

**Advantages and Limitations of Mentoring Students Online in Building their Art University
Entrance Portfolios**

Somi Lee

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By: Somi Lee
Entitled: Advantages and Limitations of Mentoring Students Online in Building their Art University Entrance Portfolios

and submitted in partial fulfillment of the requirements for the degree of
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Signed by the final examining committee:

Dr. Juan Carlos Castro Chair

Dr. David Pariser Examiner

Dr. Kathleen Vaughan Examiner

Dr. Juan Carlos Castro Supervisor

Approved by _____
Chair of Department or Graduate Program Director

Dean of Faculty

Date July 19th, 2016

Abstract

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Somi Lee

This thesis explores the advantages and limitations of online mentorship with students who are developing their portfolios for university admission. The research included 10 participants aged 18 to 19 at the time the research began. As of July 24th, 2016, six students have been accepted to the school they applied, two students have not replied my query regarding their acceptance, and the rest of the two students are continuously developing and refining their portfolios for 2017/18 entries. This Design- Based research went through four iterations. Each iteration included adjustments to workshop content and social media platforms, they were also adjusted to optimize teaching and learning efficacy. The results of the collected data revealed the affordances and limitations of the online mentorship activities. The affordances include the improvement of artistic abilities through constant practice, recurring feedback exchange, increased motivation through social recognition, and identity formation. At the other end of the spectrum the limitations include lesson content delivery methods, students over-dependence on the teacher-researcher, and distractions that come with using mobile phones. This research concludes that this form of online mentorship in the field of art education is worthy of continued investigation and refinement, which can enhance the noted affordances and address the limitations that were noted in this study.

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Preface

The inspiration for this research project originated in my previous art teaching experiences. After six years of teaching, I moved to North Bay in pursuit of further education. While I was there, a former student from Toronto contacted me seeking help with his art portfolio development, for his university applications in Canada and the United States. Over a two-month period, I provided him with feedback on his artwork, shared useful art resources that might inspire him to create artwork, and helped him to choose his final pieces. Due to the distance between the student and I, this was done over social media. The student would go on to be accepted by the Southern California Institute of Architecture, University of Waterloo's Architecture program, Ryerson University's Interior Design program, and OCAD University's Environment Design program. Meanwhile, I recognized the dynamic potentials of online mentorship. This motivated me to explore the possibilities of teaching visual art through social media.

My thesis explores assisting students who were developing art university and program portfolios in their last year of high school. These students are Toronto based and attending high schools in Markham and Toronto areas. During this research, I fulfilled the dual role of mentor/co-participant and researcher.

Chapter 1. Introduction

1.1 Background/ Positionality

The data collection and curriculum for this study were completed in the spring of 2016 via the Internet social media labeled “University Art Portfolio Development Project 2016” at portfolio2016.ning.com. Along with two face-to-face workshops at Brooklyn College in Toronto, and National College of Canada in Markham, Ontario, I offered constant assistance through social media platforms. This research included ten grade 12 students and myself as a teacher-researcher. This thesis is situated within a relatively new learning ecology, that is, online mentorship. To this extent, I explored the affordances and limitations in using social media to facilitate students art creation processes and curating the work. In accordance, my stance to favor technology applications in art education is aligned with the myriad of other supporters.

This teaching-based thesis is about mentoring secondary school students in building their art university entrance portfolios through social media platforms. As the majority of art universities ask applicants to submit an art portfolio, students may need to prepare an art portfolio to fulfill, in part, the admission requirements for the university art program of their choice. Due to the fact that portfolios exhibit a potential student’s effort, progress, and achievements (Paulson, Paulson, & Meyer, 1991), reviewers can assess the student’s artistic abilities through their portfolio, which is an indicator of their future success in university (Blaikie, Schönau, & Steers, 2004). Hence, my study was designed to help students in curating their work, improving their artistic abilities, reinforcing their skills in critiquing and analyzing art, and developing their art portfolios for university entrance. During this assisting process, I also examined the affordances and limitations of this online mentorship.

As many scholars have acknowledged, there is an increasing demand for computer and communication technology among educators and scholars (Alvarez, 2006; Anarki, 2004; Behera, 2013; Wang & Reeves, 2003). Also, there are many studies that have come to affirmative conclusions regarding the implementation of digital media in art education (Stankiewicz & Garber, 2000; Alter, 2004; Sweeny, 2004; Quinn, 2011; Castro, 2012; 2014; 2015). The documented advantages to learning visual arts online (Lai, 2002; Alter, 2004; Sweeny, 2009; Castro, 2012) include: (1) accessibility which allows users to interact (Alter, 2004; Castro, 2012), (2) peer support provided through interactivity (Collison, Elbaum, Haavind,

& Tinker, 2000; Herrington, Reeves, & Oliver, 2006; Anastasiandes, 2009), (3) dialogue exchange through looking at art on screens (Castro, 2009; Sweeny, 2009 ; Quinn, 2011), (4) improved visual literacy (Jones, 1994; Dorn, & Sabol, 2006), and (5) the asynchronous environment gives students enough time to reflect on materials that enhance the learning process (Palloff, & Pratt, 2001). On these grounds, I argue that internet-based teaching and learning is invaluable in the field of art education, in that students experience the aforementioned benefits within an online classroom community. Building on this notion, this thesis goes further to explore the role of digital media in complementing art portfolio development and the process of analyzing students' work.

1.2 Rationale

“Educators are forever experimenting and innovating” (Herreid & Schiller, 2013. p. 65). Indeed, educators should continuously search for more effective methods of transferring lessons to their students, especially those that accommodate contemporary developments in the learning environment. Students need changes that stimulate, and today's students have unique characteristics when compared with the student of decades past. The modern students spend many substantial hours connected to the Internet and are exposed to the functions of a variety of information appliances, digital, and mobile devices. Meeting students' needs has always been an important pillar of education. Taking this into consideration, teachers should strive to remain adaptable by continuing to hone their professional knowledge. That is, teachers should never stop learning new methods and remain responsive to the avenues through which their students learn.

In a design-based study, Castro (2012; 2014; 2015) used new social media to elucidate new perspectives and possibilities for theorizing and enacting the contemporary art practices in art education. He argued that “the incorporation of contemporary art in the art curriculum has become a significant focus for innovation in art education” (2009, p.7). He then queried, “how have schools adapted in response to this shift in technological and cultural practices?” (2009, p.5). My research was designed to address the question as to which social media and strategies are congruous to both teachers' and students' goals in the context of teaching and learning. I explored how effective these applications are for the deployment of information when paired with goal orientation that requires a high level of self-discipline. In this thesis, I propose that a knowledge base of the advantages and limitations in the contemporary learning ecology of

art education is crucial to art curriculum advancement. Thus, this study will add credence to the current belief that incorporating digital media into contemporary art curriculum is imperative, due to its effectiveness for both student learning and content delivery.

1.3 Statement of Purpose

This research is to determine the feasibility of teaching students to create art portfolios online. The overall purpose of this Design-Based Research (DBR) project is to find the advantages and limitations of instructing students using social media sites and other digital technology platforms, as they develop their university entrance art portfolios. The auxiliary purpose is to build on the foundation of teaching methods for online art courses. This research may motivate other interested educators to modify their lessons and employ digital technology into their methodology to effectively deliver the lessons and facilitate peer interaction.

Through six years of experience in helping grade 12 students in art portfolio development, I have found a sustained desire to pursue teaching in all forms: online, face-to-face, and hybrid. I have also realized that the standard submission system and method of portfolio assessment have changed in the past decade. The most noticeable change in the current standard is submitting applications online. When I applied to Universities in 2003, I only had to present my portfolio to faculty members in person. Aside from the written application, I did not have to submit my work online. In response to these modifications, I used my teaching experience and insights to help students discover the optimal method to prepare their art portfolios in an online setting. Through this process, I sought to define a pertinent method of lesson delivery and tools that support learning. Also, I aimed to investigate this relatively new learning environment, wherein students can freely express and demonstrate their creativity with confidence, in equal or greater measure to that of a conventional classroom setting. The final research findings provided me with a rich source of recommendations for art teachers to assist students in developing their art portfolios online. I believe that this study is applicable to the current education system, thereby, justifies that when students actively display their work using social media, it is conducive to developing their university entry art portfolio.

1.4 Statement of Problems

Numerous studies indicate that “...merely deploying new technologies in art education is not enough” (Castro, 2009, p.3). Successful deployment requires more investigations (Lu, 2007) as the strategies to utilize such mediums are still extraneous to some extent. While implementations of the e-portfolio have confirmed that it is a prominent assessment tool in art curriculum (Lu, 2007), it is argued that the use of technology should be further studied, with a focus on whether the tools and methods of online learning resonate with the societal demands for new knowledge (Tsai et al, 2008). As such, we can solidify assurances of the quality of teaching and learning using social media (Herrington, Reeves, & Oliver, 2006).

In the context of the contemporary learning ecology, the modern student prefers to interact using social media (Castro, 2015) and this “can foster social interaction” (Tsai et al, 2008). Interactivity is a key determinant in any learning method (Herrington, Reeves, & Oliver, 2006). Taking these beliefs into consideration, I strived to design lessons for this study directed towards encouraging students to articulate their ideas through the social media that best facilitate social interactions. Bloom’s Digital Taxonomy (BDT) (Krathwohl, 2002) was salient for embarking upon the project. Student performance, and interactions between the teacher-researcher and students were an integral part of this project. Hence, this study embodies an interwoven networking of each classification from Bloom’s Digital Taxonomy to promote student communication and interaction through social media.

1.5 Research Question and Objective

The core objective of the research was to determine whether mentoring a group of students predominantly through social media platforms is viable while students are developing their university entry art portfolios. The research question is as follows: what are the advantages and limitations of mentoring high school students online to guide them to build their art university entrance portfolios? advantages and limitations were classified into six modalities during the data analysis stage: new media applications, online mentorship, motivational strategies, advantages, challenges, and outcomes. The data were characterized in this manner to discern the advantages and challenges of mentoring art portfolio creation. Additional questions emerged as the research progressed, including: why does the mentorship have to be conducted online to begin with? How does it overcome the challenges of demonstrating techniques and provide

immediate hands-on help? How is an online art portfolio different from the e-portfolio common in other disciplines, such as history or social studies? Is mentorship truly required for developing a student's art portfolio? Ultimately, why is this significant? Finding answers to this sequence of questions ensured distinct adherence to the research objective against the broad scope of the core question.

1.6 Limitations

1.6.1 Timeline

In terms of limitations, the biggest challenge was the timeline. The workshop was initially designed for the fall semester, between October to January. However, the start time was adjusted to February. This would be either too early to attempt managing student motivation, as they would have approximately a year to prepare; or too late to start a portfolio project, as most university application deadlines occur in late January or early February. While less than ideal this resulted in part due to refusals from public school boards, which were delayed in responding to my queries because of a school board strike in August of 2015. In addition, the Concordia Ethics approval process took longer than anticipated. Consequently, the project began as of February 23rd, 2016. Student participants in this research were those who had already completed several pieces of artwork, or who wanted to start a portfolio to test whether they could endure the rigorous portfolio process. With these participants, I focused on testing the feasibility of online mentorship for art portfolio development, while I put less emphasis on their university admittance.

1.6.2 March Break and Final Exam

March Break and final exams extended from the week of March 7th, 2016 to the week of March 14th. After the final exam, students indicated the need for a brief reprieve from their rigorous workload. This was further affected by the reality that their academic performance is equally as important as their art portfolio development. Some students applied to programs other than fine art at various universities. For these students maintaining a high level of academic achievement was mandated. For example, Song Joong Ki's Honey (who later adopted the acronym SJKH) applied to the University of Toronto Faculty of Business Studies. He needed to achieve an

average of 96 percent or higher in his grade 12 courses. Under these circumstances balancing diverse student priorities presented some challenges in scheduling.

1.6.3 Early Acceptance

The level of enthusiasm for developing their art portfolios was dependent on individual circumstances. During the research, four students received early acceptance letters including for other programs from their preferred schools. Nonetheless, I advised these students to continue sending new works to their choice art university programs to express their keen interest in attending the school. When students were accepted to the University of their choice, regardless of whether it was an art programs or other disciplines, their participation decreased abruptly.

1.7 Terminology

1.7.1 Blended Learning

This term indicates the method of the educational program delivery using both online and face-to-face instruction in a classroom setting. The term is interchangeable with hybrid learning. The blended learning modalities consist of partial input from the following methods of delivery: face-to-face and online. Distribution could be hard-copy or through digital media (Marshall et al, 2012, p.36-37). In each case, this term mainly indicates the 'space' where the learning is taking place.

1.7.2 Blog

This term is the conflation of the words, web and log. Blog often indicates a network or chains that allows users to connect. The term log implies recording or regular documentation. Posting on a Blog is used as an interactive method of online communication, and it allows users to register texts, links, images, and videos (Toronto District School Board, 2007, p. 66). When an individual owns a Blog, he/she has autonomous control of the content. In this thesis, this term is used in reference to a personal blog, or personal log of communications and content.

1.7.3 BYOD

BYOD stands for *Bring Your Own Device*. This means that students bring their own digital devices to the school and to the classroom. These mediums might include laptops, mobile phones, tablets etc. and is welcomed with the intent of educational use (Parent Involvement Committee Brochure, 2016). Under teachers' supervision and/or direction, students can use their own device in class. BYOD is advocated widely in the Ontario School boards. The Peel District School Board is forefront in this movement by providing teachers workshops, tutorials for parents and distributing online brochures.

1.7.4 Digital Media

Digital media refers to computer programs and software such as Skype, Adobe products, Microsoft products, Dropbox, and so forth. This also includes websites, email, and social media including Facebook, Twitter, LinkedIn, Youtube, etc. In summary, any program that is used on a computer qualifies for this category. This term is used frequently throughout this thesis interchangeable with the word *social media*. The term defines any venue where individuals can assert their presence in an online setting and network with the broader group of participants as the user desires. The availability of this form of media is tremendous from an "instant production" to "dissemination of content" (Lalonde & Castro 2015, p.57) in a "virtual community (e.g., Facebook, Twitter, Academic Workspace)" (Toronto District School Board, 2007, p. 69).

1.7.5 Digital Native

"Digital Native" refers to people who were born after 1980 (Palfrey & Gasser, 2008). However, in this study, this term better refers to participants who were born after 1995, as I (born after 1980) do not feel I qualify as a digital native. I do not hesitate to call myself an early adopter, but I had my first email account when I was 13 years old, around the time the Internet started to thrive.

1.7.6 Emoticon

The term is a combination of the words: emotion and icon. Emoticons are representational pictograms used mainly to show individual's emotions, instead of words. Sweeny (2004) defines

this term as a 'transcoding' (p.80). This creates a new form of communication that has become increasingly popular worldwide. The most common types of emoticons include facial expressions, objects, places, types of weather, and animals.

1.7.7 e-Learning

e-Learning is one of the methods of teaching and learning that are conducted solely online that limits face-to-face communication. e-Learning computer instruction is provided "online over the public Internet, private distance learning networks or in-house via an Internet" (Toronto District School Board, 2007, p. 69).

1.7.8. e-Platform

In this study, the term represents website and application interfaces used for the maintenance of all postings by the students and the researcher. Student participants from the research used each platform to digitally store their work and resources while I, as a researcher, archived discussion threads.

1.7.9 e-Portfolio

In the context of education, an e-portfolio is a type of portfolio that demonstrates students' gained knowledge, ability, learning progress, and final outcome through a collection of the students' work throughout the course. This work is then electronically assembled and curated by students (Toronto District School Board, 2007, p. 69). This allows students to store their work digitally and is used to prove their progress when assessed.

1.7.10 Flipped Classroom

"In the flipped classroom model, what is normally done in class and what is normally done as homework is switched or flipped" (Herreid, & Schiller, 2013. p. 62). "The flipped classroom, which has become more and more popular among the U.S. educators, is employed by virtue of modern educational technology" (Yang, 2014. P.158). Flipped classroom is an instructional strategy and a type of blended learning that modifies the traditional educational arrangement by delivering instructional content online.

1.7.11 ICT (Information and Communications Technology)

The term ICT is used frequently throughout Chapters 1 and 3. This term refers to any communication devices and mediums that allow users to potentially communicate and share information. The form of communication varies from chatting to exchanging messages that are verbal, written, and visual. In the definition borrowed from TechTarget Search CIO, these mediums include; “radio, television, cellular phones, computer and network hardware, and software” (TechTarget, 2005). “ICT can also be used to connect students to other schools, at home and abroad, and to bring the global community into the local classroom” (Ontario Curriculum, The Arts, 2009).

1.7.12 iMovie

iMovie is a video editing software system that comes with Apple computers and devices. Non-Apple users can separately download the software with a purchase. With this software, users can edit their videos, add music, voice, background, text, etc. This video can then be transferred to any media-sharing platform, such as Vimeo and Youtube. There are differences in the iMovie features depending on the version used. The version I used for the thesis is iMovie 2013. I used a DSLR Camera to videotape an instructional clip and edited it on the iMovie Software. The students also used iMovie to create a clip to explain their artwork as a presentation medium.

1.7.13 LMS (Learning Management System)

Borrowing from Giza’s definition, LMS is an “open-source Learning Management System (LMS) content creation software” (Giza, 2011, p.2). This learning management system is widely utilized in the post-secondary education system, such as Moodle and Blackboard to deliver course content or programs. This allows teachers to monitor students’ progress, attendance, and marks. They can also upload the instructional videos and files for students. Through this system, users have greater flexibility in engaging with the course either entirely online or a hybrid.

1.7.14 Ning.com

Ning.com is an online social platform where users create their own community online. The features enable users to post images, texts, and hold discussions. There is an advanced feature which interfaces with the user’s Facebook, Twitter, Google, and Yahoo accounts. This term is

used frequently in this thesis, especially in references to the methodology. The functionality includes online invitations, a discussion forum, linking, etc. Users can use Ning.com to build their social presence online and connect with each other. This site was selected to create our own digital community.

1.7.15 Social Media

Social media are web-based platforms that attract Internet users globally. These sites assist users in “keeping contacts and sharing information with others” (Ajami et al, 2011, p.11). Some of these SNS include Facebook, Twitter, Instagram, Flickr, Pinterest, etc. To me, this term is interchangeable with social networking site, digital media, and similar to ICT.

1.7.16 WeChat

WeChat is instant message communication software, which users can download onto their mobile phones or personal computers. The program supports text and video, image sharing, and video chatting. WeChat also allows direct connection to an individual’s personal blog. Some other features include phone calls, voice messages, emoticons, and a language translator. For this research, the app was installed on a supported mobile phone to process the messaging system, and arrange daily blog logs.

1.7.17 YouTube

Youtube is a venue where users can freely view and share their clips in a virtual environment. Users cannot only view and share but also make comments, rate, upload, download, and edit. I used my video clips for the purpose of sharing resources and to encourage students to upload their work under private settings. On this platform, video content varies from educational to clips that recommend adult advisory.

1.8 Organization of Thesis

There are five chapters in this thesis, specifically: the introduction, literature review, methodology, findings, and the conclusion. The introduction presents the research purpose, questions, objectives, and identifies relevant glossary. The first chapter introduces the research

objective and core question. The glossary was alphabetically organized in the following order: blended learning, blog, BYOD, digital media, digital native, emoticon, eLearning, e-Platform, e-Portfolio, Flipped Classroom, ICT, iMovie, LMS, Ning.com, SNS, WeChat, and YouTube. The next chapter, literature review, covers art portfolio culture, Bloom's digital taxonomy, integrating technology in arts education, the advantages of peer feedback, and student motivation. The methodology explores workshop designs, iteration processes, background information about the participants, lesson plans, types of data, methods of data collection, and how design based methodologies were integrated with the rest of the research process. The findings chapter discloses results from the data analysis along with my justifications. The final chapter summarizes this thesis and proposes areas that can be modified to better assist students. It also suggests the future direction of my research.

