CREATING AN EFFECTIVE LEARNING ENVIRONMENT
FOR A SECONDARY SCHOOL PHOTOGRAPHY COURSE

by
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Abstract

Rapid advances in the development of Information and Communication Technology (ICT) have directly impacted education and learning. A previous focus on lower-order thinking skills, such as memorization, repetition, and basic comprehension have given way to the much more useful higher-order skills of critical and creative thinking, elaboration, and evaluation. Educators have focused on of 21st century learning environments in efforts to try new and innovative approaches to their teaching. This major project involves the creation of an online photography course as the direct result of searching for ways to increase student engagement by creating a 21st century learning environment where students are at the centre of their learning, take ownership of their learning and are actively engaged in their learning. The exploration of how to increase student engagement has led to an investigation into current research on learning, potential benefits of online learning and the design of effective learning environments. My efforts to address the changes in how and what students learn will hopefully help instill in them a sense of life-long learning and a love of photography.

Woodlands Photography Online http://woodlandsphotographyonline.weebly.com/

Keywords: online photography course, 21st Century learning, self-directed learning, student engagement
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Chapter 1 - Introduction

Purpose of the Major Project:

When I became a high school teacher in 2009, it was glaringly apparent to me that I needed to engage my students academically, emotionally and socially. My teaching assignment was a Fine Arts position for grades eight through twelve. Included in the Fine Arts assignment was a Photography 10-12 course. The photography course was a content-driven course that involved a great deal of advance presentation of information. My teaching style was very much like that of “instructionism”, a term used to describe educational practices that are teacher-focused, skill-based, product-oriented, non-interactive, and highly prescribed (Johnson, 2005). I struggled with student apathy and an unwillingness to learn the large amount of frontloading of information associated with photography. I lectured and students fell asleep. I put the information on Power Point slides, assigned chapters of reading in texts and then provided tests. I gave class demonstrations to half-empty classes and realized my “instructionist” teaching style may have boosted absenteeism. I was not reaching each student nor assessing what the needs were of the class or individual students. Many students “fell through the cracks”, not really understanding key concepts by the end of the course. What I was doing was not working for the majority of my students. I began searching for a better way to teach photography so students would understand the fundamentals and develop a love of photography that they could carry with them throughout their lives. A span of four years has taken place since I first began searching for various teaching methods to improve student engagement. My initial investigations led me to inquiry-based learning, creation of a class blog, and a trial run of “flipping my classroom”.

Inquiry-Based Learning

Using an inquiry-based approach in my photography course involved the following:
1. One big Inquiry Question and a choice of individual questions to explore
2. Choice in what learning activity students wanted to do on a particular day: picture taking darkroom, article reading, hands-on activities, computer lab, or mind map
3. Small discussion groups
4. Community support system for learning
5. Culminating celebration of their work in the form of a Showcase

The first step in beginning an Inquiry-Based Learning classroom was to build a Community of Learners. This consisted of group participation in what defined such a Community and how the class would manage themselves and their class curriculum. Once this was established, students then built criteria for the class in the form of a “class creed” called the 4C’s: Commitment, Control, Communication, and Cooperation. The 4 C’s were the ground floor of building a classroom based on Inquiry Learning. Periodically, the class would be asked to self-evaluate on what they did on a particular day using the 4 C’s and it became their “ticket out the door”. This was a self-managing technique that provided the students with a tool to assess their individual work ethic each week. The class had one BIG Inquiry question that was the “umbrella” for all our meaningful learning with photography and for each individual inquiry. “How does photography transform your thoughts, actions and beliefs towards yourself and your world around you?” This inquiry question became our reason for studying all the elements that go into learning about photography and its impact on ourselves and our world. Students enjoyed the flexibility of the course. They could choose darkroom work, computer lab, practical assignments or seat work depending on how they felt that day. The biggest success and observation of student engagement was the preparation leading up to the Showcase and the actual event. Students planned their photographs, took care in their presentation of their work,
got excited seeing the class work as a whole, shared their work in progress and their final pieces with their peers and parents on their own time, and were enthusiastic about the upcoming finale event. At the Showcase, students were beaming with pride and engaged in conversations about their work and photography in general. The outpouring of positive response to their work and the Showcase in general was the ultimate evidence of their engagement. I was encouraged and my new personal guiding question became: How could I keep that engagement and focus throughout the whole course and not just at the end celebration event?

**Self-Regulated Learning**

Inquiry-based learning enabled students to personalize and take ownership of their learning throughout the whole course. The start of a self-regulated learning environment began to emerge in my photography course. Learning is “self-regulated” when people actively use strategies to learn (de Corte, 2011). Self-regulated learning, or self-regulation, is “an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment” (Pintrich, 2000, p.453). According to Schunk, students who display more adaptive self-regulatory strategies demonstrate better learning and high motivation for learning (2005). My photography students, in charge of their own learning by planning and executing their photographs for their individual inquiry questions, displayed the engagement and motivation to learn during the whole semester. Facilitating the self-directed inquiry process was a positive experience for all involved and I began to search for ways to recreate the same engagement throughout the course.

The change in my teaching style to become more of a facilitator and less of a ‘sage on the stage’ had started to take hold. At the beginning of the course, the struggle to connect with
students and engage the class with resources needed to gain photography skills still persisted. Class absences, lack of motivation to learn and missing assignments still plagued my course. To address the class absences and missed curriculum, I provided the class with a blog. The blog would house course information and resources that could be accessed online at any time and would hopefully generate discussion, sharing of relevant resources and supply the much needed motivation to acquire knowledge and skills in photography.

The class blog I created in January 2012 used Blogster and was called Woodlands Photography. The blog provided an online repository for resources, weekly concepts, and field trips. It was meant to be an interactive space where students could view the week’s topics and also post their own photographs and resources to share with the class. I was proud of my blog and I worked hard at posting “Weekly Happenings” and resources I found of interest. The problem was it was all “my” blog: my students had not posted anything and I had no evidence they even viewed it on a regular basis. I went as far as assigning posts to the blog as actual assignments trying to get class participation. Basically, I had done all the work for my students and they had no vested interest to participate. I realized I was doing all the learning by researching videos, articles and topics of interest. Once again, I had spoon-fed the information to my students expecting them to be eager to learn what I provided for them. My epiphany came when I finally understood that learning was about ownership of what was to be learned. My students needed to go through the process I had gone through to create my blog. It was then I realized the engagement and learning of photography skills could be achieved by having my students create their own websites that would build their photography skills, house collaborative resources, encourage creativity, and showcase their work to a wider audience.

**Justification of the Major Project**
Students would build their own websites and construct the knowledge they needed to fulfill the learning outcomes of the photography course. The constructivism theory puts the learners in the driver’s seat, actively constructing their own knowledge and skills through interaction with the environment. Although many versions of constructivism exist, the common thread in each perspective is the learner-centered approach where the teacher becomes a guide to student learning instead of a knowledge transmitter (de Corte, 2011). “Learning happens not by recording information but by interpreting it” (Resnick, 1989). My role as a “guide” or facilitator of the learning could be achieved by creating the best of all delivery models: a hybrid course that would combine classroom learning with online learning. The best of all delivery models were hybrid courses that combine classroom learning with online learning. Friedman argues:

(T)he best of online learning, much like the best of FTF learning, requires active engagement on the part of the student. Rather than being passive recipients of transmitted knowledge, students are active participants in the learning process; they are engaged. Students – not only the instructor – help to create the learning environment. (2013, p.11)

Not only would the students build their own websites; but the photography course would be created online and would model and contain a template for the student websites. The Community of learners that was established within the classroom would be transferred to an online community. Istance and Dumont noted the importance of knowledge management and the use of rich technologies not only to stimulate learning, but also to manage information about learners (2010). Each student creating his or her own learning ePortfolio with blog pages for
reflections and comments would provide a system to manage all learners and their progress in the course.

Students in today’s classrooms exhibit the ability to process information and communicate at a rapid rate and, in turn, respond to convenient and advantageous methods of instruction and communication (Gunn and Hollingsworth, 2013). According to Gunn and Hollingsworth, it is “essential that teachers and administrators be trained and informed of the benefits of information and communication technology, not only as instructional tools, but also as a means of engaging learners academically, emotionally, and socially” (2013). I needed to explore how to best teach using 21st century skills and technology. Realizing my limited expertise and knowledge with online learning, I began a graduate degree in Online Learning and Technology. This major project involves the creation of an online photography course as the direct result of searching for ways to increase student engagement by creating a 21st century learning environment where students are the centre of their learning, take ownership of their learning and are actively engaged in their learning.

