

THE USE OF TECHNOLOGY IN THE ART CLASSROOM TO ENGAGE 21ST CENTURY
STUDENTS

By

NATALIE WICKLUND

A CAPSTONE PROJECT PRESENTED TO THE COLLEGE OF THE ARTS OF THE
UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS

UNIVERSITY OF FLORIDA

November 2014

©2014 Natalie Wicklund

Acknowledgements

First, I would like to thank my parents for instilling in me the importance of education and a desire for learning. I cannot give enough praise to Florida Vocational Rehabilitation for giving me this opportunity I would have otherwise not been able to reach. To my cheering section, Kate Pancarician and Heidi Wicklund, for helping me through deadlines, final projects, and making sure I saw the light at the end of the tunnel. I might not have found my calling as an educator had it not been for my professors Janis Brothers, Pamela Theis, and Holly Hanessian who saw something in me and helped me realize that art education was where I wanted, and needed, to go in life. Lastly I would like to give a heartfelt thank you to Craig Roland, Michelle Tillander, and Elizabeth Delacruz. Throughout my two years in the Online Art Education Master's Program they have always guided me in the right direction, sometimes with a kind and well needed nudge, and have helped shape me as both an educator and a researcher.

ABSTRACT OF CAPSTONE PROJECT PRESENTED TO THE COLLEGE OF THE ARTS
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

THE USE OF TECHNOLOGY IN THE ART CLASSROOM TO ENGAGE 21ST CENTURY
STUDENTS

By

Natalie Wicklund

November 2014

Chair: Craig Roland
Committee Member: Michelle Tillander
Major: Art Education

Abstract

This capstone project examines how K-12 art teachers are currently using technology as a tool to engage their students and foster a learning environment that connects student interests with contemporary art themes and curriculum. For my research I reviewed the current body of scholarly literature (2004-2014) pertaining to the subjects of student engagement, student-centered learning, and engagement through technology. Additionally, I interviewed eight art educators on their personal curriculum practices and how they use technology in their classrooms as a tool for student engagement. Through my research I found that the literature praises art educators for being one step ahead of other educators in terms of tackling how to teach 21st century students. The art educators I interviewed were motivated by technology even when faced with limited resources in their schools. All eight participants used technology as a means to engage their students in whatever manner they could and many of them were beginning to

practice student-centered classrooms. From these interviews I have made an ISSU publication detailing each educator's pedagogy and technological practices (<http://tinyurl.com/NWISSUU>). My capstone paper describes my research process and findings. First, I discuss why there is a need for change in teaching practices to facilitate better learning for today's students. I then describe how current art educators are using technology in their classrooms to engage their students. Lastly, I conclude this capstone paper with final insights on the future direction of technology in the art classroom.

Table of Contents

Title Page

Title Page	1
UF Copyright page.....	2
Acknowledgements.....	3
UF Formatted Abstract	4
Table of Contents.....	6
Introduction.....	8
Statement of the Problem.....	8
Purpose or Goals of the Study	8
Research Questions.....	9
Rationale and Significance of the Study.....	10
Assumptions.....	10
Limitations	10
Definition of Terms	11
Literature Review	12
Why Curriculums Need to Change.....	13
Engaged Students.....	14
Technology as a Tool.....	15
Steps to Success	16
Methodology.....	18
Subjects.....	19
Research Site.....	19