Chapter 2. Literature Review

This thesis is founded on the practicality of online mentorship and portfolio assessment culture. In this chapter, I will delve into the subjects of online learning environments, art portfolio development, and self-directed learning in the field of art education. The central hypothesis of this review will attempt to prove that online learning experiences can be cultivated in arts education via online mentorships, to an extent that would allow students to hone their artistic merits while developing their art portfolios.

2.1 Education Technology

The conventional learning environment has undergone “rapid transformation over the last two decades encompassing digital, computerized, and networked information and communication technologies” (Eid & Ward, 2009, p.1). This idea is supported by a number of experiments and studies integrating social media into arts education across all education levels with favorable conclusions (Stankiewicz & Garber, 2000; Sweeny, 2009; Alter, 2014). Lapolla’s (2014) study with her second-year university fashion students established the justification that “using social media takes advantage of the changing relationship students have with technology” (p.177) in the higher education. Moreover, Lapolla (2014) illustrated how the use of Pinterest, the photo-sharing website, as a project platform generated positive peer critique experiences, thereby enhancing collaborative learning. Likewise, other scholars have acknowledged that there has been an increase in online learning opportunities (Herrington, Reeves, & Oliver, 2006; Alter, 2014). The movement towards digital media in contemporary arts education has proved to be beneficial to the field of visual arts in particular. There are many post-secondary visual art courses offered online including Thompson Rivers University, Parsons School of Fashion, Academy of Art University, to name a few. Various other universities in the U.S. offer Bachelor of Fine Arts degrees solely through online study.

Regarding advantages, Frances Alter (2014) listed a number of advantages provided by teaching visual art through digital media sources and the Internet, including free videos, gallery tours, artist interviews, and pre-recorded art tutorials. It is apparent that an online environment provides equal opportunities for learners, accommodating those who are at a distance (Anastasiandes, 2009), and those who need an asynchronous learning environment (Castro,

2014) due to their full-time commitment to work or other studies. These advantages can be magnified proportional to how teachers harness information community technologies (ICT), to supplement their instructional approach. This may improve students learning performance (Ontario Curriculum Document, LaRose, Rifon, & Enbody, 2008) and teaching efficiency.

Examining digital device application for education, we find it is a growing field where new ideas and strategies emerge at an exponential rate (Collison, Elbaum, Haavind, & Tinker, 2000, p.14). Many art educators and scholars (Sweeny, 2004; Greenhow, Robelia, & Hughes, 2009; Quinn, 2011; Gutierrez & Guzmán, 2014; Lalonde & Castro, 2015) acknowledged the impact of various technologies in the context of contemporary art education. The Ministry of Education (2010) asserted that:

the integration of a wide range of technologies into the arts curriculum represents a natural extension of the learning expectations associated with each art form. An education in the arts will engage students in using various technologies through which artistic expression can be achieved (p.42).

With these concepts as a foundation, I argue that it is imperative to explore a wide range of digital media application to generate seamless and dynamic mechanisms that align with student's capacity for using technology and art creation. The Ontario Ministry of Education (2010) strongly suggested utilizing digital technology in any applicable scenario "whenever appropriate, students should be encouraged to use ICT to support and communicate to demonstrate their learning" (p.42). Many scholars who advocate this view would agree with adapting this addition to the context of art education. As such, Wysocki (2007), a scholar who conducted his doctoral research with freshman and sophomores concerning their level of engagement in their online courses, argued "technology is a communication medium that has changed the way students learn, think, and communicate in an online environment" (Wysocki, 2007, p12). He also detailed that digital mediums are now more accessible in schools and our environment: "Laptops, Blackberries, and cell phones have built-in wireless cards to access the Internet. Campuses have become 'wired,' and 'hotspots' or access points are available at cafes and malls" (Wysocki, 2007, p.2). In addition, some Ontario School boards are at the forefront of integrating technology that is relevant to modern students' needs, as seen with the gradual rise of "bring your own device" (BYOD) practices in Ontario schools. In their study Chen, Gallagher-Mackay, and Kidde (2014) revealed that "58% of schools in Ontario are reporting that students

are using their own devices” in school. Ontario School boards and the Ministry of Education encourage students to BYOD, and it is becoming the norm for teachers to allow students to use their hand-held devices as studying tools in class.

During my research, the participating students used mobile phones, computers, and iPads as the primary tools of communication. They also used the course blog to communicate (Lu, 2007; Quinn, 2011) and form their virtual identity (Coiro et al., 2008; Sweeny, 2009; Castro, 2014; Lalonde & Castro, 2015) and represent themselves to their community (Greenhow, Robelia, & Hughes, 2009). There were multiple advantages to using this approach “as a communication tool, the computer generally provides a written record of communication between the computer and the student, the instructor and the student, and the student and peers” (Wysocki, 2007, p3). That is to say, digital platforms proved to be more than a venue for students to display their work, or to improve their portfolio and artistic merits through this screen-based practice (Sweeny, 2004).

2.2 Portfolio Culture

Art portfolios are an excellent means for artists to demonstrate their visions and artistic abilities (Gitomer, Grosh, & Price, 1992; Dorn, & Sabol, 2006). Castiglione (1996) identified that different uses and standards for portfolios depend on their target. These portfolios included professional artists’ portfolios for juried shows and contests, students’ portfolios for art school entrance, pre-service teacher art portfolios for their courses and interviews, and student portfolios in other academic subjects such as science and languages. Portfolio culture originated as an assessment tool in the visual arts field (Castiglione, 1996), and for teachers this practice has proven conducive to assessing students’ performance (Jones, 1994), as the process generates valuable information about the students’ learning abilities and knowledge (Paulson, Paulson, & Meyer, 1991; Dorn & Sabol, 2006; Lu, 2007).

Portfolio is a prominent assessment tool for art teachers. “In studies of over 4,000 art teachers, Sabol (1998, 1999, 2001) reported that portfolios were valid and the most commonly used form of assessment in art education.” (Dorn, Madeja, & Sabol, 2004, p. 345-346). Gitomer, Grosh, and Price (1992) claimed that creating art portfolios through studio practice helps students to manifest their understanding and interest of thematic principles. To specify, art portfolios can harness the benefits of individualized learning through the structure of teacher-student

interaction (Gitomer, Grosh, & Price, 1992; Palloff & Pratt, 2001; Cole & Zanetis, 2004), and the applications of collaborative peer review and discussion (Palloff & Pratt, 2001; Herrington, Reeves & Oliver, 2006). This, in turn, can improve a student's university art portfolio development by broadening the student's horizons and sharpening their critical eye. Art portfolio assessment has become a standard methodology for assessing university art program acceptance, as they allow universities to project a student's potential for success throughout their program. The majority of art schools request that students submit portfolios as a part of their admission requirements (Cho, 1999; Blaikie, Schönau, & Steers, 2004; Dorn & Sabol, 2006; Popovich, 2006).

Progressing from physical portfolio submissions, e-portfolios are slowly replacing traditional forms of portfolios regardless of discipline (Lu, 2007). Similarly, art portfolio culture has slowly transitioned from physical to digital format with accompanying concerns. As such, a "Creative Architecture" project-based curriculum ran between December 2006 and March 2007, which used project-blog as an interactive platform for e-portfolios (p.161). Lu (2007) raised concerns that despite all the feasibility, there are doubts surrounding strategies to integrate e-portfolio in art assessment. Lu's concern was with regards to the credibility of the plans (Lu, 2007, p.158). While keeping an e-portfolio can provide opportunities for students to monitor their growth visually via a screen, there is no concrete assessment strategy (Jones, 1994; Cho, 1999; Lu, 2007) for the e-portfolio that can be widely adapted (Lu, 2007). Although there are potential risks involved when using the Internet, especially with regards to student safety, (Krueger, 2014; Palfrey, 2010) the prominence and credibility of e-portfolio practice in art education continues to grow (Lee, 2016). This is due to the fact that the use of e-platforms enriches group interactivity (Lu, 2007; Castro, 2012; 2014; 2015; Dargham, Saeed, & Mcheik, 2012) and complements project-based curriculum (Lu, 2007; The Ontario Curriculum, 2010).

Taking the above notions into consideration, my study narrowed its focus to university entry portfolios and the utilization of e-platforms by exploring the advantages of using social media in student learning. The use of e-platforms in my research served the dual purpose of creating relevance in this Internet saturated climate, and responding to contemporary admission protocol, which states that "students submit their work and other evidence of academic achievement in digital form" (Dorn, Madeja, & Sabol, 2004). In addition, there are two essential components required for an art portfolio: (i) the creation of the art through self- directed learning (Gitomer, Grosh, & Price, 1992; Jones, 1994; Popovich, 2006; Andrew 2010; Pennisi, 2013), and (ii) self-

selected work to include in the portfolio (Castiglione, 1996; Popovich, 2006; Andrew, 2010; Pennisi, 2013). My thesis highlights the means through which mentors make efficient use of e-platforms (blogs) to enhance their instructional strategies and facilitate tangible creative achievement for students.

2.3 Peer Feedback and Self-Reflective Critique

I have observed that art-analysis skills are often developed by constant self-practice and collaborative critique (Paulson, Paulson, & Meyer, 1991; Jones, 1994; Cho, 1999). This process involved students looking at peer work on screen, providing feedback to each other online, and listening to/reading peer commentary on their work (Castro, 2012; 2015). Through this exchange of dialogue, learners may expand their perspective via the information gained from peer comments and affirmations (Gitomer, Grosh, & Price, 1992; Castro 2009; 2012; Gary, 2013; Low, 2015). The reflection process in an online course transforms the participant from a student to a reflective practitioner, and may initiate the potential for lifelong reflective learning (Palloff & Pratt, 2001, p.33). Similarly, Low (2015) asserted that students deepen their understanding by analyzing their peers' work as they reflect on their own work (Low, 2015, p. 44). This enables students to expand group discussion during the feedback exchange process to a propulsive stage, thereby deepening the awareness of learning through collaboration (Collison, Elbaum, Haavind, & Tinker, 2000). In this scenario, common goals and interests act as a catalyst for group inquiry, learning, and knowledge creation (Lalonde & Castro, 2015).

In a study of design studio courses, Gary (2013) identified the informal critique used in his classes, as bearing synergistic effects when used alongside design activities in a classroom studio environment. He further argued that using such informal critique in a professional environment, regardless of whether it is virtual or physical, might lead to more constructive student discussions outside the classroom (Gary, 2013). This method of critique can begin online. Castro's research (2009) explored how high school students from grades 9 to 12 formed and sustained an online community, contrasting the ways in which students interacted via social media against their in-person school relationships. These students were engaged in various activities through the digital media platforms used. The act of using social media to look at peer art, postings, and comments were significant factors in their meaning-making, and knowledge creation processes (Castro, 2012; 2014; 2015). Specifically, students used social media to nurture their ability to look at and analyze art.

These findings imply that the growth of students' art skills (Low, 2015), and the knowledge generated by shared values can produce a new kind of social relationship through forming identity and the knowledge making process in online communities (Castro, 2014; Tsai et al, 2008). To this extent, students can engage in in-depth discussions while sustaining forward momentum, thereby enriching the learning of all collaborators (Collison, Elbaum, Haavind, & Tinker, 2000). Cooperative learning and shared goals (Yang, 2014) have a high reference value for evaluators (Lu, 2007) in the context of increasing group proficiency and maximizing independent learning.

When considering the implementation of mentor or teacher feedback, Low (2015) suggests that feedback must be clear, useful, timely and supplemented with instruction. I support this stance, as dubious feedback may confuse learners. In addition, feedback must be prompt in order to avoid the risk of losing student engagement, in other words, "with right amounts and at the right time" (Low, 2015, p. 47). Providing clear goals (Cole & Zanetis, 2004) that are responsive to student queries, and relevant to their artistic production, is crucial to the learning process. It has been noted that learners can improve their engagement in activities when feedback contains information that they can understand (Blaikie, 2005, p.66; Low, 2015). As such, my research capitalized on personalized art critique, feedback, and defining learning objectives for art portfolio development as a means of student learning and skill development. On these grounds, my study suggests that visual affirmation of personal progress through self-critique and peer feedback substantially increases the efficacy of student learning, and the outcome of their work.

2.4 Student Motivation, Ownership, and Self-directed Learning

Many scholars support the use of portfolios to observe learners' work habits that commensurate to students learning performance, and growth. This also encourages a self-directed learning approach. Gitomer, Grosh, and Price (1992), and Jones (1994) endorsed the portfolio-making process, as it allows students to be decision makers and enables them to control and understand their own learning (Popovich, 2006). In the context of autonomous student learning Andrews (2010) underscored the significance of student-centered learning with goal setting and maintaining a negotiable curriculum. Her lessons consisted of students sharing ideas in class, discussing art creation strategies with teachers and other students, and mapping out an appropriate art plan for each project. Andrews (2010) highlighted five important aspects through

her art classroom observations. First, students participated and offered creative ideas for studio activities more actively when they were allowed to choose the medium and direction of the art creation process. Second, this process situated students at the center of their own learning, which increased their level of engagement. Third, allowing students to work at their own pace and interest level enhanced their sense of accountability. She also found that the ownership students had over their projects equipped them with the impetus to explore and cultivate their creativity. Finally, Andrews (2010) concluded that by having students build their own curriculum with their teacher they could transform from reluctant to engaged learners.

Andrews' findings are supported by the participatory action research project conducted by Pennisi (2013). The aim of her research was to engage eighth graders through a negotiable curriculum. She first realized that a resistance existed among students when they were creating art because they felt strained by the fixed structure of the assignments. In response, she listened to students' opinions and desires and used her pedagogical strategies to develop an agreed-upon curriculum. Consequently, Pennisi (2013) understood that being involved in the curriculum decision-making process allowed students to become more independent learners. Similarly, Popovich (2006) conducted a study with middle school students, which experimented with the advantages of electronic portfolios. Through the study she also suggested that students are more likely to take ownership of their educational experience (p.37); and that the flexibility of a self-directed learning approach allows students to develop a sense of ownership (Popovich, 2006). The two studies established a link between a student-centered learning approach and student motivation levels, as well as provided a pertinent platform for the possibilities of a negotiable curriculum (Pennisi, 2013). In terms of arts education, adapting these notions can boost students' motivation while they develop their university application portfolios. My research extended further into the practice of teacher collaboration, by adding to the strengths of a student-centered learning approach (Andrews, 2010). This was accomplished by combining student dictated goals with my observations and knowledge of students' strengths and interests (Richards, & Farrell, 2011), to create a completely individualized curriculum (Keeffe et al., 2013, p.121).

2.5 Motivation

“Motivation is a key factor in education” (Graf, Lachance, & Mishra, 2016, p.173).

In a technologically saturated learning climate, the concept of virtual presence (Lalonde & Castro, 2015) meant more to students than their university portfolio development. Taking student social interaction as an example, virtual companionship can be viewed as the norm (Palfrey & Gasser, 2008, p.137). Students seemed more interested in presenting themselves to the world of a 'specific audience' determined by shared values and interests (Lalonde & Castro, 2015) than their skill growth. However, it is equally noted that students can naturally acquire knowledge as they interact with others in a community of practice (Tsai et al, 2008). An attentive teacher could potentially mobilize this propensity into a motivational mechanism for the benefit of learners (Richards & Farrell, 2011). To be more specific, visual references of their progress via e-platforms provides students with an opportunity to accurately identify their own progress (Popovich, 2006; Graf, Lachance, & Mishra, 2016), and make comparisons with the progress of others (Lu, 2007). Hence, learners themselves modify their strategies and elaborate the approach to their learning (Bahreman, Chang, Amistad, & Garn, 2016).

Many scholars and educators have aligned their beliefs on the subject of student motivation with those of Graf, Lachance, & Mishra (2016), who claim that motivation is rooted in more than one factor with diversified aspects, "such as personal beliefs, feelings, and/or preferences". As such, Herrington, Reeves, & Oliver, (2006) asserted that social interactivity is central to any learning environment. Palloff and Pratt (2001) situated collaborative learning within the community as a core element in the overall learning process. Bahreman, Chang, Amistad, and Garn (2016) stressed the importance of constant feedback in boosting student engagement levels. And Lalonde and Castro (2015) stated forming an identity and incorporating youth cultural practices, which are rooted in social exchanges, act as a catalyst for group inquiry, learning, and knowledge creations. In summary, it is becoming clear that forming and reforming students' identity through social interaction is a key determinant of students' engagement levels, and central to ensuring the success of their virtual learning.

2.6 Lessons Design

When approaching instructional design in the context of virtual learning, lesson developers should be mindful of individual student needs and characteristics (Anastasiandes, 2009). This methodology allows students to benefit from their learning experiences to the fullest (Cole & Zanetis, 2004). As a result, my research has manifested the importance of teacher awareness and sensitivity for determining student needs. Likewise, the personalized learning theory

presented by Keeffe and his colleagues (2013) stressed the importance of the mentor's role as a facilitator and how pivotal teachers are in shaping the curriculum. Nonetheless, the usefulness of personalized lessons (PL) is not without drawbacks, potential pitfalls to this method of constructing lessons have been identified. Keeffe et al.,(2013) criticized the PL as : (1) reinforcing social inequality (p.113) among students and (2) depending heavily on teacher's judgment, effort, and time (p.119). Teachers in that study identified these aspects as challenging to deal with (p.120). Namely, there is no clearly defined construct to overcome these concerns. This issue merits further investigation, if for no other reason than the fact that a well-defined art curriculum could function as a reference point for other subject areas when implementing PL approaches (Castiglione,1996; Keeffe et al, 2013). However, despite the challenges, I reaffirm that the pedagogical utilization of PL in virtual classes has the potential to be an effective cross-curricular tool for contemporary educators. This affirmation requires further implications for my research.

2.7 Bloom's Digital Taxonomy

Bloom's Taxonomy (BT) categorizes learning objectives according to the range of complexity and specifications of each objective. BT was developed in 1956 by Benjamin Bloom; an educational psychologist from the University of Chicago (Krathwohl, 2002; Churches, 2008). Bloom highlighted six major categories of the cognitive processes: knowledge, comprehension, application, analysis, synthesis, and evaluation. This list begins with the simplest category; lower thinking skills, and ends with the most complex, higher order thinking. In 2009 a digitized version was released; that is Bloom's Digital Taxonomy (BDT) by Andrew Churches (2008). He revised Bloom's taxonomy by digitizing the taxonomy sought to respond to today's learning needs (TDSB, 2009). He incorporated Information and Communications Technologies, or ICT (TDSB, 2009; Forehand, 2010) into the classification.

I propose that BDT encompasses the advantages of collaborative learning and supports students' cognitive development while strengthening proficiency with technology. This view was advocated by Wysocki (2007), who considered the primary importance of the social presence in an online environment. He remarked ,“it supports cognitive presence, indirectly facilitating the process of critical thinking for the learning community” (Wysocki, 2007, p4). Additionally, navigating ICT promotes skills compulsory to meeting the needs of contemporary learners (Anastasiandes, 2009; Ontario The Ministry of Education and Training, 2010), which includes

teachers. It is widely accepted that modern day teachers are exposed to an environment receptive to tailored lessons that are virtually collaborative, and encourage active participation (Anastasiandes, 2009). These suggest that BDT may enhance teacher-students deployment of asynchronous communication, supporting higher order learning via virtual connectivity.

In portfolio development, these trends have extended to e-portfolios using web-based tools in the development process. These tools are often free and promote collaboration among students (Churches, 2008; Skiba, 2013). Accordingly, students in my research demonstrated learning spanning the range from lower to higher order thinking. All the lessons programmed to guide students used aspects suggested by Bloom's Digital Taxonomy: blogging, commenting, favoriting, liking, replying, posting, etc (Churches, 2008). This process assured that the advantages of using computers in education are more likely to correspond with the advantages within Bloom's Digital Taxonomy; visualization knowledge creation (Castro, 2015), thinking, and cognitive engagement (Wysocki, 2007, p12).