Overview of Major Project

The major project Woodlands Photography Online has been in process over the course of my study in the Online Learning and Technology graduate program at Vancouver Island University. The online course was created using Weebly. The students also used Weebly for their individual ePortfolios. The course has been introduced to photography students in a blended format of classroom and online instruction. Through general observations, feedback from students and discovery of best online practices, refinement on many aspects of the course will be completed during the final build. The initial construction of the course was an attempt to “flip my classroom” by putting content online. The course has main pages consisting of Home (a
Welcome page), Learning Outcomes, Assessment, Major Project, ePortfolio and drop down menu that contains Themes, Resources and links to the class Wiki, Student Gallery and Calendar. My goal was to refine the course by creating similar theme pages that are formatted uniformly for ease of navigation. The darkroom component of the course will have a separate page entirely and will be added in the future. Rather than a stand-alone project, the major project tied in with the all-important personal inquiry question. Sections that have student ePortfolio addresses are password protected with only the students and mentors having access, unless shared by the student author.

The course stayed true to best practises for teaching online by adhering to some basic principles. Bill Pelz, recipient of the 2003 Sloan-C award for Excellence in Online Teaching, turned his philosophy of teaching around realizing “the learner is, for the most part, in charge of what gets learned (2010, p. 103 ).” Pelz learned the more ‘quality’ time students spend engaged in content, the more of that content they learned. Pelz began to put together principles for learning that would put his students in charge of their own learning.

**Pelz’s Online Pedagogy:**

**Principle #1** Let students do most of the work: student led discussions; students find and discuss web resources; students help each other learn; students evaluate their own work.

**Principle #2:** Interactivity is the heart and soul of effective asynchronous learning: students interact with one another, the teacher, the text, the Internet, with the entire class or in small groups or teams, or with a partner. Students discuss the content and interact regarding assignment, problems to solve, and projects.
Principle #3: Strive for presence: Research in the field of online learning suggests that discussion responses that add value to a discussion fall into one or more of three categories: Social Presence, Cognitive Presence, or Teaching Presence. (Pelz, 2010, p. 103-111)

Pelz’s principles for an effective online learning environment are about “personalization” where students are at the centre of their learning, about “interactivity” where students discuss, problem solve and collaborate, and about a strong “presence” where all participants, including the teacher, create a community of learning. These same characteristics of an effective online environment can be applied to a 21st century learning environment with a few additions. Istance and Dumont summarize the current research on how one designs an effective learning environment for 21st century learning and conclude it is one that:

- Makes learning central, encourages engagement, and in which learners come to understand themselves as learners
- Is often collaborative where learning is a social experience
- Is highly attuned to the learner’s motivations
- Is acutely sensitive to the individual differences, including prior knowledge
- Is demanding for each learner, but without excessive overload
- Uses assessment consistent with its aims, with strong emphasis on formative feedback
- Promotes horizontal connectedness across activities and subjects, in- and -out of school (Istance, Dumont, 2010, p. 317)
The creation of an online photography course to increase student engagement can be accomplished by adhering to these principles for an effective learning environment. Keeping in mind the crucial role of teachers as designers and orchestrators of the learning environment, “learning is not something that takes place just inside individuals but is about their structured interactions with content, with the learning professionals and with the resources, facilities and technologies” (Istance, Dumont 2010, p. 327). My path towards creating an effective learning environment for my photography students that will engage and challenge their learning has been an evolving journey. I agree with Schleicher who asserts, “Schools have to, not only rethink their design and approach to teaching and learning, but also prepare students for jobs that have not yet been created, technologies that have not yet been invented and problems that are not yet known will arise” (2011, p.43). He goes on to argue that what students learn, how they learn it and how they are being taught is changing and these changes have powerful implications for schools, universities, as well as for life-long learning (2011, p.43). My efforts to create an effective learning environment to address the changes in how and what students learn in a secondary school photography course will hopefully help guide them to a love of life-long learning and photography.

**Definition of Terms**

Blogster - a blogging community that features specific-interest blogs. Blogster maintains an online community of users who publish content, images, video and more. Blogster members can network and collaborate by creating a blog, building a personalized profile, creating friend lists, commenting on articles and interacting in an online community.
Community of learners- a group of people who share values and beliefs and who actively engage in learning from one another—learners from teachers, teachers from learners, and learners from learners.

Inquiry-based Learning- a complex process where students formulate questions, investigate to find answers, build new understandings, meanings and knowledge, and then communicate their learnings to others.

Self-regulated learning- self-regulation is an integrated learning process, consisting of the development of a set of constructive behaviors that affect one's learning. These processes are planned and adapted to support the pursuit of personal goals in changing learning environments.

21st century learning, or 21st-century skills- generally used to refer to certain core competencies such as collaboration, digital literacy, critical thinking, and problem-solving that advocates believe schools need to teach to help students thrive in today's world.

Weebly- a web-hosting service that allows the user to drag and drop while using their website builder. The created software made it easy for anybody to build a personal website. Weebly offers over 100 page design templates and multimedia features such as photo galleries, slideshows and video.
Chapter 2 – Literature Review

In today’s fast-paced, ever-changing world, learning is a major emphasis and is frequently and in the educational and political spotlight. Major changes, such as economies shifting from industrial to knowledge based and rapid advances in development of Information and Communication Technology (ICT) are directly impacting what education and learning will look like in the future (Dumont and Istance, 2010). Schleicher asserts “Schools have to, not only rethink their design and approach to teaching and learning, but also prepare students for jobs that have not yet been created, technologies that have not yet been invented and problems that are not yet known will arise” (2011, p.43). He goes on to argue that what students learn, how they learn it and how they are being taught is changing and these changes have powerful implications for schools, universities, as well as for life-long learning (2011). How can educators foster motivated, engaged and dedicated learners to prepare them for the unknown challenges that await them? Crucial to the search for this answer is the focus of 21st century learning environments and the attempts by educators to try new and innovative approaches to implement 21st century skills in their teaching.

Teaching with 21st century skills in mind has taken a central role in schools districts across the world. Are today’s schools addressing and facing up to the 21st century demands, or are they still operating on the pedagogic model aimed at preparing students for an industrial economy? Schleicher reiterates that, without question, state-of-the-art skills in any discipline will always be extremely important. Schleicher asserts that, educational success is no longer about reproducing content knowledge, but about “extrapolating from what we know and applying that knowledge to novel situations” (2011, p.42). Lower–order thinking skills such as memorization, repetition, and basic comprehension were at one time useful, but are insufficient
when compared to the higher-order skills, such as critical and creative thinking, elaboration, and evaluation (Gunn and Hollingsworth, 2013). Gunn and Hollingsworth note that school-aged students of today are “rapid processors of information and communication and demand more expedient methods of instructions and communication” (2013, p.202). Furthermore, Gunn and Hollingsworth declare it “is essential that teachers and administrators be trained and informed of the benefits of information and communication technology, not only as instructional tools, but also as a means of engaging learners academically, emotionally, and socially” (2013, p.202). An effective learning environment with the use of 21st century skills will have to address technology use that provides academic challenges, social interactions and emotional attachment.

This major project involved the creation of an online photography course as the direct result of searching for ways to increase student engagement by creating a 21st century learning environment where students are the centre of their learning, take ownership of their learning and are actively engaged in their learning. The exploration of how to increase student engagement has led to an investigation into current research on learning, potential benefits of online learning and the design of effective learning environments.

In the beginning of the 20th century, the scientific study of learning began in earnest (de Corte, 2010). The major theories of learning over that century were: behaviourism, Gestalt psychology, cognitive psychology, constructivism, and socio-constructivism (Ally, 2004). Siemens (2004) insisted a new theory was needed to guide the design of online learning materials which he called Connectivism (Ally, 2004). The behaviorist school of thought, influenced by Thorndike (1913), Pavlov (1927), and Skinner (1974), believed that learning is a change in observable behaviour caused by external stimuli in the environment (Ally, 2004). The Gestalt psychology is expressed in the German word “gestalt” which means “configuration”- an
organized whole as opposed to a collection of parts (de Corte, 2011, p. 38). The most noteworthy contribution of the Gestalt psychology was the study of insight: learning consists of “gaining insight, discovering structure, and hence, of acquiring information” (de Corte, 2010, p.38).

