DEVELOPING A LEARNING MODEL FOR TEACHING
FILM PRODUCTION ONLINE

by

Eva Ziemsen

B.F.A. (Hon.), York University, 2003
M.A., Goldsmiths College, University of London, 2004

A THESIS TO BE SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

in

The Faculty of Graduate and Postdoctoral Studies
(Interdisciplinary Studies)

THE UNIVERSITY OF BRITISH COLUMBIA
(Vancouver)
December 2017

© Eva Ziemsen, 2017
Abstract

Through my roles as a film professor, filmmaker and PhD student, I have acquired a strong motivation to develop a learning model for the teaching of film production online. My initial interest for conducting research in this area began a few years ago when I taught a screenwriting workshop in Bhutan. On my return to Canada, I wished there was a way for me to continue teaching my students in Bhutan in the domain of film production. Further research has led me to discover that machinima, a virtual mode of recording animation, could be the solution to teaching almost all aspects of filmmaking, entirely online. Machinima is already very popular amongst educators, both face-to-face and as an online mode of delivery, however, its legitimacy as a cinematic art form has given rise to a controversial debate. My goal was to employ the research method of a/r/tography (standing for artist, researcher, and teacher), to create a complex artistic and academic work to demonstrate that machinima is a valid method of filmmaking and is an immersive mode of teaching film production in the online context. The Art entailed creating a short hybrid film using machinima and live action, entitled, Romeo & Juliette2016. The Research included a literature review that situated my work in the theory that underpins machinima as an art form and in the context of online learning. The Teacher component included a documentary in which I exhibited my film to select ‘critics’, in film, media and film education, and invited them to respond. The documentary was intended to produce discourse around the notion of machinima as an art form and as a teaching tool. Finally, in conclusion, I wrote a response chapter to this interaction and to the project as a whole. This study is highly relevant in the current landscape of media and 21st century education as virtual reality applications are taking hold.
in the professional filmmaking process and as a teaching tool, and machinima is part of this revolution.
Lay Summary

This dissertation aims to demonstrate how it is possible to make films in a virtual world and how it is possible to teach filmmaking virtually and online. The research method used in approaching this topic is called a/r/tography and represents the PhD student’s unique position of being an artist, a researcher and a teacher. A literature review positions the research in existing theory. The production of a short film entitled, Romeo & Juliette16, which combines the conventional ‘live action’ filming method and the innovative method of ‘machinima’, which involves shooting a film in a virtual world, aims to provide an artistic example of the possibilities of filming in a virtual world. The film was shown to a group of professionals with media, film production and film education backgrounds with the intention to enter into discourse about the affordances of machinima as a tool for filmmaking and online film education.
Preface

This dissertation, which focuses on “Developing a Learning Model for Teaching Film Production Online,” was designed and executed in continuous consultation, over several years, with my supervisory committee, which includes Dr. Tom Sork, Dr. Carl Leggo and Dr. Sandrine Han.

The prologue is written in the form of a personal narrative introduction, to introduce myself as an artist, researcher and teacher, an a/r/tographer. This passage illuminates my initial and global motivation for embarking on this research journey and describes how my research will contribute in the areas of film production and film education in the online context.

I conducted a comprehensive literature review that situated my work in a theoretical framework, focusing on three areas: my research method of a/r/tography, film and machinima production theory, and online educational theory. Throughout this phase, I sought advice from my entire advisory committee and specifically Dr. Carl Leggo regarding the research method of a/r/tography.

The central focus of this dissertation was the production of a 17-minute short film entitled, *Romeo & Juliette16*, which was shot on location in Tokyo, Toronto and in the virtual world of Second Life. The film is considered to be a hybrid film of live-action footage and machinima, which entailed filming by way of screen-capture in Second Life. I was the writer, director and producer of this film and oversaw all phases of production, including development, pre-production, production, post-production, distribution and exhibition. I consulted with a member of my supervisory committee, Dr. Sandrine Han, who advised me in various areas of machinima production. The production of this film followed both the
standard modes of live-action film production and also the innovative and still evolving process of producing machinima.

Following the production phase of the film, *Romeo & Juliette 16*, I applied to the Behavioural Research Ethics Board at the University of British Columbia, and with the extensive guidance of my supervisor, Dr. Tom Sork, my study obtained approval to conduct the second portion of my research process, a documentary. The approval certificate number is: H16-01855. The documentary involved interviewing a group of experts/critics with backgrounds in media, film production and film education after they had viewed the film, *Romeo & Juliette 16*. The interviews conducted sought to gain their perspective on the potential affordances of using machinima as a filmmaking tool and as a tool for teaching filmmaking online. The documentary is 85 minutes in length and is both a ‘making-of’ documentary featuring myself, the filmmaker of *Romeo & Juliette 16*, and the four interviewees, culminating in a work that showcases the detailed breakdown of the production and a discussion of varying perspectives on the potential uses of machinima in film production and education.

In addition to the two film works, I also produced a course outline for a hypothetical course in Machinima Production, a collaboration involving the Bachelor of Media Arts, Animation Major at Emily Carr University of Art + Design, the Bachelor of Fine Arts, Production Program and the Master of Fine Arts, Creative Writing at the University of British Columbia.

My supervisory committee strongly encouraged reflection on the feedback of my work by the interviewees of my documentary. In the concluding chapter, I revisited my initial research goals and discussed the results of my literature review, the production of my
two films, and I provided an in-depth response to the reactions of my documentary interviewees to my film production, *Romeo & Juliette16*, as well as on their feedback on the potential affordances of using machinima as a filmmaking method and a tool for teaching film production online.
# Table of Contents

Abstract ................................................................................................................................. ii

Lay Summary .......................................................................................................................... iv

Preface ..................................................................................................................................... v

Table of Contents .................................................................................................................... vii

List of Films ................................................................................................................................... ix

Acknowledgements ................................................................................................................... x

Dedication ................................................................................................................................. xii

1. Prologue .............................................................................................................................. 1

2. Literature Review .................................................................................................................. 13
   2.1 Review of the research method, A/r/tography ................................................................. 13
   2.2. Situating Machinima in Film Production Theory .......................................................... 21
   2.3 Situating Machinima in Online Educational Theory ......................................................... 55

3. Romeo & Juliette ................................................................................................................... 65

4. ‘Making-of’ a Machinima Film ............................................................................................ 66

5. Conclusion ........................................................................................................................... 67

References ................................................................................................................................. 84

Appendix A Sample Machinima Course Outline .................................................................... 91

Appendix B Synopsis and Screenplay ..................................................................................... 106
List of Films

*Romeo & Juliette16*, short film, 17 min 39 seconds, 2017

‘Making-of’ a Machinima Film, documentary, 85 minutes 13 seconds, 2017
Acknowledgements

I offer my sincere and utmost gratitude to my supervisory committee. Foremost, my main supervisors, Dr. Tom Sork and Dr. Carl Leggo, have guided me from the very beginning of a five-year long journey. Thank you to Dr. Tom Sork for always helping me navigate the academic landscape of pursuing doctoral work at UBC and for supporting my vision for this research. Thank you to Dr. Carl Leggo for introducing me to a research method that honoured who I am at my core, a/r/tography, and for inspiring and encouraging me to express myself creatively. I am also deeply indebted to my supervisor Dr. Sandrine Han, specifically for guiding me in incorporating the innovative and distinguishing aspect of my dissertation film, machinima. Together, these supervisors taught me what truly great mentorship is, so much so, that every time I spoke with them, I immediately felt not only better about the work I was doing, but profoundly inspired to work diligently to produce a meaningful body of research and art. I know I was extremely fortunate to have supervisors who were so supportive at every milestone of this enduring and rewarding journey.

I would like to thank Dr. Tony Bates and Peggy Thompson for joining my supervisory committee for a period of time. I am indebted to Dr. Tony Bates for his mentorship and insight in online education theory.

I am thankful to my home department, the Interdisciplinary Studies Graduate Program (ISGP) and specifically Dr. Hillel Goelman, who admitted me to this program which has taught me invaluable lessons about myself as an artist, researcher and teacher. I am indebted to him for support in terms of academic guidance and my student wellbeing. I am also grateful to ISGP for the financial support in the form of grants that I was afforded.
I am indebted to all the film crew collaborators and volunteers on my production, *Romeo & Juliette* and all the participants in the documentary, without whom I would not have been able to produce the final product. There is a long list of extremely generous and talented collaborators acknowledged in the credits of the films, all of whom I will never forget.

I thank my family, friends, and academic colleagues, all of whom offered words of support and encouragement, theoretical discussion, logistical support and cups of coffee throughout this journey.
Dedication

To my daughter, Eden Rose. You were my motivation all along.
1. Prologue

My family immigrated to Canada when I was seven years old and since then I have often felt that I do not completely fit in. Back then I was not entirely Canadian, but yet, I was not fully European either. I did not have a clear-cut identity. The core premise of the famous British TV series, *The Up Series*, is that a person’s character is formed by the age of seven (Apted, 1964). This rang true for me and what was clear is that my identity struggle has shaped who I am and what I have become. The events of my childhood lead me to become a film director. Even before I could understand English, I understood the language of cinema. Films became very important to me as they transcended language and had other dimensions of storytelling that I was drawn to—the visual and the auditory. By the age of eight, I knew I wanted to become a film director.

“Cut to” the present day. I am a filmmaker, a PhD student and a College Film Production Professor (as well as a Program Co-Coordinator). If I was asked which of these roles described me most completely, I would be hard pressed to pick one, in the same way that I had difficulty picking an identity as an immigrant child. My identity search is a continuous and pervasive one such that it has become part of the work that I explore and the way in which I approach my life’s callings. Moments of clarity in life can be rare, the sense that all which has been done, has been done for a reason. Quite fittingly, I had such a moment of clarity in a place that imbues enlightenment, in the recently established democracy and former Kingdom of Bhutan. I was a visiting lecturer there, teaching a two-week intensive course on screenwriting to students of what was then a fledgling film industry. As I sat upon my wooden throne at the graduation ceremony for the course, which was attended by the Minister of Education, the administration and my students, I felt that all
areas of my professional life had aligned in this pinnacle moment in a way that they had never before. In that profound instant, I realized that I was meant to be a teacher and a filmmaker.

For a time, I believed that I had become a teacher in order to financially supplement my filmmaking income. Although I had always been naturally drawn to teaching and from an early age (I created a workshop as an 18-year-old), I did not consider it to be my primary calling. I felt that I always knew I was destined to make films, however, all my training and experience as a teacher came into play in a way that I had never expected in my lifetime. I felt privileged to have been given the drive, the passion and the ability to teach and that it matched my drive, passion, and ability to make films. These two facets had become inseparable callings, side by side. This kind of realization brought about a deep sense of peace and assured feelings of completeness.

My experience in Bhutan prompted me to pursue a PhD in Film and Education. The motivation for my PhD originated from my desire to continue to teach my students in Bhutan after my departure. While I was able to stay in touch with the students through social media and email, this was informal. I believed that in the age of the Internet and global citizenship, it should be feasible to teach anything online, which led me to develop a vision for teaching filmmaking in the online context. Specifically, my dissertation is entitled “Developing a Learning Model for Teaching Film Production Online.” The meaning of the word ‘model’ in the context of this dissertation is in accordance with the following Oxford English Dictionary definition, an “…idealized description or conception of a particular system…or process” (OED, 2017, para. 8a), and also, “…a work, that is proposed or adopted for imitation; an exemplar” (OED, 2017, para. 10). The proposed model is represented through various
components of the dissertation, including the sample curriculum in the form of a ‘Machinima Online Course Outline’, the exemplary film, *Romeo & Juliette16*, the educational documentary, *The Making-of a Machinima Film Documentary*, as well as the content of a comprehensive literature review. The dissertation proposes that the image-capture technique called “machinima” is an effective mode of artistic creation to employ toward the goal of delivering a curriculum of film production in the online context.

During my studies and through the guidance of my supervisors, I came upon the concept of a/r/tography. This led to yet another moment of realization. I felt that I would fit this three-part model and that it would be a perfect fit for me. I was, after all, an artist, a researcher and a teacher - an a/r/tographer. The surprise and joy I experienced on delving further into and reading more about this concept was cathartic and it was as if I was reading something written about who I was at my very core. The use of a/r/tography as my framework has given me permission to be myself and use all aspects of who and what I am, in the pursuit of my doctoral work.

In my work as an artist and specifically as a filmmaker, I have often employed unorthodox creative tools or modes in order to tell a story. For example, I created a film entitled, *Child of Chernobyl*, in which I used stop-motion animation to tell the story of a child’s perspective of the aftermath of the Chernobyl nuclear disaster (Ziemsen, 2002). I have rebelled against the limitations of filmmaking and agree with the underlying message of the film manifesto, “Dogme95” (1995), which was initiated by filmmakers, Lars von Trier and Thomas Vinterberg in 1995. This sought to release filmmakers from the larger constraints of cinema by way of creating a set of 10 rules for filmmaking. Ironically, having more limitations can be liberating and proved to be an effective tool for creative innovation. I
was so inspired by these rules that I created my own set of rules, in my case, rules for making truthful documentaries. One of my invented rules was, “in order to have truth in a documentary, everyone must be naked.” I applied this rule in the production of my film, *A Conversation with Lars von Trier*, in which I offered to be naked if granted permission to conduct an interview with the notoriously reclusive filmmaker. He agreed to be interviewed and although there was no physical nudity in the production, the experiment of imposing a rule to achieve something unique was a success. I was interviewed by the Globe and Mail and received a full front cover of the Arts/Review section (McDonald, 2005), which is the kind of press coverage that a short filmmaker could normally only dream of. My inspiration for this film was the movement of Dogme95, but also the film *The Five Obstructions* (2003). The theme of this movement and this film serve to demonstrate that an obstacle is an opportunity for creative growth, which is of such significance that it elevates and changes the resulting work in a way that it would not have, had there been no obstacle in the first place.

Throughout my years of working in film, I developed my own manifesto. The most important rules of this manifesto, which I believe are the keys to making a true work of art, are that ‘form must equal content’ and that ‘the personal is universal’. The former tenet deeply influences my inclination to embrace machinima, a virtual mode of filmmaking, as I believe I have endeavoured to write a story that lends itself to this new medium. Specifically, I have loosely adapted the well-known classic love story of William Shakespeare’s, *Romeo and Juliet*, from its original theatrical rendition and forced its characters to venture into the new world of virtual reality, by way of a love story between two high-tech teenagers. By creating a hybrid film, I rendered the use of machinima essential to the narrative. The story
calls for the medium very clearly and could not be told in any other way. When the story and form are inseparable, I can rest assured I have achieved my goal as an artist.

Artistic ability comprises only half of what a filmmaker must master. The logistical and business side of filmmaking is equally important. The financing aspect is at the crux of the limitations of most artists, but especially filmmakers, since films require expensive locations, feeding of crews and actors, insurance and set dressing. Machinima provides a method to execute big visions without having to wait for years for financing. In my dissertation, I embraced the affordances of the lower-resolution (by filmmaking standards) of the virtual environment of Second Life, as my story demands this aesthetic. Some filmmakers would only consider machinima as a method of pre-visualization at this stage, but in time, it will be possible to essentially film machinima at an aesthetic level that will be equal or greater to regular ‘live-action’ filmmaking. We are currently in a state of exponential technological growth, especially in the area of virtual reality and machinima is part of this larger area of innovation. “Virtual Reality has been addressed by a large number of authors in the literature for decades, many of them introducing slightly different meanings to the term” (Fällman, Backman, & Holmlund, 1999, p.2), which gave rise to a variety of differing terms. At a basic level, “VR should be looked upon as a situation where a person immersed into a computer-generated environment that bore strong similarities with reality” (Keppell et al., 1997 as cited in Fällman, Backman, & Holmlund, 1999, p.2). Various companies are already offering technology whereby you can capture a real location, create a very ‘real’ VR replica and place actors within it (Robertson, 2015) and it is just a matter of time before this functionality is feasible using consumer grade products. For example, Mark Zuckerberg created the Oculus Story Studio to make films using the technology and they
recently won their first Emmy for the film, *Henry*, which was made using (and for) Oculus Rift (2016). In this dissertation, I focused on machinima, which is the process of capturing a virtual reality environment in order to make films, however, I am cognizant of the fact that by the time my dissertation is a year old, many aspects of my chosen medium may well be dated or even obsolete. In a technological world where nothing is certain and change is guaranteed, being a producer who is flexible and adapts to new workflows is part of the new business protocol. Changing technical capabilities will impact on budgets tremendously, and in my case machinima currently offers a significantly cheaper workflow.

In most film production education programs, students learn to perform almost all the roles of production at some point in their curriculum. This is so that they gain an understanding and respect of the perspective, needs, and demands of the various roles. In order to accurately and appropriately adapt crew roles to the virtual world, it is critical to have an in-depth and first-hand understanding of the roles in the ‘real world’. Through my broad education and filmmaking experience, I have been involved in almost all the different roles in film production including, writer, director, producer, story editor, casting director, 1st Assistant Director, production coordinator, location scout, director of photography, camera operator, animator, boom operator, sound recordist, editor, producer's assistant, assistant to talent, 3rd Assistant director, production assistant, driver and craft services/caterer. Understanding the requirements and contributions of these roles on a physical film set allows me to determine how to adapt each role virtually, combine roles or eliminate roles all together.

As a creative filmmaker, I have honed the skill of ‘problem-solving,’ which, one can argue, in essence, is all that comprises the process of filmmaking. On every film that I have
made, I have spent hundreds of hours on the planning and editing phases. Some films took years to make, for example, for my film, *Yahrzeit*, the footage was collected over a span of 16 years since I filmed part of it when I was 16, more in my twenties and did not complete the edit until I was 32. Having made a machinima video presentation for a group project as part of my PhD course work, I employed all filmmaking (and trouble-shooting) skills I possessed in order to produce what was my first machinima film with a team of non-filmmakers. I discovered that machinima is in no way easier than regular filmmaking, but it is significantly less expensive and has different creative and logistical affordances that affect almost all the filmmaking roles. My directorial filmography is varied in genre, format, and stylistic treatment and includes: *Yahrzeit* (Experimental Documentary, DV, 2012), *A Little Global Citizenship Goes a Long Way* (Documentary, HDV, 2009), *A Conversation with Lars von Trier* (Documentary, DV, 2005), *Mama & Papa* (Drama, 16mm, 2001), *Child of Chernobyl* (Animation/Experimental Doc, Super8mm, 2001), *One on One With Robert Forster* (Interview, DV, 2003), *The Empress Wears No Clothes* (Documentary, DV, 2002), *Captured* (Drama, DV, 2003) *Fortune* (Drama, DV, 2001), and *Air Cadet* (Documentary, Super8mm, 1999). I have developed several feature films to complete package stage, *Sara's Peace* (Magical Realist/Personal Epic), *Cuba Libre—the Revolution of Love* (Romantic Comedy), *I Remember Ladispoli* (Documentary), *Mitzfit* (Romantic Dramedy). I was the Co-Executive Producer of the feature film, *Reign* (Drama, 2015), and have supervised countless student productions. I drew upon my breadth of experience with differing genres and formats, when engaging in this study of machinima’s affordances as a mode of virtual filmmaking.
I am fortunate to have discovered a complementary career, being a film professor, which I consider a calling of equal fervour to being a filmmaker. Early in my career, I learned that the highest level of teaching is the kind that *inspires* students. Simply conveying content is far below the bar of what truly meaningful teaching entails. In achieving a level of authentic teaching that inspires, I have found it is important to reveal my own film experience in my lessons as much as possible. Having previously presented the concept of machinima to a group of highly unreceptive students, I quickly realized that I would need to demonstrate this approach by way of example. I aimed to create a film that will demonstrate the potential of the medium and also its potential as a preparatory medium, if used for pre-visualization.

Having taught at the post-secondary level for 11 years full time in a polytechnic setting, I have tailored my teaching approach to the learning styles of my students, the majority of which are active learners who ‘learn by doing.’ I used the theory of constructivism and constructionism to argue that machinima is an engaging and effective teaching tool, since it provides highly experiential learning opportunities in the online context. I have written the majority of the content for the Advanced Filmmaking certificate program at Fanshawe College, including scriptwriting, creative resourcing, Business of Media, Marketing and Distribution, Directing and Production. At Humber College, I led the development of a fully online Multi-Platform Storytelling for Creative Producers and Screenwriters program in the School of Media Studies and Information Technology. The project began with an idea from the college’s administration and was quickly put into motion. I was responsible for securing advisory board members from the relevant industries, an instructional designer, content experts, liaising with internal development, administration,
a computer programmer/designer and the Centre for Teaching and Learning. I helped prepare applications for the Ministry of Education and ensured delivery of all materials to the successor lead, the program coordinator, who continued further development and marketing.

I have been the program co-coordinator of a large film program, Film & Television Production, for eight years. In this role, I often encounter students with significant financial limitations. While some students have wealthy parents who pay for both tuition and production fees, many do not, and while I teach in a publicly subsidized college, students struggle to pay for the increasing costs of education. Film education invariably incurs more costs than an accounting program, due to the nature of film production. Arguably, film production is the most expensive art form there is. Therefore, finding a more democratic/inclusive option for learning film production is a priority of mine. The issue of finance only worsens upon graduation, since graduates are no longer covered under the institution’s insurance plan, nor do they have access to equipment or unionized actors under the umbrella of the ACTRA/Institution Student Agreement. In addition, their peers, who were academically obligated to work on their shoot while in training (and even contribute financially) could have jobs that would now conflict with the shoot schedule and the new graduates are often burdened with student debt. The costs of filmmaking are staggering and increase tenfold once one leaves school. For many, it is debilitating and they will delay making any further films post graduation for several years due to the financial limitations. I was one such film graduate.

Securing financing post graduation is challenging for professional-level short films, but nearly impossible for feature films, due to the classic ‘catch twenty-two’ scenario, whereby one needs feature experience in order to get financing, but one is unable to gain
feature experience without funding. I had a feature film that I had pitched extensively and for which I had even secured esteemed international partners, but was unsuccessful in finding funding in Canada due to the fact that most funding applications require a prior feature film credit. This was a very defeating conundrum and had I had the tool of machinima introduced to me in film school, when I had all the energy and drive to do whatever it took, I would have gone ahead and created a work that would at the very least have showcased what I wanted the film to be. There may some be would-be students, who may not even have the means to attend film school. For example, my students in Bhutan, who did not have access to a film school or continuing education beyond the brief workshop I taught, would have been eager to embrace a medium in which they could express themselves, a medium closely related to actual film. Perhaps, if taught correctly, the students would have embraced the medium as its own artistic medium (not just a replacement for live action), and pushed the envelope of the medium, proving the validity of the proverb that states, “necessity is the mother of invention.”

