. How effective are the online tutorials in supporting your learning?

4. Do you feel you retained information learned in stage two to support stage three?

5. How do you feel about posting your assignment on YouTube?