Cognitive psychology claims that learning involves the use of memory, motivation, and thinking, and that reflection plays an important part in learning (Ally, 2004). The constructivism theory situates learners in actively constructing their own knowledge and skills through interaction with the environment. According to constructivist learning theories, how we construct knowledge will depend on what is already known. What we know depends on the kinds of experiences that we have had and how we have come to organize these into existing knowledge structures (Kanuka & Anderson, 1998). Resnick (1989) argued that “Learning happens not by recording information but by interpreting it” (p.2). Although many versions of constructivism exist, the common thread in each perspective is the learner-centered approach where the teacher becomes a guide to student learning instead of a knowledge transmitter (de Corte, 2010). An offshoot to the constructivist theory is the socio-constructivism understanding of learning which is seen as “participation” or “social negotiation”. By all standards, De Corte points out that all of these learning theories brought high expectations concerning the potential to improve educational practice (2010).

The constructivist view of learning has become the “common ground” among educational psychologists (de Corte, 2010). De Corte states that constructivism and social constructivism are active concepts of learning that explore what takes place within the individual’s mind and also encompass the interaction between learners and their contextual situation (2010). De Corte believes “the current understanding of learning aimed at 21st century or “adaptive” competence is characterized as “CSSC Learning” (2010, p.35). De Corte describes CSSC Learning as:
“constructive”, as learners actively construct their knowledge and skills; “self-regulated”, with people actively using strategies to learn; “situated”, best understood in context rather than abstracted from the environment; “collaborative”, not a solo activity (2010, p. 35). “Adaptive competence” is seen as the ability to apply meaningfully learned knowledge and skills flexibly and creatively in different situations (Bransford et. al 2006). De Corte emphasizes that “an important component of adaptive competence consists of skills in self-regulating one’s own learning and thinking and it is obvious that teacher-directed or guided learning is not the appropriate way to achieve it” (2010, p.47).

Even though the theory of CSSC Learning has received support, the constructivist approach has been under fire. Kirschner, Sweller and Clark (2006) argue that relying heavily on constructivist approaches with students experiencing discovery learning provide minimal guidance for students. Mayer claims that “Pure discovery—even when it involves lots of hands-on activity and large amounts of group discussion—may fail to promote the first cognitive process, namely, selecting relevant incoming information”(2004, p. 17). Mayer bluntly states,

In short, when students have too much freedom, they may fail to come into contact with the to-be-learned material. There is nothing magical to insure that simply working on a problem or simply discussing a problem will lead to discovering its solution. If the learner fails to come into contact with the to-be-learned material, no amount of activity or discussion will be able to help the learner make sense of it.(2004, p. 17)
Mayer concludes that until “there is a reasoned, evidence-based argument for pure discovery, the best course for constructivist-oriented educators is to focus on techniques that guide students’ cognitive processing during learning and that focus on clearly specified educational goals” (2004, p. 17). De Corte counter argues that “learning is an active and constructive process and does not imply that students should not be guided, or that they are not being guided through appropriate modelling, coaching and scaffolding by teachers, peers and educational media” (2010, p. 53).

One of the characteristics of CSSC Learning is “self-regulated”, with people actively using strategies to learn (de Corte, 2010). Schunk (2005) sees the current surge of interest in self-regulation among educators stemming from the work of Paul R. Pintrich. The Pintrich model and research support the hypothesized links between learning, motivation, and self-regulation (Pintrich & Schrauben, 1992). Self-regulated learning, or self-regulation, is “an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment” (Pintrich, 2000, p. 453). Schunk’s general conclusion is that students who display more adaptive self-regulatory strategies demonstrate better learning and high motivation for learning (2005).

If students who display strategies for self-regulation demonstrate better learning, it follows that students will have a preference for which type of learning environment they prefer. Clayton, Blumberg and Auld’s study (2010) involving one hundred thirty-two post-secondary students viewed how student’s achievement goals, self-efficacy and learning strategies influenced their choice of an online, blended or traditional learning environment. Most participants in the study preferred a traditional classroom environment over any component of
online learning. Students who selected traditional environments for learning tended to be mastery oriented and committed to investing a great deal of effort in the learning process. Students who preferred non-traditional learning environments displayed a higher degree of self-efficacy that they would be successful in an online course. The findings from this study clearly highlight the importance of self-efficacy in learning. The study also derived from students’ input that learners want “engaging learning environments that promote ‘direct interaction with professor(s) and students’, ‘spontaneity’, ‘immediate feedback’ and ‘relationships with faculty and students’” (Clayton et al., 2010, p. 362). Considerations of these student-driven criteria, in keeping with students’ motivations and learning strategies will inform and impact the design of effective learning environments for all students whether online or offline.

Directing a focus at potential benefits to online learning may give more insight on how to design an effective learning environment. As Clatyon et al. (2010) discovered, students want engaging learning environments, but what do students find engaging in an online learning environment? Dixson (2010) wanted to know which activities and interaction channels would lead to highly engaged students in an online setting. Current research into effective online learning lead Dixson to begin her study based on three conclusions:

1. Online instruction can be as effective as traditional instruction
2. Online courses need cooperative/collaborative (active) learning
3. Online Instruction must have strong instructor presence

The results of Dixson’s study were that “no one particular activity will automatically help students to be more engaged in online classes” (2010, p. 1). However, Dixson (2010) did find that multiple communication channels relate to higher engagement and student-student and instructor-student communication are strongly tied to higher student engagement with the course.
A necessary component to an effective online learning environment is collaborative and interactive activities. Instructors need to consider learning activities that engage students with content and with each other. Multiple ways of interacting with students must be created by instructors to create their own social presence. The active involvement in the learning of their students is paramount for instructors. Dixson claims “it is not about the type of activity/assignment but about multiple ways of creating meaningful communication between students and with their instructor – it’s all about connections” (2010, p. 8). The creation of a learning environment that contains both online and face-to-face interactions could only increase the meaningful connections needed between student and instructor.

Not every researcher, like Dixson, believes that online instruction can be as effective as traditional instruction. Jaggars and Edgecombe (2013) report that the CCRC (Community College Research Center) research indicates that students perform more poorly in online courses than they do in face-to-face courses. This research highlights the weaknesses of online learning and provides evidence that online courses may not be providing the range and intensity of supports that students need to perform online. Interestingly enough, students and instructors differed on their expectations and responsibilities in online courses. Instructors held a belief that the online students were independent learners who were all self-motivated and skilled in time management. On the other hand, students had an expectation that the instructors would guide them with time management and would motivate them through active engagement in the learning process. Paying close attention to teacher and student expectations and how they might differ might make online courses more effective and satisfying for students and instructors. Jaggars and Edgecombe (2013) state that by improving student preparation and support, course quality and design, and faculty professional development would maximize the effectiveness of online
courses. Facilitating student support and preparedness, creating quality designs for courses and increasing instructor knowledge of online learning are major aspects to consider for an effective online or blended classroom.

Friedman and Friedman counter the argument that students are not interested in taking fully online courses in their review of several studies relating to student engagement in online courses. According to the Sloan Consortium study conducted in 2010, nearly 30% of college students were taking online courses (Allen and Seaman, 2010). According to the Babson Survey Research Group 2011 study, approximately 31% of college students were taking at least one online course (Allen & Seaman, 2011). Online course have come a long way from their beginnings as correspondence courses in the 19th century. They have evolved to incorporate 21st century pedagogies in which communication, interaction, and student engagement, active learning, and assessment are of critical importance (Friedmann, 2013). Means et al. (2009) did a meta-analysis of more than 1,000 studies published from 1996 to 2008 comparing online with traditional classroom teaching. Their results were that online learning offers many advantages over traditional classroom learning. Better yet, Means et al. (2009) discovered that students who take courses that are either completely or partially online will perform better than students taking traditional, face-to-face courses. The best of all delivery models was the hybrid courses that combine classroom learning with online learning. Friedman argues:

the best of online learning, much like the best of FTF learning, requires active engagement on the part of the student. Rather than being passive recipients of transmitted knowledge, students are active participants in the learning process; they are engaged.
Students – not only the instructor – help to create the learning environment. (2013, p.11)

Selingo (2012) feels that “despite resistance to the idea from academics,” the evidence is there that online education has the ability to lower costs and improve the quality of education. William E. Kirwan, chancellor of the University System of Maryland, believes that, in the future, the typical college class will be a “hybrid of in-person and online elements” (Friedmann, 2013, p. 17). Hybrid classes may be on the horizon for both college and secondary schools.