Bloom's Digital Taxonomy was selected due to the fact that it is grounded in attributes that correlate to higher order learning in the context of classroom education. It also enabled me to develop a curriculum that facilitated student learning (Krathwohl, 2002; Vieyra, 2006) while developing lessons that measured the growth of student's artistic ability and knowledge (Forehand, 2010). As a result, adhering to BDT might have been conducive to meeting modern societal learning needs while improving instructional delivery methods, and building a strong art portfolio assessment tool (Churches, 2008; Forehand, 2010).

To conclude, the supporting research and claims of the aforementioned scholars frame the feasibility of assisting senior high school students to develop their art portfolios using Information and Communications Technology (ICT). By displaying students' creations online throughout the development process of their art portfolios, students may experience the various benefits of the study. Specifically; (a) students may be more engaged during the art creation process guided by the personalized lessons (Keeffe et al., 2013; Pennisi, 2013) and motivational techniques including, peer interaction and identity performances (Castro 2014) through showcasing their work to a specific audience (Lalonde, & Castro, 2015); (b) students learn to analyze art work by looking at each other's posts and comments (Castro, 2012; 2014 Gary, 2013; Low, 2015) while simultaneously comparing their progress with peers (Lu, 2007); (c) visualize their progress from self-retrospective learning approach (Jones, 1994; Lu, 2007; Castro, 2015); (d) the asynchronous

online environment provides students with sufficient time to think on and reflect on materials (Palloff & Pratt, 2001), but may also expose them to the limitless resources available via the Internet (Alter, 2014). By sharing content and ideas with a selective social group online, students are able to support and demonstrate an increased understanding of their own learning process (Castro, 2012).

In the next chapter, I will present participants details, the recruitment process, the workshop timeline and my lesson development processes. The details of this methodology will coalesce within a conceptual framework that resonates with the Ontario Curriculum. The use of Bloom's digital taxonomy, and how it helped to create the instructions, and success criteria, is another area of focus. The chapter will go on to describe data collection techniques, iteration phases (including reasons for each change), and the outcomes of each iteration.

Chapter 3. Methodology

3.1 Design-Based Research

My experiences in teaching have shown me that the portfolio preparation process is often intensely challenging for students, and requires a high level of self-motivation (Castlione, 1996) regardless of the purpose—whether academic or business related (Cho, 1999). Throughout this study, I adapted a Design-Based Research (DBR) approach for mentoring students who were building their art portfolios. My goal in this approach was to verify the feasibility of online teaching and learning for students' university entry art portfolio development. An ancillary aim was to address the crucial need to discover a more efficient mechanism for the online learning environment, specifically with regards to supporting students when creating art and improving critical thinking skills. On these grounds, my methodology centered on the following characteristics of DBR: (a) collaboration between practitioners and researchers throughout the entire research process (Reeves & Hedberg, 2003; Cotton, Lockyer & Brickell, 2009; Wang, Hannafin, 2005; Plomp, 2013), (b) broad application (The Design-Based Research Collective, 2003), and (c) flexible lesson construction to refine the modules through iteration (Wang, Hannafin, 2005).

Reeves and Hedberg (2003) asserted that collaboration with practicing personnel is paramount in DBR. Wang and Hannafin (2005) also suggested collaboration with the practitioners throughout the iteration process. As a facilitator and co-participant, I embraced practitioners' viewpoints and concerns. This was accomplished by soliciting the opinions and feedback of other teaching staff- including discussions of each student's strength, preferences, inclinations, and other variables. Further input included school guidance counselors informing me of extenuating circumstances, such as when students had exams, overall low academic performance, or chronic absenteeism due to illness. This information proved invaluable in helping me establish a deeper understanding of the varied reasons behind students' limited engagement or activity. In addition, design policy adhered to the guidance of school principals, as the key advisers regarding school facilities and resources available to students.

With an eye to maintaining such reflexivity, this research was designed on the premise of continual collaboration (Cotton, Lockyer, & Bricker, 2009) between guidance counselors, art teachers, and school principals, throughout the entire research process. Their ideas and

opinions weighed heavily in every revision to substantiate the lesson format and timeline. Their supportive and continuous proposals for constructing personalized lessons, and harnessing relevant social media applications, transcended the objectives of this research.

Finally, I mobilized new social media applications, which have gained in popularity over the last decade, specifically Ning.com and WeChat. At the outset of the first iteration, when first meeting with guidance counselors at National College of Canada and Brooklyn College, it was suggested that I use WeChat, as it has proven an efficient means of communicating with their students. I adapted to accommodate this recommendation, which subsequently shortened the learning curve for students and removed the complication of the download and sign up the process. This helped resolve some of the time limitations felt by all parties. As for the project platform, my research supervisor Dr. Castro who has extensive knowledge, suggested ning.com.

In their work Bakker and Eerde (2015) highlighted one of the major aspects of DBR, which favors my adaptation of the methodology, for its formation and reformation of educational ideas for curriculum design and freedom to adjust the curriculum during the empirical testing of the ideas (Bakker & Eerde, 2015). In adherence, I carefully re-designed the modules by adjusting materials, activities, and instructions, aligned with my analysis of students' achievements in each workshop (Plomp, 2013). Many studies have used DBR to achieve flexibility in their iteration process, as an effective means for curriculum design intervention. For example, Mor (2010) adapted DBR for his design in technology enhanced mathematics education. He went through the iteration process four times during instructions and activities. Kennedy-Clark (2012) used five diverse participant groups, including teachers, pre-service teachers, and high school students for the material iterations. Akbari (2014) went through several iterations for after-school sound art activities in a secondary school. As Amiel and Reeves (2008) argued, DBR requires iterative cycles of study that lead to a better understanding of the process of intervention.

From these reasons, I used flexible instructions and negotiable lessons corresponding to students' artistic abilities and personal learning preferences. I went through four iterations of the lessons, activities, and instructions during the nine-week workshop. Through examining validity, practicality, and effectiveness of the designed lessons, DBR allowed me to repeatedly improve (Plomp, 2013) art portfolio lessons and tutorial processes over nine weeks, which only proved the effectiveness of curriculum.

3.1.1 Limitations of Design-Based Research

Designed based research (DBR) methods demonstrated some flaws that may have proved less effective, particularly when trying to establish a theory among similar studies. This was due to the uncertainty inherent for wide use purposes, namely, whether the instructional approach could be replicated and applied across a diverse range of situations. This might include different age groups, cultures, backgrounds, and research sites. As a result, the reliability of this method was left questionable (Zheng, 2016). Researchers have used DBR for different aims and purposes in their research, with situations varying from site to site. Such variations undermine the credibility of their findings. I align my belief with Zheng's concern that "...the effectiveness of intervention cannot be validated because of the unrepeatable learning activities" (Zheng, 2016, p.296). This most notably applied to the budget variance between the schools where I conducted my research and that of public schools. Opposing Black and Browning's (2011) assertion that budget is one of the major issues for technology implementation in classrooms, both schools had no issues with providing students' supplies.

Another concern is that even within my own body of studies there proved to be some disparities with results. For example, the instructional clips I posted in my pilot study, with adults who created an art portfolio for an art exhibition, were received as very helpful and triggered a lively discussion thread. However, the high school student group did not find them of much a help. Zheng (2016) would argue that DBR must go through more investigation before establishing validation. These concerns are mitigated as universal qualities of qualitative study (Brayman, 2015). DBR falls under the umbrella of qualitative study, as it shares the characteristic of involving in-depth study with focused groups. Accordingly, findings from these studies were inclined to orient the characteristics of the specific group or individuals (Bryman, 2015). This means the results may vary from study to study. Thereby, I suggest that it is less of a concern for learning, but assigned to the controversial nature of qualitative study (Bryman, 2015). In addition, no lesson can be delivered in exactly the same way Zheng (2016) implicitly manifested as J. Castro claimed the act of teaching is an improvised reaction adapting to students needs (J. Castro, personal communication, May 4, 2016), considering for example, what students have learned from the previous lessons or knowledge established from their own experiences brought into the classroom. In this respect, the method of lesson delivery, or the lesson content per se, should leave room for negotiation according to students' individual needs and their learning

pace. In this context, the primary reason for using the DBR for this research was to allow me to tailor lessons to better assist individual students in building their art portfolio.

3.2 Method

The initial recruitment process began at the end of August 2015 when I approached various Ontario public school boards. The public school boards denied the research proposal over expressed concerns that workload expectations for participants (50+ hours) exceeded the work capacity of their students. Committee members were interested in the research methodology and its potential to support students as they move towards a post-secondary education; however, they shared reservations about the lack of specifics regarding the details of the work to be done with students (including interview scripts, media clips, etc). Modifying the study proposal based on school board concerns, and including input from Concordia's Research Ethics Committee, resulted in an eight-week school board turnaround. Time constraints led me to consider participants from Ontario Private Schools. During the months of October and November 2015, I canvassed private high schools in the Greater Toronto Area and held meetings with their respective school principals. During each meeting, I introduced myself as a researcher and presented details of my study, including direction, purpose, timeline and guidelines of the research. The duration of each meeting varied, from 20 minutes to an hour, and each school was left with a recruitment package and research timeline (See Appendix I) as a reference. Three schools replied via email, from these I selected the following two schools based on the facilities and art supplies available: Brooklyn College in Toronto and National College of Canada in Thornhill. Brooklyn College could provide fashion and art supplies, including six sewing machines, a cutting table, acrylic paints, brushes, pastels, easels, etc. National College of Canada (NCO) is equipped with up to date digital resources, including personal computers, iPads, and fundamental software for art students. NCO expressed a willingness to support students in obtaining necessary art materials. Both schools designated space for independent workshops on weekends. NCO periodically offered art class and Brooklyn College ran visual arts, photography, and fashion classes semesterly. Both schools are registered as private schools under the ministry of education in Ontario.

3.2.1 Site of Data Collection

Hybrid sites were established for the study: both online and face-to-face. The web address for the online research platform was portfolio2016.ning.com, with a working title of “University Portfolio Project 2016”. Our project website was accessible by invitation only, the process for which is found in appendix ii. Once students successfully joined the project website they could create, edit, delete, and comment on posts at anytime, from anywhere. Additionally, three face-to-face meetings were dispersed over a nine-week period. The three meetings included: (1) the initial meeting, (2) a weekend workshop, and (3) my school visits to observe student artwork to compare against the on-screen appearances. Digitally I could monitor and observe student work from home using my MacBook Air laptop.

3.2.2 Participants

Ten students in grades 11 and 12 from Brooklyn College and NCOC were recruited to participate. These students were between the ages of 18 and 19 years old, and all expressed interests in pursuing post-secondary studies at recognized Ontario arts universities upon graduation Student online pseudonyms are as follow: MD, Jin, Yu, Kiko, Chris, Teemo Bin, Cat, Song Joong Ki’s Honey (SJKH), McDonald’s, and Johnnyboy. MD, Yu, Jin, Kiko, SJKH, and Johnnyboy were applying to fashion programs. Jin, Chris, Teemo Bin, Cat, and McDonald’s were applying to OCAD University. MD posted multiple tutorial clips (See Figure 1) and ardently commented on peer works.

(Figure 1. Shared information by MD)

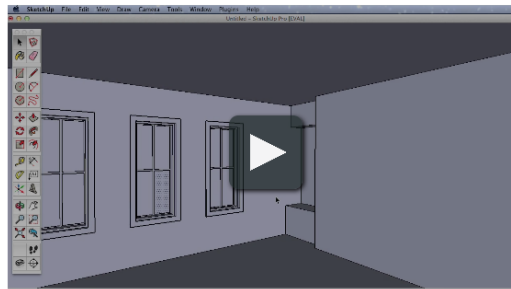


I like to share a video.

Those of you who are interested in digital arts, look at the following tutorial. You can download for free.

They offer video tutorials that are easy to follow.

Click the below image for the tutorial.



Yu created more than 15 art pieces during the research in a variety of mediums including sewing, Photoshop, photography, painting, sculpture, and drawing. Kiko's art creation revolved around fashion including two skirts and a fashion display board, or a moodboard. Chris created a video clip of himself with Jin, Yu, Kiko, and SJKH. Cat and Johnnyboy often posted their in-progress artworks. Cat frequently messaged me to confirm deadlines and task activities, then, circulated the confirmation to other members through WeChat. Teemo Bin's main area of interest was photography, while McDonald's main interest was drawing. These two often partnered together when providing pair-share feedback. The following chart consists of the schools each student applied to, the year they wanted to enroll, their ages, and gender (see Table 1).

Table 1. Participants Information

Participant ID (pseudonym)	School(s) Applying	Year Applying	Age	Gender
MD	Ryerson Interior Ryerson Fashion Design	2016/17	18	M
Jin	OCAD graphic Design Ryerson Fashion Design	2016/17	18	M
Yu	Art University London Ryerson Fashion Design	2016/17	18	F
Kiko	Art University London Ryerson Fashion Design	2016/17	18	F
Chris	Waterloo Architect OCAD Environment Design	2016/17	18	M
Teemo Bin	OCAD Photography	2017/18	18	M
Cat	OCAD Jewelry Design Ryerson Interior Design	2017/18	18	F
SJKH	Ryerson Fashion Design	2016/17	19	M
McDonald's	OCAD Fine arts	2017/18	19	M
Johnnyboy	Ryerson Fashion Communication	2016/17	19	M
SomSom (me)	Teacher-Researcher			

In addition, participants were deemed to have more than the rudimentary art skills required to enroll in this project. Some of the participants qualified as international students. As a result, they were required to provide International English Language Testing System (IELTS) scores to meet post-secondary eligibility requirements, on top of a portfolio and academic achievement. Most participants were from privileged households that could afford to pay high tuition fees and provide necessary art supplies and beyond; including the purchase of DSLR cameras, iMac, fabrics, Adobe Photoshop software, etc. No issues arose with students acquiring the required art supplies throughout the art portfolio process. None of the students from either school had met

before the process began, however, students within the respective schools already knew each other. As time passed the groups gained insight about other members through the group discussion thread on Ning.com and via WeChat video-conferences. Despite their lack of familiarity, students displayed little to no reluctance in group discussions, or discomfort during the video-conferences.

3.2.3 Duration & Time of the study

The study spanned a nine-week period beginning on February 23rd, 2016 and ending on April 22nd, 2016. This time span was settled upon after extensive consultation with the administration and principals from both schools. Deciding factors included students' university portfolio interview dates and portfolio submission deadlines, the number of courses students were enrolled in, and mandatory exams students were scheduled to take such as the Ontario Secondary School Literacy Test. The availability of school facilities also factored into student participation. The first face-to-face workshop was held on February 23rd, 2016 with a follow up held three weeks later on March 8th. The workshops lasted anywhere from two to four hours, and students were notified of each meeting via WeChat approximately two to three days in advance. I assisted NCOC students from 10:30 am until 1:30 pm and then proceeded to Brooklyn College from 2:00 - 5 or 6 pm.

The first meeting with NCOC students lasted 40 minutes, whereas the meeting with Brooklyn College students lasted 1 hour and 20 minutes. The time difference between the school was largely due to the number of students- the more students the more time required to answer students' queries and collect their information. Students were welcomed before being introduced to the research. I then oriented them to the research purpose, objectives, students' role, activities, and my expectations from each student. Students were also instructed on how to participate in the research activities, I had them test out the websites, applications, gathering background information, and giving feedback. The purpose of this first meeting was to minimize any equivocation about the research process (Collison, Elbaum, Haavind, & Tinker, 2000). In order to help students understand the nature of the research, I made an analogy between posting and commenting for the project with their habitual uses of social media sites. The following is an approximate script:

“In order to change their profile pictures, some people will take a ‘selfie’. Compare this to changing your portfolio. In order to take your best selfie what might you do? You might wear your best clothes, or change your hair, you might put some makeup on, and go to an extraordinary place and choose angle to best make yourself look stunning, right? Then you will take hundreds of photos in different lighting, and making different faces, like a smile or a duck face. Then you carefully select the best photo that represents you, and delete the rest, or store them deep in your cell phone. Finally, you decide to upload a photo including a short description sharing when and where you took the photo and/or you describe the mood you were in when you took it. Then you wait for comments from others and for how many ‘likes’ you get. You see people starting to click ‘like’ and comment. Some people comment on your new hairstyle, your dress, or ask where you took the photo and so forth, and this all makes you feel great. Then what do you do? Do you ignore the comment, or do you reply? We usually reply by responding to their questions or thanking the people for complimenting our new hairdo. This is basically what we are going to do for the project. You will carefully create your artwork, take photos, and choose the best ones to upload. Then you will wait for the comments and likes, and when you receive a comment you will reply. The only difference is that you have the option to further improve your work using the comments you receive.”

The students gave me signals by nodding or smiling as they listened. Then, I asked students to take out their mobile phones and look at their personal blogs. This 15-minute process ended with students voluntarily sharing what they noticed from their selfies, comments, and replies. As a group, we then went over the research timeline, tentative activities, and associated tasks (See Table 2). The following chart is a portion of the lesson outline, created for the participating schools’ and students’ reference. This includes recommended time, activity title, recommended duration, method of lesson delivery, and mediums students and teacher-researcher might need from the activity. It also provides the recommended student tasks for each week. The introduction ended with a statement confirming that the lessons will reflect the Ontario Curriculum, and Bloom’s Digital Taxonomy. I will describe this in greater detail in the next section.

Table 2. Lesson Outline

Timeline (2016)	Activity Title	Recommended Duration	Delivery Method/ Materials	Student Task
Week of Feb 22 nd	First Meeting	2 hrs Plus Art Creation	- Pen/paper - Google Survey - Internet - Skype/Flickr/Yahoo.ca - Left School University Requirements	- Attend the in-person meeting - Take online survey - Complete online ice-breaker - Accept online website invitation - Explore the platform
Week of Feb 22 nd	Understanding The Schools and Programs	1 hr Plus Art Creation	- Internet - School chart - Email	- Students visit websites of universities and programs they are applying to - Write a short reflection about their choice schools
Week of Feb 29 th	Posting and Commenting	1 hr Plus Art Creation	- Ning.com - WeChat - Smartphones - Computer - Wifi/data - Art supplies	- Art creation - Post their creation online along with a brief description of their work - Make a comment on another artwork
Week of Mar 7 th	Critique	1 hr Plus Art Creation	- Ning.com - Smartphones/ Computer - Wifi/data	- Students complete one task of art critique
Week of Mar 14 th	Conference (Virtual)	15 mins – 1 hr Plus Art Creation	- Ning.com - Smartphones - Computer - Wifi/data - Art supplies	- Answer questions from mentor - Students share their concerns about the researcher and ask any questions regarding their university applications - Student's self-reflection on progress

3.3 Lesson Plans

The unit was divided into three parts. In the first stage, students focused on detailed planning and composition of their university entrance art portfolios. In the second stage, students focused on personalized activities. In the final stage, the lessons heavily emphasized the completion of student-artist progress reports and self-reflection. Each workshop and activity accommodated Bloom's Digital Taxonomy (BDT) to ensure the lessons aligned with the Ontario Curriculum. Furthermore, the sequential workshops were designed and reformulated to encourage the

students to generate their ideas by triggering their creativity. After the nine-week period, students would have successfully engaged in all aspects of the art creation process, shared their work online, provided peer and self-critique, and maintained accountability through a regular progress report.

This study transitioned through four iterations in the following phases: preparation and design, teaching experiment, retrospective analysis (Bakker, & Van Eerde. 2013, p.15), and the continual practice. For the preparation and design phase, I collected teaching materials and art and university application resources. I created a timeline, activities for individuals and groups, designed workshop guidelines (Appendix iii), activity objectives, and success criteria. In the teaching experiment phase, I provided two contextual face-to-face group workshops, and a series of personalized online assistance sessions. For the retrospective analysis phase, I interpreted the following data to produce reflections on the study: workshops, student activity procedures and involvement, by-weekly individual interviews, student criticism on the research, and student work habits. Each iteration of the study was responsive to the results of my personal reflections, and contrasted against adjustments for personalized student assistance. The modified lessons corresponded to student's strengths, learning styles, and personal interests, while taking into account their ability to complete each task.