Data Collection Procedures and Instrumentation 19

Data Analysis Procedures 21

Findings **Error! Bookmark not defined.**

 Alesha Belinstine 23

 Amber Lemser 25

 Candice Blount 28

 Grace Ho 30

 Hilary McLean 32

 Madeleine Pinaire 34

 Sara Gurney 36

 Tammy Hoppe 38

 Summary of Findings..... 39

Discussion and Conclusion..... 40

 Discussion and Interpretation of Findings 41

 Significance, Implications, and Recommendations 42

 Conclusion 42

References..... 43

Appendix A..... 46

Appendix B..... 48

List of Figures and Captions..... 49

Author Biography 50

Introduction

As a *digital native* (Prensky , 2001), someone who has grown up always connected and within reach of a digital device since I was five, I feel like I still have something in common with 21st century learners. Growing up I struggled in classes to keep up with the lectures and rigorous memorization expected of me. During my high school years and even some of my undergraduate career it felt like I was simply going through the motions of work and not actually learning or creating anything. According to Ito, Horst, Bittanti, Boyd, Herr-Stephenson, Lange, & Robinson, (2008), Shernoff (2013), and Yazzie-Mintz & McCormick (2012) my experiences are not much different than today's students. Since birth, students today have been surrounded by advancing technology and have adapted to learn with it. I believe it is an educator's job to change teaching methods to best fit with how students are learning with technology.

Statement of the Problem

With a shift in the learning styles of 21st century students (Keengwe & Georgina, 2013; Roehl, Reddy & Shannon, 2013), art educators are beginning to change their teaching methods to accommodate today's students. As an aspiring art teacher I want a better understanding of what practicing art educators are doing to facilitate these new learners.

Purpose or Goals of the Study

The purpose of this study is to obtain some insight into how art educators today use technology in their classrooms and their teaching practices. To achieve this understanding I reviewed education literature and interviewed eight art educators on their practices and have published these interviews in a narrative format in an ISSUU document (Figure 1) to share with other aspiring art teachers.