Having attempted to present machinima to my own college-level film students, I discovered their poor impression of machinima. This aversion is in part due to the fact that they have viewed much machinima via the Internet made by gamers, which almost always lacks the level of narrative structure and finesse in dialogue that film requires. Their immediate rejection may also be due to their inability or immaturity in perceiving the creative possibilities of machinima. I believe providing students with convincing, well-executed and critically acclaimed examples of machinima combined with endorsements and discourse by well-established filmmakers, will be necessary in attracting and inspiring the new generation of filmmakers to use machinima as a core component of their projects.
I have been a student for most of my adult life. I completed a Bachelor of Fine Arts in Film & Video Production (Honours) at York University, where I focused on film production and screenwriting. Having a foundational grounding in film theory and film history provides me with substantial context for the status of film today. My study of film theory included formal analysis—cinematography, sound, mise-en-scène, continuity, direction, acting, picture and sound editing, composition, as well as, narrative content, including structure, plot, theme, character, and genre. Other course subjects included the documentary, ethics of filmmaking, women and film, Canadian cinema, Hollywood, scriptwriting (theory and practice), production management, and production. I often used my academic platform to travel and also to produce work internationally. For example, I participated in an exchange program in Australia, where I was exposed to different viewpoints and a slightly different film culture, and also produced a film entitled, Captured. During my Master's of Arts in Feature Film Development at Goldsmiths College, University of London, England, I studied the theory and practice of film development and re-wrote a feature-length screenplay, Sara's Peace, three times and completed a full feature film package, including a final draft screenplay, marketing plan, budget, schedule, cast, and crew rationales, director's treatment, pitches, one-sheet, and director reel. While in England, I flew to Denmark to make my short film, A Conversation with Lars von Trier. I also pitched my feature film at the Berlin and Cannes International Film Festivals and secured international partners. I have developed two research proposals for PhD’s. First I was accepted at Ryerson University for a dissertation proposal entitled, "Business Models for Financially Viable Feature Films in English Canada,” however, I soon realized this was not a subject matter that I was truly passionate about and I left within the first year. While there, I completed a PhD level course on
Research Methods. With newfound inspiration years later, I applied at UBC with a preliminary dissertation proposal to, "Develop a Learning Model for Teaching Film Production Online." This is the subject matter I am currently entrenched in, one which I am increasingly interested in and my studies have led me to reach much deeper realizations about what kind of researcher I am—and that I am an a/r/tographer.

The mentorship and guidance of my immediate committee supervisors, Dr. Tom Sork and Dr. Carl Leggo, has led me to fully embrace the research method of a/r/tography, which harnesses my experience and ability as an artist, researcher, and teacher. I believe their support and encouragement of this research method approach allowed me to completely engage with my research area, at the highest level of doctoral study, with all my capacity. My committee member, Dr. Sandrine Han, whose research focuses on the ‘integration of art education and educational technology specifically in virtual worlds,’ helped me focus my intended work, in particular the area of machinima’s use in education.

Throughout my PhD coursework, I completed several courses in the Master of Educational Technology program to strengthen my knowledge base in online education in order to complement my existing expertise in film production. The knowledge I have gained in these courses, attending a conference at MIT, The Learning International Networks Consortium (LINC) and mentorship from former (retired) committee member Dr. Tony Bates has prepared me to tackle the critical topics relating to a well-designed online curriculum.
2. Literature Review

The literature review for this dissertation, which investigates how to develop a learning model for teaching film production online, focuses on three main areas. The first focus is on situating the research methodology that will be used in this PhD study, a/r/tography, in academia. Secondly, I address literature that situates machinima in film production theory, which will interweave references to the practical component of the PhD. Lastly, teaching machinima in virtual reality and online is positioned in educational theory.

2.1 Review of the research method, A/r/tography

I began this dissertation with a personal narrative introduction because it is most fitting to the nature of my research methodology, a/r/tography, as it affords me the opportunity to engage in my research as an artist, which in turn calls for a personal approach. The following quotes are provocative and act as inciting words for my study:

Action research and a/r/tography are concerned with creating the circumstances to produce knowledge and understanding through inquiry laden processes (see Irwin et. al, 2006). (Irwin & Springgay, 2008, p. www) All three ways of understanding experience—theoria, praxis, and poesis—are folded together and form rhizomatic ways of experiencing the world. (Irwin & Springgay, 2008, p. xxiv)

A/r/tography is the unique and continuous intertwining and interweaving of art, research, and teaching, in such a way, that one cannot easily separate or compartmentalize any of these components. Within lies the tremendous opportunity of this research method, and also, the great challenge of it. Carson and Sumara, proponents of “action research as living practice,” argue:
Who one is becomes completely caught up in what one knows and does. This effectively eliminates the tiresome theory/practice problem that continues to surface in discussions of educational action research, for it suggests that what is thought, what is represented, what is acted upon, are all intertwined aspects of live experience and, as such, cannot be discussed or interpreted separately. (italics in original, p.xviii). (Carson & Sumara, as cited in Irwin & Springgay, 2008, p. xxiii)

A/r/tography is a known research methodology that represents what Gilles Deleuze and Felix Guattari describe as a rhizome. “A rhizome is an assemblage that moves and flows in dynamic momentum,” (Deleuze & Guattari, as cited in Irwin & Springgay, 2008, p. xx) connecting and “growing in all directions (Irwin, Beer, Springgay, Grauer, Xiong, & Bickel, 2008, p. 205). In botany, a rhizome is a subterranean plant found in the form of a root system, which sometimes sprouts shoots or further roots from its nodes (Jang, 2006).

Another metaphor that provides a potent image for rhizomes is a geographical map, “for maps only have middles, with no beginnings and endings: they are always becoming (Irwin et al, 2008, p. 205).

When using the rhizome image in the context of theory and when applied to a/r/tography, it radically transforms the idea of theory as an abstract system distinct and separate from practice. In its place, theory is understood as a critical exchange that is reflective, responsive and relational, which is continuously in a state of reconstruction and becoming something else altogether. (Irwin & Springgay, 2008, p. xx)

A/r/tography is situated in ‘arts-based approaches’, which are described in key texts on qualitative research. Arts-based approaches to research are relatively new, originating in
1993 at an educational event at Stanford University. They were later strengthened by the research of McNiff, who discovered, via his students’ work, that there was a “strong link between the research and the artistic process” (Savin-Baden & Howell, 2013, p. 288). Arts-based research is recognized for the creation of artefacts and allowing the use of “these artefacts as a means of understanding and examining the experiences of the participants and researchers involved in the arts-based research” (Savin-Baden & Howell, 2013, p. 289). Arts-based research is located in the liminal space, in the ‘in-between’ spaces (Savin-Baden & Howell, 2013, p. 290), which is precisely where a/r/tography is situated. The aim is often to challenge prevailing paradigms by creating knowledge through the artwork itself. This is also the reason for my own desire to employ a/r/tography as a method for my work. I intend to analyze a/r/tography as a research method by way of applying it to examples of my research.

In one of the most comprehensive and key texts on this methodology, Being with A/r/tography, Carl Leggo wrote,

So, I have found in a/r/tography a research methodology that honours and supports my long commitment to autobiographical writing...I contend that autobiographical writing is always both personal and public, and that we need to write autobiographically in order to connect with others. (Leggo, 2008, p.4)

This statement is directly and fundamentally aligned with my personal artist philosophy. My philosophy has developed over the years of being a filmmaker, and it includes two fundamental rules of filmmaking. One of the rules is that the personal is universal and that if an artist wishes to communicate with an audience, it is essential that he or she expresses it with the filmmaker’s most authentic self. The other rule I abide by in my filmmaking is that content must equal form. A/r/tography is a research method that demands experimentation
and process. Combining my existing artistic philosophy and the theory that underlies a/r/tography, I was driven to create a film, using the experimental method of virtual filmmaking, ‘machinima’, and the traditional mode of live action in order to serve a story that demands this formal execution. Graeme Sullivan, an advocate of art practice as research, argued, “If a measure of the utility of research is seen to be the capacity to create new knowledge that is individually and culturally transformative, then criteria need to move beyond probability and plausibility to possibility” (as cited in Irwin & Springgay, 2008, p.xxiii). I wish to employ an a/r/tographic research method in order to disturb the existing assumptions of machinima in the context of filmmaking. Terrance Carson and Dennis Sumara, who see action research as a living practice, state:

As all artists know, the greatest challenge to producing works that interrupt normalized ways of perceiving and understanding is to learn to perceive freshly… Learning to perceive differently, then requires that one engage in practices that, in some way, remove one from the comfortable habits of the familiar. (p.xvii). (as cited in Irwin & Springgay, 2008, p.xxiii)

My own experience of producing machinima has proven to be extremely uncomfortable and yet, incredible rewarding. The process of machinima-making in a virtual world is fraught with technical, logistical, and artistic challenges. The results have also yielded a glimpse of the immense potential of the medium. This invites serious experimentation and engagement.

“A/r/tographical research is not subject to standardized criteria, rather it remains dynamic, fluid, and in constant motion” (Irwin & Springgay, 2008, p. xix). This statement is both liberating and potentially limiting, as it immediately becomes apparent that such a research approach may not be one that would be easily accepted in the ‘traditional’ academic
community. Academia with a capital “A” seeks standardization, in part, for obvious reasons, as it aims to have comparable outcomes and evaluations. Academia relies on a common and agreed-upon structure of expressing knowledge, qualitatively and quantitatively. Academic communication relies on clarity of thoughts through a shared language, usually represented in writing in its final format. The goal of a/r/tography is to respect the uniqueness and complexity of individuals who cannot holistically communicate knowledge in one dimension only. Ellsworth is quoted, “some knowings cannot be conveyed through language” and, as such, invite us to “acknowledge the existence of forms of knowing that escape the efforts of language to reference a ‘consensual’, ‘literal’, ‘real’ world” (p. 156) (as cited in Irwin & Springgay, 2008, p. xxii).

It is unwise to put forth the idea that arts are only suited to “embodied forms of learning and research” (Irwin & Springgay, 2008, p. xxii) as this risks “perpetuating a cognitive/bodied divide between the arts and other (the “serious” or “hard”) disciplines” (Irwin & Springgay, 2008, p. xxii). As I participated in the necessary inherent theoretical research in order to remain academically robust by virtue of a/r/tography, I continuously interwove academic theory into the artistic and educational practice of this PhD study. “For a/r/tographers this means theorizing through inquiry, a process that involves an evolution of questions” (Irwin et al., 2008, p. 206). For example, my own filmmaking experience of Romeo & Juliette provided me with practice and process related questions about what the core similarities and differences are between making films in the traditional way and by way of machinima. In turn, by having analyzed the artistic affordances of machinima, I also connected this knowledge with the educational focus of my work—specifically, online education of filmmaking using machinima. In other words, “theory is no longer an abstract
concept but rather an embodied living inquiry, an interstitial relational space for creating, teaching, learning and researching in a constant state of becoming” (Irwin et al., 2008, p. 156). The structure of presenting the ‘findings’ invariably became the core challenge of the study, since the artist in me sought a narrative fluidity between the art, theory, and pedagogy.

An interesting example of a/r/tography is the project entitled, The City of Richgate, conducted by a group of a/r/tographers who were funded to conduct a collaborative project. They involved select Chinese families from the City of Richmond, which translated from Chinese into English is called, The City of Richgate (Irwin et al., 2008, p. 209). The authors preface their report on the project by stating,

while our work is written in a linear fashion here, out of the publishing necessity, we encourage the reader to engage with the work as a rhizome by moving in and out, and around the work, making connections in a personal way. (Irwin et al., 2008, p. 207)

In many ways this points to the challenge of working as an a/r/tographer, since the attempt to represent the completed work in a ‘published’ state, risks diminishing elements of the project of their potency. As an artist reading about the work, I was able to perceive their journey quite viscerally, however, I am less confident that a non-artist reader would have had a similar interpretation (as it demanded drawing significant conclusions from the descriptions of their artistic installation work). Nonetheless, the report vividly describes the project, which entailed working with various families in the city of Richmond to tell their family stories through the use of interviews, photographs and representing this collective work in an installation of ‘hanging picture gates.’ The City of Richmond is considered a gateway from other worlds, predominately China, and therefore the visual of ‘gates’ was quite fitting to tell this narrative (Irwin et al., 2008). This is a very succinct description of the project, as it was
fairly detailed in terms of research (interviewing families, meetings between the a/r/tographers, and engaging with related theoretical texts) (Irwin et al, 2008, p. 210). I was deeply moved and at times to tears by the description of the work and the participants’ words about the work, which is not a common reaction I have had when reading ‘academic texts.’ This speaks to the value of the art in a/r/tography. Art has the power and role to move and inspire an audience. In the context of a/r/tography it comprises a profound instigator for the other components of research and pedagogy. “As Bourriaud (2004) states: The forms that the artist presents to the public does not constitute a work of art until they are actually used and occupied by people” (as cited in Irwin et al., 2008, p. 213). In my case, the film I created must be viewed by an audience to fulfill its final role as a work of art and as a component of this PhD.

However, the final film is not the only artefact of importance; the ‘making-of’ process components are also critical to this study. To date, much arts-based research has focused on ‘art as the site’ of the inquiry (for example, make a film and then engage with the film as if it were a complete artefact). A/r/tography treats ‘art’ slightly differently, since it focuses on the process and context of the art (in addition to the art itself). Sites are “informed by context, where “context [is] an impetus, hindrance, inspiration and research subject for the process of making art”” (Doherty, as cited in Irwin et al, 2008, p.213). This philosophy is ideally suited to my own work, as I believe the ‘context’ that surrounds the use of machinima is the most potent catalyst for my dissertation in each of its three synchronous parts—art (a film), research (a literature review and discourse surrounding the film), and teaching (creation of written and video/documentary artefacts that eventually served as educational tools of machinima).
For example, the context for my dissertation, “Developing a Learning Model for Teaching Film Production Online” is that I saw an opportunity to continue to teach my Bhutanese students online. Upon further investigating this initial idea, the deeper context became apparent in all aspects of my intended three-part a/r/tographical research approach. The context for the film component (the art) is that machinima is a process of motion-picture creation that has yet to be proven to be an artistic, professional and technical medium in the industry and community. As key leaders in this revolution have pointed out, machinima offers a cinema-scape that has not yet been mastered at its highest potential. Closely connected to my artistic instigators, monetary obstacles have also been the impetus to evolving and experimenting into the new form of machinima for me as a filmmaker. In the context of teaching, I have witnessed strong critiques of machinima as a mode of teaching filmmaking by both students and faculty. This opposition presents a creative hindrance (also known as a creative opportunity) to address these fears and doubts as part of this a/r/tographic dissertation.

It is clear that a/r/tography, “as a research methodology…intentionally unsettles perception and complicates understandings…” (Irwin & Springgay, 2008, p. xxvi). As the creators of the The City of Richgate reported, they needed to “pay attention to tangents, to interruptions, and to unsettling conversations (Irwin, Beer, Springgay, Grauer, Xiong, & Bickel, 2008, p. 209), as these functioned as the rhizome ‘re-routings.’ Acutely aware that their creative work was also situated in an academic study, they often re-stated their positions as “university-based researchers” (Irwin et al., 2008, p. 211) contextualizing their work using theoretical texts. I witnessed heated debates at the Learning International Networks Consortium conference at Massachusetts Institute of Technology in 2015, where leaders in
the field of online education were accused of failing to adhere to instructional design and online pedagogy principles with integrity in their adaptations of curriculum to the online arena. Further discussion and deeper reflection led me to conclude that there is a desperate need for artistry, skilled storytelling, and interactive innovation in the creation of online curriculum artefacts. For example, although some of the leaders in online education, such as Harvard, MIT and Stanford are constantly trying to improve their mode of delivery with their respective platforms such as EdX and Coursera, they somehow lack the ability to produce content that is exemplary in terms of audio-visual content. My supervisor responded to my reflection by highlighting that this may point to a need for more artists in the realm of online education. I agree with this line of thought, and specifically I believe educators/ curriculum designers who are also artists can offer an angle for producing learning material that will not just be informative, but rather be inspirational, entertaining and meaningful works of art. Employing a/r/tography allows me to address this area of research with the important trifold perspectives of art, research and pedagogy.

Having analyzed a/r/tography as a research method, I have the confidence to say it promised to be the most appropriate approach for the deeply intertwined work that I wished to do, specifically the research complemented by artistic and educational components.

2.2. Situating Machinima in Film Production Theory

Filmmaking has evolved and has been transformed. As renowned director Peter Greenaway stated, “I sincerely believe that cinema is dead…the notion of the cinematic aesthetic has been around now for 115 years (Harvey, 2010)” (Johnson, 2015, p. 28). Greenaway is not alone. New media theorist Lev Manovich states, “As traditional film technology is universally being replaced by digital technology, the logic of the filmmaking
process is being redefined” (Manovich, 2002, p.300). In order to understand the bold statement by Peter Greenaway and Lev Manovich’s declaration, we must explore the origins of cinema and what elements of cinema are ripe for a re-invention.

Film was invented in the late 1800s and one of the most famous and ubiquitous film history texts, *A History of Narrative Film*, begins the first chapter “Origins” with the assertion that, “the beginning of film history is the end of something else” (Cook, 1996, p.1). While Cook is referring to the series of technological inventions that occurred throughout the earlier part of the century, the statement also means that there was another art form that gave way to filmmaking. This was still photography. Before that, it was the printing press and replication of illustration. While there were many inventors, including Edison, who were experimenting with the moving image, it was the Lumière Brothers who invented the portable Cinématographe, which was a camera, a projector, and a film printer all in one (Cook, 1996, p. 10).

Creativity has always been linked to technological advancements and social/historical zeitgeist and when we look back it is easy to pinpoint linear turning points and key milestones of what invention led to which innovation and what time period called for which kind of storytelling. However, today, innovation is happening at such a fast pace and with such simultaneity and breadth, that it feels overwhelming to keep track of what inciting incident in technology has led to which creative evolution. Furthermore, having objectivity on the quick progression of storytelling is obstructed by our proximity to the current age. In one hundred years from now, we will probably be able to see clearly why virtual reality (VR) was the inevitable next step for cinema now. Currently, we are still at the stage of being in awe of the possibilities of VR (this is demonstrated by people’s sense of child-like wonder
when first donning VR headsets), in similar fashion to people who literally ran out of movie theatres when watching L’Arrivée d’un Train en Gare (depicting a train arriving in a station), which tricked first-time movie-goers into thinking that the train would emerge through the screen (Cook, 1996). At the time, people were simply amused to watch every day events recorded, essentially short documentary segments. The message of many VR talks today is that we have all now experienced VR to some degree, but we must now move beyond the simpler meditations on merely its existence and basic capacity and push it to a mature narrative ground. Cinema evolved to a stage of ‘continuity editing’, which gives the illusion of continuous action and space, even though it is filmed out of sequence (Bordwell & Thompson, 1997). For example, when a character leaves via the house’s front door, the connecting door opening from the outside may have been shot one month later, in a different city, but it appears as though the actor has walked out of the house in one seamless action.

Continuity is one of the fundamental laws of film form, however, as cinema audiences matured and grew accustomed to cinematic language, editors were able to push what would still be acceptable. Walter Murch, one of the most famous editors in the world, states that there are always six criteria to consider making an edit, and the most important on his list is whether the edit furthers the emotion of the story and the lesser important on his list is whether it serves the continuity of the film (Murch, 2001). This demonstrates that we can take for granted the technological understanding of the motion picture and carry on at a more mature level of creativity. The hope is that virtual filmmaking, such as machinima, will achieve this maturation in the coming years, whereby the focus will be the story and human experience of the narrative rather than the novelty of its medium.
Filmmaking is closely tied to societal, political, and historical influences. For example, storytelling in film evolved in Russia when Vladimir Lenin’s Bolsheviks overthrew the government in the October Revolution of 1917. Up until this point, cinema had been a western import and for a time non-existent due to social-economic reasons (Cook, 1996). Lenin deemed, like many other leaders and dictators, cinema to be a powerful mode of communication, as it could speak to the masses at any intellectual level because it did not rely on literacy (Cook, 1996). He supported cinematic production so much so, that his wife headed the Moscow Film School, which produced propaganda newsreels intended to provoke and agitate. These were called “agitki” (Cook, 1996, p. 133). One such filmmaker was Dziga Vertov, who like any resourceful artist managed to experiment and push cinematic form, all the while producing fully-funded “Leninist films” aimed at promoting Soviet information (Cook, 1996, p. 134). Following this, one of the students at the film school by the name of Lev Kuleshov was responsible for one of the most important innovations in cinematic form, specifically called “The Kuleshov Effect.” This essentially means that a shot gains different meaning depending on the sequence it is placed in. For example, one experiment Kuleshov did involved an actor looking straight ahead in the first clip, followed by a clip of a gun, bookended by the same clip of the actor. This sequence is what gave the audience the indication that the gun was being pointed at the character and they even remarked on the actor’s ability to convey fear in the second clip. However, the exact same clip of the actor was re-used and followed up with a clip of a steaming hot bowl of soup, which audiences interpreted as ‘the actor displaying hunger’ (Cook, 1996). Kuleshov was one of the founders of Soviet montage, which Sergei Eistenstein later used in one of the most famous and
important films in film history, *Battleship Potemkin* produced in 1925, which relied heavily on “dialectical montage” which was based on Marxist dialectic (Cook, 1996).

This dialectic is a way of looking at human history and experience as a perpetual conflict in which a force (thesis) collides with a counterforce (antithesis) to produce from their collision a wholly new phenomenon (synthesis) which is not the sum of the two forces but something greater than and different from them both. (Cook, 1996, p. 170)

It is interesting to note that D. W. Griffith had made *The Birth of A Nation* in 1915 (Cook, 1996, p. 71), which was the first instance of continuity editing and the establishment of the all-important “180-degree rule”, which ensures an audience does not get disoriented in the assemblage of shots (Bordwell & Thompson, 1997, p. 286), and it only took 10 years for Soviet Eisenstein to turn continuity editing on its head and experiment to create a highly abstract, yet effective variation on editing of film, dialectical montage. Progress and experimentation today is occurring freely, however, we are currently in the phase of *Birth of a Nation*, still finding our footing in this new mode of virtual filmmaking and we are awaiting a ‘*Battleship Potemkin*’ like innovation, where we will have mastered the rules and be confident enough to break them in a big and bold way. Perhaps we need a revolution to trigger this evolution, and perhaps this revolution has already begun in the form of self-distribution and YouTube. Perhaps the day that we have the first machinima feature film, made completely in a virtual reality environment, become a Hollywood blockbuster, will be the day we identify the medium’s graduation.

Marshall McLuhan stated, “‘The medium is the message’ which means, in terms of the electronic age, that a totally new environment has been created” (as cited in McLuhan &
Gordon, 2003, p. 13). McLuhan’s highly relevant words lead us to question the form of cinema today: “Each new technology creates an environment that is itself regarded as corrupt and degrading. Yet the new one turns its predecessor into an art form.” (McLuhan & Gordon, 2003, p. 13). “If it works, it’s obsolete” (McLuhan & Gordon, 2003, p. 24). Much cinematic development and experimentation has transpired since Soviet montage, and these include the addition of sound, colour, television, the short lasting “smell-o-cinema”, the transition from celluloid to standard definition video, and that to HD video, 3D, and now mega-size formats like 4K, 8K and beyond. The word ‘filmmaking’ has been replaced by ‘transmedia’ or ‘multi-platform storytelling’ and in this age of highly technical and computer graphically created motion pictures, it can be argued that the classical approach to filmmaking is obsolete. Filmmaking on celluloid is now considered ‘craft’ filmmaking or high art, only feasible through niche film co-ops that have kept and maintained older equipment. An example of such a co-op is LIFT, the Liaison of Independent Filmmakers of Toronto.