Additionally, I created ground rules based on the 'Terms of Service' outlined on Ning.com and provided supplementary literature outlining online safety and the responsibilities of a 'digital citizen'. This provided students with clear parameters of appropriate Internet protocol or what has been termed 'netiquette'. To ensure comprehension, I simplified the wording of the document to make it more direct and easier to follow:

(i) No copying, no infringement, no cyber-bullying by threatening, abusing, violently harassing, or invading the privacy of other members in the group, (ii) Do not post anything in a manner that is hateful or discriminatory based on race, color, sex, religion, nationality, ethnic or national origin, marital status, disability, sexual orientation or age or is otherwise objectionable; (iii) Do not collect, use or disclose data, including personal information, about other users without their consent or for unlawful purposes or in violation of applicable law or regulations; (iv) Do not post irrelevant content, repeatedly post the same or similar content.

3.3.1 Workshops

During the face-to-face workshops, I demonstrated how to sew a garment, paint, and create an illustration using a variety of art materials. Each of the two-day workshops was held with the intention of helping students acquire graphic design and sewing skills through direct instruction. In addition, I answered students' questions regarding my life as an artist, during and after my time at both OCAD, and Concordia, University. I then detailed some of my experiences in helping other students develop their art portfolios. Finally, I shared some strategies for getting to know more about the schools they are interested in applying to: "Express your keen interest to the school, research the school and ensure you understand the unique qualities of their program, make sure you detail clear objectives in attending *that* school. Let them know why you are a good fit for the school: your skills and talents, and why attending the school will help open up your future career paths. Email an alumni or a faculty member who you find inspiring and let them know that you're looking forward to learning from him/her. Continue sending your artworks after the portfolio deadline, this might seem annoying but it is your responsibility to show them how you've improved your skills, and convince them that your passion is only growing" As such, I used this time to familiarize myself with the students' expectations, their level of artistic ability, and why they want to study the arts. They were interested in hearing about my personal background, why I became a teacher, and my passion for teaching the arts and assisting art students.

In terms of teaching resources, I drew upon my previous grade 12 visual arts lesson plans, teaching materials available online, and other art teachers as valuable resources in crafting each lesson (Appendix iv). All lessons carefully adhered to the Grade 11 and 12 Ontario Curriculum document 2010, which was the integral compass for developing the online portfolio curriculum. I spent roughly 10 to 15 hours each week tailoring lessons, responding to students posting, and interviewing students.

Prior to the launch of the project, I researched the schools and programs that students wanted to apply to, in order to have a full understanding of the specific portfolio requirements. The search queries included each prospective school, school requirements, and how a student's work changes and differs depending on the requirements. For ease of interpretation, the results have been placed in a chart (Appendix VI).

3.3.2 Criteria of Success

The feasibility of teaching and learning portfolio development online is vitally linked to measurements of student performance. I measured the students' achievements by applying the following criteria for success: (a) students should follow the project guidelines and actively participate in the project, (b) the portfolio should meet the requirements of the school to which the student is applying, (c) students should clearly show their understanding of the themes and purpose of each work of art, and (d) the portfolio should include a progress report that reflects the student's art creation process. All criteria for success were introduced to the students at the onset of the project.

3.4 Curriculum Conceptual Framework

The defining characteristic of the curriculum for the student art portfolio development mentorship is the integration of personalized lessons and Bloom's Digital Taxonomy. The integration of these elements facilitated the art making process and reinforced student's skills in peer-critique and presentations, through intensive exchange of dialogues. Peer collaboration and teacher-student interactions via the Internet were essential when confirming the authentic completion of the tasks or activities (Herrington, Reeves, & Oliver, 2006. pg.92) and to promote student participation.

The six domains of thinking skills listed in BDT (Churches, 2009) were broadly used when constructing the curriculum. They consist of elements from the higher to the lower order of thinking, and are labeled according to the aspects they accommodate: creating, evaluating, analyzing, applying, understanding, and remembering (Churches, 2009; Lee, 2016). The following is the chart designating each domain consists of sub-elements of learning (Bloom, 1956; Anderson et al, 2000; Churches, 2008; Lee, 2016).

Table 3. Bloom's Digital Taxonomy. From Lower to Higher order thinking

Domain	Sub-elements
Remembering	recognizing, listing, describing, networking, favoriting, searching, etc,
Understanding	interpreting, summarizing, blogging, tweeting, tagging, commenting, etc.
Applying	implementing, using, loading, uploading, sharing, etc.

Analyzing	comparing, linking, validating, media clipping, etc
Evaluating	checking, critiquing, experimenting, blog commenting, reviewing, posting, etc.
Creating	designing, constructing, making, animating, etc

This BDT application helped students develop a contextual understanding of their own work, which provided a framework for communicating with each other online. BDT proved to be an effective guideline when designing tasks and ensured a successful student experience over digital platforms. Overall, when BDT was applied to this research, it improved the feasible realization of students’ artistic merits and the development of their capacity to assess their own work via digital platforms.

3.5 Iterations

There were four major iterations over the nine weeks of the research term, involving making changes to activity content/cycles, instructional strategies, and to the selection and use of digital media tools. Each change was made with the intention of (a) resolving any technical difficulties, (b) refining instructional delivery methods to accelerate the process, (c) promoting the frequency of student task engagement, and (d) meeting students’ learning needs to the fullest. Ultimately, these adjustments and troubleshooting created a refined structure and method (Clark, 2013, p.29) that ignited the student learning process in an online environment.

3.5.1 First Iteration

The first iteration lasted over the first week of research, beginning February 23rd, 2016. The objective during this period was to facilitate students’ art creation, introduce project routine, familiarize students with social media tools, and conduct preliminary observations of students’ art styles and work habits. This period included changes to the blog platform with the goal of resolving the technical difficulties encountered by both parties. Specifics include changes from Flickr to Ning.com, Skype to WeChat. There were further adjustments to the method of lesson delivery- from solely online to two face-to-face workshops (See Table 4). The content of each lesson was subject to more minor changes, such as including improvements to the comment and reply system. Finally, the student interview process provided the necessary insights for creating personalized lessons

Table 4. Iteration Charts Changes in Social Media*First Iteration*

Medium	From and To	Reason for changes	Outcome
Research Platform	Flickr ⇔ Ning.com	Flickr was difficult to use	Must purchase to use \$30/month USD
Communication Method	Skype ⇔ WeChat	Students Suggestion	Works great, saves time in learning the app
Storage Method	Dropbox only ⇔ USB /Dropbox	Lost Internet Connection when working outside	Portable, can work anytime and anywhere

Second Iteration

Medium	From and To	Reason for changes	Outcome
Reminder	WeChat ⇔ WeChat & Google Calendar	Occasional deadline confusion	Took time to explore the Google Calendar and set up, which works well.
Discussion Forum	Weekly Task ⇔ Discussions	I separated those two sections from Ning.com due to disorganized look	Looked neater and complete

Third Iteration

Medium	From and To	Reason for changes	Outcome
Instruction Delivery	PDF/Email ⇔ Skype	Synchronized lesson	I was able to demonstrate and respond to the students' concern in real-time
Individual Messages	WeChat ⇔ Ning.com	Found out that ning.com supports messages with attachments which proved useful	Even with encouragement, students continuously use WeChat to send images

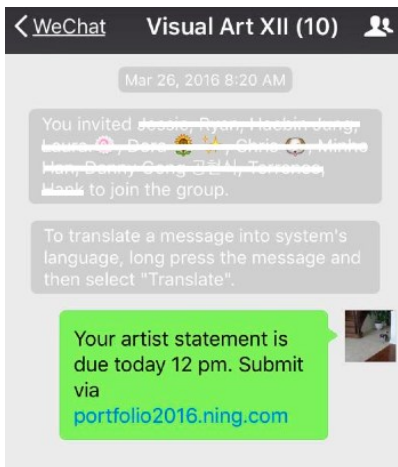
3.5.2 Second Iteration (March 5th 2016- March 18th, 2016)

Most of the substantial changes occurred during the second iteration of the study. The focus of this period was to facilitate students' art creation and refine their artistic merit. It is at this point that the personalized lessons began and BDT was actively adopted into the study. The tasks defined during the student art creation processes were aligned with BDT. Students' demonstrated examples of planning, producing, and making from the higher order thinking. Students were also tasked with reflecting on their art creation and with monitoring their own development progress. Evaluation principles in this self-reflective process included uses of checking, critiquing, experimenting, commenting, and networking.

Tasks were assigned individually based on student's needs, requests, interests, and post-secondary programs they applied to. The programs included: fashion design, interior design,

photography, graphic design, architecture, and fine arts. These tasks were further informed by lessons that I decided various students might require. For example, fashion and interior design students needed to acquire new skills such as sewing and graphic design. The architecture student desired to enhance his skills in art critiquing, curating for class presentations, and broadening his general art knowledge base. One photography student wanted to work on compositions, etc. After a series of postings, I diagnosed each student and defined their areas for improvement in accordance with their specific goals. The standard used was subjective, and primarily based on my insights.

I also stopped using Internet jargon. In contrast to my pilot study, with adult participants who exhibited self-regulation in language use, this adolescent student group used inappropriate words- even after the thorough explanation of netiquette during our first meeting. For that reason, stricter rules were applied. In addition, deadlines were firmly emphasized for activity completion, which included mass distribution of deadline reminders (See Figure 2).



(Figure 2. Reminder)

Finally, I made an adjustment to the platform and method of lesson delivery. In the first iteration of the study, I created an introductory video clip using an iPhone. I later edited the clip using iMovie on my MacBook Air. This was a time-consuming process, consuming four-hours of editing and numerous technical difficulties for what ended up to be an eight-minute clip. While acknowledging that pre-recorded video may be ideal for visual learners, I was able to compromise through live demonstrations via WeChat. This allowed for better distribution of time resources through the synchronized approach. In future instances video production could be

faster, given practice and familiarity with editing software and/or reuse of previously recorded videos, but I was satisfied with the alternative solution given the circumstantial time constraints.

3.5.3 Third Iteration (March 19th, 2016 - April 2nd, 2016)

The main challenge that preceded the third iteration of the study was the maintenance of student motivation. In response to this challenge, I implemented pair-share activities, which allowed students to post their work outside the parameters of the study (BDT: evaluating), posting on their personal blog for example (BDT: creating, sharing). In anticipation of this necessity I had already gathered information regarding student preferences, in messaging systems and blogging platforms, during the initial interview process. An additional step added at this stage developed in response to an undesirable student trend of self-criticism. Students were guided away from defeatist comments with the following prompt: “before asking me if your work is okay at any time during the process of creation, ask yourself first what you like the most and the least about your artwork at this stage”. This was supplemented with the following reminder: “don’t be discouraged during the course of art creation, you’re making a judgment based on an incomplete work”. The repetition of this act was more efficient in encouraging student work improvement (BDT: applying) and refining their work habit.

The interview questions were formed with an intention to best to motivate students at different stages of the study. One of the useful strategies used was designed by Low (2015); it entailed encouraging peer feedback through dialogue exchange, both during and after the art-making process (BDT: understanding: inferring, explaining, commenting). I applied the pair-share approach at the onset of the second iteration of the research (See Figure 3 & 4). My pilot study with adult participants revealed that a higher degree of responsibility when posting, commenting, and replying, could be established through sharing useful resources, which elicited dynamic levels of discussion. However, this process was not as successful with high school students who demonstrated comparatively less interest in sharing clips, inspirational works from emerging artists, and unique findings, through the project platforms.



Tasks

Posted by SomSom on April 7, 2016 at 9:18am

1. Make two sentence comments on cat's (turtle), kiki's (black sculpture), Teemo bin's (bridge)
- 1.2. Provide a two sentence description about your work.
- 1.3. Respond to the comments you receive.

Due: April 13, 2016

(Figure 3. Pair-Share)



mat eng

Personal preference: I don't like 'copying' a picture or following instructions in order to achieve the exact result someone else has achieved. Academically speaking I am from a science background, where answers are definite. And that's what I appreciate about painting or writing, that two people will rarely ever come up with the same sentence or same colour palette to express something. I wouldn't click like on this picture either. I don't know how these evenings are run but the result does not seem to encourage individual thinking and freedom to cultivate your own expression.

Posted on Mar 29, 2015 – [Edit](#) or [Delete](#)



Creamo

Hmmm.. There is something disconcerting, maybe even fascist, about how uniform these paintings are. At the very least, being a copycat is boring. On the other hand, even art does have rules, just like there is room for creativity and out-of-the-box thinking in science. It is important for art to have some structure, otherwise it is just a messy pile of randomness. Even though it is in the eye of the beholder, some things are universally beautiful and some things are not. If the point of this get together was to teach people artistic techniques, then there is nothing wrong with it. I do hope, however, that these people can move past this paint-by-numbers method.

Posted on Mar 30, 2015 – [Edit](#) or [Delete](#)

(Figure 4. Adult Participants' remarks)

3.5.4 Fourth Iteration (April 2nd 2016- April 22nd, 2016)

In the fourth iteration, I concentrated on promoting student art creation (BDT: creating: planning, producing, devising, publishing) by trying to make the process more entertaining, while generating a relaxing and fun work environment. A couple of effective methods included the use of a rating system and encouraging the use of emoticons “The system includes motivational techniques such as emoticons, a top helper list and an animated avatar” (Graf, Lachance, & Mishra, 2016). This will be discussed further in the Advantages in Motivation section in the Findings chapter of this paper. I also made attempts to resolve my frustration with the heavy workload by outlining virtual office hours and limiting correspondences after midnight to emergencies. I started recording student attendance and generating attendance rates, for my teaching reference (See Table 5). At the same time, I consolidated efforts on improving their first drafts, concentrating on a self-retrospective process: self-reflection and artist statement. The

thematic focus of interview questions during this period was how to make each lesson more helpful.

Table 5. Attendance Chart. Retrieved from Week of April 11th *P= Present

	Mon	Tues	Wed	Thur	Fri	Sat	Sun
MD	P	P			P	P	
SJKH				P	P	P	
Jin		P					P
Yu	P	P	P	P	P		P
Kiko			P				
Cat	P	P	P		P	P	P
Teemo Bin	P	P	P	P	P		P
McDonald's				P			P
Johnnyboy	P	P	P	P	P	P	P
Chris		P		P			

3.6 Limitation of the study

Although the participating students in my research benefited from their involvement, there were a number of shortcomings throughout the study. This study faced constraints in terms of scheduling and research timeline. The timeline for the onset of the research was not aligned with the prevalent time for art portfolio production. For instance, OCAD University only offers their intensive portfolio development course during the summer, the same applies to many other portfolio development courses in the Greater Toronto Area. Bryman (2015) suggested that researchers must find relevant research participants and sites. However, this study failed to negotiate a way to manage the difficulty and surmount any associated issues. It has become clear that student participation has been heavily influenced by March break, Easter Holiday, final exams, and a natural disaster (power outage due to the weather), as well as students writing the Ontario Secondary School Literacy Test (OSSLT), etc.

The first obstacle originated from the frequency of school holidays which occurred during the study, including March Break on March 14th to 18th, Good Friday on March 25th, and the Easter holiday on the 28th. This series of breaks restricted the students' rate of art creation, and was

only exacerbated by the fact that many students desperately needed this time to prepare for their mandatory Ontario Secondary School Test on March 31st. During my interviews with Cat, Yu, Jin, Kiko, and Chris, each expressed concerns over passing this test, and stated that it took priority over portfolio development. Some participants indicated in their research reflections that they would have benefited more if the study had started earlier to avoid conflicts with other important academic requirements. Participation during the indicated period was minimal, however, participation numbers sharply increased after completion of the OSSLT. Thus far six students involved in the research have received an acceptance letter from the universities of their choice (Figure 5. Acceptance letters). The second concern was portfolio deadlines. Most students applied to Universities in Ontario and Canadian university closed student applications on January 31, 2016. This was three weeks before the start date of my research with these schools. The final concern surrounded extracurricular requirements the students had to meet to earn their high school diploma, including 40 hours of Community Volunteer Hours. Students used weekends and after school hours to volunteer to earn hours. Students would devote further time studying for final exams during the week of March 8th, 2016.



(Figure 5. Acceptance Letter for Jin, Left & Offer of Admission for SJKH, Right)

3.7 Data Collection & Analysis - Types of Data

I used the mixed method of data collection, which is widely practiced for educational research in academia. For example, Bower (2008) used mixed methods included persistent observations, reflective journaling, and multimodal discourse analysis for his research on designing interactive

and collaborative learning in a web-conferencing environment with his students. In Squire's (2004) doctoral research, which promoted marginalized students' understanding of the development of Western society through playing the video *Civilization III*, he maintained observation log-books and student products for data collection.

The level I data from my study included interview transcripts, dialogue exchange between participants and participant to co-participant (me). The interview transcripts were recorded verbatim and stored in colour-coded digital folders after analysis.

The level II data included digital journal documentation of daily email communications, participants' surveys, student complaints, my reflections on participants' commitment to each activity and enthusiasm levels, and any noticeable changes/improvements. This has been done by identifying participants' patterns of engagement and estimating variables. Keeping journals helped me organize my interpretations, processes, and track ideas as I navigated through the next steps and modifications. Level II data and the data analysis were completed concurrently with level III data.

The level III data included a review of literature topics on video conferencing, e-learning environments, cyberspace, Bloom's Digital Taxonomy, personalized curricular, motivational techniques, critique and feedback, social media implementation, and portfolio assessments. The forms of publication were thesis dissertations, art education journals such as NSEAD, conference papers, scholarly journals, education policy reviews, and books. As Hoonard suggested (2015), looking at examples from previous studies I referred to relevant scholarly journals, news articles, and books to compare the data analysis with scholarly theories and findings. As such, I referenced (1) Castro's dissertation (2009) and the series of proceeding articles (2012; 2014; 2015) on his doctoral dissertation study with secondary school students; which demonstrated a relationship between students' learning process and their improvement in art analysis, and (2) Lu's (2007) dissertation on Blog platform integration and its use as an assessment tool. For a master's thesis, I referred to (1) Akbari's (2014) paper on designing an art curriculum that integrates sound and listening as part of the creative process and (2) Sabatino's (2008) study with high school students on enhancing the effectiveness of video-conference field trips to art museums.

3.7.1 Data Collection Technique

The accumulated data included my reflections on students work habits, my observations on their success criteria, frequency of students attendance (posting, commenting, and replying), screenshots of instant chat logs, interview questions and transcripts, email communications, students works, and comments that were posted on the research website (ning.com). Audio recordings of the interviews were captured using a Samsung Galaxy S4. The interviews themselves were held via WeChat using an iPhone 5S and transcribed on Google Docs. Additional notes were added cataloging my impressions of the interview transcripts. Transcripts were reread one by one, and then a third time line by line. Data from my reflection on student postings and comments were also recorded on one page in Google Docs. This pattern aimed to provide a quick access reference to the larger transcripts and reflections. Data from the lesson reflections followed a different routine, these were placed in a template I created in Microsoft Word. The template provided a readily accessible platform for my reflections on each iteration and workshop (Bakker & Van Eerde, 2013) (See table 6).