If hybrid classes are predicted to be the norm for future classrooms, educators are going to need to adjust their teaching philosophy and adopt principles for online pedagogy. Bill Pelz, recipient of the 2003 Sloan-C award for Excellence in Online Teaching, turned his philosophy of teaching around realizing “the learner is, for the most part, in charge of what gets learned (2010, p. 103 ).” Pelz learned the more ‘quality’ time students spend engaged in content, the more of that content they learned. Pelz began teaching with the ‘I talk–you listen’ style and soon realized students listening to an enthusiastic lecturer is not the ‘quality’ time on task students need to learn. “A lecture is the best way to get information from the professor’s notebook into the student’s notebook without passing through either brain.” (Pelz, 2010, p. 103). Pelz began to put together principles for learning that would put his students in charge of their own learning.

**Pelz’s Online Pedagogy:**

**Principle #1:** Let students do most of the work: student led discussions; students find and discuss web resources; students help each other learn; students evaluate their own work.
Principle#2: Interactivity is the heart and soul of effective asynchronous learning: students interact with one another, the teacher, the text, the internet, with the entire class or in small groups or teams, or with a partner. Students discuss the content and interact regarding assignment, problems to solve, and projects.

Principle#3: Strive for presence: Research in the field of online learning suggests that discussion responses that add value to a discussion fall into one or more of three categories: Social Presence, Cognitive Presence, or Teaching Presence (Anderson, 2000). Social Presence is when participants create a community of learning by projecting their personal characteristics into the discussion (Pelz, 2010, p. 103-111).

Pelz finds that online students bond earlier and ‘better’ than students sitting in the same classroom. There is an absence of appearance-based factors that can inhibit self-expression and create stereotypical expectations. Further, possibly because of the anonymity of the asynchronous mode, online students tend to self-disclose to a greater extent than those sitting face to face (2010).

Pelz’s principles for an effective online learning environment are about “personalization” where students are at the centre of their learning, about “interactivity” where students discuss, problem solve and collaborate, and about a strong “presence” where all participants, including the teacher, create a community of learning. These same characteristics of an effective online
environment can be applied to a 21st century learning environment with a few additions. Istance and Dumont summarize the current research on how one designs an effective learning environment for 21st Century learning and conclude it is one that:

- Makes learning central, encourages engagement, and in which learners come to understand themselves as learners.
- Is where learning is social and often collaborative.
- Is highly attuned to the learner’s motivations.
- Is acutely sensitive to the individual differences, including prior knowledge.
- Is demanding for each learner, but without excessive overload.
- Uses assessment consistent with its aims, with strong emphasis on formative feedback.
- Promotes horizontal connectedness across activities and subjects, in- and -out of school. (Istance, Dumont, 2010, p. 317)

Whether traditional, online or a hybrid, “the learning environment recognises that the learners in them are the core participants, because knowledge is always constructed by the learner” (Istance, Dumont, 2010, p.319). The principles for an effective learning environment for both online and 21st century learning are about “personalization” where students are at the centre of their learning, take ownership of their learning and are actively engaged in their learning. Istance and Dumont note, “If an effective learning environment makes the activity of learning central and reflects the rich diversity of individual differences, it needs to be information rich, especially for the learning professionals working within it” (2010, p. 329). A learning environment where the activity of learning is made central pays close attention to what is being
done when learning is engaged; hence, it encourages students to be ‘self-regulated learners’ (Istance, Dumont 2010). Further noted by Istance and Dumont is the importance of knowledge management and the use of rich technologies not only to stimulate learning, but also to manage information about learners (2010). Effective learning is not a ‘solo activity’ but a ‘distributed one’, where individual knowledge construction occurs with the processes of interaction, negotiation, and co-operation (De Corte, 2010). But as Instance and Dumont point out, the importance of co-operative learning as a 21st century competency does not downgrade “autonomous work, personal research, and self-study” (2010, p. 321). “One benefit of adopting the learning environments perspective is to bring to the fore how effective learning will involve different pedagogies and modes of study over the course of a learning day, week, or month, not depend on a single approach” (Istance, Dumont 2010, p. 321).

The search for innovative approaches to implementing 21st century skills in teaching provides educators with extensive research on learning and designing effective learning environments that involve different pedagogies. Effective learning environments for the 21st century learners can be characterized as: learner centered but with a strong central role for teachers, structured with professionally designed learning environments that allow plenty of room for inquiry and autonomous learning, personalised in being sensitive to individual differences, and fundamentally social in nature (Istance and Dumont, 2010). Keeping in mind the crucial role of teachers as designers and orchestrators of the learning environment, “learning is not something that takes place just inside individuals but is about their structured interactions with content, with the learning professionals and with the resources, facilities and technologies” (Istance, Dumont 2010, p. 327).
The creation of an online photography course to increase student engagement can be accomplished by adhering to these principles for an effective learning environment. In keeping with Istance and Dumont’s (2010) summary of the current research on how one designs an effective learning environment, the Woodlands Photography Online course would: encourage engagement by making the learning central with the use of personal websites, bring awareness to personal learning that is both collaborative and social with the creation of a class resource page, create a learning environment that allows for a demanding but not an excessive overload of tasks with the use of theme pages, use formative assessment with regular feedback on blog pages, and promote connectedness by extending student work and achievement outside the classroom to reach mentors, peers and global audiences.
Chapter 3 – Procedures and Methods

Major Project Design

The creation of an effective learning environment for a secondary school photography course stemmed from an exploration on how to better engage students and challenge their learning of photographic skills. Lack of student engagement in my photography course was the driving force for change in my teaching. My focus while building the woodlandsphotographyonline course was to be able to implement an online environment for learning photography that could be successfully taught in a blended format. I taught a face-to-face course and had experienced the frustration of lecturing, assigning weekly assignments that were never completed, and demonstrating concepts when half the class was absent, sleeping, or even worse, engaged in something else while I taught front and center. Students want to learn differently and they want to learn at their own pace and schedule. Many of my students battle with economic, social and physical problems that prevent them from being successful during their school year. An online course, where content, contributions and learning is possible without the student physically being present each day would reach my diverse student body and offer a means for them to be successful. My goal was to create self-directed learners who would be expert researchers and contributors to learning within our course community. In the first term the photography course in the first term was dedicated to creating a community of learners and laying the foundations of photography using 35mm cameras, developing film and learning darkroom skills. The blended format for the Woodlands Photography Online course began in full swing in second term. Students arrived in class with options and choice for how, when and where they wanted to learn. Class time was spent on active participation and engagement in a variety of classroom spaces which included: the darkroom, the computer lab, the class studio
and various photo shoot location at school and offsite on scheduled fieldtrips. The photography course is Inquiry-based with a shared class vision stated in the Inquiry question: How can photography transform my thoughts, feelings and beliefs towards myself and others in my world around me? With the Inquiry-based classroom in full swing, students had a focus and a reason why they needed to obtain their skills in photography as well as a culminating Showcase event to work towards to demonstrate and celebrate those skills and achievements. My major project of creating an effective learning environment for a secondary school photography course involved keeping my established Inquiry- based classroom while building a course website, a class wiki, and an ePortfolio requirement for each student.

Weebly was my choice for a dashboard, the first place students go in a course, because it is well known by my students and provides an easy navigable site for all course material. Students also used Weebly as their ePortfolio website where assessment of learning would take place. The ePortfolios provided the platform for students to demonstrate and reflect on their own work and the work of others in the course. Blog pages within the ePortfolio enabled opportunities for feedback (instructor, peer, mentor and community). Web 2.0 tools used in the course, besides Weebly, are: Wikispaces for the class resource page, Prezi and MindMeister for mind map presentations, and Google Calendar for course events and deadlines.