We therefore return to the quote by renowned director, Peter Greenaway that “cinema is dead” (as cited in Johnson, 2015, p. 28) with a deeper understanding of its veracity. Greenaway argues that machinima will take “audiences and filmmakers toward future aesthetics derived from the gaming culture and emerging virtual worlds like Second Life (as cited in Johnson, 2015, p. 29). “Rather than filming physical reality, it is now possible to generate film-like scenes directly on a computer with the help of 3-D computer animation. As a result, live-action footage is displaced from its role as the only possible material from which a film can be constructed (Manovich, 2002, p.300). Machinima is simply the next step of filmmaking, and its use in mainstream cinema is tied directly to the evolution and advancement of virtual reality software and hardware. “Machinima” is a combination of the
words “machine” and “cinema” and is simply defined as “animated filmmaking within a real-time virtual 3D environment” (Marino, 2004, p.1). The process of machinima entails using screen-capture software to record a virtual world such as Second Life. A producer of machinima is often referred to as ‘machinimator’, ‘machinimist’ or ‘machinimatographer’ (Johnson & Pettit, 2012) and is essentially the person who records the footage in a virtual world. Much like the word ‘filmmaker’ is somewhat ambiguous in terms of what artistic skills they possess and exercise, being a machinimator may mean different things to different people. The word ‘filmmaker’ is usually synonymous with ‘director’. In some cases, a filmmaker will also operate their own camera, but most often they will hire a director of photography and camera operator. In the case of machinima, most often a machinimator will capture their own footage, however, in some cases they may have additional machinimators capture footage, from other points of views, for example.

In order to create unique shots and camera movements, [machinimator] must move the view of their avatar or its point of view within the game. As there is no actual camera to manipulate, shot sizes and movements are created with the use of a mouse. The mouse’s ability to change what is seen on screen makes it the equivalent of the camera and lens and the screen-capture software becomes the equivalent of the hard drive or videotape. Once these shots are recorded, the machinimator can use any editing software to cut the shots into a film sequence. Just like a filmmaker, the machinimator may do the editing themselves or hire an editor. (Ziemsen, 2012, para. 2)

While ‘regular’ machinima still generates low-resolution animation, several companies have developed VR cameras, which have been recently released and these allow one to capture a
real setting, such as a beach, turning it into a 3D beach into which other 3D objects can be inserted later. These include real actors or avatars (depending on the aesthetic desires), and these can co-exist seamlessly as if they were filmed on location. For example, new on the market are the Lytro camera and the Jaunt Neo system, which is a VR film studio (Robertson, 2015). As McLuhan states, “In this century Ezra Pound called the artist the ‘antennae of the race,’” (McLuhan & Gordon, 2003, p.16). Filmmakers who pushed boundaries of cinema often invented equipment to suit their needs. Stanley Kubrick worked with special lenses to expose the film Barry Lyndon entirely using candlelight. “As Kubrick über-fan Steven Spielberg once noted, Kubrick was a chameleon who never made the same movie twice. What did stay constant, however, was his pioneering embrace of cutting-edge technologies, from Steadicams to NASA satellite lenses and more” (White, 2012).

I haven't come across any recent new ideas in film that strike me as being particularly important and that have to do with form. I think that a preoccupation with originality of form is more or less a fruitless thing. A truly original person with a truly original mind will not be able to function in the old form and will simply do something different. Others had much better think of the form as being some sort of classical tradition and try to work within it. (Kubrick, as cited in Nastasi, 2014, par. 3)

Kubrick’s message is an ideal platform from which to begin the process of analyzing machinima’s potential in all six phases of filmmaking: development, pre-production, production, post-production, distribution and exhibition. Foremost, a canvas of key machinima texts will be provided, followed by contextualization of further ancillary literature in each of the phases.
Relative to machinima’s novelty, substantial literature has been written about machinima in a short time-frame and a summary of this will be outlined here, prior to breaking it down in the context of the phases of filmmaking. One of the key texts on machinima is *The Machinima Reader*, which is “the first critical overview of this rapidly developing field” (Lowood & Nitsche, 2011, cover). This book details the history and early evolution of machinima. It outlines what the future holds in terms of a ‘studio’ or pipeline for machinima production, analyzes machinima as media, the performance aspects of machinima and in the context of film theory. The most relevant chapter for my work is *Everything I Need to Know about Filmmaking I Learned from Playing Video Games: The Educational Promise of Machinima* (Payne, 2011) as it helps situate machinima in constructivist learning theory and underlines the relevance of machinima in the acquisition of 21st Century literacy skills. The book offers a thorough and broad theoretical analysis of machinima and features chapters by eminent scholars such as Lev Manovich, and known authorities of machinima (who are also the editors), Henry Lowood and Michael Nitsche. Additional chapters deal with gender and ethnography in machinima, demonstrating the depth and complexity of machinima’s potential in an academic arena. Specific passages from the book are expanded upon in the detailed breakdown of film production phases in the context of making machinima. Another key text on machinima was published only a year later, *Machinima—The Art and Practice of Virtual Filmmaking* (Johnson & Pettit, 2012), which is distinct in the literature on machinima as it reads like a case-study manual for machinima filmmaking. The book features comments by known machinimators, starting with an introduction to machinima as moviemaking, and then breaking down the process of machinima making, from the development of story, pre-production, cinematography, collaboration and also a
chapter on using machinima in education. This book can be seen as a small textbook on machinima in some ways, as each chapter also provides a set of exercises. The following year, 2013, another key text was published, *Understanding Machinima*, edited by Jenna Ng. This text is far more theoretical and is split into two main parts: “1. Thinking Machinima and 2. Using Machinima.” It is worth noting that I received a call for a proposal for articles for this book, but since I was not at an advanced stage of making or researching machinima, I forwarded it to my colleague Sandra Danilovic who had made one machinima feature documentary. She is an experienced documentary filmmaker, but had only just finished her first foray in virtual filmmaking. Impressively, her chapter is now published alongside the chapters by some of the most esteemed authorities of machinima, such as Lowood and Nitsche, which reveals that machinima is a democratizing medium. With only one attempt at making a machinima film, one may be catapulted to the highest level of recognition in this arena. The original word “machinima” was coined by Hugh Hancook, who initially launched the well-known website, machinima.com in 2000, which features in large majority gamer-oriented content. The website, recently acquired by Warner Bros., features “scripted series, original content, weekly and daily shows … pop culture content and gameplay videos” (Weaver, 2015), and claims to reach 151M views each month. While the website is not a publication, it is noteworthy as it is a substantial hub of machinima content. Hancook is the co-author of *Machinima for Dummies* (Ingram & Hancook, 2007), which is written in line with the ‘for dummies’ brand, and provides practical, detailed and comprehensive instructions to start creating machinima works. Phylis Johnson outlines recent successful machinima production in her chapter, *Painting Machinima in Second Life: Emerging Aesthetics in Virtual Filmmaking* (Johnson, 2015), in the book, *New Opportunities for*
Artistic Practice in Virtual Worlds (Doyle, 2015). Johnson names countless successful examples of machinima productions and distribution, including a machinima festival juried by Peter Greenaway. Beyond these dedicated texts, many journal articles and chapters in other books have focused on machinima in different contexts and these were used to support the following analysis of machinima’s potential in each of the six phases of film production.

Development is the first phase of any film project. The first step of the development phase is the writing of the screenplay and securing the rights to the intellectual property (the screenplay), and in some instances a preliminary treatment. In some cases, the screenwriter writes independently, thereby owning all rights to the screenplay and then seeks to pitch this to a producer, but in other cases the producer options the rights to an existing property (such as a novel) and then engages a screenwriter to write the screenplay. In this situation, the screenwriter does not own the script at all. The process of screenwriting can be lengthy, ranging from a few months to a few years, depending on page length, funding intervals and complexity. The process of screenwriting usually involves preliminary development and research, such as character biographies, identifying themes, a step-outline which forecasts the structure, background research of the world of the story and ensuring all elements of the screenplay are complementary. Different authorities on scriptwriting have different frameworks that can be useful in guiding a writer. For example, Syd Field is well known among scriptwriters and his theory is that all screenplays should follow a formula of adhering to plot points tied to page numbers (Field, 2005). Therefore, on a feature film he suggests that the inciting incident must occur on page 10, or else the reader/viewer will lose interest (Field, 2005). Christopher Vogler is known for his structure called ‘The Hero’s Journey,’ which outlines very specifically the progression of a story and is ideal for use in any quest
story (Vogler, 2007). Philip Parker is known for the concept of ‘The Matrix’, which is useful for ensuring all elements are lined up to be complementary (Parker, 2006). For example, in the case of a machinima film, you could use ‘form’ as a starting point in the matrix and then allow all other elements to complement it. In the matrix, form is closely linked to plot, which would help the writer determine if the plot is serving the form or whether the form is serving the plot. In the case of my film, *Romeo & Juliette16*, the form will be a hybrid between a virtual world (shown through machinima), which supports the plot of two characters struggling to be together in the ‘real world’ due to an antagonist, which forces them to seek the virtual environment. The story type would be a romance in this Matrix, which would lead to a fitting theme, “Is virtual love as real as real-life love?” Hence, the Matrix is a way to check if all elements are aligned and complementary. “Knowing how to effectively use your story medium is essential, but it starts with knowing the elements of a great story” (Johnson & Pettit, 2007, p. 73). Scriptwriting is methodical and writing for machinima is no different from writing for any other format, in that the story demands an explicit rationale for being told, in its content and its form. In conventional filmmaking, the rules of screenwriting are clear, however, the gamer-oriented machinima content that has been produced sometimes lacks thoughtfulness or meaning because “some machinimatographers become so caught up in the tools that they forget about the central story to be told” (Johnson & Pettit, 2007, p. 73).

The development phase also entails a significant amount of legal work that must be completed to ensure that the ‘chain of title’ of the property is clearly expressed and is contractually binding. The chain of title includes a writer’s agreement, an option-purchase agreement, a story editor’s agreement, options/assignments of underlying rights, and in some cases co-development contracts and financing agreements. Without securing rights to the
property, the project is worthless in the end, and therefore it is critical to secure a lawyer to create original and comprehensive contracts for this phase. Making a machinima film would not be any different from a conventional film in this regard, and would unfortunately not save any money. Legal clearances must be obtained in the ‘real world’ under the appropriate jurisdictional law. The parties involved can decide under which law the contract will be written, but usually it is in the country where the producer’s company is registered. Funding partners often insist that the contracts are under the laws of the location where the project is funded, but there are also provisions for international co-production. It is interesting and perhaps no coincidence that the article, *All the Game’s a Stage: Machinima and Copyright in Canada* uses an excerpt from William Shakespeare as an introduction. Shakespeare is one of the great examples of the public domain, which is one of the key reasons why I chose to base my film on *Romeo and Juliet*. Many storytellers adapt Shakespeare’s work as it is creatively rich, but also because it is copyright cleared on condition that one uses the original publication. When working on a machinima film, it is critical to uphold the same level of professionalism as with any other production specifically because the producer must possess these underlying rights if they want to sell the project to mainstream distribution channels later on. Development legal negotiations are more straight-forward than the legal negotiations that would be required during pre-production with regard to virtual shooting location agreements, talent releases, and more, which will be addressed in the next section. Another aspect of the development is securing ‘star’ attachments to the project, such as actors, a composer, a director, and in some cases, other elements such as the involvement of a game company, for example. The ‘Star System’ dates back to the early beginnings of the Hollywood Studio System and specifically it is a standardized mechanism “used by the film
industry to construct and promote the images of leading performers” (McDonald, 2000, p.1).

It is important to note that the star system “deals in individualism” and focuses on the “production of popular identities” (McDonalds, 2000, p. 1), which audiences will seek out repeatedly. Star-power can impact and help trigger funding and attract specific audiences to a project, and a machinima project is no exception. Stars for a machinima film may include, for example, the voice of a famous actor or gaining permission to film inside an existing game engine, which would attract the game’s user audience. By no means should machinima aim for less, since these assets are what drive mainstream film to become popular.

Machinimators must adopt similar practices if they wish for machinima to ‘break through.’ Of course, some people may choose to make machinima as a ‘practice or low budget mode’ of working, however, it should be encouraged that any filmmaker—no matter how novice—aligns her or his story with an audience. For example, if a virtual bike ride takes place in a machinima film, perhaps the filmmaker can approach an environmental organization that would wish to use the piece as part of their awareness or media campaigns. In summary, the development period for a machinima film entails thorough scriptwriting and professional attention to legal aspects. While development is the earliest phase of the film and machinima process, it is foundational and will impact all subsequent milestones to come and therefore must be completed thoroughly.

Any experienced filmmaker would agree that thorough work in pre-production will invariably lead to a smoother production process. Filmmaking can easily be compared to a game of chess, where pre-production is the beginning of the game, where one must set up pieces to be in just the right positions so that when the time comes for the larger game and the production is in play, each piece/position can do its inherent work. If one loses too many
pieces on the board, the game will be lost and in the case of film, the production will fail. It is actually a very simple and straightforward equation: solid pre-production equals the best chances of a smooth production. “The bottom line…is that every machinima producer must carefully consider those components that make a good story – the plot, the characters, the props, the setting, the dialogue, etc.—all these elements must work together (Johnson & Pettit, 2012 p.34). Pre-production is both creative and logistical and includes visualization, production design, location scouting, crewing, technical testing, scheduling, and casting. “Basically, the same pre-production rules apply for machinima as with television and filmmaking (Johnson & Pettit, 2012, p.81). Visualization usually begins with the director who composes a visual director’s treatment, which details how she or he plans to translate the written screenplay to the screen. This treatment is a plan for intended camera design, production design, editing (pace/rhythm), sound design, music, and acting. This is a document that directors keep to themselves or tailor for distribution among the ‘key creative’ heads of departments. Another visualization tool is a storyboard, which “serves two purposes: First, they allow a filmmaker to pre-visualize his ideas and refine them …; secondly, they serve as the clearest language to communicate ideas to the entire production team” (Katz, 1991, p.24). The director would collaborate with the cinematographer or Director of Photography (DOP) to create a storyboard and then, in turn, a shot list. A shot list would utilize standardized shot sizes, such as “Extreme Close-up” (ECU) or “Medium Shot” (MS), and would cover the scene at hand adequately for the editor to assemble a continuous scene with many options.

Production design is led by the Production Designer, who is responsible for designing the entire look of the film including: set design, locations, wardrobe, props, and hair and
make-up. Another term that includes all that is seen in any given shot is, “mise-en-scène” (Bordwell & Thompson, 1997, p.169). In a live action film, a certain portion of the film would be set in an interior space and some scenes would be exterior. Of the interior scenes, a portion would be shot on location and some would be shot in studio, depending on the needs to the production. Shooting on location and especially exterior can present a host of production challenges that are difficult to control. One of the biggest advantages of shooting a machinima film is that you completely eliminate the typical challenges of weather, crowd control, on-set safety, production facilities and logistics, transportation/parking, and even craft services (catering). The cost savings are also significant. However, some costs arise specifically due to shooting machinima, since one must either find locations or create them using 3D animation. There are various ways of sourcing locations, props and animations for a machinima film. The seemingly easiest option is just to start filming in virtual reality, freely recording the characters and landscapes of the setting as one finds them. There is nothing stopping anyone from running screen-capture software and capturing a full-view of what they see. While a machinimator will not be approached by a security officer during the shoot and asked to stop filming without a permit in a very expensive game-world, the issue here is the copyright associated with that content. “This means that the rights holder (the gamer developer) has exclusive rights (with some exceptions, such as fair use), which include the right to copy, the right to create derivative works, the right to distribute the work, and the right to publicly perform the work (U.S. Code 17, in Johnson & Pettit, 2012, p. 186). A famous example of a machinimator ‘getting away’ with infringing on copyright was the Red Vs. Blue series. A team at the company Rooster Teeth created a show inside the game of Halo, which Microsoft, the owner of the game, permitted without demanding a license fee.
Microsoft later hired the team to create further videos to serve as advertisements (Johnson & Pettit, 2012, p. 187). Certain game companies have given permission for, “personal, non-exclusive, non-transferrable licenses to use and display Game Content and to create derivative works based on Game Content, strictly for noncommercial and personal use” (From Microsoft's "Game Content Usage Rules" (2007) as cited in Reynolds, 2010, p. 732). This would mean that the creator of this machinima content cannot start to profit from this content, arguably even via Youtube advertisements. Therefore, filming in a game world is not ideal for a filmmaker who seeks mainstream distribution for her or his work. On the other hand, “it is not copyright infringement, however, to do anything with copyright-protected work that the copyright owner has explicitly permitted (Reynolds, 2010 p. 732), which applies to some degree in the virtual world of Second Life (SL). Second Life is an entire online world, where real people operate avatars and do things that we do in regular life, such as buy houses (with Linden dollars, which have a conversion rate to any currency via PayPal), but also things that are only feasible virtually, such as flying with your avatar or being half animal. Anything you do or see in SL can be filmed using machinima techniques, usually using screen-capture software. Some SL property owners have signs at the entrance of their properties giving permission to film or indicate permission via the land covenant information (Linden Lab Official: Snapshot and machinima policy, 2011). However, any veteran and responsible producer would know that this ‘permission sign’ is likely not enough of a release in the face of obtaining “Errors and Omissions” insurance, which would have requirements for actual signed location agreements (or in this case, artistic asset release/assignment). There are some VR worlds that have been specifically created for creating films, such as Moviestorm, however even these do not have concrete copyright
policies and gauging by a simple Internet search, it appears that there have been several legal disputes relating to content created using Moviestorm (Kibishipaul, 2012). Unfortunately, Moviestorm does not have a dedicated customer service department, and the only answers (both technical and logistical), can be derived from their wiki, which is sporadically up and down. Therefore, any producer wishing to sleep at night, knowing that they can safely sell their film, should seek a way to create machinima in a way that allows actual contracts to be signed. Therefore, one motivator for creating objects anew using 3D animators is due to the copyright issues surrounding virtual reality locations. The alternative to this would be to hire ‘in-world’—entire communities are dedicated to creating content that you can purchase, such as costumes, locations and props. In these situations, I would have to spend a great deal of time obtaining the rights to reproduce the image of their creation in perpetuity and for commercial use and ensure the veracity of their identity and that they are the true owner of the copyrights to the material. Usually a contract would include an indemnification clause, which would protect me (the producer), however, if I were sued by a third party for use (by the SL-based vendor) of assets that were infringed on from other work, then I would have to ensure that I had very rigorous contracts in place that would allow me to transfer that responsibility back to the original creator via the indemnification clause. I would also have to obtain the rights to modify their content, in case I need to alter it to fit the film and also negotiate credits of the creators and contributors. Most people do not think about all the ways in which copyright can become a huge limitation in the creative process, and it is critical to meticulously handle all aspects relating to copyright and the chain of title.

Technical testing is an important activity in pre-production, however there is a vast difference between the type of testing that would be involved in a machinima film and a live-
action film. Common tests in live-action involve testing the camera equipment or perhaps
doing a test of a special effect or new piece of stedicam equipment. However, with
machinima, the key technical requirements that will need testing both independently and as a
package, include a computer, screen-capture software and editing software. “The three things
that will impact machinima production directly are using the latest CPU technologies at the
fastest processing speeds, the maximum RAM installed that your operating system can
utilize and finally the best graphics card you can afford” (Johnson & Pettit, 2012, p. 36). If
one is creating original 3D animation as I did, one can choose to either use the 3D animation
tools within some of the virtual worlds, such as SL, or one can use professional animation
software and import the creations. There are significant technical tests that must be done
throughout this process to ensure that everything works in the end. For example, if one builds
within SL the creations are called ‘prims’ and if one designs outside of SL and imports them,
they are called ‘meshes’—each has their own set of technical and creative advantages and
challenges (Linden, 2015).

Understanding the full scope and complexity of creating machinima can only truly be
appreciated upon experimenting with it in a practical sense, as all computer ‘set-ups’ and
workflows will present unique challenges that cannot be forecast by a theoretical manual. In
my experience of creating 3D objects, I quickly realized that most professional 3D artists
work with high-end software such as 3D Studio Max and have never used Second Life’s
native 3D building software and it is hard to convince the 3D artists to do so. Their
avoidance of working in SL directly is due to the fact that they feel they have more control
and ability to create detail using their advanced software. Therefore, my working solution
was to engage the 3D artists and have them output 3D Studio Max files, which I then
provided to a Second Life asset expert, who creates objects in Second Life professionally. He was skilled in both 3D Max and Second Life, and took the objects I had as ‘meshes’ and converted them into ‘prims’ (which are native to SL). Only in one instance did he have to completely create an object from scratch in Second Life, and that was due to the size of the file and issues with importing it. As with most things in technology-based arts, many unforeseen challenges will arise, with no logical explanation. As addressed previously, a good alternative to creating original 3D objects and environments is to secure permission from SL landowners to film on their land or a combination of the two. Despite originally having planned to create original shooting locales, costumes and props, I was forced to seek locations and assets “in-world”, due to time and budget. I would have been unable to manage the creation of more objects/props than I already did. Therefore, I chose to follow the advice of SL experts, which was to seek locations that would best lend themselves to shooting my content, of which there were plenty of viable options, and contacted the landowners of these locations. Location scouting is the process that is known in the film industry, whereby specific crew members visit potential locations to evaluate their appropriateness for filming and each make observations and judgments about how the location will affect the production. For example, the cinematographer would evaluate the availability of natural light, the necessity to bring in artificial light and also ease of manoeuvring with a camera rig, whereas the location manager would be looking at washroom facilities, parking, holding areas for extras, equipment tents, power access, and more. A first assistant director would determine, among other things, including whether crowd control of background pedestrians would be problematic. On a machinima location scouting session, many of the typical location issues become irrelevant. However, there are machinima-specific items that would be critical to
evaluate on a virtual scout. Distinct to machinima, it is important to identify how many other avatars that visit the SIM, since you would need releases from any avatar that appears in a shot. It is also important to check the ‘rating’ of the SIM, since this will impact the kind of clothing an avatar must wear and the actions permitted in the location. For example, if a film calls for a sex scene, it would be necessary to film in a SIM that is classified as “adult.” In my situation, I was able to secure the use of a privately owned ‘skybox’ (which is a parcel of land floating above the mainland), in which part of the environment from below had been replicated, and therefore it appeared that the SIM was the same, yet I had the freedom to shoot a sex-scene with nude avatars. Lastly, it is critical to check the land covenant, which would state whether machinima is permitted. If it is not, then you must contact the landowner first. In my situation, I was fortunate that the landowner was very willing to sign a ‘real world’ release form, connect with me via email and Skype to facilitate this, and also assist me by giving me ‘rezzing’ rights. This allowed me to bring some of my inventory into her SIM, such as a ‘throne’ prop and more. I took these permissions very seriously, as I did not want to make any mistakes on her land inadvertently. This nearly happened when I was trying to move the throne and almost moved the grass beneath the throne. I consulted with an entertainment lawyer regarding the contract that I had the SL landowner sign. I was concerned about the fact that the landowner had purchased props and items on the land from another party, from whom I did not have permission, however, my lawyer reassured me that for the scope of my film I needed to measure the risk appropriately, since any person wishing to sue me for use of their work would first have to prove financial damages. Since I knew that this film was not intended to gain a great deal financially and would likely never recoup its costs, I opted to go ahead with shooting. I did attempt to contact several asset owners, for
example, creators of the wardrobe of the avatars, all of whom did not respond. I also was unable to secure permissions of locations such as stores (due to lack of replies by owners), and so I found alternatives for these situations. For example, instead of having the character buying her clothing in stores, I simply already had them in her inventory and then had her get dressed against a black vacant space (against a black wall created in yet another skybox).