Table 6. Reflection from the online mentorship

Timeline (2016)	Activity Title	Recommended Duration	Activity Objectives	Student Task
Week of Feb 22 nd Location Online	Understanding The Schools and Programs <i>Pre-Activity Stage</i>	1 hr Plus Art Creation	- Understanding the schools and programs	- Students visit websites of universities and programs they are applying - Write a short reflection about the schools
<p>Reflection: For this task, I set a deadline: Feb 27th, 2016. The objective of the task is having the students understand the schools and programs and know whether that is the school they pursue the study. This worked nicely. Two students SJKH and Jin withdraw from applying Textile Design program at OCAD university. They believed that it is the fashion design program where they can learn technical garment design skills. From the description of the OCAD University, the program focuses more on designing the textile and fabric.</p> <p>Affordance: Having their expectations and objective aligned with the schools' expectations and the characteristics of the school is salient. Limitation: Some school websites and programs do not provide full information, e.g. deadlines. I encouraged the students to email the school directly. Later we found out that the deadlines were emailed to students directly at the time of students' application submissions.</p>				
Week of Feb 29 th	Posting and Commenting	1 hr Plus	- Posting image is the base for this project - Students posts might	- Art creation Post their creation online along with the brief

Location Online		Art Creation	motivate/inspire others in the group to achieve their goals and vice versa.	description of their work - Make a comment
<p>Reflection: To me, this is the beginning of the project for the research. I posted one image on our project website: portfolio2016.ning.com for a demo or sample. I suggested the students to take a look at it before they post. Affordances: When students were unsure what to post and how to respond, they used WeChat me for clarifications. Limitations: Students are still confused with how to post and how to respond.</p>				
Week of Mar 7 th	Critique	Plus Art Creation	- Strengthen art critiquing skills - Critique activity might trigger our discussion going.	- Students complete one task of art critique
<p>Reflection: This is exam week for both schools. Some of students told me they did not create any art. Then, later of the week, SJKH posted two artworks for feedback. None of the students commented on his work until the following day. Instead of me giving them reminders, I feel like using automatic reminder app so that students can manage their own time without my intervention. Affordances: I attempted to check students' independent art creation progress through WeChat. Limitations: Final exam. As students were scheduled to have a final exam on March 8,9,10, students expressed that they wanted to focus on their final exam first. I agreed that their academic achievement is also important.</p>				

Reflection labeling and data collection combined to create a theme and to generate the next phase of interview questions. In this process repeated words, phrases, and sentences were coalesced into emergent themes (Keeffe, Lovejoy, Spencer-Jones, & Prain, 2013). With the desired result of developing a desirable pedagogical mechanism, I questioned the aims and limitations of my research and responded to the questions as sincerely as possible. For example; "What am I capable of offering to students? What are my concerns? How do I feel about documenting students progress? What was the most challenging aspect of the activity? On a scale of 1 to 10, how satisfied I am with the students progress?".

All in all, the collected data suggested that the study was adequately calibrated to develop sound instructional strategies. Ensuring the successful realization of this online mentorship research requires a mentor's commitment to encouraging maximum student performance online. Answers to above questions are addressed in detail throughout chapter 4 of this thesis.

3.7.2 Data Analysis

The analysis was conducted at regular intervals along with data collection, as I set a routine of analyzing my reflections on a weekly basis. The coding process originated from my notes and the wide spectrum of my reflections. During the indexing process words repeated, including;

methods of communication, email, meeting, schedule, workshop, lesson plans, motivation, achievements, goals, success criteria, etc. were used to form category based themes (Gary, 2013). Other less significant, but contextually valuable, words were subcategorized. Furthermore, important words that were repeated by interviewees or during my reflection process such as, “OSSLT” or “Exam” were classified in subcategories based on their characteristics. Many codes were dropped in the process of category creation (Löfgren, 2013). Any conceptual uncertainty surrounding the proper labels for buzzwords was discussed with incumbents prior to validation (Keeffe, Lovejoy, Spencer-Jones, & Prain, 2013, p.112). One such example is “March Break”, and the ambiguity surrounding time usage as some students use this time for art creation while the rest used this time to prepare for their OSSLT. After comprehensive discussion with the principal and the art teacher, March Break was classified under the category of limitations as there were numerous miscommunications and delays during the break. I analyzed data along with the iterations. For example, I interviewed students and used their reflection to ensure the usefulness of the existing formula, and to determine the necessity of reformulation for the next iteration. The following is a portion of an interview transcript:

Me: Please tell me your feelings and reactions to the feedback you have received?
MD: Um... I am happy that others see my work. Uh... hm... it is helpful that I have an idea how I can improve my stuff..my art.
Me: In your opinion how effective are the reminders sent through WeChat?
MD: I think it's good. The amount of task is pretty manageable. It is also helpful that I know what I need to do next.

In this instance, I decided to continue what I had been doing when assigning tasks. Clark (2013) stated that “through the cycles of analysis, consultation, refinement, and reflection”, (Clark, 2013, p.30) students will experience the greatest benefit. The lesson structure and implementation of ICT were revised in a similar fashion. Words were conceptualized using buzzwords and assembled according to the similarity of meaning, this provided a more unified set of words for the next reflection. For example, when choosing between ‘individualized lessons’ and ‘personalized lessons’, I dropped individual and chose personalized. Another example was the dropping of ‘digital media’ and replacing it with ‘social media sites’ instead. Also, the colour coding system was not just visually pleasing, it also reduced confusion and complication when digitally categorizing themes. For example, when ‘red’ visually indicated obstacles whereas ‘green’ represented affordances.

3.7.3 Data Storage Method

The research was entirely paperless as all data was stored digitally: Google Drive, Dropbox, and personal USB. Google Drive was selected for its automatic saving system and my familiarity with the software, which I have used since 2012. The system has proved reliable and has never posed any technical difficulty or issues. I recorded my notes and journal reflections in Google Drive files. I used Dropbox to store related literature, and screenshot images from my MacBook Air and iPhone, all of which were updated on a weekly basis. As an alternative when I was without Internet connectivity, everything was stored on my personal USB drive. On the 4GB USB, I mainly stored Appendix items, lesson outlines, schedules, personalized lessons, iterations etc. Along with my MacBook Air laptop, the USB worked efficiently as I could carry this with me at all times without concern for connecting to the Internet. I archived screenshots of the information distributed into the three storage mediums in anticipation of the impending expiration of the research website, portfolio2016.ning.com, at the end of April 2016.

3.8 Conclusion

This design-based research lasted from February 23rd, 2016 to April 22nd, 2016 incorporating the efforts and education of ten grade 11 and 12 student participants residing in Toronto, Ontario. The students were attendees of private schools located in Toronto and Markham, and all were strictly adherent to the Ontario Curriculum Document, designed by the Ontario Ministry of education. Over the course of the nine-weeks period, these students engaged in the art making process, specifically, to create portfolios for their university applications to art programs. For part of the research activity, their art creations were submitted and viewed through the online platform found at portfolio2016.ning.com.

As a teacher-researcher I designed a dynamic art curricula as the research progressed, responsive to students' strengths, interests, goals, and the school they applied to. This resulted in lessons which were modified for each student, yet all following a standardized format. Development of the curriculum focused on two criteria: (a) experimenting with numerous instructional strategies for art curriculum in the virtual environment and (b) finding comprehensive social media sites and digital tools that contribute to students art creation and online exhibitions. The primary focus of this research was to find the advantages and limitations of online mentorship in developing student's university entry art portfolios. In doing so, this

research relied heavily on the collected data, and the four iteration procedures taking place at intervals of one to three weeks. The most salient data came from the reflections of the students and myself, all of whom were deeply involved in the design individualized lesson process. These reflections consisted of the three scheduled, and numerous spontaneous, interviews with students, and my reflections on student participation and progress. The centralizing motif of the various iterations was to ensure the reliability of student tasks and teaching strategies (Zheng, 2016), as well as experiment with digital tools that complements student art creation. The sustainability and effectiveness of the lessons, social media sites, and tools were judged flexibly in response to students' feedback and my reflections after repeated use.

Tentative course outlines, lesson plans, and student tasks were prepared and ready for modification prior to the beginning of the research. Bloom's digital taxonomy was used as a guide for developing a curriculum as it enabled a broad practice for students; ranging from the lower order (ie. googling, social networking, subscribing, etc.) to the higher order of thinking (ie. filming, posting, collaborating, reviewing, etc.), in the digitized environment (Churches, 2009). Finally, a design-based research methodology allowed me to most thoroughly assess and reassess the lessons, while differentiating tasks according to student's needs, strengths, and interests. This contextual framework would provide a well-designed curriculum, through a series of iterations ascribed to the flexible methodology.

I will use the next chapter to delve into the advantages and limitations that I found through this research, while addressing the result from the series of iterations. The chapter is sectioned into advantages and limitations, including; (i) assisting students online as a teacher-researcher (ii) students' perspectives of developing art portfolios with guided assistance via social media, (iii) and other contextual findings.

Chapter 4. Findings

4.1 Introduction

Applying advantages in online mentorships is common practice in a wide range of disciplines (Herrington, Reeves, & Oliver, 2006; Alter, 2014). The effective performance of newly implemented media (Eid & Ward, 2009) was paramount in ensuring both synchronous and asynchronous assistance to students, who were developing their university application art portfolios throughout this research. The mediums selected for this research were chosen for their supportive potential to this study. However, there were challenges in determining whether each medium was compatible with each activity and task assigned to the students. Further challenges included maintaining a practical balance that prioritized the artistic and portfolio development process. This chapter will elucidate the processes and outcomes of the study. I will expand on these to delineate the apparent boundaries between the advantages and limitations of utilizing new media.

Through my research, I sought to respond to issues related to the high demand for computer and communication technology integration in the field of art education (Alvarez, 2006; Anarki, 2004; Behera, 2013), by expanding the learning possibilities within an online environment. Through the process of data collection and analysis, I observed the emergence of three perspective modalities: mentor, student, and communal. Five classifications were established and compartmentalized with a maximum of six subcategories. The classifications include: (i) new media applications, (ii) time management, (iii) strategies for motivation, (iv) types of assistance, and (v) outcomes. Classification (i) includes the following subcategories: issues and expediencies in lesson delivery, and method of communication. Classification (ii) includes: time constraints, deadlines, and feasibilities. Classification (iii) includes: personalized lessons, peer feedback, self-reflection, goal-setting. Classification (iv) includes: online and face-to-face portfolio development, school work, and interview. Finally, classification (v) includes: issues and advantages. The unifying objective of the project was the improvement of art and curating skills through art portfolio development. As a result, all the listed modalities and subdivisions, were harnessed into the context of finding advantages and limitations of online mentorship in the field of art education.

The inherent advantages of this approach consists of: (a) improving student artistic merit through continual practices (Paulson, Paulson, & Meyer, 1991; Jones, 1994; Cho, 1999), (b) a dynamic methodology for enhancing student confidence (Low, 2015; Lee, 2015; 2016) and participation, (c) broadening student perspectives through sharing with peers and reflecting on progress (Castro, 2012; 2014; 2015, Low, 2015; Lu, 2007; Palloff & Pratt, 2001), (d) expanding the spectrum of presentation skills by applying Bloom's Digital Taxonomy (Ontario, Ministry of Education, 2010), and (e) reinforcing collaborative skills through collaborative problem solving and critique (Anastasiandes, 2009). Despite all the advantages of the online environment there were still drawbacks to this online mentorship: (a) students stress and frustration levels due to time constraints, and adherence to the Ontario curriculum, (b) time loss due to Internet distractions, (c) high demand causing my (teacher-researcher) frustration (this includes responding to students' demands, needs, queries, and tailoring personalized lessons to student work rate), (d) miscommunication and delays in communication, and (e) limitations to lesson content delivery.

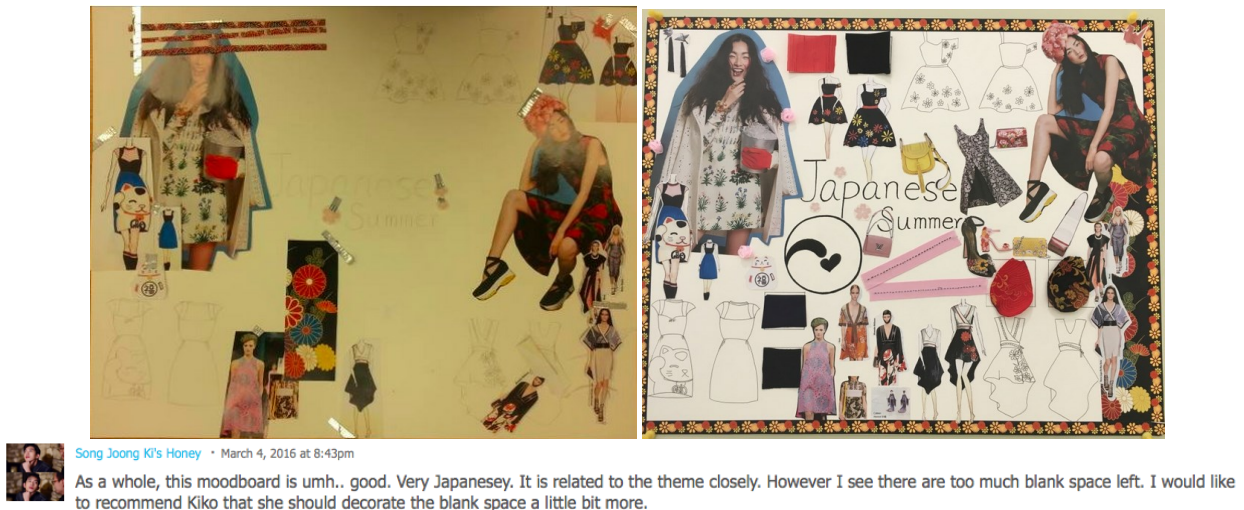
4.2 Advantages

The advantages discovered through this research were applicable to personal growth in students, efficiency of the monitoring process, and ICT compatibility with online mentorship in art portfolio development. The following apply regarding students' growth, (1) strengthening artistic merit, (2) confidence, responsibility, and enhanced work habits, (3) time management skills, and (4) collaboration skills development. Additionally, flexibility in the timing and method of delivery through ICT was a noticeable, commensurate with student understanding of technology and its usage in education. Easier monitoring and tracking of student growth through social media platforms was another profound discovery in my research.

4.2.1 Student Artistic Ability Improvement

Improvement of students' artistic ability was predicated on a structured learning cycle: art creation, posting/commenting, improving work, and self-reflection. Typical exchanges included posting work to solidify their identity, commenting to interact with others, exchanging replies, then revising their creations in reaction to feedback. This posting and commenting practice helped students significantly enhance their art skills; positive progression which was re-enforced by each student's ardent practice of planning, art creation, revision, and critique. For example,

as posting their work-in-progress was a core part of their activity, students had a documented reference of their step-by-step progress. The benefit to students was further emphasized when writing their self-reflections (artist statements) as the posting and commenting practice directed students to revisit their work (Palloff & Pratt, 2001; Lu, 2007). Nine out of ten students found they strengthened their artistic abilities, including: drawing, painting, digital media, sewing, along with art analysis strategies. One such example would be how Kiko's mood board revisions derived from SJKH's feedback received via Ning.com. SJKH commented that "As a whole, this moodboard is umh.. good. Very Japanesey. It is related to the theme (Japanese Summer) closely, which is a good thing. However, I see there are too much blank space left. I would like to recommend Kiko that she should decorate the blank space a little bit more." The following images show how Kiko's work progressed from this point (See Figure 6).



(Figure 6. Kiko's work: Prior to the feedback on the left & her Reaction to SJKH's feedback on the right. The feedback is as follows)

During an hour-long video-conference, we agreed that Kiko's work had improved from her initial postings, and the artist expressed more confidence in her work as well. The advantages of this task involvement are readily evident. Most students found that the greatest area of increase was attention to detail, and art critique. In an interview with MD, he expressed that learning from peer critique and feedback was the greatest advantage of this project. Other areas of growth include building a habit of art making, sharing (presenting), collecting resources, and reassurance of the skills. In Teemo Bin's interview, he said "I was already confident about my work. We all have different perspective, so, if I get some negative feedback, I am not discouraged by it [...]." This statement provided insight into Teemo Bin's artistic confidence, a strong indication that the

activity cycle heightened his art creation practices. Thus demonstrating the integrality of the structured learning cycle and the feedback loop, in ensuring the main objective of portfolio development through social media.

4.2. 2 Confidence Reinforcement

The activity also proved advantageous in increasing self-confidence in students with regards to their artwork creation. Facilitating active student participation was essential to establish confidence in students, and this was reinforced through a supportive online learning climate. Collison, Elbaum, Haavind, & Tinker (2000) underscored the significance of the facilitator's role in forming a thriving online community. Through my role as a teacher and researcher, I strived to create a friendly and welcoming environment by using a casual tone and using common "Net Jargon" in my commentary (e.g. ":", "lol", or "XD"). Furthermore, I attempted to balance the ratio of teacher-student interaction with student-to-student interactions. It has been stated that "interactivity is a key determinant of the quality of any learning environment..." (Herrington, Reeves, & Oliver, 2006. pg.91). In keeping with this strategy, I limited my posting, allowing for participants to comment, take initiative, and interact (Lee, 2016) by affording more room to participate and engage in peer-interactivity. This approach was targeted to develop and enhance their level of confidence.

In addition to interacting within a community of shared interest, the activities which promoted exponential growth as an artist, in turn, invigorated their confidence. This was achieved by displaying their work on Social Media, having their artworks noticed, looking at various versions of their own work on screen, and expanding their comprehensive art analysis. In an interview with McDonald's, he stated that "by commenting on others work, I tell them how to change and how to filter, suggesting and teaching, therefore, they will be a good artist. The commenting reassures me that I am good". His remark from this interview specifically shows that his confidence level has strengthened through the feedback process. He continuously cultivated this art analysis habit as the research progressed.

As such, commenting was one of the activities that helped students increase in confidence as students experienced positive reception to their ideas. In an interview, Teemo Bin stated that "It is fun leaving a comment, it means that I am sharing my opinion and that will help the person's

work. I improve (my art) from the peer feedback and they improve (their work) too. It's a simple logic."

Another participant Yu explicitly illustrated that she builds up confidence through the posting and feedback activity loop.

Yu: on a scale of one to ten, my level of confidence is 8. We can have different ideas and we can share our work. I like my art more after displaying my work and after receiving feedback. It is easy to use ning.com. It is better than printing out because it is easy.

The above statements clearly support the benefits of the feedback process through social media, fostering confidence in their production and in the execution of shared activities (Keeffe et al., 2013).

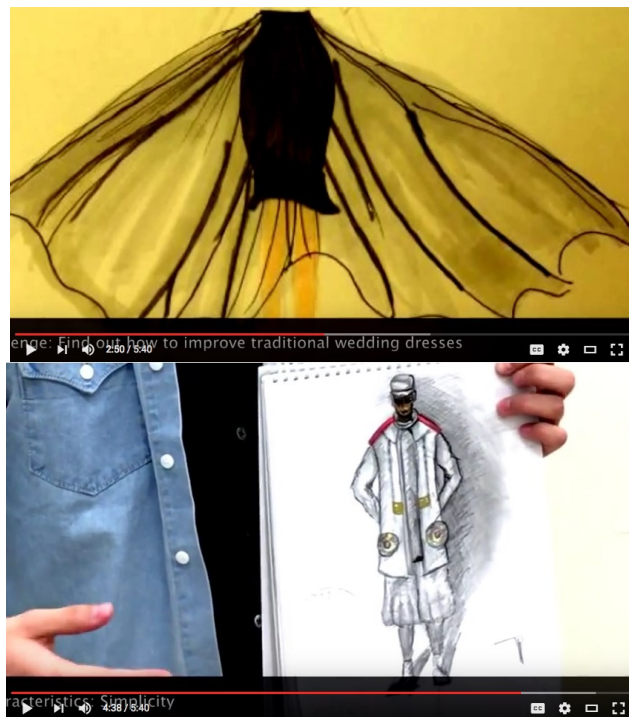
Similarly, at the beginning of the project, the majority of students would continuously ask for my opinion on the quality of their art creations. Some students would ask me to correct their work for them, and to be more critical of their work. However, online assistance led them to become increasingly independent in their art creation and self-evaluation. With the sense of preparedness, students displayed greater comfort and confidence towards their final outcomes, as their works had already been evaluated and critiqued by peers. As such, peer interaction and support in the online learning landscape played an inextricable role in developing student confidence. In time, students provided mutual sources of inspiration for the art portfolio development process. This activity engendered student-forged collaborative learning within the community.