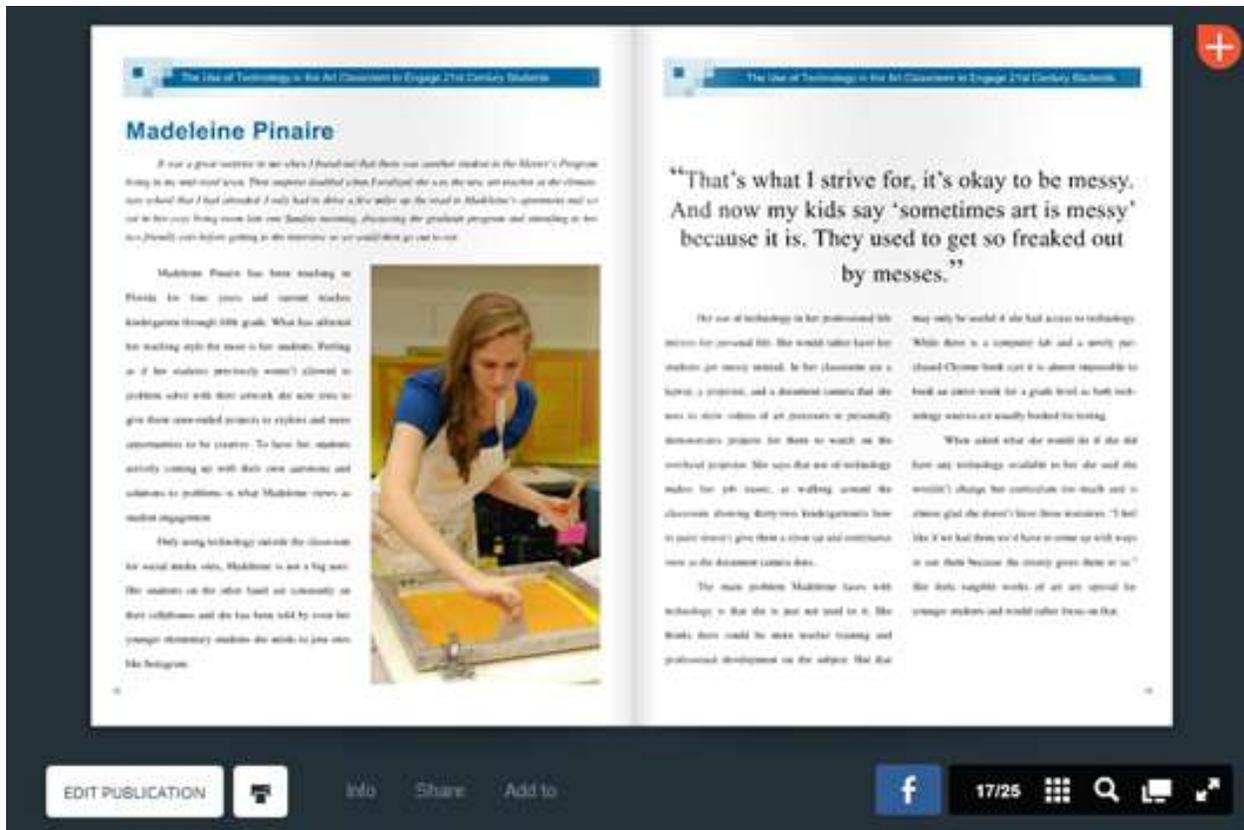


Figure 1. Screenshot of ISSUU document.

Research Questions

My capstone project focuses on three main questions regarding student learning and engagement and art educator's technology practices.

What are the teaching styles used for today's students? With students wanting to always be connected, their need for instant random information access, and ability to multi-task I wanted to have a better understanding how art educators are changing their pedagogies, if indeed they are, to facilitate these new learners.

What are art educators' technology practices in the classroom? With limited knowledge of how art teacher use of technology I wanted to better understand exactly how teachers are using technology in their classrooms. Are they using technology in new ways or are they using it to do old things with new tools (Prensky, 2005)?

How do art educators use technology to engage students? Since technology is important to today's students and student engagement is an important factor in the classroom I wanted to know how teachers were connecting the two, if indeed they are.

Rationale and Significance of the Study

I believe this study is important for my personal growth and pedagogy, as a way to view art educators' technology practices outside my own small community. While I knew technology was commonplace in classrooms prior to this project, I didn't know exactly how much would be considered normal technology use in art classrooms and how were art teachers making use of it. As an aspiring art teacher and someone who regularly uses technology I wanted to become more informed and hope that other future art teachers will feel the same way and find this research useful.

Assumptions

I expected a high level of technology use among the art educators whom I interviewed, both in the classroom and in their personal life, because they were motivated to use technology in their personal life by getting an Online Master's Degree.

Limitations

Participants for my interviews came from a narrow pool of subjects, a closed Facebook group only for students and alumni of the University of Florida's Art Education Master's Program. Gaining participants through the Facebook messaging system was difficult due to the ability for Facebook members to turn off notifications of messages from people they are not connected with. The time limit of interviews was two weeks, one of which fell on the last week of classes for some of the participants which resulted in minor scheduling issues. As I have never worked as an art educator I cannot give my personal opinion on this subject. I also

assumed that potential participants may doubt my ability to perform this study due to my inexperience.

Definition of Terms

Digital natives. Mark Prensky (2001) originated the term to describe the generation of people who ‘have spent their entire lives surrounded by and using computers, videogames, digital music players, video games, cell phones, and all the other toys and tools of the digital age’ (p. 1). Scholars may also refer to these types of people as *Millennials*, the *Net Generation*, and the *Google Generation*.

Digital immigrants. People who were born before digital media and devices became mainstream, everyday items (Prensky, 2001).

Millennial. A similar term to Digital Native used to describe young people whose lives are saturated with new digital technologies. These students “learn in collaborative learning environment and exhibit a preference for teamwork incorporating cooperative learning and constructivist principles” (Keengwe & Georgina, 2013, p. 52).

Flipped classroom. Lecture or instructional content is assigned out of class as homework or in preparation for the next class. “Students utilize the time in class to work through problems, advance concepts, and engage in collaborative learning” (Roehl, Reddy, & Shannon, 2013, p. 45).