Casting is a very important component of a film’s success, since actors are key players in cinematic execution. The casting process involves auditioning actors, ideally in person, in order to, “find out as much as you can about the physical, psychological and emotional make-up of each potential cast member” (Rabiger, 2003, p. 266). Since my film was a hybrid of live-action and machinima, filmed in two countries, I had a very unique experience with securing my cast. The Japan component of the film was shot a few years ago and when I had nearly given up in finding actors, I serendipitously happened upon them in a bar/restaurant. The situation was very typical of independent filmmaking. It was difficult to attract actors in a foreign country with no budget. I was with my local producer friend and decided that we should have dinner in a very cheap ‘hole in the wall’ spot under a train overpass. She warned me that the food would be terrible, as would the sake. We were seated outside on a bench next to a few young people and in my very non-Japanese approach I initiated a conversation with them. I asked them if they knew where young actors hang out in Tokyo, which caused them to laugh to themselves, and they responded, “we are actors!” These two actors became my Romeo/Ren and Juliette/Junko and we arranged to film all scenes in one afternoon and evening. The remaining scenes I planned to shoot in Toronto upon my return and this forced me to post character breakdowns for the roles, only this time, the actors I was seeking would not be recognized, but rather needed to resemble the Japanese
actors. I succeeded in finding the right matches, with the use of wigs and planning to shoot them from the right angles. In machinima casting terms, I also secured puppeteers for the machinima characters, who needed to be available on the SL sets on specific ‘shooting dates’ and perform the roles. Due to time restraints, I played the role of Juliette16 and had rotating puppeteers play the role of Ren2001. The puppeteers were selected based on their previous knowledge of gaming, which proved to be useful as many of the commands and mechanisms for moving around in SL are similar to those in games. Having puppeteers became critical for ease of shooting, since a third person, the machinimator, had to control the camera exclusively and do the filming or ‘machinimating’. My resulting advice based on this experience is that it is critical to have puppeteers for each of the characters, so that you can direct the film and see what is being shot at all times. It is very challenging to play a role while having to monitor what is being filmed simultaneously. Lastly, I posted a casting call for voice actors who had to read the parts of the translated script in Japanese. The auditions for the voice actors were conducted over the phone to gauge their voice’s appropriateness for the characters and also their ability to adjust their performance based on direction given. “Casting just one wrong voice for …machinima can distract from your work” (Johnson & Pettit, 2012 p. 59). The original performances were performed in SL in English, as reference track for the English-speaking editor and post-production team. Surprisingly, the mouths of the avatars moved very realistically and appeared synchronized to the dialogue in English and paradoxically later also looked naturally aligned with the Japanese ADR (additional dialogue recording).

Crewing is usually done in development and pre-production, depending on the level of the position. For example, ‘above-the-line’ or ‘creative key’ crewmembers are hired in
development, whereas ‘below-the-line’ individuals are hired in pre-production. Above and below the line refers to a line in the budget that delineates higher paid individuals, such as producers, writers and stars, from ‘union/scale’ level employees. “Creative key” personnel are the heads of department (HOD) on a film, such as the Cinematographer or the Production Designer. They are below-the-line, but their names are often used to attract financing and they are involved in hiring their own department staff. It is critical to have above-the-line individuals and HODs hired on a production as early as possible, as they will be instrumental in shaping the vision of the film. A director should collaborate with HODs as early as possible as part of a thorough pre-production process. Thoughtful crewing as part of the pre-production phase is equally important in a machinima film. Many of the positions required on a live-action film are also required for a machinima film, with a few exceptions and substitutions. For example, instead of a Cinematographer, a ‘machinimator’ or “machinimatographer” must be hired to compose, light and shoot the footage ‘in-world,’ which is entirely different from live-action. The machinimator must have a creative background and must be knowledgeable regarding the software and hardware required to create machinima. A machinimator is a very specific role that requires a very specific skillset, which is rare to find when compared to conventional cinematographers. I came across some in-world machinimators, however, they were quite unreliable to get in touch with, so I posted the position of machinimator on an outsourcing website called, www.upwork.com, where I was lucky to find someone who had a great deal of experience with creating machinima, specifically in Second Life. Since this was a paid out-sourcing service site, individuals with good ratings usually are quite responsive and reliable. My hired machinimator was very interested in the project and provided a great deal of advice for
nearly six months leading up to the actual shoot. There are services ‘in-world’ such as ‘Suzy’s Super Cast & Crew (Johnson & Pettit, 2012, p. 118), which advertise machinima services, but after having reviewed the portfolio material on their website (which is very different from the style I wanted to achieve), I realized I would need to develop my own team. The additional positions that were unique to machinima included puppeteers and a 3D ‘prim’ designer. It was interesting to have shot certain live-action components of the film just a few weeks prior to the machinima, as this was a good reminder of all the positions that I was able to eliminate on a machinima set. For example, on the machinima set we did not have a camera assistant, a DMT (Data Management Technician), a craft services person, a 1st AD, a location manager, or a casting director. While some of these positions would benefit a machinima shoot, it was feasible to consolidate these into one person on a machinima shoot versus a live-action shoot. My live action shoot was done by a very lean crew and on the machinima shoot, I was able to cut, for better or worse, even more positions.

Scheduling is a highly standardized task performed in pre-production and also during production, which is essential to the film’s execution and completion. Scheduling a film involves first ‘breaking down the script’ by way of categorizing all elements of a script, such as props, wardrobe, characters, sets and more. This can be done using software such as Movie Magic Scheduling or by using colour pencils and pre-printed breakdown pages. Eventually, the breakdown is complete and each scene will be represented in one breakdown sheet, which gives all departments on a film a clear indication of what is needed. The content on the breakdown sheet is also used in making a schedule, often referred to as a ‘lined schedule,’ where each scene is represented by one line or strip on a larger ‘stripboard schedule,’ which is used to easily oversee all scenes in a film. If using software to organize
the schedule, there are efficient filters that enable you to sort the schedule by a plethora of parameters, including actors’ schedules, location availability, day or night shoots. A First Assistant Director is the crewmember responsible for creating a schedule and ensuring the schedule is followed, or else significant money can be lost on a production. Schedules go through a number of revisions and approvals before they are shared with a crew. During production, changes to the schedule will occur due to unforeseen issues, such as illness or weather, which will cause scenes to be shuffled around. The information on a schedule is included on a daily ‘call sheet,’ which provides all key pieces of information to all cast and crewmembers for a specific shoot day. Call sheets are often created in the pre-production phase and updated daily as changes occur throughout the production. While I did not use call-sheets on my machinima shoot, I would recommend creating call sheets specifically for a machinima film shoot. Instead of indicating where the nearest hospital is, which is mandatory on a standard call-sheet, I would provide information on which Skype accounts shall be used as back up forms of communication, if, for example, SL avatar accounts malfunction. Depending on the complexity of the machinima shoot, set information and character information should remain the same as on a traditional call-sheet.

Rehearsals are typically held with cast members and the director prior to the film shoot, in order to go over performances, character motives and blocking in greater detail than is possible during the shoot day due to time. In live-action films, directing and acting are highly creative and artistic endeavours and “the very best actors make it look easy,” however, “rigorous technique and careful detail go into such performances” (Weston, 1996, p.7). Directing ‘avatars’ in machinima is a distinctly more technical task than an artistic one, as you cannot manipulate facial expressions or ‘presence.’ While I did not anticipate the need
for rehearsals for my machinima portions of the film, it became clear that rehearsals are extremely important in machinima for slightly different reasons than in live-action. Machinima demands the use of ‘animations’ in order to perform many specific actions and therefore it is critical to rehearse using the animations with the puppeteers and avatars involved. For example, in order for two avatars to hold hands on set, an animation must be obtained (usually purchased on the Second Life marketplace), held in one of the avatars’ inventory accounts, and must then either be ‘rezzed’ (made to appear) in the SIM the scene will be in (which may require the avatar account to have ‘rezzing’ permission from the landowner) or else the animation must be ‘wearable’. Most often the animation must be rezzed in the scene and each avatar must ‘sit’ on an ‘action ball,’ which will then lead their avatars to perform the action. ‘Acting’ in Second Life is highly technical and requires a certain amount of skill, planning, and testing with regard to the logistics of performing dynamic actions.

Following pre-production is the production period, which involves the actual filming of the footage that will later be edited. Conventional film production and machinima are almost identical processes in the sense that all the elements and respective crafts must coincide simultaneously in order to piece together later. The director of a live-action film or machinima production will use the storyboard and shot list in collaboration with the cinematographer or machinimator to carefully follow the planned visualization of the film and also use it in order to catch any potential continuity errors and ensure adequate coverage is planned in order facilitate a flexible and creatively free edit. The shot list is a critical tool that is used by the crew on set, as they progress through the shots in the most efficient manner possible. One distinction in shooting machinima versus live-action is that it is much easier to switch shooting directions virtually than it is in real life. For example, on a live
action set, the cinematographer will set up all the lights to be perfectly positioned for one side of the room and the crew would attempt to ‘shoot out’ one side of the room before ‘swinging around’ to shoot the reverse shot coverage, as this will entail an often time consuming process of re-positioning lights, at times changing art department elements, and even just removing people’s equipment boxes and gear. On a machinima shoot, while there is some lighting that can be positioned in the same fashion as it is on live action, most lighting is set by the environment settings and, at times, the avatars wear invisible lights that illuminate them specifically. There is still some set-up time required in a reverse angle on a machinima shoot, however, it is generally much quicker than on a live-action set. Particularly because it is so much easier to switch shooting directions, the storyboard is increasingly important in ensuring continuity on a machinima shoot. For example, on the first shoot day, my machinimator had not yet set up a way to ‘screen-share’ what he was filming with me, and therefore I did not see the shots until the next day when they had been transferred to me via Google Docs. Unfortunately, since I was not able to oversee whether the shots were adhering to my storyboard (and there are always changes ‘in the moment’), we had many issues with the 180-degree rule of continuity, having ‘crossed the axis’ and as a result, had to re-shoot the scene at a later date. Cinematography is the process of lighting, composing for, and capturing footage for a film, using a variety of tools and techniques. The typical process of cinematographers on a shoot day is leading their team by instructing where lights would be positioned by his/her gaffer (lighting and electric trades). They would describe the motion of the camera to his/her camera/ stedicam, operator, and dolly grip, who would manoeuvre the camera by hand, rig, or dolly track. A camera assistant would pull-focus of the camera’s lens, in order to capture the designated focal length as dictated by the cinematographer.
Many of these positions would be consolidated into one on a machinima set. For example, since there is no ‘actual’ camera, but rather just a ‘camera point of view’, the duty of the machinimator includes setting the lighting from within their avatar account, and the camera movement, which is usually done by specialty mouse such as a ‘space navigator’. Dolly/tracking or even flying shots are much simpler, cheaper and faster to achieve than live action, as they require simply a smooth motion using a navigator mouse, a fast computer processor and a high-quality video card to be captured effectively. One key tool on a film set that allows a film director to know exactly what is being filmed is a ‘monitor’ that shows the captured frame and footage. If the director is not the machinimator him or herself, then they must find a way to ‘see’ what the machinimator is filming. On my shoot, for example, we created a special monitor-like replica by using Skype’s ‘screen share’ mode, which allowed me to see my machinimator’s monitor and exactly what he was capturing. It enabled me to give very clear directions on shot adjustments, even before he started to ‘roll camera.’ On a live-action set, a first assistant director will call the shots (Rabiger, 2003), which gives everyone on set a clear ‘count down’ to the camera and sound equipment to start rolling, a slate to be captured to identify the shot verbally and visually, and then the wait for the director to call ‘action.’ In the case of machinima, it was difficult to visually slate shots due to the fact that any actual ‘slates’ in SL’s marketplace where just props, but not functioning slates that could be held in the shot with any identifying markers. Therefore, we relied on my verbal slates to keep track of what we were doing, which later proved to be quite a burden for the assistant editor, who had to listen to every shot (rather than be able to ‘scrub’ through the footage and benefit from the visual cues of a slate). It was in instances such as these, where I noted the strong need for machinima-specific tools to be developed.
Sound on set was recorded as a reference track only, in English, rather than Japanese. It was critical to have a reference track, so that the editorial team could assemble and then fine cut the scenes according to the screenplay. Our intention was always to do ADR (additional dialogue recording) or VO (voice over) in post-production. The location sound was also recorded for reference at times, although it was turned off by the machinimator, in order to have a cleaner recording of the guide-track of dialogue. “By carefully considering the technical and aesthetic principles of sound and audio, a machinimist will most certainly improve the value of his or her production” (Johnson & Pettit, 2012, p. 163). It is critical, in machinima as it is in live-action, not to underestimate the importance of sound since, “ultimately, the quality of sound can affect the viewers’ attention to the visual work” (Johnson & Pettit, 2012, p. 161). It is important to understand the difference between diegetic and non-diegetic sound and know the respective narrative implications of both. Diegetic sound, “is sound which has a source in the story world” (Bordwell & Thompson, 1997, p. 330), whereas non-diegetic is sound, “which is represented as coming from a source outside the story world” (Johnson & Pettit, 2012, pg. 330), such as musical score. In the case of SL, many SIMS have a unique musical track, which can be turned on and off, however, this musical soundscape gives an identifying sense of place (as it is usually a sound that is indigenous to that SIM). When creating machinima, it is important to consider how the soundtrack may impact the eventual viewer and the machinimator must make editorial choices on whether to include it, replicate it, or create a hybrid. For example, I chose to turn off the diegetic sounds, as I knew I would not own the rights to the music ‘in-world,’ however, I asked my composer to replicate a similar music source. The result was a bridging between using the sound as a diegetic sound at first, giving a sense of the SIM world, but
eventually having it grow into the musical, non-diegetic score of the film. “Sound has a spatial dimension because it comes from a source” (Johnson & Pettit, 2012, p. 330), and this is especially true for the quality of dialogue recording and editing. For example, in many SIMS in SL a certain amount of reverberation can be heard, as if there is a limit to the SIM’s world, which causes the voices to bounce off and return from the edge of this universe’s limit. Of course, when you record ADR of lines at a later time and replace your guide-track with these ‘clean’ and ‘crisp’ audio recordings, it is essential to add back the reverb to the lines, or else it will be noticeable that the lines sound like they were recorded in a studio and will mislead the viewer in establishing their understanding of space.

The post-production period entails picture and sound editing, additional dialogue recording (ADR), foley, special effects, composing/scoring, mixing, and exporting. In live-action filmmaking, ADR is usually avoided at all costs, however, in machinima it is the convention to record dialogue after the images have been recorded, as it affords a better recording than what you would achieve over a computer’s microphone set up. The post-production period on a narrative film usually begins with an assembly edit, done by the assistant editor or editor, in accordance with the script, which is followed by a meeting (or ‘spotting session’) between the director and editor who will watch and go through the timeline and footage. The editor will then complete another edit, with varying involvement by the director, and will continue to work on revisions until the film is ‘picture locked’. In some situations, visual effects and color grading would be done at this stage. A final locked picture is then exported, complete with rough sound files, and sent to the sound designer/editor who will work with his team on creating the soundscape for the film using dialogue, sound effects, and musical score. As stated by one of the world’s best film editors,
Walter Murch, “a talented director lays out opportunities that can be seized by other people – by other heads of departments, and actors” (as cited in Ondaatje, 2002, p.28), and this is true for every stage of the film process, including post-production. Arguably all key creative personnel in the chain of production have created artistic openings for the post-production team to take and hopefully synthesize into something even greater in impact than was originally intended. The final export, containing the married image and sound, becomes the master file, which is ready for distribution.

Distribution and exhibition are the final phases of filmmaking and ‘machinimaking’ and they are as important as all the stages that have preceded them. All filmmakers aim for their work to be seen by an audience and the modes of distribution and exhibition have dramatically changed over the years. Prior to video, distribution was limited to those who had the funding to produce a celluloid print that could be projected in a cinema. Broadcasters would accept broadcast-standard tapes, however, they were and remain extremely selective in choosing content. Most of these modes of exhibition required a professional distributor, a ‘middle-man’. Finally, with the advent of the Internet and specifically websites such as Youtube.com and Vimeo.com, filmmakers became empowered to distribute their work directly to an audience. While a filmmaker can submit work to nearly any film festival, there are now machinima-specific film festivals, which exclusively showcase machinima content. Conventional film festivals do not yet have a designated category for machinima content and so it may be difficult to label a machinima film and as a result it may fall under ‘animation’ or ‘experimental’ categories. In my case, I have a hybrid of live action and machinima, so the positioning of the film may be even broader. The website www.machinima.com is dedicated to machinima content, but largely showcases videos related to gaming and non-artistic films.
The gaming world is an extremely popular, multimillion-dollar industry and content around gaming dominates the machinima genre. For example, “gamers love to cite statistics comparing the Halo series, which made 170 million dollars on the day of release to blockbuster films like Spider-Man 2 which only made 40 million on its first day” (Horwatt, 2007/2008, p. 10). The lack of recognition at conventional film festivals of this unique production method is an indication of the industry’s delayed acceptance of machinima as a viable filmmaking medium. If a filmmaker searches the specific word ‘machinima’, a great amount of content is available online, however, it is not a medium that is taught in conventional film curriculums or one that is widely understood by content creators. Quite ironically, machinima is a medium that can be very empowering in motion picture arts. As one of the early adopters of the medium, Hugh Hancock said, “Machinima seems to be the only way that someone like me is going to get to produce stories on the scale I want without having to spend 35 years working my way up in the TV or film industry” (Hancock as cited in Horwatt, 2007/2008, p. 10). Beyond gaming content, a good portion of machinima work is political and experimental. A famous film, “The French Democracy (2005)…detailed the events and situations which led up to the French suburb riots of October 2005” (Horwatt, 2007/2008, p. 12). Molotov Alva and His Search for His Creator is a series of video diaries of “a man who supposedly evaporated from real life and reappeared in…Second Life” (Horwatt, 2007/2008, p. 13). It is a highly philosophical and experimental docu-drama and, “has become the object of much discussion after its purchase by HBO for broadcast in 2008 and was entered into the Academy Award’s short film competition in 2007” (Horwatt, 2007/2008, p. 13). It is this type of recognition that will help propel machinima into the mainstream. In order to further have successes such as these, machinimators must treat the
medium with same respect that filmmakers treat conventional filmmaking. For example, it was my sincere intention to write a film that truly embodied the dogma that I apply to all my film works, which is that content must match the form. Therefore, I sought to write a script that inherently needed Second Life as a platform and in my story. Thus, it so happened that both the real world and the virtual world had to be incorporated.

Forming an artistic and technically applied focal-point portion of my dissertation is my short film, *Romeo & Juliette16*, a hybrid machinima and live-action short film loosely adapted from William Shakespeare’s tragic play, *Romeo and Juliet*. It is set in Tokyo and tells the story of Ren, 17, and Junko, 16, who meet by chance under a cherry blossom tree and fall in love at first sight. Since Junko's father is extremely strict, their only option for getting to know each other is in a virtual world called 'Second Life,' where they fall further in love and go on many exciting adventures together including flying together as avatars. In real life, Junko is highly disciplined. She attends a private high school and trains hard as a fencer to improve her chances of studying in America. Ren works for his father’s small food stand and builds virtual 3D objects as a hobby. Despite their class differences they long to be together. After some time, they cannot stand being apart and arrange to meet in person. When Junko’s parents find out about their meeting, they punish her by forbidding her to go out and by taking away her Internet access. Ren and Junko meet one last time, at a pre-arranged location on the Tokyo Rainbow bridge, where the story ends in suicide, leaving the audience torn between believing the virtual and reality. The film, *Romeo & Juliette16*, is located in section 3 of the dissertation.
2.3 Situating Machinima in Online Educational Theory

Technology is having a revolutionary impact on the delivery of education and it is enabling educators to effectively teach any course online via the Internet. “The Internet revolution is the…most recent shift in human development and is the basis for the 21-century Knowledge Age” (Harasim, 2012, p. 80). In British Columbia, for example, “enrolment in online courses has grown by more than 500% in the last five years” (Government of BC, 2016, p. 6). Post-secondary institutions are offering courses in almost all fields online, however, currently there are only select institutions offering online courses in filmmaking or film production. This may be due to the fact that up until recently, the prospect of teaching film production online was unfathomable. Any filmmaker would attest that filmmaking is a hands-on process that you learn through the experience of doing it. This dissertation posits that this new process of filmmaking, machinima, is an immersive and engaging mode to teach filmmaking online and virtually. This chapter argues that machinima affords a replication of the essential components of traditional film production education. Applicable learning theories and frameworks, such as constructivism and Online Collaborative Learning Theory (OCL), will be analyzed to support teaching machinima filmmaking online. Potential obstacles and challenges of the implementation of machinima in education will be considered and analyzed. Since the fundamental aim of film production education is applied media literacy (Payne, 2011, p.243), it would normally face considerable challenges to achieve its practical learning outcomes in the online sphere. Using an online virtual motion graphic capture process (i.e., machinima) to overcome the physical limitations of online film production education could be revolutionary. The use of machinima has opened a world of possibilities for online film production education, which provides institutions a robust and
creative platform to develop online machinima production courses. The decision to complement or convert traditional film production education, which has been historically taught in a classroom, a studio, and in the field, to the online format requires a theoretical foundation. Applicable learning theories that can be used to support and ground online modes of education are Constructivism and the Online Collaborative Learning Theory. The Constructivist learning theorists suggest “that people construct their own understanding and knowledge of the world through experiencing the world, and reflecting on those experiences…As such we are active creators and constructors of our own knowledge” (Harasim, 2012, p. 60). Educators with teaching experience using machinima and SL connect the practice to constructivist learning theory. For example, in *Everything I Need to Know about Filmmaking I Learned from Playing Video Games: The Educational Promise of Machinima,* Matthew Payne emphasizes that using machinima to teach filmmaking is compatible with the constructivist learning theory, broadly stating that we learn by doing and playing (Payne, 2011). In her presentation on *Experiential Education in Second Life,* Hilary Mason states “experiential education is a learner-centered educational philosophy, sharing many similarities with constructivist and active learning paradigms” (2007 p. 14). She lists the essential skills of experiential learning, including collaboration, critical thinking, and reflection. Therefore, constructivism supports the concept of learning how to make films using machinima, since the student machinimator will be required to collaborate with other ‘players’ (classmates), perform active tasks, and thereby construct knowledge of filmmaking. To date, virtual reality (VR) technology in education has primarily been used in training and simulation in the medical, vehicle, or military fields (Fällman, Backman, & Holmlund, 1999, p. 1). “The ability to work with abstract and multidimensional information is a crucial skill in
today’s society” (West, as cited in Fällman et al., 1999, p. 2), “not only in the academic world but also for large parts of the workforce as a whole” (Fällman et al., 1999, p. 2). Definitions of VR are also evolving and fluid. For example, “VR from a psychological perspective, where it becomes nothing of a technology but rather a state produced in the users’ minds that can occupy their awareness in a way similar to that of real environments” (Keppell et al., as cited in Fällman et al., 1999, p. 2).