4.2.3 Work Collaboration Skills

Active participation was desired and encouraged throughout the project. In this context, peer interaction was imperative to create an active discourse via the online community (Herrington, Reeves, & Oliver, 2006). Peer interaction on the research website was contingent on participants' postings, responses, questions, and activities (Dargham, Saeed, & Mcheik, 2012), as these generate an extended social circle. In an interview with McDonald's, he indicated that shared interest formed a sense of belongingness.

McDonald's: I feel that we can be more... friendly and getting close to each other...and...because I know that we have common interest... by commenting and replying. [...] That makes me comfortable posting and reposting...commenting and re-commenting, and replying more often [...]

His response indicates community belongingness allowed him to create diverse means of participating (Tsai et al, 2008) and the research activities provided him with an inclusive atmosphere of involvement and commitment (Baran, & Correia, 2009). Concurrently, their sense of involvement led students to broaden their art creation approach. That is, students cohesively and systematically went about their art production. One noteworthy instance was when I recommended that several students make a video of their work process, and outcomes, to send with their university applications. I claimed that such a recording could give the school admissions staff added insight into the student's' skills, work habits, and potential to complete the program. Such exposure extends beyond impressing the portfolio selection committees, into teaching students how to present themselves to their target audience. In creating these videos (See Figure 7) all the participating students cooperatively arranged a time and location to hold their video shoot, practice interviews, and help each other edit their final clips.



(Figure 7. Youtube Videos created and edited by group members)

This group collaboration was evidence that a deeper level of shared knowledge and goals helped students cultivate initiation (arranging), creativity (creating clips), and critical thinking skills (distributing roles based on their capacities) (Palloff & Pratt, 2001, p.33). Moreover, such practices enhanced student readiness for proactive collaboration in a project, and developed critical problem-solving skills by distributing roles based on individual skill sets. This indicates that having a common interest and goal promotes group interaction. The students' willingness to interact on a personal level provided the potential for students to illuminate a collaborative learning community (Palloff & Pratt, 2001). Correspondingly, peer support contributed measurable effect on other prominent qualities, such as work habits, responsibility, confidence, obtaining new skills, and sustained motivation. Along with the peer support strategy, these attributes are reified through collective activities within the group.

4.2.4 Responsibility and Work Habits

Students developed enhanced responsibility and work habits through the contexts of tasks. For example, students were prompted to comment on the work of an assigned peer, as opposed to commenting on any picture of their choice. Students were more likely to complete the task ahead of deadlines, regardless of the nature of the task itself, or if their task was different from that of their peers (Yang, 2014, p. 159). In terms of the schedule, advanced notification of deadlines was practical because minimized equivocations, and kept students on task (Cole & Zanetis, 2004). I found that students predominantly worked closer to the deadline, as they spent most time working on weekends. Providing deadlines was a useful strategy to engage them to complete assigned tasks as the reminder acted as subtle pressures. Students identified that they liked the reminders, that they keep them on track. Nevertheless, individual student work habits and responsibility levels are more credible assurances of work completion, i.e. a clear deadline worked for students who already had good work habits. Regardless of the individual predisposition, the level and frequency of engagement abruptly increased closer to deadlines of research tasks, and school applications/Interviews. As such, meeting deadlines was one of the defined goals within this research, and auxiliary to the integral goal of preparing their art portfolios. Working from a foundation of strong intentions for goal achievement created proactive students, with a higher rate of task completion.

The goal-oriented nature of this project allowed the participants to build a routine of regular and constructive art creation (Gitomer, Grosh, & Price, 1992). During McDonald's interview, he

indicated that “building a habit of doing art more regularly” was the primary lasting benefit of the project. Jin remarked that the goal of creating a robust university entry portfolio acted as a catalyst for improving the quality of his work, through the deterrent of possibly presenting “low-quality works” to the committee. These remarks lend credence to the notion that this type of goal-oriented project can provide an external pressure outside of the school. Such high stake goals make participants more serious, ensures timely progress, and holds them accountable for completing their work.

4.2.5 Flexibility of Time and Access

The online environment allows participants more time to view, ponder, and write (TeacherStream LLC, 2009). Participants from the study expressed that they felt less pressure responding to posted artwork because they had time to contemplate their peers’ artwork before commenting. Furthermore, when compared against traditional classroom settings, this online community allowed all participants equal opportunity and platform to discuss the posted images (TeacherStream LLC, 2009 ; Baran & Correia, 2009; Dargham, Saeed, & Mcheik, 2012). During the video conference, Cat acknowledged that one of the major benefits of this online environment was that she could revisit peers’ artwork as many times as she needed before making or replying to comments. Accordingly, this flexibility of time and access ensured an adaptable workspace, which accommodated individual student work rates, and schedules, beyond the online community. In support of this, some students worked all at once, specifically whenever their schedules allowed, or when they wanted feedback.

A remark from a spontaneous interview with Teemo Bin strengthened the belief that flexibility of access enables autonomous learning. His subsequent postings relates his sentiment that the time allowances were the biggest advantage of this online mentorship:

Me: How do you feel about this online mentorship? Tell me the one aspect that works the most for you and another aspect, if any, that works the least.

Teemo Bin: It was easier.

Me: What do you mean?

Teemo Bin: You have less expectations.

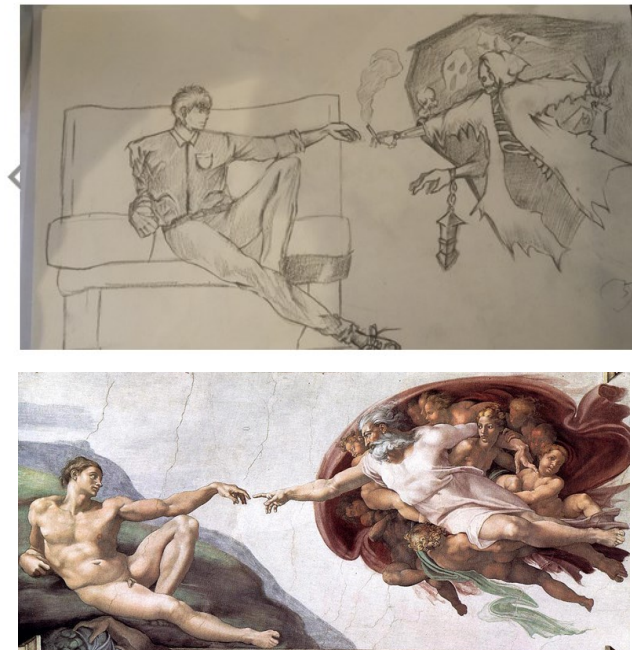
Me: Can you specify that a little bit more?

Teemo Bin: You know, I don’t need to respond to anything right away. I can answer after thinking a lot about it, and find information from the Internet first and answer when I am ready.

Me: I see. Um...so, Teemo, which tasks required more time to think a lot before you responded? And... for which tasks did you use the Internet?

Teemo Bin: ... um...you didn't ask difficult questions to the students. Oh, right! When I replied to McDonald's's work progress on the modernized 'Creation of Adam', I Googled and wikied. And that's why I talked about colours a lot. I like his (McDonald's) art, but his (work) has no colours and I suggested him to add colours from the real piece (original) (See Figure 8).

20160406_161415
Posted by McDonald's on April 7, 2016 at 10:23am



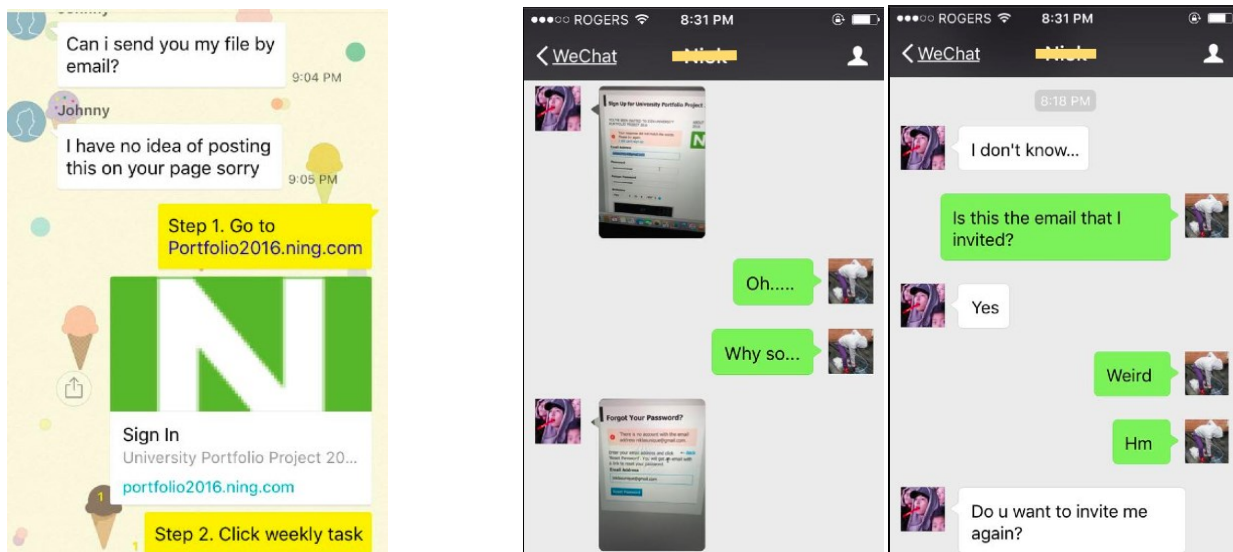
(Figure 8. Top: "The terrible Habit" by McDonald's, & Bottom: The creation of Adam.1511 by Michaelangelo Buonarotti)

This interview shows that students take as much time as they need to collect the necessary information to respond with the depth of quality and specificity that they feel comfortable with, while pacing themselves to get their task done.

In this manner, from a teacher-researcher's point of view, this project was only viable because the online setting provided all parties much more flexibility in time and access than a conventional classroom setting. As I work full-time during the day I used my breaks, lunchtime, after work hours, and weekends to contribute to this research. If the research was face-to-face, we could not have achieved as much toward the process of building their art portfolio. In addition, students' growth would have been affected by the dearth of content exchanged.

While using the social media platforms, students exchanged photos whenever they wanted feedback, or felt the need to share. Students could get online anytime and anywhere using Wi-fi

or their own cell phone data access, to post, comment, and reply. Easier access to their teacher (teacher-researcher) encouraged students to make contact more often. This enabled an accelerated learning process through expedited problem solving and instruction. Participants often sought the platform to communicate that would prompt the quickest reply. If they did not receive a direct response they would often use two to three different methods to try to reach me. They displayed a tendency to find their own solution when it comes to using new media and devices (See Figure 9). I responded to students as much as I could regardless of the time and location. The online environment rendered our busy schedules and rigorous offline workloads surmountable, allowing us to carry out the project as planned, while adhering to the success criteria. That is, the flexibility in time and access from the social media platform helped students arrange and plan their work to fit into their busy schedules (Cole & Zanetis, 2004; Dargham, Saeed, & Mcheik, 2012) and the omnipresence of platforms supported students in achieving their learning outcomes.



(Figure 9. Left: Johnnyboy suggesting an alternative way. Right: SJKH suggesting a solution)

4.2.6 Enhanced Monitoring of Progress

Determining the effectiveness of online mentorship was an essential aspect in the successful outcome of my research to locate the advantages and limitations of assisting students to build a competitive art portfolio online. The efficacy was partially determined by the high student participation rate (Palloff & Pratt, 2001; Castro, 2009) and by student skill acquisition

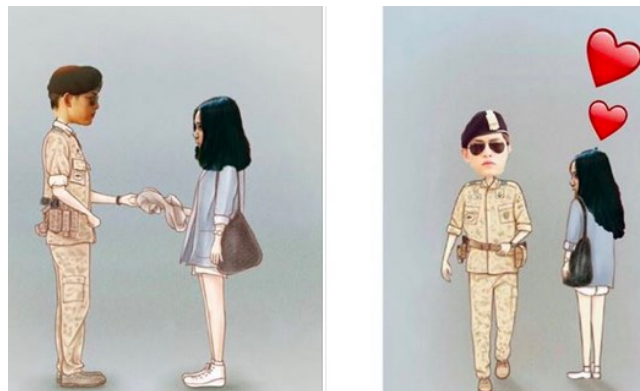
(Castiglione, 1996; Dorn, Madeja, & Sabol, 2004). In this vein, as a teacher-researcher, I was vigilant in engaging students in activities and monitoring their progression through the assigned tasks. Tracking students from a computer screen kept me well informed due to the ready access to the students work, their attendance rate, and the accommodating overview of students work when displayed on a screen. The comprehensive thumbnails of students' work enabled me to make a side by side comparison of their work-in-progress and final product. With this visualization (Castro, 2015) the teacher feedback and teacher-student discussions were richer in content. For instance, students could pinpoint their strengths and weaknesses, sequentially detailing what they think that they did well and what they should avoid in their next art creation. In a conventional classroom setting, I grade students' work focusing on student product, and rely on my memory to recall how the work was established. This, to some degree, limits proper tracking of students work progression. The screen-based tracking and sequential comparison of student learning used in my research enhanced the teacher's ability to monitor student progress. Similarly, students could monitor their own growth by comparing their work at any stage of the creation process. This view was supported by Chris during a video conference. Chris noted that it was interesting to look at how his artwork developed and changed after his initial posting. He also stated that this helped him to write his artist statement.

With a communal space to store and curate their work, students can view the work of their peers as much as they look at their own. Another advantage is that students can avoid the loss or damage of artwork incurred through handling. This view was supported by an incident that affected Johnnyboy during the research project. The student submitted his sketchbook for marking, however, it was returned to him later than he anticipated. Instead of finding himself stuck, Johnnyboy used the stored thumbnail sketch on the project website as a base to carry on in his art development. The online curation provides participants with ample opportunities to monitor and sustain their progress by assuring that their work procedure, and those of their peers, are available at all times.

4.2.7 Better Understanding of Student and Inherent Benefits

The practical value of the mentorship for the learners can be ascribed to the systematically adapted strategies employed by teachers (Cole & Zanetis, 2004). In conjunction with the strategy, when teachers acquire a good understanding of their students it ensures that the individualized curriculum is insightful and consistently linked with each student's unique abilities

(Keeffe et al., 2013). Palloff and Pratt (2008) asserted that allowing students to share their personal events intensifies the teacher-student bonding (p.88). As such, remaining responsive to student sharing is vital. Ideally, free discourse is initiated by teachers by disclosing their interests, which promotes teacher and student interaction thereby enriching student expressions (Keeffe et al., 2013, p.114). One such instance was when I realized that a female student and I enjoy the same television program called “Descendents of the Sun”. After discovering this I sent her a photo of a male cast member, to respond to her sharing of interest, and to create a relaxing learning environment. Less than an hour later, she replied with an attached image. The image was a Photoshop modified version of the picture that I sent (See Figure 9). Our exchange led the student to use her interest to demonstrate her abilities through an integrated approach, which accounted for her existing skill set and perspective. This acted as a lever to better elucidate the range of her artistic strengths, and assisted me in guiding the direction of her portfolio.



(Figure 10. Photoshop Work by Kiko)

4.2.8 Online Situation for Teacher Flexibility

As a teacher-researcher one of the main advantages to develop through this online mentorship was the freedom it allowed me to explore social media platforms. My focus in this context included easy-to-use, web-based, tools that were accommodating to our specific application of the tools. One of the more notable observations that emerged during the process of investigation was the manner in which the teacher’s level of technology fluency (the ability to troubleshoot technical problems), and their willingness to learn the medium, held great influence (Cole & Zanetis, 2004) over the online mentorship outcomes. This was most evident in the delays during the initial stages of my research study. One of these delays occurred when I failed to resolve an

issue with member invitations on the Flickr website. After sending out invites I was only able to locate three members on Flickr. Considering the intensity of this project and pre-existing time constraints, a quick decision was required, which resulted in us switching the site to Ning.com. While some scholars suggest that teachers do not have to know everything about the software (Black, & Browning, 2011), having a backup plan for digital mediums and social media proved vital throughout this study. Quick decision-making played an essential role throughout the project, and it eventually served to maintain a working knowledge of what other possibilities and alternatives were out there. How well my selections aligned with students' suggestions of digital mediums proved to be a significant factor in the study. This was especially noticeable when there was a familiarity with the tools being used. In Castro's research (2009) with a group of high school students, he chose an interface that resembled many of the social media interfaces students would be familiar with. Castro (2015) detailed that this was to ensure that the platform would feel familiar and easy to use (p. 8). As such, the familiarity attached to each digital platform was conducive to increased teaching efficacy, and maintaining a flexible and free flowing methodology as a teacher-researcher.

The online setting not only provides students with ample time to reflect on their work and that of their peers, but also broadens the spectrum and timeline of teacher observations. Although my responses were always prompt, the necessity for providing students with instant feedback was greatly diminished. This translated into more detailed and resource-laden feedback, as I could devote considerably more time and energy to the specificity of my response than I could in a classroom setting. Following my belief in the value of approach, this became the prevalent practice during the research.

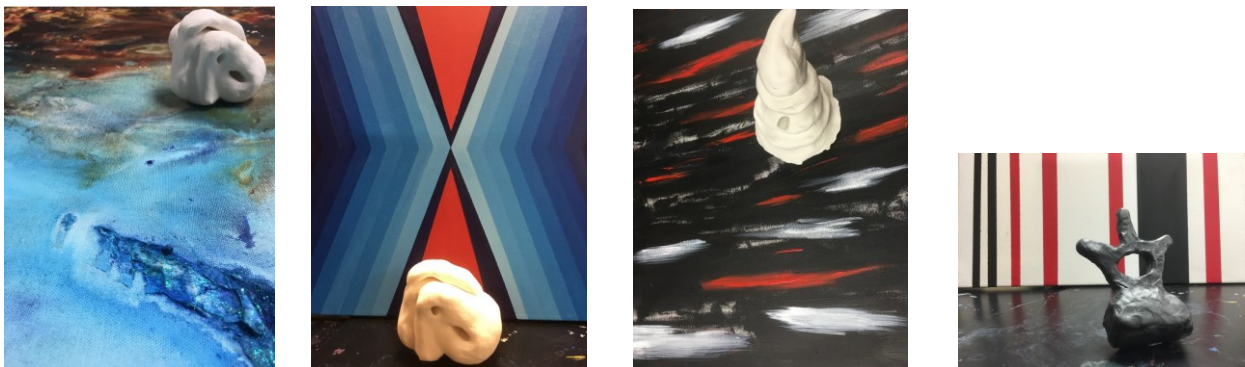
4.2.9 Online Diversity for Student Motivation

As a high student attendance rate is essential to any constructive learning environment, motivating students was pivotal to the success of this project (Ontario Ministry of Education, 2010). The purposive iterations were geared towards enhancing student participation by attracting students' attention. This section will examine the motivational strategies I experimented with during the four iterations of the research project that were most viable to the online learning environment. Key strategies for motivation include: (i) rating system, (ii) encouraging continual social practices through use of personal blogs, (iii) use of easy-access and easy-to-use social media platforms, and (iv) construction of a net-identity. There was an

additional association between students' level of engagement and teacher-researcher commitment, demonstrated by regular interactions with the students.

Through their routine class activities students expanded their range of expression, as they received peer recognition and support. Graf, Lachance, and Mishara (2016) suggested that emoticons, a top helper list, and an animated avatar may enhance student motivation. Modifying these suggestions to accommodate my research, I applied gameful learning strategies () during the third iteration, which also encouraged peer recognition. The following is the announcement that I made on the research platform: *"Pick your favorite artwork from the website. The selection with the most 'likes' will be displayed as the cover of the project website for a week."*

The following is the Yu's first art posting and her posting later in the project. After her work was selected (most "liked") to be exhibited as the lead image on the project website, her posting frequency increased.