Student-centered learning. Also known as a learner-centered classroom, “the student-centered approach is based on the understanding that students learn more when they take responsibility for their own learning. Further, the instructor assumes a new role of guiding, mediation, modeling, and coaching active learners” (Keengwe & Georgina, 2013, p., 2013, p. 52)

Student engagement. This phrase is commonly used to describe a student who is actively participating and retaining information. Along with cognitive engagement there is “a behavioral component associated with positive behavior, effort, and participation and emotional/affective component that includes interest, identification with school, a sense of belonging, and a positive attitude about learning” (Yazzie-mintz & McCormick, 2012, p. 747).

Literature Review

With the rise of digital technology, students are now learning differently than they have in previous generations and it is causing a problem for both teachers and students (Prensky, 2001). As teachers continue to use old curriculum that focuses on memorization and lecture, the students who are now used to multi-tasking and instant access grow bored and weary. In the past decade progress in changing teaching methods and curriculum but it is still not enough. Simply being connected to a computer in a classroom or having students point and click through online educational programs are not enough to engage them and to have them think critically about what they are learning. There are many ways to connect with students through technology and at different levels of technical involvement for those who aren't digitally literate.

For my literature review I examined publications from 2004-2014, focusing on keywords such as art education, technology, student centered learning, student engagement, and digital natives and branching out into similar keywords from there. First I looked into how 21st century students are different learners than previous generations and how teachers are changing their curriculums to reflect this. I then began looking in to student engagement: what it is and how scholars suggest achieving it. Next I discuss what scholars think of how teachers are implementing technology into classrooms. Lastly, I searched how scholars suggest promoting technology in the classroom for successful student engagement.

Why Curriculums Need to Change

Today's students are always connected wherever they go. They are connected to the Internet, to a computer, and to each other, all within one device. Unlike previous generations, they have grown up in a world where people are plugged in and wired to each other and the world. By growing up with this overload of technology, *millennial* students or *digital natives* have a different way of learning and working. Students today are used to social connectivity and collaboration, instant access to information, and multitasking (Prensky, 2001; Roehl, Reddy & Shannon, 2013).

With the change in learning styles of the students the teaching and learning activities in the classroom need to change with them. Gregory (2009) reminds us that education is about learning and it is an educator's job to assist the learner. "We must invent new student-centered approaches that use the power of new learning technologies that focus on collaborative learning, real world problem solving, and creative, critical thinking"(p. 47). Roehl, Reddy,& Shannon (2013) also suggest shifting from the dictating lectures centered around the educator to a curriculum based around the students and their needs.

To facilitate student learning, educators and scholars are both beginning to emphasize student-centered learning strategies. This shifts the importance from the project or lecture to the student and their personal learning. "In student-centered classes, the students and their ideas are the focus of study. The class begins with them and their artistic pursuits. Students choose a medium that will best express their artistic goals and visions" (Andrews, 2010, p. 42) With students leading the inquiry, teachers become guides and facilitators rather than instructors.

The student-centered learning approach includes such techniques substituting active learning experiences for lectures, assigning open-ended problems and problems requiring

critical or creative thinking that cannot be solved by following text examples, involving students in simulations and role plays, and using self-paced and cooperative learning.

(Seng, 2014, p. 143)

Another form of student-based learning is the *flipped classroom* where student inquiry is reserved for class time and viewing lectures or preparation work for the next class is assigned as homework. In order for students to take learning into their own hands in the classroom they must show responsibility by viewing the outside work. “Properly implemented student-based learning can lead to increased motivation to learn, greater retention of knowledge, deeper understanding, and more positive attitudes towards the subject being taught” (Seng, 2014, p. 143). Student centered learning gives 21st century students the lead role of investigators when learning is placed directly in their hands.

By keeping with the education of generations past, educators today risk causing strife between themselves and their students who grow uninterested the longer the lectures go on (Shernoff, 2013; Yazzie-Mintz & McCormick, 2012). Directly relating to the art classroom, Black & Browning (2011) state “not embracing digital technologies can also create schisms between art educators... and the art world that has been quick to promote, integrate, and exhibit current artists’ digital works” (p. 20). It is essential for educators of all fields, but especially those in the visual arts, to integrate technology into their classrooms as they are the gateway in helping facilitate learning and creativity in today’s students (Black & Browning, 2011).