Major Project Development

The first plan for implementing steps for an effective learning environment for my photography course was the creation of an ePortfolio as a model website for each student. The website was called Ms K’s Photography ePortfolio and was used as an exemplar for student ePortfolios. The basic student ePortfolio would have the following components: Welcome page, ePortfolio page (with a drop down menu that contained all the theme pages: Good Composition,
Depth of Field, Shutter Speed, Landscape and Nature, Street Photography, Abstraction in Photography, Panorama, Forced Perspective and Photoshop), Major Project page, Showcase and a Resource page. The class used Weebly as their website builder. I considered the purchase of a Weebly for Education account, where I could manage the student accounts and each student could edit their own page, but this would mean the students would lose their websites at the end of the year. I wanted students to be able to continue building on their websites after their graduation so I opted for each student to create their own Weebly account, providing minimal personal information, using only their first name and last initial in their website title. The students also chose settings in Weebly to ensure the website was not searchable. The proper consent forms and permissions were signed by students, parents and administration. To further ensure online etiquette, a digital citizenship lesson preceded the building of personal websites. With permissions in place and digital citizenship introduced, I felt I had addressed student privacy and protections to the best of my ability. The next hurdle was how best to introduce and teach ePortfolio design to two large blocks of photography students. How could one instructor be able to provide the time and support needed to require each student to build their own website?

The solution was that each high school student was supported by student teachers at Vancouver Island University (VIU). The VIU secondary teaching class of student teachers had all created ePortfolios in their programs. They not only had expertise, but they also could validate for my students the importance of tracking and reflecting on their learning. The first encounter with creating personal ePortfolios with student teachers at VIU happened in March, 2013 and was such a successful experience, I repeated the process again in 2014. A blog written for the OLTD (Online Learning and Technology Program) program at VIU on the experience can be found at http://jeanklearsonline.weebly.com/learning-journey-oltld-504/march-21st-2013.
In a wider sense, ePortfolios served as areas of achievement and a way for life-long learners to demonstrate growth. ePortfolios are also used by educators as performance assessment tools. My photography students would be personalizing their websites, researching resources, demonstrating their photography skills, showcasing their work with peers, reflecting on their own and their peers accomplishments and beginning to view themselves as self-regulated learners. The ePortfolios were a tremendous record of a learning journey with twists and turns that finally culminated in a Showcase of growth and accomplishment.

After the model ePortfolio website was created, the Woodlands Photography Online course began to take form. The main pages were: Home Page, Inquiry Page (with a drop down menu for Gallery Showcase Criteria and Gallery Showcase Photos), Learning Outcomes Page (with a drop down menu for Assessment), Theme Pages, and ePortfolio page (with drop down menu for Ms K’s ePortfolio and password-protected student ePortfolios). More pages included: Resources (with drop down menu for Contact and Web Tools), Calendar and Student Gallery. The Major Project Page was the last page added and had its first introduction to photography classes in 2014.

The Home Page welcomed the student to the course and outlined an overview of course expectations (see Appendix A). The Inquiry Page introduced the class question, had an inspirational video to highlight the power of photography and presented the Gallery Show Criteria and Gallery Photo Pages (see Appendix B). The Learning Outcomes Page listed thirty-six darkroom, 35mm and digital photography outcomes (see Appendix C). The drop down menu Assessment page outlined the demonstrations of learning for the course and contained the wiki and ePortfolio submissions that required students to earn at least 100 points during the semester course (see Appendix D). The point system was introduced to “gamify” a portion of the course
and was included as a way to motivate students to add comments to their own and their peers’ blogs, participate in the posts to the class resource page, and annotate photos posted to their ePortfolio pages. Connected to the Assessment page are the Rubric and Prezi examples page. These provided the student with the criteria for their ePortfolio, Gallery Showcase, Mind Map and Wiki submissions.

The Theme pages consist of nine themes plus a Gallery Show page (see Appendix E). The themes chosen took into consideration the importance of mastering good composition, depth of field and shutter speed, while adding genres of interest with Landscape and Nature, Street Photography and Abstraction in Photography. The Panorama, Forced Perspective and Photoshop pages introduced students to Photoshop and to alternate ways to manipulate an image. The variety of theme pages provided multiple areas of interests to engage a diverse group of photography students. Each theme page contained a “Task” that was required to be uploaded to the corresponding theme page on the student ePortfolio. Theme pages introduced the topic and provided resources for student review (see Appendix F). The students worked on their ePortfolios during their second term of photography and had nine weeks to complete the pages. During the month of May, a fieldtrip a week was scheduled to provide opportunities for shooting photographs that pertained to each theme. For example, one week entailed a trip downtown to shoot Street Photography using camera angles and another week focused on landscape and nature with photography fieldtrips to local parks. Providing students with fieldtrips for each theme ensured they would all have collaborative and social opportunities to learn and share their photographic skills.

The Major Project Page was the last page I added to the course, but I felt it was a much needed addition (see Appendix G). The idea to create a learning journey in a blog format was
inspired by Alec Couros. Alec had assigned a major project to his ECMP 355 that involved learning using online resources and instructions. Couros shared these learning journeys with our OLTD 505 (Online Learning and Teaching Diploma at Vancouver Island University) course. I was so impressed with the project on light photography presented by Cynthia Schultz that I emailed her and asked permission to use her blog as an example for my photography students. Understanding that Cynthia’s blog was a graduate level project, I adjusted the requirements for a high school student and made the criteria manageable but with a sufficient amount of challenge for even the most motivated student. Each student would use online resources to learn some aspect of photography in which they had an interest. A minimum of ten posts describing their learning journey needed to be uploaded to their Major Project Page with links to resources included. The Major Project page used Padlet as a web tool to encourage students to post their topics in order to connect with classmates with similar project interests. Students worked together on likeminded projects and shared resources while each created their own learning blog. The learning blogs were an added step to the personal inquiry each student would create for their end-of-term gallery Showcase. The addition of the learning journey for the major project encouraged self-regulated learning that connected to individual interests and motivations and added to the social and collaborative atmosphere within the course.

The ePortfolio page supplied students with information on how to annotate their photographs (see Appendix H). Students were required to write reflections with their photographs and comment on the works of others in the class. Reflections guided the learning process and were an integral part of the students’ self-awareness of what they learned and how they learned it. Reflections on student work by peers, mentors, and the instructor, also created a social presence that helped build a sense of community (Pelz, 2010, p. 103-111). The drop
down menu under the ePortfolio page contained the links to Ms K’s Photography ePortfolio (the exemplar for student websites) and previous class student ePortfolio pages that remained password protected. Each current photography class had a page that housed all student ePortfolio addresses for each student to access and in which to make contributions to. A Resource page provided links to photography learning communities and other useful tools. The drop down menu contained a page called “Contact Ms K” for any questions students might have about the course. Each theme page had a button that linked to the Contact Ms K page for easy access. A Calendar page was added to highlight events, fieldtrip, guest speakers and class demonstrations. The final page on the course contained the Student Gallery page that highlighted student work produced throughout the term. Once students displayed proficiency with their photographic skills, they enjoyed seeing their work posted and were motivated by seeing the photographic achievements of their peers.

**Major Project Delivery and Implementation**

The Woodlands Photography Online course was constructed and improved upon over a two-year period. I felt the pages displayed online were all worthy of being included and each served a needed purpose. My course had been introduced to two semester classes in photography and would be used again in my upcoming February 2015 photography class. I have added and adjusted course design after each class experience with the course, but had only shared segments of the website with my Online Learning and Teaching colleagues. After spending the last month reviewing the pages and content, I was finally ready to send my course out to the World Wide Web for feedback. I first sent my website to our Online Learning and Teaching Facebook page for review by my own learning cohort. I then posted the website to the Online Learning and Teaching Google+ community page where subsequent cohorts had access. I contacted three
photography teachers in School District 68 and asked them for constructive feedback on my major project. I sent out my website to my work colleagues, some of whom had experience with Inquiry-based learning. I also shared my website with my two student teachers currently completing their practicums in education with Vancouver Island University. I contacted a former professor in my Online Learning and Teaching program who had created course curriculum in photography and sent him my website. We met to collaboratively discuss the design and content of my Woodlands Photography Online major project. I allowed ten days for the feedback posted online to be returned to me. Responses from my colleagues in the district were promptly returned within the week of the November 25, 2014 mail out. I reviewed the feedback responses and addressed the relevant changes needed to improve the course.