(Figure 10. Series of posting by Yu: First three are the after the recognition and the last is before the recognition)

The frequency of student participation was directly proportionate to recognition amongst their peer group, and through their postings or instant messages. This may be due to their latent tendency to seek attention in the form of communication, and to form new relationships or extend their existing ones. The influence of this tendency cannot be understated, because no recognition translates to no existence in an online setting. This practice of recognition, peer interaction, and support, demonstrates the viability of reinforcing student motivation levels online through the use of a rating system.

Another dynamic of student motivation was evident in the practice of students displaying their work to a target audience. Many of the students posted their work process and/or completed work on their personal blog, via the social media platform WeChat. As I saw their artwork posted on their personal blogs with colloquial descriptions, I decided to once again modify my teaching approach. To begin with, I allowed students to post their work in the manner that most appealed to them. And to follow, I encouraged students to invite peers to their personal blogs in a collaborative spirit. Yu, Cat, Chris, Jin, and MD left their Instagram IDs on the project website as a result. I asked the remaining students whether they post any work on their personal blogs during the research; the results showed that 60% of students posted their work on their personal social media, including Instagram and Facebook. Moreover, 50% of these students responded that they prefer publishing their work on their own blog.

There were two reasons that students preferred posting on their personal blogs. The first was it aligned with their habits creating an effective social and cultural resonance. The second is that students were prone to showcase their representational artwork with those who were more likely to give them positive feedback. This implies that students are programmed to seek comfort in their social and cultural practices and demonstrates how interacting with others through positive feedback puts them at ease. The following transcript provides further insight into this phenomena:

Me: What motivates you to post your work on your blog?

Cat: Somi!! It is a habit!! I am documenting my life everyday and I wanna show it to my family and friends [...].

Some of the attributes of the personal blog triggered a boost in motivation. Sharing their work within their social circles led to acknowledgment, which in turn provided further motivation to showcase their work. This extended to student work displayed on SNS, which proved to be another significant prompt for art production. By presenting their work and receiving comments from their peers, with whom they share a common goal and interest, students formed a net-identity within the social group (Lalonde & Castro, 2015). The creation of a mutual space further forged a group identity through common interests. The byproduct of this motivation cycle is that displaying their work provides an incentive for students to remain active in the creation routine.

The last salient finding of the research is the relationship between easy-access/easy-use and motivation. In the study, the students used the medium they each found most convenient to

share their work. When posting their work most students used their mobile phones, as they could document and directly upload photos of their artwork on the same device. The use of the device when commenting varied amongst the students. Cell phones have become the standard day-to-day communication device for most students and more than 70% of the students used their mobile phones to comment; stating that they find it easier and more accessible, as they are likely to carry their phones with them at all times. When considering social media platforms, complicated options should be avoided as they could have an adverse influence on student participation. Rather, teachers should adapt to tools that provide easy access to digital platforms and which are easy to troubleshoot. “Easy access” played a crucial role in facilitating self-expression and identity formation through these digital platforms. This also allowed students to receive notifications of comments and posts. Given that students displayed a natural tendency to share their everyday life, multiplatform applications derive additional benefit from connecting with students’ personal blogs.

Some of the interviews with students led me to delve into the relationship between the apps installed on their mobile phones and the frequency of their postings. Results from the ensuing survey disclosed that students found that an app icon on their phone, directing them to social media sites, makes a site more accessible. 100% of the student participants in this research own a personal blog, and 90% of them use messaging systems that are connected to their personal blogs. All of them responded that their personal blogs are downloadable on their phone, and viewable on their phone screen. Mobile apps on Ning.com need to be individually developed through API’s and require programming experience, a process that conflicted with the time restrictions of this project. If the site had a ready-to-use app that enabled students to access the site from an icon on their phone, students participation numbers would have increased. Further limitations are discussed in the following sections.

4.3 Limitations

While remote communication was beneficial, there were distinct benefits to the face-to-face meetings as well. The first meeting with participants at the outset of the project helped put participants at ease, by reducing the obtrusiveness of constant access. It also provided them with an opportunity to better understand the project, its potential for assisting them, and learn about me and my role as co-participant. The face-to-face meeting provided me with an opportunity get to know the participants’ personal preferences and background. This was

beneficial when tailoring individualized instructions and questions (Dargham, Saeed, & Mcheik, 2012). In the end, this study failed to meet all mentorship demands through online correspondence. There were two face-to-face workshops, in response to students' expectation for in-person assistance, via close observation of their art making process. Yet, there were instances where students simply wanted immediate help on site. In the earlier chapters I referenced the variety of social media platforms that support art, however, it is not easy to find those compatible with the demands of art instruction, or to provide instant personalized demonstration. In response, I would like to pursue the development of a better mechanism for a comprehensive, art related, platform that is safe to use and supports digital art education. The following sections will explore limitations more in depths of online mentorship including teacher frustration, students frustration, and the distraction from using Mobile phones and the practice of BOYD.

4.3.1 Frustrations Related to Work and Student Demands

Despite years of teaching experience across a variety of disciplines, and with learners of a wide range of ages and cultural origins, I was a 'newbie' to online instruction. This was exacerbated by the fact that online mentorship was an equally new concept to my colleagues. As a result, I could not draw upon the reasonably expected support from my colleagues, and it was challenging for me to find teaching strategies and resources that were compatible with online mentorship on my own. For example, developing instructional clips with a DSLR camera was painstaking and time-consuming. Often, I had to study proper hardware use on my own, going over the manuals, or learning from Youtube tutorials instead of collecting information from colleagues. After accounting for the time constraints of this project, the self-guided instructions, and then teaching time, the pace of the entire process proved an inefficient form of progress.

Despite the many advantages of online learning, responding to students' demands and queries was overwhelming as one individual. On occasion, students would pose similar questions during their individual video-conferences, and I was conscious of the inefficiency of repeating answers individually, as opposed to in a group setting. This repetition would lead to confusion as it also became difficult to keep track of what was said to whom. Finding the time to create lessons, analyze student's work-in-progress, responding to students questions, and collect teaching resources became an all consuming demand on time resources. Receiving messages from students at midnight distracted from my sleep. This led me to believe that sustaining this work

rate for longer than the nine-week project length was not feasible. The extremely high work demand, and constant requests from the students proved overwhelming.

In this respect, one of the biggest challenges of this project was responding to students' needs and demands. Some students felt uncertain and asked the same question many times seeking assurance. Some requested help in writing their university entrance personal statements. They also sought help with art presentations for their class, weekly face-to-face workshops, finding places where they could order art, fashion, and design supplies, and even asking me to come with them to select fabrics. Some students asked me to stage mock University entrance interviews at 1 am or 2 am seeking feedback. I was often a personal assistant troubleshooting their university application processes, helping them pay application fees, confirming their interview dates with the school, and so forth. These requests were generally made through WeChat instant messaging system, "it's like having unlimited office hours" (Collison, Elbaum, Haavind, & Tinker, 2000, p. 34). In the third iteration, I put WeChat on silent mode, I could not respond to messages in a timely matter with constant access. An associated issue was that students related their problems to me without providing proper details. The following is an example from a student who asked me to help her write an entrance essay:

Student: Can you help me with the essay?

Me: Sure. What can I do to help?

Student: Can you tell me the format and the topic?

Me: Did you take a look at the entrance requirement?

Student: No...

Me: Okay. Step one, go over the entrance requirements. Step two, look for guidelines on the format and the topic. Step three, tell me the format and the topic, and we'll start from there.

Student: I don't know where to find it.

Me: Yes you do. It's posted on the project website. Or you can Google "Ryerson Fashion Design entrance requirement 2016".

Student: Can you send me the file to my email?

This exchange ended with me advising the student that it is his/her responsibility to confirm the format and topic with the school s/he is applying to, and I could only help him/her by looking at the essay and making suggestions on improvement. By the midpoint of the research project, I was almost burnt out. The demands for assistance were overwhelming. I was unprepared for directing students to be more independent. Some of the unreasonable demands were rooted in their lack of confidence in their creations and artistic merits, uncertainty about their progress, and the tendency to be inclined towards external sources of validation.

4.3.2 Teacher Student Frustration

Some students displayed resistance to embracing feedback to the extent that benign comments were interpreted negatively. In these cases, sincere suggestions were susceptible to become outlets for frustration.

Student: Can I throw it (his artwork in progress) away and redo?

Me: I was thinking, instead of restarting from the scratch, your current piece can be improved, with a few simple revisions.

Student: ...I think you just hate me. This is an ugly piece of sh*t.

Me: Mind your language. I am just giving you a suggestion. You don't need my approval to redo, or revise.

Student: Whatever...

I suspect that there is a possibility that my interactions with this students prevented him from coming back to the platform afterwards, "Teachers must strike a balance between knowing when to push students to excel and when to be sympathetic and encouraging in order to boost the students' confidence" (Low, 2015, p. 44). Increased confidence in their creations encouraged students to participate more. When they are discouraged in their art products, they are more likely to be disengaged in the activity. This can also lead to undesirable or inappropriate interactions in the online community. I perceived that this problem could have been a byproduct of over-familiarity, given that students may often be interacting with the teacher (me) via digital media from informal physical settings, e.g. at home, in bed in pajamas. Additionally, because they do not see me in person, they may adopt that belief that there would be no negative consequences to their actions, or that hostile behavior would have no impact on their personal life.

4.3.3 Distraction

An equally noticeable disadvantage to the project was the student distraction levels while using their smartphones, this is not an uncommon occurrence as "many young people spend hours every day hooked up to an instant messaging program while multitasking on the computer" (Cole & Zanetis, 2004, p.79). A teacher at one of the project bases raised a concern that her student (who was a project participant) uses his cell phone during class too often and it distracted him from learning. Also, in interviews, two students from the study expressed that posting through their cell phone is distracting.

MD: "I don't like using computer... um... ah... I cannot pay attention... there are many distractions. When I am online, I want to browse online stores and restaurants.

Chris: It [posting] is not very difficult (to use) but I am distracted... when I use my phone to post, and if I receive text messages from my friends, then, I wanna reply first.

Although students had no difficulty posting and sharing, the drawback was the increase chance of distractions (Palfrey, & Gasser, 2008). This could lead to shortened attention spans as students could become over-stimulated (Palfrey, & Gasser, 2008, p.244).

4.4 Conclusion

What results is a dichotomy between the advantages and limitations mentoring youth in art portfolio development over a nine-weeks period. Looking at the advantages, social media and digital tools allowed students and mentors to carry out their roles at their own pace. This is the key characteristic of the online learning infrastructure and it enables students to improve their artistic abilities, increase confidence, and develop collaborative skills (Anastasiandes, 2009), through task cycles that provide visual references of their progress (Lu, 2007; Palloff & Pratt, 2001). On the other hand, the limitations included student and teacher frustration due to increased workload, student distraction when using their smartphones, fewer resources from colleagues compared to traditional teaching delivery methods, and constraints when demonstrating art techniques online.

Taking both advantages and limitations into consideration, I identified some structural recommendations for future iterations of the online mentorship process. The first would be to ensure that the platform is as accessible as possible. This is essential to improving student participation. For example, if Ning.com had a ready-to-use mobile app, students could access the site directly through their phone, making the log in process that much simpler. Second, having virtual office hours would prevent teachers from burning out, ideally, this could be indicated somewhere in the platform. Third, teachers should have ready backup plans for social media sites and tools they will use just in case their primaries do not work out. Spending time on troubleshooting might ultimately prove time wasted when the solution results in a switch of platforms. Fourth, allowing students to post their work without formal descriptions, and inviting simple and light-hearted feedback will put the students at ease. Fifth, clear regulations and standards should be provided not only for the virtual environment but also for offline sites where students work independently. This way their involvement in such projects will not interfere with

other academic commitments. Finally, to make a solely online mentorship process possible there should be a prerequisite standard of art skill and experience for all participants. As there is a limit to the basic art technique instructions available, this can alleviate the need for hands-on instruction.

By the end of the study, I found that regardless of the listed limitations, the use of digital and social media applications to mentor students in the process of developing their art portfolio proved effective. Student growth was contingent upon a constant practice of art creation, posting, commenting, improving the work in response to peer feedback, and self-reflection. This supports the social construction of knowledge, to strengthen collaborative and negotiation skills.

Chapter 5. Conclusions

5.1 Introduction

This thesis concentrated its analysis on art portfolio development, online mentorship, technology, and the art education practicalities of social media. The underlying question of the research project asked; how does web-based technology impact student art creation and curation skills? Bridging the numerous cross sections of the four areas presented challenges to the architecture of this thesis. So why choose social media? And why was social media expected to aid in fostering students art creation and curation?

This is self-explanatory: Establishing relationships and reinforcing social interactivity within new media has become the norm in youth cultural practices (Castro, 2015). In the context of education, teacher and student exposure to virtual learning environments and digital media applications has long lost its novelty. Take a standard breakdown of my day as an art teacher as an example: the first thing I do in the morning is open my phone to check the time, weather, and any over night messages. I then browse the newsfeeds on Facebook, and any Instagram updates. Soon after I leave for school to teach my grade 12 class. As soon as I arrive in the classroom I open up my laptop, which automatically connects to the school's Wi-Fi. I click the Dropbox icon and download the previously designed teaching plan for the day. At this point I have about 15 mins left before class begins. I use this time to check my email to determine if any students have written to notify me that they will be missing today's class, or if there are any school email notifications. When class begins I connect my Mac laptop to a television screen to show instructional clips and my teaching materials. During class, while students are learning and exploring the class content, they use their mobile phones or laptops to look up and browse information related to the class. When class is over I email absent students with the day's in-class task and worksheets in PDF format. When I come home from work, I prepare lessons using my laptop and collect references that are accessible online. I also email my colleagues to ask whether they have any resources or files they could share through Google Docs. I suspect that there are many teachers whose days are similar to mine. As such, this thesis narrowed its aims to elucidate and formalize the advantages of using social media to deliver lessons and enhance student artistic aptitudes. These benefits were contextualized through the art portfolio development process, which carried its own inherent rewards including its role in university

entrance applications. The aim of using the platforms of online mentorship and social media was to develop an effective portfolio.

As stated in this thesis, there are concerns associated with digitized teaching and learning practices. Some are rooted in the insecurity surrounding unfamiliar approaches. New kinds of educational terminology proliferate at such a speed that it is highly unlikely that an educator could develop fluency in all the various platforms available. As such, a myriad of new technologies and inventions made appearances during my research. Google Classroom updated their student progress maintenance features three times in last two months. Moleskines Smart Drawing Set was introduced; it mirrors whatever is written on its paper to a digital device. There was the release of a 3D printer that can be employed in arts and crafts (Korvo, 2016), a laser cutter that students can design, and more. In light of this, I suggest that the most active response is for interested scholars and educators to take part in pooling information and exchanging their insights to alleviate the collective challenges associated with using social media and ICT.

5.2 Summary

The research was geared towards finding advantages and limitations in assisting high school students to build their art university entry portfolio predominantly through individualized online mentorship. The mentorship included directing students in planning a portfolio that would be relevant to the programs and schools to which they applied. This process involved: instructing art creation, proofreading artist statements, providing skill-based resources, guiding self-determined portfolio curation, and monitoring their progress. To this extent, this thesis concentrated on what can be achieved and identifying drawbacks to mentoring over social media. The findings were meant to be enhanced and modified for future reference. As such, the participants' levels of involvement in research activities were essential for accurate diagnosis of the success criterion, and achieving the research objective. When recruiting the student participants for this research project, caution was advised. For example, it would be ideal to include students who are interested in applying to programs that are compatible with my teaching strategies and experience, rather than students whose interests and skills are beyond my teaching competency and knowledge. However, I was not able to find a group of the students with a common area of pursuit. The students had varied areas of pursuit including fashion design, interior design/architecture, photography, and fine arts (drawing and painting).

All the students wished to pursue art education in post-secondary programs after high school. As a prerequisite to participation in this research, students needed to have completed or were enrolled in at least one grade 12 art credit at the beginning of their research participation. Students also had to be deemed competent enough to carry out the tasks while maintaining their academic schedule. Students interacted with each other through social media, but some of them were acquainted prior to the study through their high school. Such familiarity among members positively influenced group collaboration throughout the research. By the launch time, there were ten participants and eight of them were fully active throughout the research; the other two students were outliers.

From the standpoint of methodology, the Design-Based research was helpful in designing workshops and building tasks for the four iteration cycles. These meticulously designed tasks were modified to reflect on the collected data, including insights from student interviews, and my teaching observations. I practiced regular documentation of student and research progress from a teacher-researcher's perspective. I was able to identify advantages, limitations, and more, through these iterations. I could then highlight potential areas for modification in the context of lesson content delivery methods, and the configuration of tasks. For example, the significance of student motivation levels and its impact on student portfolio development was recognized in the second iteration (out of four) of the study. In response, I strived to retain students' motivation by using pair-share tasks, personalized tasks, and applying a rating system.

Furthermore, the incumbents, teachers, principals, and guidance counselors, voluntarily provided insights when they desired. This feedback was highly regarded, and taken into consideration for future iterations. The iterations were made in social media platforms, workshop plans, methods of delivery, and rules and policy about netiquette. This allowed an understanding of the efficiency in using social media and the lessons pursuant to their needs and skills. Ning.com and WeChat were used as online platforms, the latter selected for timely communication including instant messaging, voice messaging, and video-conferences. Email communication was found most efficient for sending essays to proofread, and forwarding emails from universities. The structural lessons and workshop plans, followed by supplementary materials, and recommended methods of communication, were developed through the nine weeks of field research. This was to provide teachers with teaching materials as a reference point, which could be modified as circumstances dictate. Due to the limited insight into each

student's circumstances and learning styles, there was no set number of tasks at the outset of the research. Rather, students were engaged in the activity cycle depending on their availability and their work pace. However, there was an emphasis on assisting students with writing their artist statements to enable a critical approach to their process of art creation. This was a core activity included in every task cycle. Bloom's digital taxonomy was used for the curricular design, and stabilizing the online teaching and learning efficacy. BDT resonated harmoniously with my research, as it contributes to the Ontario Curriculum. Since the recruited participants were attending schools regulated by the Ministry of Education of Ontario, they had a pre-developed familiarity with the expectations, which has been noted as one of the advantages through my research.

The advantages and limitations were mainly defined by student improvement in several criteria: the ability to create and complete art, critiquing, self-reflecting, and presentation skills. Borrowing a term from Sweeny (2004), this screen-based visual practice has the following advantages evinced in this thesis: (a) flexibility of the work pace, (b) fortify students artistic ability through continuous BDT cycles, (c) boost confidence level through collaborative work, (d) positive development of online presentation skills, and (e) offline social construction skills. On the other hand, there are limitations we should take into consideration: (a) the method of instruction delivery, (b) unable to provide 24/7 assistance, which is often considered an advantage of online mentorship, (c) distractions when connected to the Internet through their smartphones, (d) the amount of resources and aids available to teachers for online instruction.

In addition to the advantages and limitations, there were further salient findings that had a great impact on the results. Along with students' artistic skills, student work habits and personal circumstances, and student attendance were considerable determining factors when measuring the success of this thesis. One such example is the student participation rate. This was significant because, "if a day or more passes without publishing or interaction it can often diminish the motivation and interactions, resulting in students leaving the established networks to pursue other social media networks" (Lalonde & Castro 2015, p.57). This observation was true to my research, in that each student's online attendance rate was proportionate to the number of tasks they completed, which in turn was influential to their artistic growth. The students' engagement was closely linked to their work habits, the urgency of their need for assistance, and their general interest.

5.3 Implications

This study of online mentorship examined a small segment of the educational technology phenomenon. To this extent, the art portfolio development is just one of countless manifestations of online mentorship as a whole. Across all disciplines, online mentorship enables both mentors and students to perform their role from a distance. Mentoring students through the use of available social media, and testing each medium for suitability and practicality were important to this study. This thesis responds to the development of new media, and the ever-changing learning environment that is evident in many preceding studies, including Alter's visual art university course (2004), Castro's (2009) research with high school students, Lu's (2007) e-art portfolio development blog experiments in Taiwan, Quinn's (2004; 2011) e-art portfolio experiments at the University of Georgiana and East Carolina University, and Gutierrez and Guzman's (2014) study to investigate the role of the educational videos in K-12 students and to inspect their academic performance when digital devices are used with ICT (p.822). This array of studies proves that online art courses are a prevalent and growing area of research in the field of art education.