Engaged Students

Student-based learning is a means of engaging students, but how does one know when a student is engaged? Student engagement is a complex term that every scholar and teacher has their own definition for. Is it actively participating in the classroom? Retaining information?

Enjoying learning? Or a combination of those and more? Yazzie-mintz & McCormick (2012) discuss the factors that go into student engagement and in their article on the subject they say that “student engagement consists of two components: a behavioral component associated with positive behavior, effort, and participation and emotional/affective component that includes interest, identification with school, a sense of belonging, and a positive attitude about learning” (p. 747). Shernoff (2013) continues this by discussing the many ways how to measure the different types of engagement, what can promote or discourage engagement, as well as determines that “challenge and relevance have strong effects on students’ concentration, interest, and attention” (92). Along with the methods previously mentioned there are many ways to engage students. In Yazzie-mintz & McCormick’s (2012) analysis of data from the High School Survey of Student Engagment (HSSSE) they found that 60% of students were excited ‘some’ or ‘very much’ by discussion and debate as well as group projects while in contrast 42% of students were excited ‘not at all’ by teacher lecture (Yazzie-mintz & McCormick, 2012, p. 753). One of the biggest points they make is for teachers to simply ask their students what engages them as a starting point for student engagement and classroom learning.

Technology as a Tool

There are misconceptions that by simply using technology in the classroom, either through computer access to the Internet or having students use digital programs they are receiving a quality learning experience (Dempsey, Hofer & Harris, 2013). While technology can be a creative medium for students to use, simply to use it should not be the main outcome of a lesson. Wilks, Cutcher, & Wilks (2012) say that educators need to continue creating curriculum that breaks the mold and keeps students thinking and questioning while using technology to assist their inquiry process. Educators should utilize technology “in ways that are meaningful,

relevant, and worthy in the creation and criticism of the visual arts” (p. 59). Educators who simply strive for the use of technology without a thought as to how students interact with it in relation to the visual arts are not fulfilling their students’ needs.

Black and Browning (2011) also believe that technology should “play a secondary role to creative pedagogy enabling the concepts of teaching and learning to drive the art education curriculum” (p.33). They continue on to say that technology should not be the center focus of a curriculum but instead that art making should continue to remain the primary objective:

When students learn to express themselves creatively, they create art rather than just completing an exercise for the assignment. The technological basics can be taught alongside with the artistic theories and principles; when working together, they provide the student with what they need to engage their creativity. (Black & Browning, 2011, p. 22)

Black & Browning conducted a three-year study program for art educators to create lessons around broad themes that incorporated technology before they “found that art educators not only thrived when they focused on creative art ideas and not technology driving the curricula, but they also flourished when given freedom to shape creative digital arts programs” (Black & Browning, 2011, p. 24). By designing a lesson and picking the digital medium or tools best suited for the task, teachers have a higher success in engaging their students in study.

Steps to Success

As previously mentioned, scholars believe that art educators should be at the head of developing creative and innovative curriculum with technology inclusion and there is a plethora of articles to back this up. Numerous scholarly articles plan out step-by-step how art teachers can begin to incorporate technology into their classrooms in order to create better learning

environments for students (Black & Browning,2011; Gregory, 2009; Huffman, 2013; Roehl, Reddy, & Shannon, 2013; and Wilks, Cutcher, & Wilks,2012). Some art educators take this a step further by creating blogs and curating bookmarking sites to discuss and share their new teaching methods.