Following the changes made to the course, I wrote the Field/Beta testing results (Chapter 4) and completed the process paper with Conclusions and Recommendations (Chapter 5). The Major Project of Creating an Effective Learning Environment for a Secondary School Photography course was previewed by my supervisor before being submitted to the Vancouver Island University Dean of Education for final approval.
Chapter 4 - Field/Beta Testing and Findings

Beta Testing - Methods and Process

The goal of this major project was the creation of an effective learning environment for a secondary school photography course. Woodlands Photography Online represents two years of building a course that would adhere to the current research on what a 21\textsuperscript{st} century learning environment should include (Istance, Dumont, 2010, p. 317). My photography students were not sufficiently engaged in my course when presented with traditional teaching methods and were in need of new ways to learn and represent their understanding. The major project of creating an online learning environment placed students at the center of their learning with opportunities not only to understand themselves as learners, but also to document their learning journey through the use of photography ePortfolios. The use of student ePortfolios and a self-directed learning approach to course outcomes created an atmosphere of learning, collaborating and sharing in my photography class. The blended format for the use of the major project provided the perfect balance of face-to-face and online teaching.

Woodlands Photography Online encompassed a complete second term of learning for a grade ten to twelve photography class. The course had been introduced in a blended format to two consecutive semesters at a secondary school. Each class experience led to adjustments to the course with some additional material added and some removed. The class trial runs of the course enabled me to observe and record areas of success with students and note the glitches that occurred. The major project was finally completed and ready for Beta/Field testing in the week of November 25, 2014. The website was sent first to the Online Learning and Teaching private Facebook page and the Online Learning and Teaching Google+ Community Page. I chose these two groups believing my colleagues’ shared background knowledge and interest in online
learning and teaching would offer trusted feedback and expertise in the field. Three photography teachers in School District 68 were also sent the major project website, as was the entire staff at Woodlands Secondary School. I solicited feedback from my two Vancouver Island University student teachers, both of whom have experience in inquiry-based learning and technology. The final feedback came in the form of a collaborative meeting with a former Online Learning and Teaching instructor who had previously created an online photography course. I felt I had covered a wide range of candidates with varied experience in online learning, teaching and curriculum design to beta test my major project.

The Online Learning and Teaching Community on Google+ and Facebook, colleagues, and staff at School District 68 were given my website address and a link to an anonymous Google form http://tinyurl.com/pthlau2. (see Appendix I). The form required reviewers of the major project to comment on the following the areas: Curriculum (theme selections, learning outcomes, content), Effectiveness (suited for Blended/Hybrid learning environment), Navigation (functional hyperlinks, active/smooth transitions, logical sequencing), and Visual Design (layout, engagement, pleasing to the eye, legibility). The form also had a text box for Additional Comments. I sent personal emails with the major project website and the Google form link to six close colleagues in School District 68, plus the staff at my Secondary High School.

The Woodlands Photography Online Course Feedback received eleven responses from the posting of the Google form in the Online Learning and Teaching Communities (in Google+ and in the private cohort Facebook page). Four colleagues in my district returned responses to me by email that had detailed comments on all aspects of the major project. I also had an hour long recording of a collaborative meeting with a former Online Learning and Teaching instructor from Vancouver Island University that extensively reviewed the course. I had anticipated more
responses from the Online Learning and Teaching Communities, but was satisfied with the overall responses. Responses from my school district and close colleagues were rich in examples and detailed feedback. I felt I had a considerable amount of quality feedback to begin analyzing my beta testing findings.

**Findings of Beta Testing**

The feedback for the major project of [Woodlands Photography Online](#) was compiled into the categories of Curriculum, Effectiveness, Navigation, and Visual Design, with an added Additional Comments category. The main objective for the beta testing was to gain perspective from professionals in the teaching field on the overall learning environment presented for a blended classroom and to obtain specific feedback to enhance the website. The feedback response was overwhelmingly positive towards the self-directed learning approach which framed the major project. I was impressed with the amount of valuable feedback I received on enhancing the website in terms of navigation and visual design. It was obvious the reviewers spent time on each element of the website and were engaged with the content presented in an online format.

In terms of the Curriculum category, reviewers were asked to comment on theme selection, learning outcomes and content. The theme selection was noted as being up to date with current interests and technology. Positive feedback was given on the use of visuals, though some noted that on certain theme pages, like the Good Composition page and Street Photography page, students would need more images to paint a picture of the criteria. I agreed with this and had not used more examples online due to copyright issues and permissions needed for photographs. It is a future consideration to complete the pages with more photographic images; a possible solution would be to have student permissions to use class photographs on the course
site. Students were shown examples in class with an internal document used as a handout. If this course was used in an online format only, this suggestion would carry considerable weight. Comments expressed that the site was well laid out and easy to follow and that the “content clearly outlined the expectations of the learning outcomes.” One colleague stated, “You’ve done a really good job laying out what students need to do, where they need to start, and where they are going. Also, what they will learn along the way”. The learning outcomes were seen as being “possibly daunting from a student’s perspective” and a solution might be to group them according to themes. The significant number of learning outcomes of the photography course, reflect the fact that the course contains a great deal of information and reflections on learning that occur over a five-month period. Overall, students who represented their learning at the end Gallery Show expressed a sense of accomplishment and pride at achieving a skill set and knowledge base in photography.

The Effectiveness category referred to feedback on the suitability of the major project for a blended/hybrid course. Every reviewer wrote that they felt the course was a good fit for a blended classroom, while some went so far as to say they could see students using it in a fully online course as well. Observations of great interest to me were those that acknowledged the flexibility of the course and its suitability to diverse learners. The quotes that express this were: “excellent for blended use and allows students to work on areas of interest in their own order” and “suits diversity of learners from novice to expert with individuals challenged appropriately.” One reviewer suggested that tutorial videos should be added to the website. This is an area I will consider investigating in the future.

The most detailed feedback was given in the Navigation category with a focus on functional hyperlinks, transitions and logical sequencing. An area that the majority of the user
groups found that needed attention was the opening of links in the website that replaced my web page. This meant that students clicking on an external link would be taken away from the main website. I addressed this by changing the settings in Weebly to “open in a new page”, ensuring users could easily navigate back to the photography website. Another navigating issue brought to my attention was making sure that there was more than one avenue to get to a place within the website. An example was offered with the suggestion to make links or buttons to subpages within the website. On the Theme home page it was suggested I add links to all the theme pages for easy navigation. The “button” boxes within the template chosen for my website all originally said, “Click on Comment to Post”. A reviewer noted that when they clicked on the button it only let them post a comment not a photo. This was a confusing feature as each theme page contained the same button but task instructions asked students to upload photos to their ePortfolio. The solution offered was to change the type on the button to “Questions?” and then link to the Weebly feature of a contact form on a separate page. This was done on each theme page and on the Home Page. Since the “Links” page was not needed as I already had a resource page tab, I changed “Links” to a “Contact Ms K” page and had the “Questions?” button linked to it.

The major project contains numerous links within the pages to provide support for the photography students. A few older links that were established in the site at the beginning of the build are no longer opening. This was a good reminder for me to update links to resources on a regular basis. Most links are not opening in a new window and these will all have to be corrected. It is inconvenient for students navigating off the site not to have an easy way to return to the course. Oddly enough, this aspect was not brought to my attention from students who had experienced the course to date, yet each reviewer noted it as a major inconvenience and annoyance. All reviewers felt the website had a logical sequence to the pages.
The Visual Design category asked the user group to comment on the layout, engagement, and legibility of the website. Many reviewers thought the choice of font and layouts were visually appealing. One such reviewer wrote, “I typically rely on visual presentation to assist me in making meaning of something of which I know very little about. This design complemented the language used to illustrate and explain.” Suggestions for a better “flow” to my site included keeping consistent with font size, colour and indentations and using the list and bullet functions available in the website editor to avoid items running under the numbers making it hard to read. The only other comments on the legibility concerned a few punctuation notes that were easily corrected.