It is vital to remain critical of the conversion of any curriculum to the online realm, as highlighted by Dall’Alba and Barnacle in Embodied Knowing in Online Environments. The authors are critical of decontextualized knowledge, emphasizing the importance of ‘embodied knowing’ which is apparently missing in much of online education (2005). They warn that delivering curriculum online does not necessarily guarantee a quality improvement, despite the recent wave of its adoption. Admittedly self-evident, the authors remind us that only the technology that enhances learning should be adopted and not just because it is capable of doing something (Dall’Alba & Barnacle, 2005, p. 729). There are numerous models for selecting media for education with a wide variety of criteria, however, as mentioned by Baytak in his canvas of different frameworks, “Tony Bates’s ACTIONS model is one of the clearest criteria for selection of media… In contrast to other models, Bates’ model focuses on media selection in terms of current technology” (Baytak, n.d., p.2). I found an effective and practical framework is the updated SECTIONS model (Bates & Pool, 2003), which is based on the ACTIONS model as first described by Bates in 1988 and further in 1995, which functions as a framework for selecting and using technology (Bates & Pool, 2003, p. 75). SECTIONS stands for, Students, Ease, Cost, Teaching and Learning, Interactivity, Organizational Issues, Novelty, and Speed (Bates & Pool, 2003). Thorough
analysis of any technological adoption using this or any comparable framework should be part of the responsibilities of any educator or instructional designer, as it exposes both the complex positive and negative impacts of a proposed implementation of new technology.

I have assessed the adoption of machinima as a mode of teaching film online in the context of a (hypothetical) cross-disciplinary and joint-institutional course between UBC and Emily Carr University of Art + Design using the SECTIONS model. The detailed course outline for this potential course follows this chapter. This rigorous assessment led to the conclusion that machinima would enable and enhance teaching and learning of filmmaking in the online context. It is arguable that by way of its collaborative, interactive, creative, and distinctly cost effective application, machinima is superior in some aspects to live-action film production in the context of education.

Our education system is situated in the 21st century ‘Knowledge Age.’ “Knowledge has become the principal component of today’s economy…The use of the Internet for collaborative knowledge creation is the basis of the Knowledge Age and a new theory of learning with relevant pedagogies and technologies must respond to this new reality” (Harasim, 2012, p. 80). Namely, the Online Collaborative Learning Theory (OCL) defined by Linda Harasim was created to support new forms of learning, especially online education. Essentially, OCL “refers to educational applications that emphasize collaborative discourse and knowledge building mediated by the Internet” (Harasim, 2012, p. 88), where the role of the teacher is to connect students to the larger knowledge community. While OCL distinguishes itself from constructivism, its emphasis on knowledge building through collaboration and discourse is supportive of the use of machinima as a mode of teaching film production online. For example, one of the key learning outcomes of most filmmaking
education is to teach students to collaborate and solve problems through a building of diverse knowledge. This outcome is in line with the intellectual convergence that Harasim refers to, which she states can also result in the output of a work of art. Thus, the theoretical framework that supports the use of machinima to teach film production online stems from constructivism, with an emphasis on experiential learning and extends to the Online Collaborative Learning Theory for its support of knowledge convergence mediated via the Internet.

There are many advantages of using machinima to teach film education online. Machinima democratizes film education, it closely mirrors the collaborative traditional phases of film production, and it is low cost. It is somewhat dangerous to claim that something is “democratizing” education because inevitably one can argue the opposite is true due to a lack of access to basic requirements such as bandwidth and a computer. However, if compared to traditional film production, machinima is a highly accessible mode of filmmaking. “VR allows students to visualize abstract concepts, to take part in and interact with events that for reasons of distance, time, scale, safety or money would not otherwise be conceivable” (Fällman, Backman, & Holmlund, 1999, p. 4). Machinima is open to anyone, around the world, with almost no additional costs beyond the computer and Internet. In certain instances individuals with mobility disabilities would have opportunities to make machinima that they would not otherwise have. Finally, one need not be enrolled in an academic program to participate in learning machinima, as there are many forums and even “in-world” mentors who can teach one how to operate in the form of an avatar.

What is likely the most important point is that machinima replicates the traditional filmmaking process (Jones, 2005) and therefore is a promising mode to teach the essential
elements of filmmaking online. For example, in an interdisciplinary program at the University of Utah, students are collaborating with a variety of students to create machinima films. Van Langeveld and Kessler’s course learning outcomes are listed as follows:

- Learn and apply filmmaking techniques including: storyboarding, scriptwriting, cinematography, sound, lighting, editing and film/storytelling
- Learn tools for building sets, props, lip synching, and character acting
- Learn to work with students from other disciplines: Teamwork, Problem solving—partially due to limitations in the tools and technical environment and yet still allowing expressions of creativity. (2009, p. 465)

The learning outcomes for this machinima course are identical to many course outlines of traditional film production courses. The key differences are that the students collaborate virtually and online, to write a script, via email, chat, Skype, or in the form of their avatars. Instead of driving to scout for locations, they must find them in SL or a game, and possibly build digital props and sets. They plan their shots using a traditional storyboard format and finally, they would shoot their production virtually, instead of physically. Lighting and camera ‘operation’ differs from ‘real-world filmmaking’ but nonetheless are required in a modified manner in SL. The students coordinate whose avatar shoots what in order to obtain adequate coverage of their production. Once all footage is captured, the students edit the footage in a method akin to any traditional edit. From beginning to end, the learning outcomes of a machinima course are analogous to traditional film production course.

The cost of machinima is significantly less if compared to traditional filmmaking. The average thesis project in a film school ranges between six to $12,000 out-of-student-pocket dollars (more in some cases), on top of the tuition-covered equipment rentals from the
college or university. Once the equipment cost is accounted for, most student thesis projects amount to about $20,000. While cheaper films can be produced, these numbers are realistic and average for most thesis films. To create machinima, one must simply have access to a fast computer with a good graphics card, a high-speed Internet connection, and a non-linear editing software program, such as Avid or Adobe Premiere Pro. If one wishes to add other effects, one may wish to subscribe to Adobe Photoshop, After Effects and 3-D modeling software to build custom sets. A computer microphone is also useful for voice-over. This is the extent of a machinima studio, which may amount to two to four thousand dollars, depending on software costs. The cost difference between machinima and traditional filmmaking is substantial (Carr, 2007).

On the other hand, there are pitfalls of using machinima to teach film production online, which include copyright issues, technical limitations, the steep learning curve involved in virtual software and real-world applicability. Technical limitations are also an important factor, specifically bandwidth, basic media literacy, and also limitations of the software. While much of the developed world enjoys fast, reliable Internet access with a bandwidth that allows the transfer of large files, many parts of the world lack this. For example, Bhutan is a country that is very eager to join the digital revolution and educate its own crop of filmmakers (Ziemsen, 2011), but unfortunately does not have reliable or fast Internet throughout the country (Rennie & Mason, 2007). Therefore, machinima courses, just as many other subjects, are limited to locations with fast Internet connections.

Furthermore, although literature on machinima makes it seem that it is rather facile to learn to exist in Second Life, to create an avatar and to participate virtually, in reality, it is not so simple (Fortney, 2007). It requires much time, patience, and guidance. A way to
overcome the many initial hurdles, several educators encourage using SL as a social network, whereby you can ask for help internally (Joseph, 2007). However, this peer-mentor approach is one that would also need to be taught. Level of difficulty will also depend on prior knowledge of gaming and other media literacy. Basic computer skills are assumed and stipulating prerequisite these skills would be essential in ensuring the success of a machinima student.

In terms of ‘real-world’ applicability, machinima does not teach students some of the skills they would require to work on a ‘real’ film set. For example, the skill of directing a live actor, perhaps inspiring them to cry, would be impossible (and unnecessary) in machinima. The physical skills of operating equipment would not be developed using machinima, and would need to be learned outside of a machinima class. Finally, the people that make up a crew often become life-long friends and sometimes life-partners due to spending extended periods of time in confined spaces, which is a significant shortcoming of not being on a real-world set. However, collaboration, problem solving, overcoming limitations, storytelling, and the concepts of lighting, editing and sound, would all be learned using machinima. Arguably collaborating online on such a work-intensive project may also lead to life-long professional and personal bonds between machinima students.

The integration of machinima online courses is already happening, but the adoption amongst some of the large film production education institutions is lagging. The Second Life Educators conference indicates that machinima using SL has been successfully used in education for years. These conferences showcase complex examples of the use of machinima in education and also provide best practices. The evolution of the SL community is referred to as an ecosystem (Linden & Linden, 2007, p.iii). The ecosystem metaphor is effective to
use in framing the integration of a new technology into a school. For example, researchers Zhao and Frank compare how the Zebra mussels integrated into the Great Lakes to how technology is successfully integrated into schools. As they demonstrate, a mix of complex factors will contribute to the successful adoption, or evolution, of a technology within the context of a school system. The researchers make it clear that there are factors that lead to a successful adoption in an ecosystem, without which a new species could quickly be rejected. Perhaps the salient point of analyzing machinima in the context of education centers on the resistance to change in an institutional setting. Leo Berkeley reported on a case study of a major curriculum change at RMIT University, Australia. He highlighted the rationale and profound need for the complete overhaul of their Bachelor of Communication (Media) degree in terms of content and delivery mode, but also details the resistance they experienced in this process. “Implementing major curriculum change within the tight timelines and crowded academic schedule prevalent in most universities involves a demanding additional workload for already overworked academics and requires considerable commitment to the changes being made” (Berkeley, 2014, p.193). With a shift to ‘student-centered learning’, they found that some students resisted strongly, as they felt they were part of an experiment and they were accustomed to ‘outcome-based’ learning not ‘process-focused’ learning (Berkeley, 2014).

With a push to teach 21st century skills, combined with pressures of lowering school operating budgets and paradoxically increasing enrolment, institutions may become more open to the innovation of teaching film production online. The democratization of access and open resources will drive students towards using machinima as a mode of creative expression. Most importantly, machinima replicates most of the learning outcomes of
traditional filmmaking including, collaboration, creativity and problem solving, all at a significantly lower cost. While there are pitfalls of using machinima to teach film production online, such as copyright issues and technological limitations, these can evolve and be overcome with time. Machinima is a powerful mode of teaching film production online and has the potential to revolutionize film production education.
3. Romeo & Juliette16

*Romeo & Juliette16*, short film, 17 min 39 seconds, 2017

Please find link for film in the abstract in the cIRcle metadata.
4. ‘Making-of’ a Machinima Film

‘Making-of’ a Machinima Film, documentary, 85 minutes 13 seconds, 2017

Please find link for film in the abstract in the cIRcle metadata.
5. Conclusion

The Godfather of narrative structure, Greek philosopher Aristotle stated, “a whole is that which has a beginning, middle, and end” (Aristotle as cited in Tierno, 2002, p.7). In creative narrative terms, he stipulated that, “every tragedy [dramatic story] is in part Complication and in part Denouement” (Aristotle as cited in Tierno, 2002, p.7). In the film industry, and especially in the education of film production, it is customary to hold a ‘post-mortem’ meeting to finalize any production, during which all crew-members have a chance to voice their reflections on what lessons were learned, about what was effective and what presented challenges (that could be improved upon) during the production. On longer film shoots, these types of meetings will occur regularly during the production period to serve as an iterative learning and team-building exercise. This concluding chapter will provide a final reflection on the body of work of this dissertation, including revisiting the original intention of the research and reflecting on the creative and academic works produced. The conclusion will also illuminate the interviews conducted with select media professionals who watched the film, Romeo & Juliette16 and provided their responses to a set of questions. The interviews were videotaped and edited into a ‘making-of’ documentary. This chapter explores and engages with the answers and reflections of the participants in greater depth than the format of the documentary affords and will therefore contain comprehensive quotations of the participants, as a way to end with a literary representation of a ‘post-mortem’ meeting.

The original title and research aim of this dissertation was “Developing a Learning Model for Teaching Film Production Online” by employing the research method of a/r/tography. The resulting body of work that investigates the research goal includes several
academic written components complemented by two key applied cinematic projects. The ‘learning model’ is represented as a holistic curriculum, including a sample Machinima Online Course Outline, which relies on the inclusion of an exemplary machinima film, in this case, *Romeo & Juliette16*, a ‘Making-of a Machinima Film’ documentary that is designed to serve as the educational asset of an online film production (or machinima) course, and the literature review, which provides a thorough theoretical contextualization of machinima as an artistic mode of cinematic creation. The personal prologue introduced my original inspiration of wishing to continue to teach my Bhutanese students about filmmaking via the Internet, which contributed to my motivation to conduct research in the area of online film education. My diverse background as a filmmaker (artist), PhD student (researcher) and professor (teacher) led me to discover that I am an ‘a/r/tographer’ and that the research I wished to undertake called for the employment of the unique and highly appropriate research methodology, a/r/tography. My research entailed a preliminary literature review, which situated my applied research in the academic literature surrounding my research method, a/r/tography, film production theory, and educational technology theory. My applied research involved the production of a 17-minute short film entitled, *Romeo & Juliette16*. This film was based on an original screenplay written with the goal of demonstrating that the filmmaking method, machinima, is viable and effective when utilized with intention in a story. The film’s elaborate pre-production, production, and post-production proved to be invaluable phases to undertake and provided original source material for understanding and analyzing the complexity of machinima production. Upon completing this production, a preliminary ‘Research Ethics Review Board’ application was made in order to conduct a series of interviews, which would serve to engage in discourse with individuals with
differing viewpoints about the film, *Romeo & Juliette*. The interviews are focused on investigating the film’s impact on the perception and evaluation of the process of machinima as a filmmaking tool and as a tool for teaching filmmaking online.

The individuals interviewed included Andrew Stevenson, a professor of film production and the co-coordinator of the Film and Television Production Advanced Diploma Program in the School of Media and Information Technology at Humber College. Andrew is also a filmmaker with extensive credits and has been teaching for 15-20 years. Dr. Adam Miller is a Professor and Program Coordinator of the Multi-Platform Storytelling Program and the Bachelor of Communications Program at Humber College. He holds a PhD in Communication and Culture and has a background in media and communications theory. Paul Neale is a Professor of 3D Animation at Humber College and has been teaching for 22 years. He is also a technical director, which entails working with production pipelines, dealing with the functionality and back-end coding of things as well as the artistic components, such as modelling and animating. His work experience includes working on short and feature films, ‘AAA’ game and mobile titles, for large companies, military/aerospace, medical and architectural industries. Matthew Lafontaine is a filmmaker and commercial director, who graduated from a film program in 2011 (the three-year Film & Television Production Program at Humber College), has built his own digital video agency and, together with his business partner, produces work for Fortune 500 brands. While he focuses on directing, he has experience doing almost all roles related to film production and occasionally holds multiple roles on a project.

Since machinima is not a common format to date, the first question posed elicited varying responses. The question was whether they had ever seen a machinima film prior to
viewing *Romeo and Juliette16*. Andrew Stevenson had genuinely never seen a machinima film prior to this opportunity. Paul Neale first stated that he had never heard of the term before I mentioned it to him, however, with further clarification, he realized he in fact had seen game engines used to create content. Upon further reflection, Paul Neale realized that he had in fact made a machinima production himself before. Adam Miller said,

> the first exposure I had to machinima as its own form was a film—not sure if you refer to it as a film, it was a short called “Diary of a Camper.” It came out in the mid-90s and, as I remember, it was shot on the Quake gaming platform and it was very, very brief but I remember thinking the first time I saw it that there was a lot of potential there. (A. Miller, personal communication, June 15, 2017)

Matt Lafontaine said that while he was not sure if he had seen a machinima film before, he had played video games since he was four or five years old and therefore felt he had engaged in this type of storytelling for a long time already. What I found surprising about these answers was that apart from Adam Miller, who had seen a definitive ‘machinima’ film, the rest were either not clear on what machinima was and, in the case of Andrew Stevenson, had never seen this medium before. Given that all of these professionals are educated in media and versed in countless genres of filmmaking, their lack of exposure to machinima or ambiguous knowledge of what it is, demonstrates the infancy stage of this medium.

The reactions to the film, *Romeo and Juliette16* were overwhelmingly positive and insightful both in terms of the content and form. One hypothesis prior to making this film was that it is necessary to provide an example of machinima effectively employed in a film in order to have the best possible chance of convincing fellow filmmakers, potential collaborators and film educators of its potential use in both professional filmmaking and in
an online film curriculum. The resulting interviews demonstrate that there remains some resistance towards the exclusive use of machinima as a means to teach film production, however, they also convey a certain enthusiasm for what new technology may contribute to the future of film education. Miller emphasized it was a,

nice illustration of how you can kind of get the audience on board. It was designed for the novice machinima viewer, because it got them kind of acquainted with the form and comfortable with it so they could really focus on the story. (A. Miller, personal communication, June 15, 2017)

Andrew Stevenson pointed to the combined use of the virtual and reality:

I thought the interweaving of the virtual world and the live action created a really interesting effect on me, as a viewer, and I thought it really enriched the narrative to be able to have characters that were existing in two different realms at the same time, and really exploring kind of the limitations and their drawbacks and the conflicts between each realm. (A. Stevenson, personal communication, June 15, 2017)

Paul Neale pointed out the future potential of the medium in his reaction:

I watch a lot of things from the technical side, from the aspect of creating a film, or creating a piece. So, to me, watching it was very interesting, trying to figure out how is this going to be utilized in the future? As soon as I saw it and watched it, I thought, feature films are one step away right now from doing that. (P. Neale, personal communication, June 15, 2017)

He went on to argue that machinima is essentially already being used in Hollywood,

I see no limitations at this point in the technology. You know, obviously time, money, right? And everything else. But it’s an excellent way to story tell, because you’ve got
unlimited ability to build worlds. For that fact, if you watch any of the top run movies these days, how many of them aren’t machinima, right? Watch “Avatar” – it’s all CG, and it’s a mix of live action. It’s just the way they have done it is you don’t see the difference between the two. (P. Neale, personal communication, June 15, 2017)

As a filmmaker, one’s work is not complete until it has been screened to an audience – which is the final phase of filmmaking, exhibition. This audience of four provided responses that demonstrated that the intention behind the creation was translated to the screen and ultimately resonates effectively with others. Arguably, this clarity is the goal of any storyteller and when this works effectively, it should not be taken lightly or for granted. Audiences naturally have their own insights that do not always align with the filmmaker’s intention, but these varied reactions are equally fruitful and desired outcomes of filmmaking. However, it is extremely gratifying when audience members, in their own words, articulate exactly what the filmmaker had hoped they would perceive. Adam Miller succinctly summarized the film’s plot:

It’s a sort of a ‘boy meets girl, girl can’t be with boy’ story, it’s a very, sort of, a familiar narrative set-up, and then we get this opportunity to kind of see them go into their private spaces and the lighting changes and it’s very sort of intimate, and then we’re kind of ushered into this machinima environment, and so we can see the same kind of personality traits transferred from one character to the kind of virtual representation or the avatar, and so it makes it easier to kind of remain invested in the character right to the end. (A. Miller, personal communication, June 15, 2017)

I specifically chose to loosely adapt William Shakespeare’s *Romeo and Juliet*, as it is the most recognized love story ever told and therefore would provide a known storyline for the
completely new formal execution of it. Andrew Stevenson commented on the importance of the source material,

I also was really impressed by the way the narrative explored a very traditional classic source like “Romeo and Juliet” with a very contemporary and cutting edge update with the characters living very much in the modern world and, you know, using modern technology, and so I thought the combination of sort of that old world storytelling and new world context was really effective. (A. Stevenson, personal communication, June 15, 2017)

The theme of a story is in essence, the moral core of the story and it is what must register in an audience to be considered effective storytelling. Adam Miller and Matthew Lafontaine accurately describe the theme of the film,

It’s a very modern day interpretation. I think he [Shakespeare] would be interested to see how the environment changed the dynamic between the characters. I think it kind of increased their intimacy but also there was… a sadness to it because…they were together, but they were together in this virtual space, and both seemed depressed about the fact that that’s all it would ever be, and so that was kind of a nice, I think, comment on…digital society and…how it’s designed or intended to bring us closer together but, in many respects, the kind of omnipresence of the user disconnects him or her from that every day, one-on-one interaction that, in different industries, becomes less and less of a thing. Well so, the ending …it becomes apparent they’re not going to be together, and then he decides that it’s almost like the appropriate or the honourable thing to kind of remove himself from that space. And so, … the
implication is that he threw himself into the river...kind of a virtual suicide, which is, again, very true to the play. (A. Miller, personal communication, June 15, 2017)

I think...a really important message of this story, for me, was ... reality is not so easily defined, especially if you’re feeling emotions in either place, you know, real human emotion (M. Lafontaine, personal communication, June 15, 2017).

One of the key motivators for exploring using machinima first hand was to determine whether the objections that I have oft received in the filmmaking community for using machinima would hold true if I were to apply the highest narrative filmmaking production value, structure and techniques. The resounding response to the question that asked about the ‘pros’ and ‘cons’ of using machinima was that the lack of facial expression remains a ‘con’ for all interviewees. However, it was worthwhile to interview a 3D expert, since Paul Neale pointed out how machinima compares to animation.

So, I like the machinima idea because it is more off the cuff, it is a little more sort of free-flowing, and it certainly can be done a lot faster that way, and I think you can tell interesting stories and, certainly, if you can do it quicker, the cost comes down and more people can tell stories then, and tell more interesting stories, as opposed to always having to spend, you know, $300 million budgets to produce a movie, you can produce things quickly....Storytellers that would never see the light of day could easily produce interesting stories utilizing that kind of technology, which would be fantastic. [The] “Incredibles” and all of Pixar, any kind of movies like that are all done frame by frame. Give you an idea, the average animator per character would be expected to do about 2 seconds worth of animation per week. When you look at it, it’s 24 frames a second, and there are hundreds of hundreds of controls on each
character. So, a single character could have a thousand different control points on them for manipulating the face, the hands, everything else. Bits and pieces. And every single one of those needs to be keyed and, generally, we’ll end up with keys, you could say, every other frame on every control, just about. So, it takes years to produce one of those films, yes. Generally, it’s 3 years for things like “Toy Story” and the first time they do a film from ground up, it’s 5 years. (P. Neale, personal communication, June 15, 2017)

The consensus amongst the interviewees was that the lower cost and ability to experiment with visual storytelling were among the strongest ‘pros’ in support of using machinima as a filmmaking tool and a tool for teaching filmmaking. In comparing machinima to traditional filmmaking, the interviewees highlighted the affordances of both. For example, Matthew Lafontaine spoke of the ease of shooting motion shots in machinima versus live action, as it is a matter of moving your mouse in machinima to achieve a shot that would normally require a helicopter in live-action. Adam Miller highlighted that machinima offers students and instructors a safe environment to learn in, as well as, a feasible way for the instructor to be present for the film shoot. Typically, film professors do not join their students on set of a location-based film production and the machinima medium would furnish a unique opportunity to participate as a mentor with the ability to provide immediate feedback during the creative process. Andrew Stevenson pointed out all the aspects of live action filmmaking that present challenges, such as physical location scouting, weather contingencies, accommodating crew cars on set, and catering to name a few, which would be eliminated when shooting machinima. Conversely, he spoke of the challenge of casting and directing actors, which traditionally relies heavily on skilled performers who have been trained to
subtly showcase the subtext of their character through something rather intangible in their facial and physical expression. Machinima would force any performer to relay all of the emotion through their voice, and many performers are not trained voice actors. He astutely described the challenge I had in finding voice actors for my film, who also had to fit other characteristics, such as the characters’ age, personality, and in my case, Japanese language skills.