Black & Browning (2011), Gregory (2009), and Wilks, Cutcher, & Wilks (2012) all give good descriptions on setting up a classroom for engaged student learning alongside technology. Gregory (2009) describes a structured and well thought out plan to begin for implementing technology in the classroom. First, she suggests if an art educator is not familiar with technology he or she should seek out a mentor in a college within the school who is willing to help answer questions. Secondly, the classrooms should be set up for student-centered learning. This method of teaching gives students a role in the learning process and can be tested out through project based learning, problem solving, interdisciplinary learning, and cooperative learning. Next, Gregory encourages art teachers to understand the limits and uses for the technology at their disposal and learn to use the tools immediately available and any other relevant technologies that your students may be using. She recommends that once you have set up a plan and have begun to interact with the technology you wish to use on a regular basis, begin integrating the technology into your art classroom in stages. Lastly, Gregory encourages teachers to do not stop once they have begun integrating technology. “Consider extending the walls of your classroom by collaborating with others using distant and learning technologies to create a social learning environment” (Gregory, 2009, p. 50).

All the work and planning and learning for a teacher can be a lot. By working alongside other art educators and spreading the load across a group or by modifying a lesson plan provided by another art educator online, art educators can make a daunting task a reality. Both Black &

Browning (2011) and Lin (2011) remind educators that technology does not have to be mastered all at once. “Teachers do not have to know everything about the software; they need only to be willing to take creative approach to technology and learn from their students” (Black & Browning, 2011, p. 21). By mastering only the basic elements of a program teachers can learn along with their students as they work. Not only does this relieve stress from the teacher but it also creates a cooperative learning environment for the students and gives them creditability for learning.

While the groundwork is beginning to be set in order to use technology in a learner-centered classroom there is still much for art educators to do. By continuing my research through interviewing art educators on their own practices and building my own base of educational resources, as both a digital native and an aspiring art educator, I hope to add a unique perspective to the literature currently available.

Methodology

My capstone project focuses in two areas: a review of scholarly literature from 2004 to 2014 on technology use in art classrooms and interviews of technology-using art educators. My literature review covers the past decade on how art teaching practices are changing, how art educators are implementing technology in their classrooms in order to engage their students, what challenges art teachers are facing with bringing technology into the classroom, and how teachers are engaging their students. For the interview portion of my research I questioned eight art educators over Skype, a video-conferencing program, on their technology practices in the classroom and how they use technology to engage their students.

Subjects

Eight art educators participated in my study. Dispersed across the United States, the educators varied in both age and years of teaching. I used the Facebook group for the University of Florida's Art Education Master's Program, a closed group only for students and alumni of the program, to find interviewees. This was a purposeful sampling of teachers who use technology beyond digital media or generalized use. A purposeful sampling is a sampling of people specifically selected to represent expert knowledge of the population (Battaglia, 2008). In compliance with University of Florida Institutional Research Board (IRB) rules, I asked for the interviewees' written consent as voluntary participants to use their responses in my study.

Research Site

Since the participants in the interviews are spread out across the United States I conducted the interviews over a video conferencing program, specifically *Skype*[®], and recorded the conversations with screen-capture software, specifically *Screencast-O-Matic*[®].

Data Collection Procedures and Instrumentation

This project is classified as quantitative research through a purposeful sampling interview. I collected data through semi-structured interviews with art educators as a means to gain insight into their technological practices. I followed the steps for creating interview questions and conducting interviews as outlined by Dilley (2000), Jacob & Furgerson (2012), and Rowley (2012). I interviewed eight art educators with nine open-ended questions (Appendix B) and the interviews lasted from fifteen minutes to thirty-five minutes. In creating my questions I followed Rowley (2012) suggestion that "questions should be checked to ensure that they: (1) are not leading or have implicit assumptions; (2) do not include two questions in one; (3) do not invite 'yes/no' answers; (4) are not too vague or general; and (5) are not, in any sense, invasive"

(p. 265). I also created an interview protocol for myself that listed the questions I intended asking along with a script of what to say before and after the interview, a reminder to collect informed consent forms, and to ask for any other information either party might need after the fact. In compliance with University of Florida Institutional Research Board rules, I asked for the interviewees' written consent to use their responses in my study.