All in all, the feedback I was given for the Woodlands Photography Online website will greatly improve its functionality and appearance. The comments were both supportive and constructive. I was encouraged by the positive responses to the inquiry and self-directed approach for increasing student engagement and the overall course construction and presentation. A highlight from the feedback form follows:

The impression I get from this website is that the Photography 10-12 course has been thoughtfully planned for students in the class. Expectations are clear; however, within that, there is lots of flexibility (with the Inquiry approach) to “invite students in” and then challenge them, at whatever level.

Another colleague wrote,

Jean, I loved your site. It is so beautifully set up and usable.
What an amazing amount of work you have put into this.

I found the links for resources were abundant and so helpful.

You used step by step instructions, which left no question as to what the students needed to do. Love the e-portfolio idea for the students. Showing students web tools is such a great idea. I would love to take your course!! Absolutely beautifully done!

The major project of creating an effective learning environment for a secondary high school photography course has been a rewarding learning process. It was a privilege to share the website with my former Online and Learning and Teaching cohort and instructor, my staff and colleagues in School District 68 and my fellow photography teachers at the high school level. Their insightful comments, observations and suggestions were greatly appreciated and have impacted the final build of my major project and planned future improvements.
Chapter 5 - Conclusions and Recommendations

Conclusions

My journey to create an effective learning environment for a secondary school photography course began in earnest four years ago. Lack of student engagement and overall student apathy towards learning the fundamental skills and learning outcomes for my photography class led me not only to re-assess my own teaching practice, but also to research learning environments designed for the 21st century learner. Twenty first century skills are referred to as higher order thinking skills that include collaboration, digital literacy, critical thinking, and problem-solving. The questions arose whether I could create an atmosphere of learning in my photography course that would improve student engagement as well as help equip students with developing much needed 21st century skills and competencies.

Gunn and Hollingsworth believe it “is essential for teachers to be trained and informed of the benefits of information and communication technology, not only as instructional tools, but also as a means of engaging learners academically, emotionally, and socially” (2013, p.202). Understanding that the rapid developments in ICT (Information and Communication Technology) are beginning to transform educational practices and understanding that my own personal knowledge of teaching with technology was limited, I enrolled in the Online Learning and Teaching Graduate Diploma Program at Vancouver Island University. This two-year program provided me not only with best practices for development of effective online learning with the guidelines and barriers that surround its use, but also introduced me to a myriad of web tools, resources and emerging technologies to enhance my teaching practice. My search to redesign the learning environment in my photography course began with an inquiry-based approach in a face-to-face classroom and progressed to a blended course implementing both inquiry and project-based learning in an online
format. The end goal of developing an effective learning environment of self-directed, life-long learners in a secondary school photography class came to a realization with the creation of Woodlands Photography Online.

Young people need to develop into self-directed, life-long learners because, as Schleicher asserts, education should be preparing students “for jobs that have not yet been created, technologies that have not yet been invented and problems that are not yet known will arise” (2011, p.43). Students in school today need to learn not only how to process new information, but also how to be adaptable and flexible in dealing with new information. An effective learning environment with the use of 21st century skills will need to address technology use that provides social interactions, emotional attachment and academic challenges (Gunn and Hollingsworth, 2013). Current understandings of learning that is aimed at 21st century competence is characterized as “CSSC” Learning (De Corte, 2010). De Corte describes CSSC Learning as: “constructive” (learners actively construct their knowledge and skills), “self-regulated” (students actively using strategies to learn), “situated” (best understood in context) and “collaborative” (not a solo activity) (2010, p.35). De Corte was quick to point out that the important skill of self-regulating one’s learning and thinking could not appropriately be achieved with the teacher-directed approach (2010). My photography course needed to have a learning environment that was learner-centered, well designed, profoundly personalized, social, and inclusive (sensitive to group and individual differences, in which even the weakest learner could feel successful). After two years of building, trial testing and “tweaking”, the major project of creating an effective learning environment for my photography course was finally completed in October, 2014.

Woodlands Photography Online was ready for Beta testing the week of November 25, 2014. Over a ten day period, feedback on the major project was received from the Online Learning and Teaching cohorts, photography teachers in School District 68, colleagues in School
District 68, student teachers at Vancouver Island University and instructors in the Online Learning and Teaching Graduate Diploma Program. As a survey tool, I used a Google form with text boxes for feedback with the following headings: Curriculum (theme selections, learning outcomes, content), Effectiveness (suited for Blended/Hybrid learning environment), Navigation (functional hyperlinks, active/smooth transitions, logical sequencing), and Visual Design (layout, engagement, pleasing to the eye, legibility). The form also had a text box for Additional Comments. Even though I received detailed feedback on each heading of the form, I felt I was missing feedback from reviewers on the effectiveness of the entire project and each subheading. In hindsight, a solution would have been to create a more detailed feedback form that would have required reviewers to comment on each individual topic and subtopic. This would have given me a better idea of the reviewers impressions on all aspects of the project, instead of a response given to a select portion of the question. For instance, one colleague gave detailed feedback on the topic of Curriculum in regards to theme selection, but I had no indication of their thoughts on the learning outcomes or general content. This rating scale would have provided me with data on each selection that, in turn, could have easily been graphed into a visual representation. The visual representation could have possibly shown an area of the major project that may have been weaker than others and in need revisiting on my part.

Many of the comments for improvement to the course were in terms of navigation and overall consistency of design. Navigational items such as opening links to a new window, updating dead links and creating more than one avenue to navigate through the course are all relatively easy fixes that will be implemented to improve the online course. Reviewers noted design issues with consistency, such as, font size, placement of learning activities and coloured
texts. Adjusting these will add to the flow and overall look of the course. Aligning numbered and bulleted items were also noted as items to improve the legibility of course content.

The written responses to the project were overwhelmingly positive in nature. Many reviewers expressed how comprehensive they felt the course was and viewed it as visually appealing with engaging content. One colleague noted the intent “to take photography past the pointing and shooting stage and into the realm of making meaning and personal connections”. Another responder viewed the attention given “to the diversity of learners’ needs from novice to expert, where individuals are challenged appropriately”. A reviewer praised the collaboration ideas with the use of ePortfolios and the major project page. It was rewarding to hear comments about the course that directly involved the attempt to address 21st century skills within the design of the course build.

**Recommendations**

As was mentioned in Chapter 4, the [Woodlands Photography Online](#) course was implemented over two years with two consecutive blocks of photography. As much as the feedback from colleagues from the university and the school district was valuable for improving my course, anecdotal reflections from my students and my own recordings of student successes were of equal importance for validating the effectiveness of the learning environment I was attempting to create. My first year using the ePortfolios with the online course produced an excitement and engagement from students I had not seen in years. A student who has attendance issues and very little interest in school was so enthusiastic about our day at VIU learning to create an ePortfolio that she could not stop talking about it to her parents. Her mother said it was the first time in over two years that she expressed excitement about learning. Another student returning to my photography course for a second year was going to drop the course. When I
asked her why, her response was, “I already did it all last year, so why would I want to do it again?” I immediately told her she could build a website on anything she was passionate about. Her second year in photography would be based on her building an ePortfolio of her own choice and design. It turned out that she had a love of cooking and wanted to pursue culinary arts school after graduation. It was decided she would follow her passion and learn to photograph food and design her own website around her learning. (see appendix J). At graduation last year, she thanked me for helping her with realizing her culinary dreams. I later learned her ePortfolio on food photography was instrumental in gaining an acceptance into the Culinary Arts Program at Vancouver Island University.