When I began my research process, I hypothesized that machinima is the ideal mode of teaching filmmaking online, since it replicates almost all of the learning outcomes of a film production curriculum. When I asked my interviewees what in their opinion are the most important learning outcomes of a film curriculum, the responses were as follows. Andrew Stevenson, a veteran film professor, stated that the three most important learning outcomes of a film production curriculum are:

Methodologies and practices that they need to learn in order to be able to work in the industry. That’s number one, and that would encompass everything from how to operate certain pieces of equipment or technology, to understanding software, to understanding just the protocol of how things work in a certain department of the film industry, who reports to whom, how work flows from one person to the next, so that’s number one. Number two, I think, visual storytelling is probably the most important outcome of a film production program. Learning how to translate ideas, themes, arguments into visual terms that will be engaging to an audience through the visual language of short film, documentary, etc. The third learning outcome that I think is really critical for students leaving a film production program is what I would put under the umbrella of ‘professionalism’, so it would include how to work in a team,
how to communicate effectively, how to learn to cope with the heavy demands of long hours and difficult, challenging tasks, and so on. So, I think those three are the most important outcomes. (A. Stevenson, personal communication, June 15, 2017)

These learning outcomes are very much in line with my own opinion of what is critical in a well-rounded film program. Film graduate Matthew Lafontaine added that collaboration and communication are also critical learning outcomes for any film graduate. Therefore, my hypothesis that most of the important learning outcomes, short of manipulating physical equipment and directing real actors, are attainable by learning to make films using machinima and therefore this mode offers a great deal of potential in the realm of film education. Interestingly, Paul Neale pointed out that the technology used in 3D animation programs already has advanced capabilities in terms of testing how different ‘real life’ lenses, lights or textures would affect a shot. In other words, technology will soon catch up in virtual worlds like Second Life to offer users even more realistic filmmaking options. The resounding consensus amongst the interviewees was that the practice of visual storytelling was one of the primary affordances of machinima, which live action may not allow for as easily or economically.

In addition to film production theory, this dissertation was situated in educational technology and online learning theory. One of the key factors affecting education today is the need to produce students with ‘21st Century skills.’ Matthew Lafontaine distilled the most essential skill of today’s worker.

The most important thing to understand in the 21st century is to understand how to utilize a search engine and how to teach yourself…you have to have a system on how to teach yourself and…the fact that you can give yourself schooling at any point of
the day or any time of day is very important. (M. Lafontaine, personal communication, June 15, 2017)

Adam Miller pointed out that,

the whole notion of going to work 9-5 and sitting in your office and interacting with people on the same floor or in the same part of the building is not as much of a reality anymore, and so I think machinima and the online collaboration that goes with it are both a nice approximation of what working in this day and age is actually like. (A. Miller, personal communication, June 15, 2017)

He pointed out that expectations in media storytelling are also being pushed to different levels and producing a story may involve ‘multiplatform storytelling,’ requiring skill and agility to deliver in different mediums. Paule Neale revealed a powerful message about his view on what the 21st century requires in the next generation of workers,

These days, things change very fast. The way we do things is constantly changing. The camera we’re currently shooting with now will not be the same in no time at all. I mean…film was never going to go away, how many years ago? And it’s gone. Disappeared. I’ve said that even lenses on cameras are going to disappear. They’re big, bulky, and expensive. What’s next? So, you’ve got to be able to adapt. The job you start off with, I think they say now, it’s something like minimum three, four, five careers that people are going to have in their lifetime? I think I’m on my 5th now, and with online, people have to understand they need to be able to just go and dive in and research and jump on the next thing. (P. Neale, personal communication, June 15, 2017)
Furthermore, he revealed that throughout his youth he was labelled as having a learning disability. He recounted that the system in place at the time was not effective in helping someone in his situation learn and that even today, he argues, it is critical to understand that those in education must deliver curriculum in a manner that engages the learner and that machinima may be just the tool for that approach for some individuals. This for me, was a profound realization of something I had not highlighted in great detail in my research—that machinima may be an extremely useful tool for certain students with learning disabilities whether they manifest physically, mentally or socially. With machinima, it is easy to accommodate schedules, as you are not relying on daylight and other logistical factors. Therefore, accommodation of students’ needs can be made with ease and in some cases, the mode of learning online only may resonate with a student more than the live-action mode of learning filmmaking.

Finally, when asked whether the interviewees would wish to make a film using machinima now, based on having viewed Romeo & Juliette16, their answers were varied. Matt Lafontaine stated that until the photorealism improves, he would likely only employ CGI (computer-generated imagery) or partial elements from a virtual setting if the content called for it specifically. Paul Neale reiterated that he has already made a machinima work and he believes it is here to stay and would therefore continue to work with those who want to produce machinima productions. Andrew Stevenson points out that he is very much attached to the human component of using actors in cinema and given that he has no background in filming in virtual worlds, his learning curve would be very steep, and therefore he would likely stick with live action filmmaking until virtual worlds become more and more realistic. However, he does state that machinima offers a great deal as a pre-
visualization tool. Adam Miller, who is not a filmmaker, illuminates a point of view that I found very promising—machinima opens the door for anyone who ever wishes to experiment with making a film to do so. He stated that he is cognizant of the fact that live-action filmmaking is extremely expensive and risky in a logistical and financial sense, and machinima gives anyone the chance to experiment in a forgiving medium and process. Therefore, he said, if he were to embark on making a first film, machinima would be his ‘logical first step’ (A. Miller, personal communication, June 15, 2017).

Conducting these interviews proved to be challenging to set up, given the extensive ethics applications that I completed over the course of several weeks. The results, however, have been invaluable to my final interpretation of the significance of my research in the context of the professional media industry and in the education sector. My intention with my research was to “Develop a Learning Model for Teaching Filmmaking Online” and through a highly applied and iterative process, I believe I have addressed this research goal. Hearing the thoughtful and insightful reflections of very diverse individuals, with varying backgrounds, experiences, and philosophies, provided me with a professional and academic context in which to test and evaluate my research hypotheses. It is worth noting that the professionals most closely linked to film and filmmaking, Stevenson and Lafontaine, were the most resistant to the adoption of machinima, whereas a 3D animator such as Neale and a novice ‘non-artist’, Miller, were the most likely to use or adopt machinima. This reaction is consistent with the original conversations that I had with students and colleagues alike, prior to starting the PhD, and this leads me to believe that it is critical to develop any machinima course with a proportionate number of students from an animation background, students who may never otherwise make a film, and perhaps a few film graduates who have been
unsuccessful in producing their work due to lack of funding. This combination of people will most likely adopt the mode of machinima more readily. In line with the previous quote of Stanley Kubrick, it will be the artists who cannot function using the form as it is (due to financial, artistic or logistical reasons), and they will be the ones to innovate the cinematic form. In line with my research methodology, a/r/tography, I have followed a rhizomic path, which constantly led me to engage the artist, the researcher and the educator aspects of myself, in order to arrive at a complex, yet authentic model of how filmmaking can be taught online.

In Appendix A, I provided an example of a course outline for a hypothetical machinima course, which would be offered between Emily Carr University of Art + Design and the two programs at the University of British Columbia, namely the MFA Creative Writing and the UBC BFA Production Program. In my extensive research preparing this outline, I had the opportunity of consulting with various departments including the individual program heads and the department at UBC responsible for the development of new courses (and their budgets) and came to realize that one of the major challenges of delivering such a course was not the content itself, but the bureaucratic obstacles of delivering a course across programs. Having produced my own highly artistic machinima film, I now also conclude that it would require an extremely skilled instructor, who knew machinima production and all of its inherent trouble shooting needs very well, to effectively deliver such a course. However, I have found that such professors or groups of professors (from the respective domains) do exist, and if they came together in a well-planned curriculum, they could deliver an incredibly inspiring and creative course.
As I outlined in the ‘making-of’ documentary of this dissertation, my experience of making a machinima film was the most challenging film project that I have attempted in my career. The film, Romeo & Juliette16 was a hybrid film that was shot on location in Tokyo, Toronto and in Second Life, using machinima. The logistical challenges of shooting the live-action components were distinct in nature from the technical and creative challenges presented in the machinima shoots, however, they were equal in complexity and level of difficulty. I traveled dangerous journeys such as the Trans-Siberian Railway on my own to make a film, I became very ill on a shoot in Rwanda, and I risked humiliation in my film about Lars von Trier, but none of these previous films pushed me to the edge of my capacity as a filmmaker as the film, Romeo & Juliette16 has. When I discovered the research method of a/r/tography, I felt a deep sense of having found a mode of expression in academia that would allow me to showcase all of my talents and my holistic self. I believe that this dissertation tested me in all of my areas of expertise to the absolute maximum and perhaps that is what a doctorate level dissertation aims to do. I believe I evolved as a filmmaker similarly as I have as a result of all other films I have previously made, in that I tackled an entirely original screenplay with its fitting form, and have learned about the unique symbiosis that that combination required. Just as I have often felt after the completion of a conventional film, I now feel completely depleted, I feel nervous about audience reactions to come, and for just a little while, I cannot look at the film as anxiety is triggered when reviewing all of the challenges that to which each frame gave rise. This is usually my natural reaction following any film that I have poured all of my energy into for an extended period of time and so I know that I have successfully come full circle in my creative process. It is my hope that my work in this dissertation has provided others with robust references, useful
and effective applied artefacts, and a body of research with which they can continue in the work of “Developing a Learning Model for Teaching Filmmaking Online.” I also hope that filmmakers and film educators, as a result of this work, become more open-minded towards machinima as a creative and educational tool, as it has empowered me to make a film, which would otherwise have been impossible. One of the core reasons I became a filmmaker was to create something, from nothing. Machinima has opened a door for me, and I believe it is open to anyone with an imagination and the willingness to work diligently, to express a unique story and vision in a highly democratic mode.
References


http://www.bcedplan.ca/assets/pdf/bc_edu_plan.pdf


Ziemsen, E. (2012). Using Machinima to Teach Film Production Online. Unpublished
essay.


Appendix A Sample Machinima Course Outline

CRWR – Number TBD: Machinima Production (Online)

University of British Columbia

MFA Creative Writing Program (Optional Residency)

<table>
<thead>
<tr>
<th>Instructor:</th>
<th>Eva Ziemsen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email:</td>
<td><a href="mailto:Evaziemsen@gmail.com">Evaziemsen@gmail.com</a></td>
</tr>
<tr>
<td>Skype:</td>
<td>Cinevafilmsinc</td>
</tr>
</tbody>
</table>

Class Time and Place: Online

Course Overview:

This course will cover Machinima production (filmmaking that is conducted within a virtual reality). Through collaborative crew work, students will create a motion picture work of art that has the aesthetic quality of an animation film. Students will draw upon their existing backgrounds in screenwriting, film production and 3D animation to contribute in unique roles to the production of a Machinima film. Students will learn about the collaborative process of Machinima production, in the context of an online and virtual world, through the production of this major group project. The course will cover all phases of the Machinima creative process, from the development phase of scriptwriting to the final phase of exhibition of the Machinima project. The chronology of phases will follow standard film production protocol and will be adjusted where appropriate to Machinima.
Learning Objectives

By the end of this course, students will be able to:

- Maneuver in the virtual reality, Second Life, and understand the principles and process of Machinima (as well as film) production
- Collaborate in a multi-disciplinary crew, online and virtually
- Analyze and critique Machinima creative elements and processes
- Perform specific duties as part of a Machinima crew
- Create a short Machinima film, from development to exhibition
- Market and distribute a short film to international film festivals, via the Internet

Course Requirements:

Pre-requisite requirements:

UBC BFA Production Program

Students have all credits that make them eligible for “FIPR 469 (3-12) d Special Projects Advanced film production”

Emily Carr Bachelor of Media Arts, Animation Major

Students have all credits that make them eligible for: ANIM 326 Collaborative Animation or equivalent

MFA Creative Writing
Students must have completed: CRWR 506N – Advanced Drama for Screen

**COURSE FORMAT:**

The course will be taught online using a learning management system (LMS), on private property in the virtual reality, Second Life, and will require students to utilize software in their respective disciplines. Each week, students will be assigned specific learning activities and tasks through the LMS. Teaching methods will include video lecture clips, other video demonstrations and examples, text-based readings and synchronous lectures in Second Life, asynchronous discussions through the LMS. The Professor and Teaching Assistants will be available as per schedule, for questions.

The course will follow the professional phases of Machinima (and film) production, which include in chronological order, development, pre-production, production, post-production, post-production, distribution and exhibition.

A minimum crew will be formed and typically roles such as Director, Director of Photography (DP) or Producer/PM and 1st AD, would be performed by different people. However, depending on class size, it would be feasible to consolidate the roles as follows:

- 1 screenwriter (MFA Creative Writing)
- 1 Producer/PM/1st AD (UBC BFA Film Production Program)
- 1 director/ Machinimator/DP(UBC BFA Film Production Program)
• 1 editor/continuity (UBC BFA Film Production Program)
• 3 x 3D Animators - (Emily Carr Bachelor of Media Arts, Animation Major)
• “Actors”/Puppeteers (could be doubled by the writer and editor)

Students will collaborate in groups to create a short Machinima film. Students will be responsible for different tasks, based on their position and skillset, and are required to adhere to strict deadlines in order to achieve the completion of the production.

Software/Hardware Requirements

*Students from these respective programs should already have access to most of these programs.

MFA Creative Writing – must have access to: screenplay formatting software (Final Draft, Movie Magic Screenwriter, or Celtx), broadband Internet, account for Second Life, MS Word, Excel, iShowU screencapture software and minimum computer technical specifications set out by Second Life.

BFA Film Production – must have access to: screenplay formatting software (Final Draft, Movie Magic Screenwriter, or Celtx), Movie Magic Scheduling (or equivalent), MS Word, Excel, Adobe Photoshop, After Effects, Premiere/Final Cut Pro or Avid, Protools, broadband Internet, account for Second Life, MS Word, Excel, iShowU screencapture software, GarageBand or equivalent (optional) and minimum computer technical specifications set out by Second Life.
Emily Carr Bachelor of Media Arts, Animation Major - must have access to: 3D Studio Max and/or Maya, broadband Internet, account for Second Life, MS Word, Excel, iShowU screencapture software and minimum computer technical specifications set out by Second Life.

Class Schedule:

Module 1

Introduction to the Course and Machinima

The course will be introduced via a video of the instructor. Students will register on the course Learning Management System (LMS) and post their own bio and picture.

A theoretical overview of Machinima will be given using select Machinima videos and readings. Students will write responses in a discussion forum in the LMS.

Reading:


Watch:


**Module 2**

**Operating in a Virtual Reality (VR)**

This module will introduce students to maneuvering in a virtual reality, by way of a virtual tour in the VR environment. Students will first view an introductory video, where the basics of creating an avatar are outlined. Students must prepare for this week by creating an avatar and attend a synchronous session in Second Life in a designated area, with the entire class. They must also ensure their computer and Internet connection are adequate for this session.

Students will be guided to different sets, as a preview of where they will be ‘filming’. Students and the teacher will end in a VR classroom space to discuss the environment and the difficulties/challenges that they have experienced.
Module 3

Screenplay Selection

Four to five screenplays will be posted in the LMS and students will vote via ballot to the instructor, which screenplay they wish to move forward and which role they wish to fill. Options for roles would be tied to student skillset and backgrounds (as listed in the course format section) and approximate crew size will be seven members. The instructor will post the crew lists and selected projects on the LMS. All decisions are final. The writing student will assign the copyright of the screenplay to UBC, and upon completion UBC will assign the copyright back to the crew.

Each crew role will have specific research tasks associated with their position. Students will be provided position-specific reading, research and preparation tasks through the LMS.

Module 4

The Machinima Production Process – Step by Step

Much like traditional filmmaking, machinima has a very clear production process in order to be managed efficiently. The key steps for moving forward with your production are outlined, along with specific tasks for each crewmember. All crewmembers must meet for regular production meetings to discuss the logistical and create elements of the production. The overall vision of the production must be clear to all members. The director will provide the
initial vision statement, however, since this is not an auteur-driven production, all members must provide their input as necessary. Visual references should be used, and all discussions should be documented in the discussion group that will be created in the LMS for each production.

- Producer/PM/1st AD - Breakdown of the screenplay, whereby all elements of a film are broken into departments. (Same as any film, but added elements Machinima-specific elements)

- Director/ DP - Storyboards are drawn and shot-list is created

- Puppeteers - must rehearse moving their avatars to ensure they can perform a wide range of actions. Puppeteers will collaborate with Director and Animators to decide on Avatar wardrobe and body specifications. These can be adjusted in the VR and additions can be created by animators.

- Animators - Planning and building of the 3D sets and props, in consultation with director

- Producer/PM/1st AD - Scheduling of the VR rehearsal and production

- Editor – Researching the settings of the screen capture software, conduct a test of capturing footage and editing a short video sample.

Module 5

Continued Pre-Production

- Rough virtual sets should be underway and in the process of being built. Animators should upload progress images of their work for review by director.

- Storyboards and shot lists must be uploaded by director for review by DP,
Producer/PM/1st AD and Continuity/Editor.

- Puppeteers upload sample video of their rehearsal of the script with wardrobe, in a virtual reality void of props or sets. Director should collaborate in this rehearsal.

- Production Meeting about elements – do this live in VR environment and with chat for taking notes.

- Professor will monitor the progress of students and ensure that all elements are uploaded to either LMS or designated dropbox. Each crew member will have a clear checklist of items they are responsible for uploading by a due date this week.

Module 6

Rehearsal

- Semi-complete complete sets in VR

- Students will do a run-through this week of their production

- Students will piece together a sample scene from their production and upload for review by Professor

- Call Sheets and final schedule is provided to all crew via LMS (by 1st AD)

Module 7

Production 1

- Students will be shooting their productions following their production schedules

- All Machinima shooting will be done in Second Life.

- The shoots will be similar in length to other film shoots, which typically range from 7-12 hours for at least two days. Even though Machinima is done online, it often
takes the same amount of time (if not more) to effectively capture the materials needed.

- Students will capture the visuals with guide track for the audio, but ADR (additional dialogue recording) will be necessary.

Module 8

Production 2

- Often there are technical glitches, mistakes made or other challenges faced in production. This additional week is allocated for crews to ensure they have captured all of their work effectively and allows for extra time to re-shoot scenes that may require it.

- Depending on the complexity of the 3D sets, this extended production period provides students flexibility to schedule their shoot as it is possible within the two-week production period.

- Students are responsible for completing all shooting by the end of this period.

- All footage must be uploaded to dropbox, and all crew members should make back-up copies on their local hard drives.

Module 9

Post-Production – Picture Cut

- Editing students will log and organize footage in their non-linear editing system.

- Director and editor will have an online meeting to screen rushes – this should be done
synchronously using Skype and shared desktop function. Editor should make notes about comments from director.

- Editing student will create a rough cut, using the screenplay
- The rough cut will be posted online for review by instructor and other members in the crew. Feedback will be given.
- A fine cut will be created.
- Producer/PM/1st AD will be responsible for ensuring the schedule is followed in post-production (acting as a post-supervisor)
- Animators should organize their 3D assets, create tags and upload to Dropbox for future use in the course. They will sign a release, to allow others to use props and sets.
- Puppeteers are responsible for writing a post-mortem report on challenges and solutions for operating their avatars and lessons learned on the production. This will be uploaded on the wiki and tagged according to content of their entries.

Module 10

Post-Sound (Dialogue Edit)

- The fine cut will be the guide for any ADR (additional dialogue recording) that is required. There are two options for this process. Option 1: Hire voice actors locally to do ADR in a studio and synchronize audio. Option 2: Have actors do ADR online, by viewing the film live and performing roles while recording through their microphone. This process will take a great deal of time, as it does in standard filmmaking processes.
- Dialogue will be synchronized and edited with the visual.

Module 11

Sound FX and Music Score

- Sound Effects that have been broken down in the initial script breakdown will be sourced and mixed with the dialogue.

- Music will be sourced and a score will be married to the mix as in standard filmmaking process.

Module 12

Marketing and Distribution

- The crew will take on different roles for the marketing portion of the project

- Roles include: Marketing Manager (who creates a launch plan), Graphic Designer (who will create a digital poster), trailer editor (who will edit the promo trailer), transmedia position (who will promote the project through social media and create a stand alone website using a template). Crews can decide how to allocate these positions, but should use the natural skillsets of the members.

Module 13

Exhibition

- Marketing Package Presented and Feedback provided

- Online Machinima Film Festival (will be created for this course) through UBC will premiere the films. The festival will be invite only and not screen films widely online
until a full festival run has been completed. If a campus-based screening is feasible, this will be held on UBC campus.

- Students will have entered film into other regular film festivals and online festivals.

Module 14

Wrap Up

- Final discussion will occur about learning experience
- All digital elements of project will be collected by each student from the LMS/Dropbox. These assets will also be saved by UBC for future use (or digital props or sets).
- Final marks will be emailed to each student

GRADING CRITERIA

1. Participation (in all discussions, meetings, vote) 20%
2. Pre-Production Elements 30%
   (Related to individual crew roles)
3. Production and/or Post-Production 30%
   (Responsibilities outlined via rubric for each role)
4. Marketing Project 20%
   (Responsibilities outlined via rubric for each role)

Total 100%
*Assignment sheets and rubrics will be provided at the beginning of the course. Since all roles have different responsibilities, it is critical that students review their own rubric for each evaluation component, to ensure accurate completion of assignments.

**Contact/Office Hours:**

**Professor Eva Ziemsen** - Mondays and Wednesdays 10am-3pm PST, and by appointment at other times

**TA Machinima** – 10am-3pm PST Tuesdays and Saturdays, and by appointment at other times

**TA 3D Animation** – 10am-3pm PST Sundays and Thursdays, and by appointment at other times

We will ensure that you always have a point of contact throughout the week. Please contact the faculty member on ‘duty’ of each day for immediate problems. If you have a specialized problem, you can contact the respective person and we will return your email within one day.