The major imperative of this thesis is the prevailing importance of a teacher's professional development, training, and technical savvy, in the context of online art education. This imperative is heavily dependent on the teacher's technology fluency, specifically in relation to the contemporary learning landscape. As well as their willingness to adapt the continuous changes of that landscape (Lee, 2015). Through my research, I continuously observed students who displayed a natural aptitude and inclination for using technology, and a fearless approach towards resolving any issues they encountered. Unfortunately, many teachers are not afforded the proper resources or professional development, and are not ready to respond to these changes. To name a few teacher challenges; there are constraints associated with the acquisition of new skills, developing familiarity with the exponential number of ICT devices, limited school resources/facilities (Delacruz, 2004), and the unreasonable amount of time associated with the overwhelming process of differentiating teaching strategies. There is also the challenge of ensuring students' online safety (J.Castro, personal communication, May 4, 2016; LaRose, Rifon, & Enbody, 2008; Palfrey & Gasser, 2008; Palfrey, 2010; Lee, 2015), spending extra money on using social media platforms, and ensuring students work is copyrighted (J.Castro, personal communication, May 4, 2016) to avoid its circulation without their knowledge

(Lee, 2015). Exhausted from this unsustainable work flow may also prevent teachers from embracing the present-day teaching and learning framework.

In spite of all the demanding prerequisites, this screen-based visual practice demands more streamlined platforms, and delivery mechanism, capable of providing visual references to students for art production, self-reflection, artist statements, and art critique.

While the key findings from this research promote the enhancement of advantages; the surmountable limitations must also be amended to align with the dynamic contemporary learning landscape, and students aptitude.

5.4 Future direction

My thesis initially aimed to build upon existing theories of how to establish better instructional strategies, and to find supplementary mechanisms for online mentorship. As the research progressed, the necessity of developing resolutions for the drawbacks came to light.

Unsustainable teacher workloads, and the incompatibility of educational software programs for online art portfolio development proved to be stumbling blocks. In future studies, I would delve into how to make this process more sustainable and lasting in terms of workload, with the aim of relieving both teacher and student burn out. I realized that more support should be available, and teachers should strive to develop cohesive lesson plans that alleviate teacher and student frustration. The evidence confirms the importance of pursuing these strategies, and indicated that the drawbacks will be surmountable if teachers are aware of the challenges prior to beginning their course.

In closing, I would like to continue experimentation with social media and digital devices that are compatible to portfolio development, and online mentorship. I am eager to note the variance in the application with different groups of students and from different fields of study.

As of July 24th, 2016, six students have been accepted to the school they applied, two students have not replied my query regarding their acceptance, while the rest of the two students are continuously developing and refining their portfolios for 2017/18 entries.

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Appendix I- Recruitment Package and Timeline



Created by Somi Lee



Appendix I

Study Title: Affordances and Limitations of Mentoring Students Online in Building their Art University Entrance Portfolios

STUDY TEAM AND CONTACT INFORMATION

Role	Name	Institution [†] / Department / Address [‡]	Phone #	e-mail address
Principal Investigator	Somi Lee	Concordia University/ Department of Art Education	(647) 625-4107	Somilee25@gmail.com
Faculty supervisor [§]	Juan Castro Carlos	Concordia University/Department of Art Education/ S-EV 26251515 St. Catherine W.	(514) 848-2424 ext. 4787	juancarlos.castro@concordia.ca

Purpose of Research

The research is for my master's thesis at Concordia University. The research focus is finding affordances and limitations of guiding students online as they create their art.

This research is about assisting secondary school students between the ages of seventeen and eighteen in building their university entrance art portfolios. As a researcher and mentor of the students' art creation process, I will advise and guide the participating students throughout their portfolio creation. The findings from the research might also be published in other educational publications and presented at educational conferences.

I am looking for up to five research participants. The students **MUST** be in their grade 11 or 12, interested in art-making, and interested in applying art universities or post-secondary (University) art programs.

Research duration: 9 weeks, last until Feb 12th, 2016

Your duty as a participant will be the following:

1. Prepare your art portfolio for art university applications
2. Create artwork: 3 to 4 pieces during the research
3. Post your work on a designated website (Invitation-Only website).
4. Partake in one-on-one video conferences with a mentor/researcher.
5. Provide feedback on works done by others in the group.

Your benefit:

1. You will get assistance over social media in creating an art portfolio and art university application.
2. You will be provided resources that may be helpful in building your art portfolio.
3. You will be introduced to new technology media and enhance your technological fluency.
4. You will reinforce your artistic abilities and strengthen critique skills through portfolio development and peer feedback.

If you're interested in participating this research, please fill out the consent form available at the principal's office.

Researcher: Somi Lee

Institution: Concordia University

Degree: Master of Art Education in Fine Arts

Contact: somilee25@gmail.com

Deadline: TBA

Your Information

Preferred user ID for this research project	Gender
School	
Age (as of Dec 20 th , 2015)	Grade
Email Address	

Please provide your background information.

Your interests (ie. hobbies)
Number of hours you use the Internet per week
The art medium you prefer to work with
Your art making experience
Which art universities and programs do you intend to apply?
How much time are you willing to commit to the artwork per week
<div style="display: flex; justify-content: space-around;"> 0-3 4-6 more than 7 hrs </div>
Write the classes you will be taking between October 1 st , 2015 and December 31 st , 2015

Please circle or highlight your answer to the following questions.

- | | | |
|-----------------------------------|-----|----|
| Are you a team player? | Yes | No |
| Do you enjoy working with others? | Yes | No |
| Have you worked collaboratively? | Yes | No |

Timeline



Portfolio Development Project

December 2015

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14 First day Introduction	15	16	17	18	19
20	21	22	23 Conf	24	25	26
27	28	29	30 UFD & FCR 01	31		

Portfolio Development Project

January 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6 SRS	7	8	9
10	11	12	13 UFD & FCR 02	14	15	16

17	18	19	20 AAS	21	22	23
24	25	26	27 UFD & FCR 03	28	29 WD	30

Portfolio Development Project

February 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3 Conf	4	5	6
7	8 PS	9 PS	10 UFD & FCR 04	11 PS	12 Last Day AAS	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29					

Conf = Virtual Conference

SRS= Self-Reflection Submission

UFD= Upload images on Flickr

AAS= Art Analysis submission

FCR= Feedback Comments to the group member and reply

WD = Withdrawal deadline

PS= Art piece selection

Intro	In-person or Virtual	3 hrs
AC activity 1		24 hrs
Art Analysis	Online Write up (100 - 150 words)	6 hrs
AC activity 2		21 hrs
Conference (Virtual)		
AC activity 3		24 hrs
Art Analysis	Online Write up (100 - 150 words)	6 hrs
AC activity 4		21 hrs
Conference (Virtual)		
Self- reflection	<ul style="list-style-type: none"> • Analyse your work • What have you learned from the project/course • Your feedback on the research 	12 hrs
Total		111 hrs

Appendix II- Invitation



Before you begin your artwork, please note that there are a few preliminary steps for this project. Here are the things that you need to do.

Step 1.

Create an account for each software and sign up: WeChat and Ning.com

Create a fictitious name for each Social Media Applications (Do not use your real name).

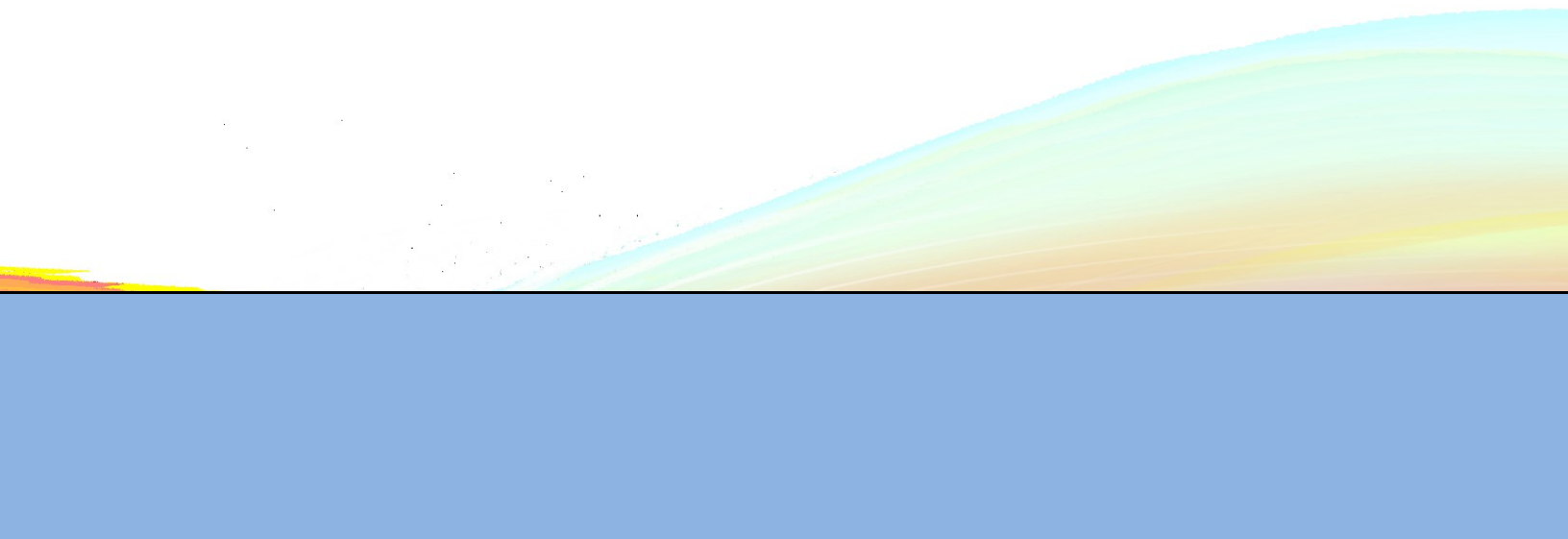
Step 2.

Add me on your WeChat and message me with your name and email address. Then, I will send you an invitation via email (somilee25@gmail.com).

Step 3.

Accept my invitation and complete your first task on Ning.com. If you have a problem please inform me immediately via WeChat.

Appendix III- Guidelines



Guideline for each Project and Workshop

1. Create artwork for your art portfolio.

Beside school projects, you can definitely create more if you want!

2. Post images of your artwork and/or photographs when you want feedback or when you are done creating (Your post of artwork may be finished or unfinished. I suggest you to post as much as you want)

Please note that an online community exists only if its members are active and posting. Posting image is important for this project because your images might motivate/inspire others in the group to achieve their goals and vice versa. Also, this activity might trigger our discussion going. *I will keep track of your attendance.

3. Provide feedback to other members in the group

Your feedback might guide others organize their ideas in a constructive way and promote their artistic development. Please be willing to give/embrace both positive and negative feedback. When you're providing feedback, remember to choose appropriate dialogues (G rating only).

4. Partake virtual and face-to-face conference

The conference is to update how you're doing in this project and share your thoughts and concerns (if you want to share ideas and change direction of your work, we can discuss that too). The main purpose of the conference is updating your process and sharing your experience of this project. The conference could be short, less than 5 minutes or last up to an hour, depending on how talkative you are.

5. Participate online group discussions

Keeping the discussion active is essential for each project. The group discussion will facilitate your interaction with others in the group and your active participation may lubricate the discussion. In the group discussion forum, we will be mainly talking about the direction of your portfolio development.

6. Progress Report

This is a short artist statement that you must post on the website after each project. It must be one or more paragraphs describing your artwork and your achievement and challenges during and after the work completion.

7. Share any cool art stuff and ask for resources through the project website. I'll post things that might be helpful. Take full advantage of this opportunity. If you have personal website, invite your group members including me.

I will track your participation and rate your work habits based on your online attendance.

Activity- Fashion

What is a Mood Board?



A mood board is typically a combination of images, fonts, colours, and textures that define the style of the project. It is a tool for conveying your ideas through creative style display. In this context, mood boards are broadly used in other field such as film, photography, branding, web design, wedding planning, interior decorating etc. and they all have different ways of laying out their graphics. In fashion, creating a mood board is an excellent way to organize your research and ideas at the beginning of a project. A mood board captures the style and theme for a set of designs by displaying images, fabrics, and colours that are to be influential in the creative process. An effective mood board will make a clear, cohesive statement to the viewer, who gains an understanding of your design direction. A mood board is also sometimes known in the industry as a story, or concept, board.



How to create a mood board

(All steps must be documented in your sketchbook)

Step One. Research! Browse the Internet and look at other fashion moodboards before you begin. Other examples include street photos, stores, pinterest, fashion magazine. Document your thoughts and inspirations as you research. Create a mindmap based on your theme. Draw illustrations with the elements from the mind map. Then, collect the inspiring images. i.e. art, fabric, photo, architecture, nature, history, etc.

Step Two. Select a theme and colour palette. Theme can be of different types. There are unlimited themes a Designer can work upon. What ever topic inspires a designer can be a theme the designer work up on. e.g. Nature, Retro Fashion, Floral, Dimension, Disco etc.

Step Three. Select photographs related to your theme. Be careful in selecting the best photos with good aesthetic. These pictures will be the base and inspire the designer to design the collection. Silhouettes, prints, surface ornamentation of fabric of the collection will be inspired from the photograph.

Step Four. Collect fabric swatches or recycle old clothes. You need THREE to FOUR textile samples. With your swatches, you can cut out paint swatch cards, wrapping threads around card stock or painting your own samples.

Step Five. Illustrate Designs. Now, you can draw the design of your garment including flat drawings and full body drawings. These designs must be original and consistent with your theme, colour palette, and inspirations.



Step Six. Design your logo and typography. The logo must be original while the typography could be borrowed from existed fonts. Both the logo and the typography must be representational of your theme and colour palette.

✍ Above steps are the most common way to create a moodboard. However, several steps could be interchangeable depending on your work preferences.

✍ In terms of types and size of the board, it is designers' (your) choices. Therefore, I will leave it up to you.

NOW, take out your sketchbook and start exploring your creativity!!

Your Checklist

Things you must include in your moodboard:

(The followings should also be included in your sketchbook)

- Typography
- Flat drawings
- Full body drawings with original design garment
- Photographs, Magazine cutting, photocopies of images (This can be different from your sketchbook)
- Fabric swatches
- Thread stitches
- Your logo

Things you must consider:

- Layout**
- Format & typography**
- Colour Palette** _____
- Theme** _____
- Season** _____
- Audience** _____

Things you might want to look at

- Work procedure (at least three pictures of work procedure should be posted online)
- Sketchbook documentations
- One page write up- description of your work
- Neatness and completion

Activity - Photography

Objectives:

You will independently draw 6 thumbnail sketches

You will present your preliminary ideas to the group members and me during the conference

You will exchange ideas to successfully take the photos.

You will use digital media such as PPT when presenting (on ning.com) your pictures.

Step One. Draw 6 thumbnail sketches and write down the expected location, date and time to take your photos.

Step Two. Have your planning sketches completed before taking photos.

Step Three. When your ideas well delivered to the group members, consider some of principles of design aspects in your final piece: Proportion, Movement, and Repetition.

Things you must include one of the following elements in your photo,

- Chair(s)
- Cup(s)
- Car(s)
- People
- Stationary
- Fruit(s)
- Hand(s)

Number of photographs you are recommended to post: **FIVE**

Number of photograph you are recommended to take per photo: **Minimum 5.**

Things you might consider to submit

- Thumbnail sketches
- Five pieces of photography in PPT
- Self-reflection
- Feedback

Due Date: April 11th



Activity: x-ray Painting

X-ray painting is a style attributed to Norval Morrisseau. The x-ray technique shows the interior as well as the exterior of a figure.

You will need:

- Paper and canvas suitable for drawing and painting
- Inks, crayon or pastels to apply bright colours – acrylic or tempera Paint
- brushes
- Palette

Procedure

1. Research

- Think about symbols that represent your identity, such as culture, religion, home, food, landmarks, and favorite place to visit.
- Write them down on a piece of paper.
- Select one or more symbols for this activity

2. Thumbnail

- Start research on the symbols. For example, history, appearance, legend, stories about the symbol.
- Sketch the outline of the symbol(s) on your paper.
- Use coloured pencils to fill in shapes.

3. Conference

- Have your ideas ready to present them to the group members and me.
- Show all your research processes and drawing during this conference.

4. Painting

- With the thin brushes and black paint, you can outline the symbol of your choice and draw lines and shapes.
- Add colours by filling in shapes with the acrylic paint.

5. Self-reflection

- Answer three Qs from below:
 1. Note anything you found easy
 2. Note anything you found challenging
 3. Describe how your ideas changed as you developed your work Annotate this image by: describing the; shapes, colours, tones, textures, layout, and scale of the finished artwork
 4. Are you pleased with the work you have done?
 5. How would you improve it if you had the opportunity?

6. 1. Feedback Loop

- Go to ning.com and provide feedback to other group members.

6.2. Feedback Loop

- What have you learned from looking at others work, that has been helpful in the development of your own work?

Portfolio Requirements

Schools	Portfolio Requirements	Other Required Documents	Method of Submission	Application Deadline
Ryerson Interior Design	A variety of work demonstrating your 2D and 3D potential (may be in a variety of media). Aim for quality rather than quantity in selecting work. There should be no more than 10 examples of personal work	Written Design Test http://www.ryerson.ca/content/dam/undergraduate/admission/downloads/NAR/InteriorDesign_Submission.pdf	Mail	January 13, 2016
Ryerson Fashion Design	Three Portfolio Items. Check off the categories that you have chosen. Applicants to Fashion Design must choose at least one of A, B or C. A. Sewn Garment B. Styled Outfit C. Illustration of an Original Garment Design D. Illustration of a Fashion Accessory E. Poster Design for a Fashion Event F. Logo Design for a Fashion Brand G. Fashion Event	-Resumé -Short Essay	-In-person -Mail	January 13, 2016
OCAD	Include a maximum of 10 pieces of your original work in art, design or media, including a creative journal/sketchbook to demonstrate your creative process	-A personal creative statement of approximately 250 words - Creative Profile of a maximum of 350 words	- In-person Interview	January 13, 2016 Interview dates: Vary
University of the arts London	Examples of research, development of your ideas and final pieces. It might include drawings, paintings, sketchbooks, colour studies, materials investigation, design development (2D and 3D), construction, consumer and market information, written notes, design presentation sheets, or any other types of work you choose. Sketchbooks show your research and help us to understand how you think.	- IELTS 7.0 - Personal Statement	- Online	Jan 31, 2016
Waterloo Architecture	Drawings or paintings of any subject Mixed media and conceptual work Examples of 3-dimensional works Craft and design work such as ceramics, jewelry, metal work or furniture Digital media work such as graphic design or animation Photography or video work Performance work such as dance and music, either recorded or performed live	In case of 'mail-in' a 500-word written statement that discusses the intentions and motivations of the work in your portfolio -a digital video file of yourself discussing your work	- In-person Interview - Mail-in	January 13, 2016 Interview dates: April 18 - 22, 2016

* The application deadlines and interview and/or portfolio submission dates could vary.

Appendix VI- Sample Interview Questions

Questions

Week 2

1. Which type of assistance do you prefer? In-person or online?
2. Why do you prefer in-person or online assistant than the other?
3. Which one do you feel more comfortable and why?
4. How do you feel about the feedback you have received?
5. Is the weekly task manageable?
6. How do you feel about getting reminders through WeChat?
7. Any suggestions?

Week 4

1. Tell me about your experience with this project (so far).
2. What has motivated you to create art for the project?
3. Where are you at this point?