Along with starting the interview with the basics in terms of getting to know each other and beginning with simple questions, Jacob & Furgerson (2012) suggest to "arrange questions in order from those that are least difficult or contentious to those that are most difficult" (p. 4). They also advise to create large, open-ended questions so that the participant "might say things that you would have never thought to ask and often those things become one of the most important parts of your study" (p. 4). Along with these questions, prompts were added in order to help remind me as the interviewer to keep on track and to help explore different avenues of questioning.

With my questions determined, I practiced the interview in a pilot test with my sister who is in her fourth year of teaching high school studio art. I chose my sister for the pilot test for two reasons, the first of which was that interviewing her would be less stressful since we know each other and this would help me become use to asking the questions. The second was that her pedagogy is similar to the aim of my study and, as a master's degree holder and avid and literate researcher, she could give me assistance with creating prompts for each question. The questions were arranged for optimum flow of thought and after her interview it was decided that the questions themselves brought forth the needed information and only a few required prompts to delve deeper.

Once I had my first interviews scheduled I began searching for a screen recording device to use. I had previously used *Screencast-O-Matic*[®] but it would only record up to fifteen minutes of video without a paid subscription. I instead used a free-client software called *S Recorder*[®] which had a similar layout: A boundary screen to show where the program was recording, buttons for stopping and starting recording, a save button, and a button for exporting the file to a different file format. I tested the program out by recording a *Youtube*[®] video and going through different websites. I exported this data and opened it in a media player to test that it worked correctly. The first two interviews were less than a day apart so I decided to wait on transcribing the first interview until after the second interview. While exporting the two interview files the program crashed and all data on the program became corrupted. After searching online for a way to salvage my files and finding no alternatives I instead took this as a loss. I purchased a subscription to *Screencast-O-Matic*[®] and attempted to reschedule repeat interviews with the two participants but was unable to due to scheduling conflicts. With a new screen recording program and eight scheduled participants I began exporting the videos once an interview was finished and transcribing it immediately afterwards.

Data Analysis Procedures

Besides collecting data for research purposes, I also recorded and analyzed information regarding the potential respondents in regards to their participation. Seventeen members of the UF Art Education Facebook group were initially contacted to ask for participation in the study. Two did not reply, five were either not working or were working in areas that were not applicable to my study. To analyze the data gathered from both the literature review and the interviews I used a framework based on procedures common to qualitative analysis. Dierckx de

Casterlé, Gastmans, Bryon, & Denier (2012) and Smith & Firth (2011) both describe useful step-by-step processes for developing and coding qualitative data.

The first step in the process in data management is to become familiar with the data itself. After each interview I immediately transcribed the audio and once all interviews were completed I replayed the audio to double check my transcriptions. I then printed out and read through each interview transcription multiple times to become better acquainted with the material. Dierckx de Casterlé, Gastmans, Bryon, & Denier (2012) warned that researchers do not take enough time to properly review and re-review the data given, even at the later stages of analysis to make sure all conclusions have accurately described the initial data. I read through the hard copies twice, color coding phrases that connected to each of my three questions. Blue was used for conversation related to learning styles of students, red was for the art educator's technology practices, and black represented where the art educator spoke about how they engage students with technology. In the margins I categorized what each code section related to, generalizing them into terms such as 'student-centered learning' or 'personal technology use.' This was helpful as I began writing my vignettes, which was also another way to familiarize myself with the gathered data. Lastly, I took all of my codes and categories and listed them together by their color grouping to sort through and look for common themes.

Findings

In order to best organize and present the information from the interviews I wrote them in narrative form, discussing each art educator's pedagogy, technical practices, and how they foster student engagement through technology. I was surprised to find that three of my participants had limited technology available to use in their classrooms, usually a single computer and projector. Still, all but two of the participants stated that they wanted to use more technology and would use

what they had available to its full extent. No matter their technology standing, all participants commented on their schools having some form of computer lab that were unavailable to them due to being reserved for testing.