**Academic Integrity**

The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a
mark of zero on the assignment or exam and more serious consequences may apply if the matter is referred to the President’s Advisory Committee on Student Discipline. Careful records are kept in order to monitor and prevent recurrences. A more detailed description of academic integrity, including the University’s policies and procedures, may be found in the Academic Calendar at http://calendar.ubc.ca/vancouver/index.cfm?tree=3,54,111,0
Appendix B Synopsis and Screenplay

Film Synopsis

*Romeo & Juliette 2016* is a hybrid machinima and live action short film loosely adapted from William Shakespeare’s tragedy play, *Romeo and Juliet*. It is set in Tokyo and tells the story of Ren, 17, and Junko, 16, who meet by chance under a cherry blossom tree and fall in love at first sight. Their first encounter is short and fateful, quickly interrupted by Junko’s father who calls for her to return to the family picnic. Ren manages to share his Second Life Name with Junko before she must leave in haste. Shortly thereafter, Junko finds Ren in Second Life where they fall further in love and go on many exciting adventures together including some where they fly together as avatars. In real life, Junko is highly disciplined. She attends a private high school and is in training to become a fencer in order to improve her chances of studying in America. Ren works for his father’s small food stand and builds virtual 3D objects as a hobby. Despite their class differences they long to be together. After a time, they cannot stand being apart and arrange to meet in person. When Junko’s parents find out about their meeting, they punish her by forbidding her to go out and by taking away her Internet access. Ren and Junko know the only way to see each other again is by meeting at a previously planned location. Her parents chase her through Tokyo to this location but, before her parents catch them, Ren and Junko commit suicide, not willing to be separated again.

The following screenplay was the final draft prior to production, however, various elements have changed in the final version of the film. The dialogue has also been modified since it was translated into Japanese.
EXT. TOKYO - NIGHT (LIVE ACTION)

The skyline of Tokyo is dark bluish black, with lights glimmering in the distance. It is serene. A montage ensues of buildings, ending on the aerial view of the large Shibuya crossing and random people on it.

CUT TO:

EXT. CHERRY BLOSSOM PARK, TOKYO - DAY (LIVE ACTION)

A flash of white light appears through green leaves. There are no cherry blossoms on the trees. REN (17) stands by a tree. He is youthful and also mature in his stature. He wears a red knapsack and holds a pink paper plane and throws it across the park.

It lands at the feet of JUNKO (16), who is wearing white converse shoes, a mini skirt and a red purse. Ren approaches her and they lock eyes. Time slows down for a moment. She gives him back his paper plane and they walk together, smiling. They continue to walk playfully around the park and laugh together.

JUNKO'S FATHER (O.S.)
(Japanese)
Junko, where are you? Junko!?

CUT TO BLACK:

TITLE CREDIT: ROMEO & JULIETTE16

SIMULTANEOUS CREDIT IN JAPANESE: ROMEO + JULIET

REN (V.O.)
(Japanese)
Junko, my name is Ren.

JUNKO (V.O.)
How can I see you again?

REN (V.O.)
I know a place.

CUT TO:

INT. JUNKO'S BEDROOM - NIGHT (LIVE ACTION/MACHINIMA)

Junko closes the door handle softly. Juno's bedroom has a several pictures of NYC on the wall, including the skyline,
graffiti with an angel behind barbed wire, and of her fencing. Junko sits at her laptop. We see only her silhouette from the back. She is wearing a white tank top. She moves her finger on the mouse pad.

The window Second Life opens and she creates a new user name, "Juliette16".

CUT TO:

INT. SECOND LIFE – DAY (MACHINIMA)

JULIETTE16 has arrived in the 'birth island', as a bare avatar missing any specific clothing and just the 'default hair' and plain body suit. She begins to practice walking.

Juliette16 searches for "Ren2001" and adds him as a contact.

Juliette16 begins the process of creating her avatar.

Montage:

Juliette16 selects 'free' outfits that are available. She walks around awkwardly, often stumbling. She adjusts her breast size a few times, first inflating her breasts like balloons, and then reducing them to a smaller size. She tries on hair styles, of different cuts and colours. Then, she comes across 'for purchase' hair and accessories. She spots a 'wig' made of 3d cherry blossoms. She selects it.

A Second Life (SL) message notifies her that her connected PAYPAL account has been charged.

The piecing together of her outfit is shown in an abstract, almost cubist manner.

Upon completion, Juliette16 wears a hippie/romantic white dress, with lots of flowing fabric and her flowing cherry blossom hair extends down below her shoulders.

She gets an alert from "Ren2001". The message is an invitation to 'Sakura Island'. She clicks 'accept'.

Juliette16 teleports to the Sakura Island, which is indicated by way of a TELEPORTATION SOUND, and suddenly her avatar is no longer viewable in the 'birth island' area.

CUT TO:

EXT. SECOND LIFE – SAKURA ISLAND – DAY (MACHINIMA)

Juliette16 drops down in a field of flowers and greens. She
stands and takes in the view. She practices walking around more.

From the side, Ren2001 walks towards her.

Juliette16 and Ren2001 look at each other for a moment. The sun is glowing from the side. Juliette16's cherry blossom hair is blowing. Ren2001 is dressed like a warrior horseman. His white shirt reveals his chest and he wears a strap that carries a bow and arrow harness. His face and hair look similar to his real face, in real life.

REN2001
You look beautiful.

JULIETTE16
Thank you. You look...like some kind of hunter.

She laughs.

REN2001
A protector.

JULIETTE16
Protecting from what?

Juliette16 spins around playfully.

REN2001
When I met you in the park, I did not want to leave you.

JULIETTE16
Yes, sorry, but my dad is...my dad. Even tonight, I had to wait until my parents were sleeping. The walls are thin in my house.

Ren2001 nods and smiles.

REN2001
Come, let me show you around.

JULIETTE16
How do you move around so easily?

REN2001
It comes with time, I'll teach you all the commands. To walk, just press the up arrow. Are you using a keyboard or a game console?
JULIETTE16
A keyboard.

She moves forward with him and they start to walk towards the river.

JULIETTE16
What is this place?

REN2001
It's special. It's magical, like your hair.

REN2001
Let's fly!

JULIETTE16
What?

Ren2001 pops up into the air with ease. Juliette16 falls down again.

JULIETTE16 (CONT'D)
I am horrible at this.

REN2001
Just press "CTRL + up"

Juliette16 shoots up into the air.

JULIETTE16
No way! This is crazy. Now what? How do I move forward?

REN2001
Just like you walk, just push forward or press.....

Ren2001 reaches for Juliette16's hand and holds it, as they fly together above water and towards the mountains.

JUNKO'S FATHER (O.S.)
What's the noise, Junko?

Juliet hits the MUTE button. An icon indicating a speaker that is crossed through appears on her screen.

CUT TO:

INT. JUNKO'S BEDROOM - NIGHT (LIVE ACTION)

We see Junko talk towards the door, but with her face still out of view.
JUNKO (O.S.)
Oh, I was just watching a video on
youtube for class, dad. I forgot
something.

JUNKO'S FATHER (O.S.)
Ok, but go to bed. It's 12:30, it's
too late.

JUNKO (O.S.)
I will. Goodnight.

Junko waits for a moment, for complete silence, and then
begins to type.

CUT TO:

INT. SECOND LIFE - SAKURA ISLAND - DAY (MACHINIMA)
Ren2001 is standing there, looking at Juliette16.
The messenger window appears in SL.

INSERT: Juliette16: I have to go. Tomorrow, same time?
She logs off and her avatar's head drops.

CUT TO:

INT. JUNKO'S BEDROOM'S - NIGHT (LIVE ACTION)
Junko closes her laptop. The former computer glow in her
room is now gone and only the light that remains is coming
in through the blinds, from the moonlight.

She lays on her side, on her bed, facing the wall. We see
her from the back, inhaling and exhaling deeply.

The computer remains on her desk, with her battery charging
light slowly dimming and illuminating, as if it is
breathing.

CUT TO:

INT. SECOND LIFE - SAKURA ISLAND - NIGHT (MACHINIMA)
Ren2001 is left standing in SL. He looks at Juliette16's
inactive avatar. He flies around it.
Beautiful Juliette.

He holds his hand close to hers, but cannot fully grasp it.

If I profane with my unworthiest hand. This holy shrine, the gentle sin is this: My lips, two blushing pilgrims...two blushing pilgrims...ready to stand.

He walks away.

Oh I am crazy. This is crazy. I already love you. How does this happen so fast?

Juliette16 remains inactive.

CUT TO:

INT. REN'S BEDROOM'S - NIGHT (LIVE ACTION)

Ren stands in the middle of the room, wearing a headset that looks like that of Oculus Rift. His room is very messy. The curtains are frayed. An air conditioner rattles on the window. His room is filled with 'hero' posters of action films, some of animated films. One action hero is wearing a visor that covers his eyes and looks like an enlarged metal ski-mask.

Ren is still pacing around his room, miraculously side-stepping all the plastic game covers that area strewn all over the floor.

CUT TO:

INT. SECOND LIFE - SAKURA - DAY (MACHINIMA)

Ren2001 is building a throne in 3D animation. First he draws the outlines, which creates a transparent 3D structure, using his avatar's hands and using different commands.

MUSIC is playing. The sun is eternally setting.

Eventually the throne is finished and shimmers in the golden light. It has elaborate ornaments on it, some pink stones.

He tries it out. It is somewhat small for him, but he can
still sit.

CUT TO:

INT. REN'S BEDROOM - NIGHT/DAY (LIVE ACTION)

Ren sleeps, with his Oculus resting on a pristine sidetable. Night turns into day, and morning light enters the room.

His work boots sit on the floor and his uniform is hung over the chair in the room. Ren quickly jumps to the sound of an alarm and we see him dress and put on his shoes like a lightening bolt. He slams the door behind him.

CUT TO:

INT. FENCING STUDIO - DAY (LIVE ACTION)

Junko walks onto the floor, dressed in the fencing suit, holding her helmet. The studio is large and dark. We see her don her helmet from afar.

    JUNKO'S FATHER (V.O.)
    Don't mess this up again...

Her opponent walks towards her, to begin the match. Junko carefully approaches her opponent, who lunges at her abruptly and scores a point.

    JUNKO'S FATHER (V.O.)
    ...if you want to go to school in America.

Junko re-positions and continues. Their moves slow down.

    JUNKO'S FATHER (V.O.)
    Without hard work

Junko lunges forward and attempts a score, but fails.

    JULIET'S FATHER (V.O.)
    ...you will achieve nothing.

CUT TO:

INT. JUNKO'S BEDROOM - NIGHT (LIVE ACTION)

Junko stands in front of her computer. She plops her fencing
helmet on the bed. She opens her computer and logs on while still standing. She is changing her outfit, from her sports leggings to sweat pants and a tank top.

She types her password. She looks towards the door, and puts on her earphones.

CUT TO:

EXT. SECOND LIFE - SAKURA ISLAND - NIGHT (MACHINIMA)

Juliette16 appears on the island. Ren2001 is waiting for her, where they left off.

REN2001
Juliette! You are here!

JULIETTE16
I am.

She tries to hug him, but her avatar jumps on Ren2001, in an almost sexual manner.

JULIETTE16
I'm so sorry. I can't control this thing. How do I stop it?
(laughing)

REN2001
(laughing)
Try CTRL + __.

Juliette16 jumps off of him and stands before him.

JULIETTE16
I am so sorry! Sorry.

REN2001
It's quite alright. Don't worry it took me a long time to get the hang of this. Come, I have a surprise for you.

They fly together to another part of the island.

They land in a field of green, in the middle of which sits a golden throne. They land just before it.

REN2001
I made it for you.

JULIETTE16
You didn't!
REN2001
I did. For my queen.

JULIETTE16
You don't even know me.

REN2001
I feel close to you already. Is that odd?

Juliette16 sits on the throne.

JULIETTE16 (CONT'D)
I think it suits me.

Ren2001 bows before her, and then just sits by her feet, fiddling with his bow and arrow.

JULIETTE16 (CONT'D)
I appoint you the Queen's protector!

They laugh.

REN2001
So, how was your day?

JULIETTE16
My father is controlling everything I do. School, fencing, getting into University.

REN2001
I guess he wants the best for you?

JULIETTE16
No, he wants the best for himself.

JULIETTE16
How are your parents with you?

REN2001
My father wants the best for me, but he doesn't understand me. He wants me to help his business, because it's a good job, but it's a store. I don't want to sell things in a store. He says he is fine to close it, but then he will have no money and starve.

JULIETTE16
Where is your mother?
REN2001
She died when I was 13.

JULIETTE16
Oh...I so am sorry.

They appear small in their environment.

JULIETTE16
How long have you been coming here?

REN2001
Since I was 13. I created my own world.

Juliette16 contemplates this for a few moments.

JULIETTE16
You created this whole island?

REN2001
Yes.

JULIETTE16
All the trees? The mountains? The grass?

REN2001
Everything. You are my first visitor. Normally, I like to be alone with my nature here.

JULIETTE16
Why me?

REN2001
You are the first person I met who I felt belonged here...with me...
Come look at the fish in the stream.

They sit at the river's edge and walk through it to look at the fish.

REN2001
I really like you...Juliet.

JULIETTE16
Do you like me, or Juliette16?

REN2001
You are one and the same.
JULIETTE16
Well, you know what I look like in
real life, but you don't know me.

REN2001
Most people in here have never met.
We are lucky.

JULIETTE16
We are lucky. It's a nice escape.

REN2001
I'm the lucky one.

Ren2001 gives her a white flower.

JULIETTE16
What happens when we leave here? We
can only be together here, in
Second Life.

REN2001
Maybe we can meet again, in person?

JULIETTE16
My father would literally kill me
if he found out. Maybe we don't
need the outside world for a while.

Ren2001 kisses Juliette16. They kiss for a long time.
Juliette16's cherry blossoms hover around them.

JULIETTE16
I guess... I should go do my
homework and then go to bed.

Juliette16 gets up.

REN2001
Do me a favour? Try to dream about
us.

JULIETTE16
You can't control your dreams.

REN2001
Yes, you can. Try to remember them
and then you will get better. That
way we will be together even
longer.

CUT TO:
INT. FENCING STUDIO - DAY (LIVE ACTION)

Junko is practicing on her own, skillfully jabbing into the air with her foil, while turning.

INT. REN'S BEDROOM - DAY (LIVE ACTION)

Ren is wearing his headset, and he is holding a gadget in one hand and is waving it around as if it's a wand.

CUT TO:

INT. BLACK AREA - DAY (LIVE ACTION/VFX)

A wand is painting a 3D area of pillows and soft, flowing materials. It resembles a floating bed, made of leaves and flower petals.

Ren, wearing his headset, appears. He holds the wand controller, making brush strokes, which are creating 3D shapes. The colours are flowing, as if they are dripping paint.

CUT TO:

EXT. TOKYO STREET - DAY (LIVE ACTION)

A point of view of a person walking amongst many people in the rain.

JUNKO (V.O.)
I cannot meet you this week. I have a tournament.

CUT TO:

INT. SECOND LIFE - MONTAGE (MACHINIMA)

Juliette16's avatar is 'dormant' by a tree. Ren2001 sits on the ground beside her, looking up at her.

REN2001
Arise, fair sun, and kill the envious moon, Who is already sick and pale with grief, That thou, her maid, art far more fair than she.

CUT TO:
EXT. TOKYO SKYLINE - NIGHT (LIVE ACTION)

There are thousands of lights illuminated in the vast city skyline of Tokyo.

CUT TO:

EXT. TOKYO STREET - NIGHT (LIVE ACTION)

Montage of Tokyo sights. Ren is standing on a street corner, wearing his red backpack. Junko is walking down her stairs and into the busy streets. They both walk with a fast pace through busy streets in a Tokyo night market area.

After some time walking, they arrive, facing each other. They look into each other's eyes. They approach slowly. Ren smiles. Junko smiles. He takes her hand gently and they begin to walk together, through the streets at night.

Eventually they end up standing by a street, talking and laughing.

Junko's phone shows a text message. It is her father.

Insert: Where are you? I tried calling you. Come home now!

Junko is taken aback, quickly says goodbye and walks away. Ren watches after her.

CUT TO:

INT. TOKYO SUBWAY STATION - NIGHT (LIVE ACTION)

Ren stands on the platform, slouched, waiting for a train.

REN2001 (V.O.)
Juliet, I cannot lose you. If you ever can't come online, we have to have a meeting place. If ever we are disconnected, we will know when and where to meet.

CUT TO:

INT. SUBWAY TRAIN - NIGHT (LIVE ACTION)

Junko leans against the window of a train, looking out.

CUT TO:
INT. SUBWAY TRAIN - NIGHT (LIVE ACTION)
Ren sits on another train, with a lost expression on his face.

CUT TO:

EXT. SECOND LIFE - SAKURA ISLAND - NIGHT (MACHINIMA)
The stars twinkle and illuminate the deep dark sky.
Juliette16 stands in the middle of the garden, looking up at the sky.
Ren2001 walks up behind her.

    REN2001
    Good evening, Juliet.

Juliette16 turns around to face him.

    JULIETTE16
    Good evening.

    REN2001
    I made a reservation to watch Romeo and Juliet. We can teleport there.

    JULIETTE16
    I love that play.

    REN2001
    Something about your avatar name made me think so.

CUT TO:

EXT. ROMEO AND JULIET AMPHITHEATRE - DAY (MACHINIMA)
There is a cross-shaped neon light, glowing in red. The camera pulls out and reveals a church, resembling almost that of barren Sagrada Familia. There is a long path to the altar of the church. Everything appears abstract. Ren2001 and Juliette16 walk down the isle.

    JULIETTE16
    Where is everyone? This isn't a play.

    REN2001
    I'm sorry, I must have gotten it wrong. It seems this is just a
space for people to admire the play.

JULIETTE16
Romeo, oh Romeo, where art thou, Romeo?

REN2001
You're good.

She smiles and together they arrive in front of the altar.

JULIETTE16
Would you kill yourself for love?

REN2001
It's the only thing worth dying for.

Juliette16 sits down on the ground, at the altar area.

JULIETTE16
Ren, how...how will we ever be together?

REN2001
We are together.

JULIETTE16
This isn't real.

REN2001
It's as real as you make it. Let me show you something I made.

They teleport.

CUT TO:

EXT. SKYBOX - SECOND LIFE - NIGHT (MACHINIMA)

They float above the bed made of flower petals.

REN2001
Do you like it?

JULIETTE16
It's beautiful.

REN2001
You are beautiful. This is real to me. Do you see that it is me, behind this avatar?
Ren2001 takes off his shirt.

REN2001
It is just us here. No one else.

JULIETTE16
What do I do?

REN2001
If you like, take off your real shirt... at home.

He helps her take off her avatar's dress.

CUT TO:

INT. JUNKO'S BEDROOM'S - NIGHT (LIVE ACTION)

Junko quietly locks her door. She stands in front of her computer, her silhouette showing her body, as she takes off her shirt.

JUNKO (O.S.)
Okay...

CUT TO:

EXT. SECOND LIFE - SAKURA ISLAND - NIGHT (MACHINIMA)

Juliette16 and Ren2001, are practically naked and are slowly making love, although no one shot reveals the larger picture. There are only abstract shots of the scene. Arms, legs and they are kissing.

The sky is illuminated with stars.

CUT TO:

INT. REN'S BEDROOM - NIGHT (LIVE ACTION)

Ren sits on his bed, wearing his goggles, and extends his arm to reach something...

CUT TO:

EXT. SECOND LIFE - SAKURA ISLAND - NIGHT (MACHINIMA)

Ren2001 extends his arm to caress Juliette16's cherry
blossom hair, as she is laying beside him, covered by flower petals.

They look at each other, for a long time.

CUT TO:

INT. JUNKO'S BEDROOM - DAY (LIVE ACTION)

Junko's bed is perfectly made, and the sun brightens her walls. Junko's computer is making update CHIME noises.

We see an OLDER MALE HAND use the mouse, and click on images and messages that are being sent. They are digital images of Ren2001 and Juliette16 in Second Life.

The male hand rips out the Internet cable from the computer.

CUT TO:

INT. FENCING STUDIO - DAY (LIVE ACTION)

Junko is in a match, fighting against her opponent, in slow motion.

    JULIET'S FATHER (V.O.)
    You are going to ruin your future, if you don't focus!

She is losing, and finally is stabbed in the heart.

She walks off to the side, into the darkened studio, with her head hanging slightly.

CUT TO:

INT. JUNKO'S BEDROOM - NIGHT

Junko walks toward her desk. Her computer is off - the screen is black. She puts her hand on it, closes it softly and lays down on her bed.

CUT TO:

EXT. SECOND LIFE - SAKURA ISLAND - NIGHT

Ren2001 walks by himself through the island at night.

CUT TO:
EXT. TOKYO STREET - NIGHT (LIVE ACTION)

Walking shots of Tokyo streets are jaggedly edited. Dutch angles are used as a layers of people are added.

REN2001 (V.O.)
We will meet at the Rainbow Bridge, if we are ever separated. At midnight.

CUT TO:

EXT. BRIDGE - NIGHT (LIVE ACTION)

The rainbow bridge is visible amidst the dark Tokyo skyline.

Intercut with a POV shot of the train on the bridge moving quickly along the track, which fades in over the previous shot.

CUT TO:

INT. BRIDGE IN SECOND LIFE - NIGHT (MACHINIMA)

Juliette16 walks upon a bridge structure. It looks more barren than the real bridge, but resembles it somewhat. Ren2001 walks towards her.

They arrive in the middle of the bridge, and embrace.

JULIETTE16
Hi.

REN2001
I missed you so much, Juliette!

They look at each other.

JULIETTE16
I don't know what to do... I think I need to focus on school... My father has given me one more chance.

REN2001
We can just meet in here, not in the real world anymore.

JULIETTE16
I don't think I can even do that.
Then I will wait for you.

For how many years?

It doesn't matter.

You can't.

I can.

I don't want you to....Hold on for a second. Someone is at my door.

Juliette16's avatar drops her head.

Ren2001 looks at her avatar for a long moment.

CUT TO:

INT. CHURCH - NIGHT (MACHINIMA) (FLASHBACK)

Ren2001 and Juliette16 are sitting embraced on the steps of the altar, completely still.

CUT TO:

INT. BRIDGE IN SECOND LIFE - NIGHT (MACHINIMA)

Ren2001 walks around Juliette16's dormant avatar. He then looks down to the water. He climbs on the ledge of the bridge. He looks at the dormant Juliette16 one more time, and jumps. His avatar falls to the water.

If I may trust the flattering truth of sleep, My dreams presage some joyful news at hand. I dreamt my lady came and found me dead—Strange dream, that gives a dead man leave to think—And breathed such life with kisses in my lips. That I revived and was an emperor.
EXT. BRIDGE - NIGHT (LIVE ACTION)

Small waves are on the water, which are illuminated by colourful lights.

CUT TO:

EXT. BRIDGE IN SECOND LIFE - NIGHT (MACHINIMA)

Juliette16 lifts her head and turns a full 360 to see that Ren2001 has disappeared.

    JULIETTE16
    Ren!

She looks down to the water, which is dark and wild.

    JULIETTE16
    Ren!! Where are you?

She goes to search for his username, and the message is:

INSERT: "User does not exist."

She walks erratically along the bridge.

    JULIETTE16
    What have I done?