These are just two of the many examples of student engagement and learning occurring in my photography course in the last two years. What can’t be seen in these pages are the rich relationships and opportunities for formative feedback that occur when the “sage on the stage” becomes a “facilitator of learning.” Placing the learning environment online and creating a self-directed path through curricular objectives enables the instructor to spend more time and energy with individual students. Regular check-ins are scheduled which reduces the risk of students falling behind. The increased amount of formative assessment improves student learning and, in turn, produces a higher quality of photographic work. Students are motivated to put their best work in their ePortfolios where they have an audience of their peers and mentors. Students mastering skills in photography are rewarded with a Gallery Show celebrating their learning and accomplishments at the end of the course. Parents and friends who are not able to attend in person can still view their work on their ePortfolio in an asynchronous fashion. The students have a lasting record of their learning journey that can follow them through high school and beyond.
The Woodlands Photography Online course for a secondary school photography class was created in response to a need to increase student engagement by employing 21st century skills and technology into the learning environment. This major project is not a stand-alone course, but an added component in an effort to create an effective learning environment for a secondary school photography course. In keeping with Istance and Dumont’s list (2010, p. 317), I believe Woodlands Photography Online brings the best of online and face-to-face teaching together in a blended format that adheres to the current research on designing an effective learning environment for 21st century learning. This blended format:

- Makes learning central with the use of ePortfolios as a method to record a student’s learning journey. Students begin to understand themselves as learners
- Is often social and collaborative with learning groups, blog comments and group resource submissions to the class wiki
- Provides personalisation that is highly attuned to the individual motivations by offering choices with the personal inquiry question
- Is sensitive to individual differences with opportunities for even the weakest learner to be successful and the strongest learner to be challenged in the self-directed format
- Uses assessment as its aim with numerous opportunities for formative feedback in the form of blog comments, regular check-ins and group meetings
- Promotes horizontal connectedness across activities in-and out of school with the flexibility and personalization to choose interests in photography

My recommendations for creating an effective learning environment for a secondary school photography course would be to have a learning environment that was learner-centered
(but with a strong role for teachers), well designed (with ample room for inquiry), profoundly personalized (offering different pacing and tailored feedback), social, and inclusive.

An important element to the success of the learning environment is for the teacher to be able to “regulate” and be responsible for all aspects this environment. Incorporating an inquiry-based learning approach into a classroom is challenging as the students need intensive scaffolding and constant assessment and direction as the inquiry unfolds. Teachers are advised to obtain support and mentoring while orchestrating a class of individual and extended projects. It takes a strong pedagogical practice to maintain a focus on all the individual learning activities in a learner-centered classroom.

In the future, my next goal is to build a fully online photography course that would include my own tutorials, assessments and online collaboration tools. I recognize a need to provide online curriculum to the growing population of learners who embrace online learning, particularly courses that adhere to best teaching practices and offer a strong teacher presence with scaffolding skills. I will continue my efforts to create effective learning environments to address the changes in how and what students learn in my secondary school photography course, a process which will hopefully help to instill in them life-long learning and a love of photography.
References


http://sloanconsortium.org/publications/survey/class_differences


http://www.cmu.edu/teaching/principles/


Appendix A - Course Home Page

Welcome to the online version of Woodlands Photography 10-12

This course will explore photography with an inquiry-based learning model working under our class inquiry question:

“How can photography transform my thoughts, feelings and beliefs towards myself and my world around me?”

You will be studying composition, depth of field and shutter speed as you work through the course themes. As you gain a range of knowledge and skills in photography that you need to think creatively, you will create your own inquiry question that will be the focus of your photography presentation in the Gallery Show.

To complete this course, all students must:

- Build an ePortfolio website that showcases their photography and provides reflection on their work.
- Demonstrate their learning in photography by creating a mind map of visuals and photographic concepts.
- Complete a major project documenting their learning journey online of one genre of photography.
- Participate in a celebration of their learning in a Gallery Show.

This term is your time to use as many opportunities as you can for shooting photographs. I am looking forward to facilitating your learning in photography.

Contact: jkloppenburg@sd68.bc.ca

Ms. Kloppenburg

http://woodlandsphotographyonline.weebly.com/
Appendix B - Inquiry Page

Inquiry-Based Learning

Photography 10-12 is an Inquiry based learning course. Our class inquiry question is:

"How can photography transform my thoughts, feelings and beliefs towards myself and my world around me?"

As you progress through the photography course, you will be deciding on an inquiry question of your own that will guide your photography and serve as your focus for shooting in the weeks leading up to the Gallery Show.

David Griffin's Ted-Ed talk on the power of photography

Ted-Ed Video by Ms. K

View my "flipped" lesson on Ted-Ed What will your Inquiry Question be?

Click here for the Ted Talk

http://woodlandsphotographyonline.weebly.com/inquiry.html
Appendix C - Learning Outcomes Page

Woodlands Photography Online

Learning Outcomes for Photography

This course is designed to give students a basic understanding of darkroom and digital photography taught through a series of practical exercises.

**Darkroom, 35mm and Digital Photography**

1. I can identify and define the Elements of Design within a given artwork.
2. I have a thorough understanding of the Principles of Design and how to apply those concepts to the creation of my own artwork.
3. I can create a photogram with strong contrast and composition.
4. I can list the four basic camera parts and have a clear understanding of their purpose and function.
5. I can successfully load my 35mm black and white film into a developing tank after exposure.
6. I can develop my 35mm black and white film maintaining a clear understanding of the chemicals needed and the time rotation required for my specific film.

Appendix D - Assessment Page

Assessment

The demonstration of your learning in Photography 10-12 will involve three things.

1. ePortfolio/Class Wiki
2. The creation of a mind map
3. Gallery show Presentation

Class Wiki/ePortfolio

Throughout this term you will need 100 points. Points are earned by:

<table>
<thead>
<tr>
<th>Points</th>
<th>Activity</th>
<th>Suggested Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 pts</td>
<td>Adding resources to wiki</td>
<td>At least a one sentence description of link along with names</td>
</tr>
<tr>
<td>20 pts</td>
<td>Annotations to ePortfolio theme photos</td>
<td>Between 50-100 words</td>
</tr>
<tr>
<td>10pts</td>
<td>Comments on student blog pages</td>
<td>25-50 words</td>
</tr>
<tr>
<td>100 pts</td>
<td>Total needed</td>
<td>By end of term</td>
</tr>
</tbody>
</table>

ePortfolio

1. Submissions and Annotations for each Theme (see ePortfolio page for annotations guide)
2. Resource Page additions for Good Composition, Depth of Field, Shutter Speed, and Digital Photography

http://woodlandsphotographyonline.weebly.com/assessment.html
Appendix E - Theme Pages

http://woodlandsphotographyonline.weebly.com/themes.html
Appendix F - Good Composition Theme Page

Good Composition

On this theme you will be learning how to create photographs that are pleasing for the viewer to look at. There are six basic guidelines to use when you are trying to create a photograph with good composition.

Outline of the Six Basic Guidelines:

**Simplicity**

- Giving the center of interest the most are (move in close)
- Concentrate on one subject (avoid competing or unrelated subjects)
- Make the background less busy (choose uncomplicated backgrounds)

Links

- Rule of Thirds
  - http://www.youtube.com/watch?v=xqpfFs3pQjE&feature=youtu.be
- 10 Top Photography Composition Rules
- 5 Elements of Composition in Photography

http://woodlandsphotographyonline.weebly.com/good-composition
Appendix G - Major Project Page

http://woodlandsphotographyonline.weebly.com/major-project
Appendix H - ePortfolio Page

**ePortfolio - Annotations and Submissions**

Annotations **[BBC LINK here]**

Throughout this course you will be required to record reflections on your photography themes on your own E-Portfolio Weebly web site.

When presenting your work, your pictures should be presented along with written explanations/notes (called annotations) recording details of:
- What you took photographs of
- What Visual Elements are included in your photo (Look at the bottom of the page to make sure your use the correct vocabulary)
- Why you have chosen a particular technique or subject
- What you have learned from it
- How did you take the photo
- What you were hoping to achieve
- How it relates to your study
- How could your photo be improved?

**ANALYZING IMAGES**

Appendix I - Google Forms Doc

Woodlands Photography Online Course Feedback

Feedback submitted on this form is provided anonymously and comments will be used to inform Chapter IV of my MEDL690 process paper. Constructive comments may be used to improve further edits of the course website.
Thank you for your time and consideration in supplying your much valued feedback.
Jean Kloppenburg, B.Ed., MEDL graduate candidate.

* Required

Curriculum *
(theme selection, learning outcomes, content)

Effectiveness *
suited for Blended/Hybrid learning environment

Navigation *
(functional hyperlinks, active/smooth transitions, logical sequencing)

Visual Design *
(layout, engagement, pleasing to the eye, legibility)

Additional Comments

http://tinyurl.com/pthlau2