The WAVES SOUND loudly.

She looks down at the water.

She gets up onto the ledge of the bridge. She looks ahead and then jumps off. Her body floats through the air to the water, but hits the water's surface hard.

CUT TO:

EXT. UNDERWATER - NIGHT (MACHINIMA)

Juliette16 floats down, limply, but peacefully.

Ren2001 appears in the far distance, also floating limply.

There is seaweed everywhere, floating in the dark. There are colourful rays of light that stream down, almost forming a rainbow.

Eventually Juliette16's back hits Ren2001, and they appear to almost embrace, as they float motionless. Only their clothing and hair moves back and forth, slowly.
CUT TO:

EXT. BRIDGE - NIGHT (LIVE ACTION)

The 'real' water is calm, small waves are rippling and some light is reflecting off of them.

FADE OUT:

CREDITS FADE IN AND OUT.
EXT. TOKYO - NIGHT (LIVE ACTION)

The skyline of Tokyo is dark bluish black, with lights glimmering in the distance. It is serene. A montage ensues of buildings, ending on the arial view of the large Shibuya crossing and random people on it.

CUT TO:

EXT. CHERRY BLOSSOM PARK, TOKYO - DAY (LIVE ACTION)

A flash of white light appears through green leaves. There are no cherry blossoms on the trees. REN (17) stands by a tree. He is youthful and also mature in his stature. He wears a red knapsack and holds a pink paper plane and throws it across the park.

It lands at the feet of JUNKO (16), who is wearing white converse shoes, a mini skirt and a red purse. Ren approaches her and they lock eyes. Time slows down for a moment. She gives him back his paper plane and they walk together, smiling. They continue to walk playfully around the park and laugh together.

JUNKO'S FATHER (O.S.)
(Japanese)
Junko, where are you? Junko!?

CUT TO BLACK:

TITLE CREDIT: ROMEO & JULIETTE16

SIMULTANEOUS CREDIT IN JAPANESE: ROMEO + JULIET

REN (V.O.)
(Japanese)
Junko, my name is Ren.

JUNKO (V.O.)
How can I see you again?

REN (V.O.)
I know a place.

CUT TO:

INT. JUNKO'S BEDROOM - NIGHT (LIVE ACTION/MACHINIMA)

Junko closes the door handle softly. Juno's bedroom has a several pictures of NYC on the wall, including the skyline,
graffiti with an angel behind barbed wire, and of her fencing. Junko sits at her laptop. We see only her silhouette from the back. She is wearing a white tank top. She moves her finger on the mouse pad.

The window Second Life opens and she creates a new user name, "Juliette16".

CUT TO:

INT. SECOND LIFE - DAY (MACHINIMA)

JULIETTE16 has arrived in the 'birth island', as a bare avatar missing any specific clothing and just the 'default hair' and plain body suit. She begins to practice walking.

Juliette16 searches for "Ren2001" and adds him as a contact.

Juliette16 begins the process of creating her avatar.

Montage:

Juliette16 selects 'free' outfits that are available. She walks around awkwardly, often stumbling. She adjusts her breast size a few times, first inflating her breasts like balloons, and then reducing them to a smaller size. She tries on hair styles, of different cuts and colours. Then, she comes across 'for purchase' hair and accessories. She spots a 'wig' made of 3d cherry blossoms. She selects it.

A Second Life (SL) message notifies her that her connected PAYPAL account has been charged.

The piecing together of her outfit is shown in an abstract, almost cubist manner.

Upon completion, Juliette16 wears a hippie/romantic white dress, with lots of flowing fabric and her flowing cherry blossom hair extends down below her shoulders.

She gets an alert from "Ren2001". The message is an invitation to 'Sakura Island'. She clicks 'accept'.

Juliette16 teleports to the Sakura Island, which is indicated by way of a TELEPORTATION SOUND, and suddenly her avatar is no longer viewable in the 'birth island' area.

CUT TO:

EXT. SECOND LIFE - SAKURA ISLAND - DAY (MACHINIMA)

Juliette16 drops down in a field of flowers and greens. She
stands and takes in the view. She practices walking around more.

From the side, Ren2001 walks towards her.

Juliette16 and Ren2001 look at each other for a moment. The sun is glowing from the side. Juliette16's cherry blossom hair is blowing. Ren2001 is dressed like a warrior horseman. His white shirt reveals his chest and he wears a strap that carries a bow and arrow harness. His face and hair look similar to his real face, in real life.

REN2001
You look beautiful.

JULIETTE16
Thank you. You look...like some kind of hunter.

She laughs.

REN2001
A protector.

JULIETTE16
Protecting from what?

Juliette16 spins around playfully.

REN2001
When I met you in the park, I did not want to leave you.

JULIETTE16
Yes, sorry, but my dad is...my dad. Even tonight, I had to wait until my parents were sleeping. The walls are thin in my house.

Ren2001 nods and smiles.

REN2001
Come, let me show you around.

JULIETTE16
How do you move around so easily?

REN2001
It comes with time, I'll teach you all the commands. To walk, just press the up arrow. Are you using a keyboard or a game console?
JULIETTE16
A keyboard.

She moves forward with him and they start to walk towards the river.

JULIETTE16
What is this place?

REN2001
It's special. It's magical, like your hair.

REN2001
Let's fly!

JULIETTE16
What?

Ren2001 pops up into the air with ease. Juliette16 falls down again.

JULIETTE16 (CONT'D)
I am horrible at this.

REN2001
Just press "CTRL + up"

Juliette16 shoots up into the air.

JULIETTE16
No way! This is crazy. Now what? How do I move forward?

REN2001
Just like you walk, just push forward or press.....

Ren2001 reaches for Juliette16's hand and holds it, as they fly together above water and towards the mountains.

JUNKO'S FATHER (O.S.)
What's the noise, Junko?

Juliet hits the MUTE button. An icon indicating a speaker that is crossed through appears on her screen.

CUT TO:

INT. JUNKO'S BEDROOM - NIGHT (LIVE ACTION)

We see Junko talk towards the door, but with her face still out of view.
JUNKO (O.S.)
Oh, I was just watching a video on youtube for class, dad. I forgot something.

JUNKO'S FATHER (O.S.)
Ok, but go to bed. It's 12:30, it's too late.

JUNKO (O.S.)
I will. Goodnight.

Junko waits for a moment, for complete silence, and then begins to type.

CUT TO:

INT. SECOND LIFE - SAKURA ISLAND - DAY (MACHINIMA)
Ren2001 is standing there, looking at Juliette16. The messenger window appears in SL.

INSERT: Juliette16: I have to go. Tomorrow, same time?
She logs off and her avatar's head drops.

CUT TO:

INT. JUNKO'S BEDROOM'S - NIGHT (LIVE ACTION)
Junko closes her laptop. The former computer glow in her room is now gone and only the light that remains is coming through the blinds, from the moonlight.

She lays on her side, on her bed, facing the wall. We see her from the back, inhaling and exhaling deeply.

The computer remains on her desk, with her battery charging light slowly dimming and illuminating, as if it is breathing.

CUT TO:

INT. SECOND LIFE - SAKURA ISLAND - NIGHT (MACHINIMA)
Ren2001 is left standing in SL. He looks at Juliette16's inactive avatar. He flies around it.
REN2001
Beautiful Juliette.

He holds his hand close to hers, but cannot fully grasp it.

REN2001
If I profane with my unworthiest hand. This holy shrine, the gentle sin is this: My lips, two blushing pilgrims...two blushing pilgrims...ready to stand.

He walks away.

REN2001
Oh I am crazy. This is crazy. I already love you. How does this happen so fast?

Juliette16 remains inactive.

CUT TO:

INT. REN'S BEDROOM'S - NIGHT (LIVE ACTION)

Ren stands in the middle of the room, wearing a headset that looks like that of Oculus Rift. His room is very messy. The curtains are frayed. An air conditioner rattles on the window. His room is filled with 'hero' posters of action films, some of animated films. One action hero is wearing a visor that covers his eyes and looks like an enlarged metal ski-mask.

Ren is still pacing around his room, miraculously side-stepping all the plastic game covers that area strewn all over the floor.

CUT TO:

INT. SECOND LIFE - SAKURA - DAY (MACHINIMA)

Ren2001 is building a throne in 3D animation. First he draws the outlines, which creates a transparent 3D structure, using his avatar's hands and using different commands.

MUSIC is playing. The sun is eternally setting.

Eventually the throne is finished and shimmers in the golden light. It has elaborate ornaments on it, some pink stones.

He tries it out. It is somewhat small for him, but he can
still sit.

CUT TO:

INT. REN'S BEDROOM - NIGHT/DAY (LIVE ACTION)

Ren sleeps, with his Oculus resting on a pristine side-table. Night turns into day, and morning light enters the room.

His work boots sit on the floor and his uniform is hung over the chair in the room. Ren quickly jumps to the sound of an alarm and we see him dress and put on his shoes like a lightening bolt. He slams the door behind him.

CUT TO:

INT. FENCING STUDIO - DAY (LIVE ACTION)

Junko walks onto the floor, dressed in the fencing suit, holding her helmet. The studio is large and dark. We see her don her helmet from afar.

JUNKO'S FATHER (V.O.)
Don't mess this up again...

Her opponent walks towards her, to begin the match. Junko carefully approaches her opponent, who lunges at her abruptly and scores a point.

JUNKO'S FATHER (V.O.)
...if you want to go to school in America.

Junko re-positions and continues. Their moves slow down.

JUNKO'S FATHER (V.O.)
Without hard work

Junko lunges forward and attempts a score, but fails.

JULIET'S FATHER (V.O.)
...you will achieve nothing.

CUT TO:

INT. JUNKO'S BEDROOM - NIGHT (LIVE ACTION)

Junko stands in front of her computer. She plops her fencing
helmet on the bed. She opens her computer and logs on while still standing. She is changing her outfit, from her sports leggings to sweat pants and a tank top.

She types her password. She looks towards the door, and puts on her earphones.

CUT TO:

EXT. SECOND LIFE - SAKURA ISLAND - NIGHT (MACHINIMA)

Juliette16 appears on the island. Ren2001 is waiting for her, where they left off.

REN2001
Juliette! You are here!

JULIETTE16
I am.

She tries to hug him, but her avatar jumps on Ren2001, in an almost sexual manner.

JULIETTE16
I'm so sorry. I can't control this thing. How do I stop it?
(laughing)

REN2001
(laughing)
Try CTRL + __.

Juliette16 jumps off of him and stands before him.

JULIETTE16
I am so sorry! Sorry.

REN2001
It's quite alright. Don't worry it took me a long time to get the hang of this. Come, I have a surprise for you.

They fly together to another part of the island.

They land in a field of green, in the middle of which sits a golden throne. They land just before it.

REN2001
I made it for you.

JULIETTE16
You didn't!
REN2001
I did. For my queen.

JULIETTE16
You don't even know me.

REN2001
I feel close to you already. Is that odd?

Juliette16 sits on the throne.

JULIETTE16 (CONT'D)
I think it suits me.

Ren2001 bows before her, and then just sits by her feet, fiddling with his bow and arrow.

JULIETTE16 (CONT'D)
I appoint you the Queen's protector!

They laugh.

REN2001
So, how was your day?

JULIETTE16
My father is controlling everything I do. School, fencing, getting into University.

REN2001
I guess he wants the best for you?

JULIETTE16
No, he wants the best for himself.

JULIETTE16
How are your parents with you?

REN2001
My father wants the best for me, but he doesn't understand me. He wants me to help his business, because it's a good job, but it's a store. I don't want to sell things in a store. He says he is fine to close it, but then he will have no money and starve.

JULIETTE16
Where is your mother?
REN2001
She died when I was 13.

JULIETTE16
Oh...I so am sorry.

They appear small in their environment.

JULIETTE16
How long have you been coming here?

REN2001
Since I was 13. I created my own world.

Juliets16 contemplates this for a few moments.

JULIETTE16
You created this whole island?

REN2001
Yes.

JULIETTE16
All the trees? The mountains? The grass?

REN2001
Everything. You are my first visitor. Normally, I like to be alone with my nature here.

JULIETTE16
Why me?

REN2001
You are the first person I met who I felt belonged here...with me...Come look at the fish in the stream.

They sit at the river's edge and walk through it to look at the fish.

REN2001
I really like you...Juliet.

JULIETTE16
Do you like me, or Juliets16?

REN2001
You are one and the same.
JULIETTE16
Well, you know what I look like in real life, but you don't know me.

REN2001
Most people in here have never met. We are lucky.

JULIETTE16
We are lucky. It's a nice escape.

REN2001
I'm the lucky one.

Ren2001 gives her a white flower.

JULIETTE16
What happens when we leave here? We can only be together here, in Second Life.

REN2001
Maybe we can meet again, in person?

JULIETTE16
My father would literally kill me if he found out. Maybe we don't need the outside world for a while.


JULIETTE16
I guess... I should go do my homework and then go to bed.

Juliette16 gets up.

REN2001
Do me a favour? Try to dream about us.

JULIETTE16
You can't control your dreams.

REN2001
Yes, you can. Try to remember them and then you will get better. That way we will be together even longer.

CUT TO:
INT. FENCING STUDIO - DAY (LIVE ACTION)

Junko is practicing on her own, skillfully jabbing into the air with her foil, while turning.

INT. REN'S BEDROOM - DAY (LIVE ACTION)

Ren is wearing his headset, and he is holding a gadget in one hand and is waving it around as if it's a wand.

CUT TO:

INT. BLACK AREA - DAY (LIVE ACTION/VFX)

A wand is painting a 3D area of pillows and soft, flowing materials. It resembles a floating bed, made of leaves and flower petals.

Ren, wearing his headset, appears. He holds the wand controller, making brush strokes, which are creating 3D shapes. The colours are flowing, as if they are dripping paint.

CUT TO:

EXT. TOKYO STREET - DAY (LIVE ACTION)

A point of view of a person walking amongst many people in the rain.

JUNKO (V.O.)
I cannot meet you this week. I have a tournament.

CUT TO:

INT. SECOND LIFE - MONTAGE (MACHINIMA)

Juliette16's avatar is 'dormant' by a tree. Ren2001 sits on the ground beside her, looking up at her.

REN2001
Arise, fair sun, and kill the envious moon, Who is already sick and pale with grief,That thou, her maid, art far more fair than she.

CUT TO:
EXT. TOKYO SKYLINE - NIGHT (LIVE ACTION)

There are thousands of lights illuminated in the vast city skyline of Tokyo.

CUT TO:

EXT. TOKYO STREET - NIGHT (LIVE ACTION)

Montage of Tokyo sights. Ren is standing on a street corner, wearing his red backpack. Junko is walking down her stairs and into the busy streets. They both walk with a fast pace through busy streets in a Tokyo night market area.

After some time walking, they arrive, facing each other. They look into each other's eyes. They approach slowly. Ren smiles. Junko smiles. He takes her hand gently and they begin to walk together, through the streets at night.

Eventually they end up standing by a street, talking and laughing.

Junko's phone shows a text message. It is her father.

Insert: Where are you? I tried calling you. Come home now!

Junko is taken aback, quickly says goodbye and walks away. Ren watches after her.

CUT TO:

INT. TOKYO SUBWAY STATION - NIGHT (LIVE ACTION)

Ren stands on the platform, slouched, waiting for a train.

REN2001 (V.O.)
Juliet, I cannot lose you. If you ever can't come online, we have to have a meeting place. If ever we are disconnected, we will know when and where to meet.

CUT TO:

INT. SUBWAY TRAIN - NIGHT (LIVE ACTION)

Junko leans against the window of a train, looking out.

CUT TO:
INT. SUBWAY TRAIN - NIGHT (LIVE ACTION)

Ren sits on another train, with a lost expression on his face.

CUT TO:

EXT. SECOND LIFE - SAKURA ISLAND - NIGHT (MACHINIMA)

The stars twinkle and illuminate the deep dark sky.

Juliette16 stands in the middle of the garden, looking up at the sky.

Ren2001 walks up behind her.

REN2001
Good evening, Juliet.

Juliette16 turns around to face him.

JULIETTE16
Good evening.

REN2001
I made a reservation to watch Romeo and Juliet. We can teleport there.

JULIETTE16
I love that play.

REN2001
Something about your avatar name made me think so.

CUT TO:

EXT. ROMEO AND JULIET AMPHITHEATRE - DAY (MACHINIMA)

There is a cross-shaped neon light, glowing in red. The camera pulls out and reveals a church, resembling almost that of barren Sagrada Familia. There is a long path to the altar of the church. Everything appears abstract. Ren2001 and Juliette16 walk down the isle.

JULIETTE16
Where is everyone? This isn't a play.

REN2001
I'm sorry, I must have gotten it wrong. It seems this is just a
space for people to admire the play.

JULIETTE16
Romeo, oh Romeo, where art thou, Romeo?

REN2001
You're good.

She smiles and together they arrive in front of the altar.

JULIETTE16
Would you kill yourself for love?

REN2001
It's the only thing worth dying for.

Juliette16 sits down on the ground, at the altar area.

JULIETTE16
Ren, how...how will we ever be together?

REN2001
We are together.

JULIETTE16
This isn't real.

REN2001
It's as real as you make it. Let me show you something I made.

They teleport.

CUT TO:

EXT. SKYBOX - SECOND LIFE - NIGHT (MACHINIMA)

They float above the bed made of flower petals.

REN2001
Do you like it?

JULIETTE16
It's beautiful.

REN2001
You are beautiful. This is real to me. Do you see that it is me, behind this avatar?
Ren2001 takes off his shirt.

REN2001
It is just us here. No one else.

JULIETTE16
What do I do?

REN2001
If you like, take off your real shirt... at home.

He helps her take off her avatar's dress.

CUT TO:

INT. JUNKO'S BEDROOM'S - NIGHT (LIVE ACTION)

Junko quietly locks her door. She stands in front of her computer, her silhouette showing her body, as she takes off her shirt.

JUNKO (O.S.)
Okay...

CUT TO:

EXT. SECOND LIFE - SAKURA ISLAND - NIGHT (MACHINIMA)

Juliette16 and Ren2001, are practically naked and are slowly making love, although no one shot reveals the larger picture. There are only abstract shots of the scene. Arms, legs and they are kissing.

The sky is illuminated with stars.

CUT TO:

INT. REN'S BEDROOM - NIGHT (LIVE ACTION)

Ren sits on his bed, wearing his goggles, and extends his arm to reach something...

CUT TO:

EXT. SECOND LIFE - SAKURA ISLAND - NIGHT (MACHINIMA)

Ren2001 extends his arm to caress Juliette16's cherry
blossom hair, as she is laying beside him, covered by flower petals.

They look at each other, for a long time.

CUT TO:

INT. JUNKO'S BEDROOM - DAY (LIVE ACTION)

Junko's bed is perfectly made, and the sun brightens her walls. Junko's computer is making update CHIME noises.

We see an OLDER MALE HAND use the mouse, and click on images and messages that are being sent. They are digital images of Ren2001 and Juliette16 in Second Life.

The male hand rips out the Internet cable from the computer.

CUT TO:

INT. FENCING STUDIO - DAY (LIVE ACTION)

Junko is in a match, fighting against her opponent, in slow motion.

    JULIET'S FATHER (V.O.)
    You are going to ruin your future,
    if you don't focus!

She is losing, and finally is stabbed in the heart.

She walks off to the side, into the darkened studio, with her head hanging slightly.

CUT TO:

INT. JUNKO'S BEDROOM - NIGHT

Junko walks toward her desk. Her computer is off - the screen is black. She puts her hand on it, closes it softly and lays down on her bed.

CUT TO:

EXT. SECOND LIFE - SAKURA ISLAND - NIGHT

Ren2001 walks by himself through the island at night.
EXT. TOKYO STREET - NIGHT (LIVE ACTION)

Walking shots of Tokyo streets are jaggedly edited. Dutch angles are used as a layers of people are added.

REN2001 (V.O.)
We will meet at the Rainbow Bridge,
if we are ever separated. At midnight.

CUT TO:

EXT. BRIDGE - NIGHT (LIVE ACTION)

The rainbow bridge is visible amidst the dark Tokyo skyline.

Intercut with a POV shot of the train on the bridge moving quickly along the track, which fades in over the previous shot.

CUT TO:

INT. BRIDGE IN SECOND LIFE - NIGHT (MACHINIMA)

Juliette16 walks upon a bridge structure. It looks more barren than the real bridge, but resembles it somewhat. Ren2001 walks towards her.

They arrive in the middle of the bridge, and embrace.

JULIETTE16
Hi.

REN2001
I missed you so much, Juliette!

They look at each other.

JULIETTE16
I don't know what to do... I think I need to focus on school... My father has given me one more chance.

REN2001
We can just meet in here, not in the real world anymore.

JULIETTE16
I don't think I can even do that.
REN2001
Then I will wait for you.

JULIETTE16
For how many years?

REN2001
It doesn't matter.

JULIETTE16
You can't.

REN2001
I can.

JULIETTE16
I don't want you to....Hold on for a second. Someone is at my door.

Juliette16's avatar drops her head.

Ren2001 looks at her avatar for a long moment.

CUT TO:

INT. CHURCH - NIGHT (MACHINIMA) (FLASHBACK)

Ren2001 and Juliette16 are sitting embraced on the steps of the altar, completely still.

CUT TO:

INT. BRIDGE IN SECOND LIFE - NIGHT (MACHINIMA)

Ren2001 walks around Juliette16's dormant avatar. He then looks down to the water. He climbs on the ledge of the bridge. He looks at the dormant Juliette16 one more time, and jumps. His avatar falls to the water.

REN2001
If I may trust the flattering truth of sleep, My dreams presage some joyful news at hand. I dreamt my lady came and found me dead—Strange dream, that gives a dead man leave to think—And breathed such life with kisses in my lips. That I revived and was an emperor.

CUT TO:
EXT. BRIDGE - NIGHT (LIVE ACTION)

Small waves are on the water, which are illuminated by colourful lights.

CUT TO:

EXT. BRIDGE IN SECOND LIFE - NIGHT (MACHINIMA)

Juliette16 lifts her head and turns a full 360 to see that Ren2001 has disappeared.

JULIETTE16

Ren!

She looks down to the water, which is dark and wild.

JULIETTE16

Ren!! Where are you?

She goes to search for his username, and the message is:

INSERT: "User does not exist."

She walks erratically along the bridge.

JULIETTE16

What have I done?

The WAVES SOUND loudly.

She looks down at the water.

She gets up onto the ledge of the bridge. She looks ahead and then jumps off. Her body floats through the air to the water, but hits the water's surface hard.

CUT TO:

EXT. UNDERWATER - NIGHT (MACHINIMA)

Juliette16 floats down, limply, but peacefully.

Ren2001 appears in the far distance, also floating limply.

There is seaweed everywhere, floating in the dark. There are colourful rays of light that stream down, almost forming a rainbow.

Eventually Juliette16's back hits Ren2001, and they appear to almost embrace, as they float motionless. Only their clothing and hair moves back and forth, slowly.
EXT. BRIDGE - NIGHT (LIVE ACTION)

The 'real' water is calm, small waves are rippling and some light is reflecting off of them.

FADE OUT:

CREDITS FADE IN AND OUT.