When explaining how they use technology in their classrooms as forms of student engagement, all participants were using technology in ways that supported old techniques. For instance, instead of using a slide projector teachers used a digital projector connected to a laptop to show reproductions. However, most also used technology as a way to enhance student learning. By having access to search engines students could find the answers to their questions immediately and begin their own inquiries. Some students also found greater value in their artwork after submitting them to online galleries. None of the participants said they were doing completely new, transformative things with their technology.

Alesha Belinstine

Alesha and I met at the last intensive Summer Studio class held in Gainesville, FL. I decided to ask her to participate when I remembered hearing her talk extensively about her students during our class together at UF. Our meeting was on a Monday at 4pm Central Time and we spent the first few minutes of our Skype session catching up and talking about the graduate program. Her camera is at a low angle, pointing up at her. The room she is in is painted a medium blue and I can see part of an ink drawing hanging on the wall behind her.

Alesha Belinstine lives in Michigan and has been teaching kindergarten through fifth grade art for five years. She teaches at two schools and has roughly 800 students. Focusing more on critical thinking and creativity than technical skills, she prefers to have a student-centered classroom where they have control of the learning process.

Alesha has a high proficiency with technology and admits that her iPhone is essential to her since she does everything on it. Along with her personal laptop she uses an iPad provided to her by her schools to do daily tasks, both personal and professional.

Students at one of her two schools are very active with technology and are constantly relaying information about the lesson that they have researched at home to her during class time. Although the other school is in the same district, the use of technology outside the classroom by her students is drastically lower.

In her classrooms Alesha has access to an iPad, an Apple TV, and a projector. While the computer lab is already reserved, there is an iPad cart for her to check out as well as a new Chrome book cart she has yet to use in her classroom, but is excited to implement.

Alesha sees technology in the classroom as unavoidable in this day and age and thinks of it as an important and useful tool. But even with the attraction of technology, Alesha has a hard time using it in her classroom. Unless she checks out the iPad cart she and her students have access to only one iPad in her classroom. She says that can be hard and wishes she could put technology in the hands of her students more often. Along with the problem of accessibility she notes that what technology she does use quickly becomes outdated. "I feel we're always three years behind everybody." It's frustrating to her when she can't access content because things always need to be upgraded.

To engage her students, Alesha primarily shows her students resources from the Internet, such as contemporary or historical reproductions and videos. She has them take responsibility of their work by having the third, fourth, and fifth graders create and maintain their own artwork galleries on Artsonia (<http://www.artsonia.com/>), an online museum for student artwork. Alesha says her students enjoy taking pictures of their work and uploading them to the site, "It makes

them take a little more ownership because their artwork is going to be ‘out in the world’ so that’s exciting.” To her, student engagement is when students of all levels are excited and thinking about the problem that has been given to them. It’s important to Alesha that her students are interacting and attempting to solve the idea.

Alesha believes that in the future student exposure to technologies in school will be greater as schools continue to bring in new technologies and hopes that there will be one device per student. “It always takes a little while but the stuff you can do now days on any kind of device.” To her, technology is a great tool for getting students’ attention and keeping them engaged. It’s quick, like her young student’s attention spans, and it’s something they already know how to use. However, as wonderful of a tool as technology can be, Alesha doesn’t think it will ever take the place of traditional tools and mediums in the art classroom. “Because there’s just another world where you have pastels in your hands and you’re just covered in color and they can’t really experience that without actually doing that.”

Amber Lemser

Amber and I met over the summer when we were in the same classes during the two week-long intensive studio sessions at the University of Florida. While I had not known much about her technology use I did know from speaking with her then that she cared greatly about her students’ learning. It was 7 pm in Arkansas and 8 pm in Florida when we started the Skype session. She was sitting in a cream colored room on her brown couch with her laptop. At the edge of her video screen I could see the white furry outline of her cat sitting on top of the couch back.

Amber Lemser is art educator in Arkansas who has been teaching for six years and currently teaches grades pre-kindergarten through fifth. Her teaching style focuses on student-

centered inquiry and students are given access to whatever technology or medium they feel would work best for them for a particular lesson. If the classroom doesn't possess the technology a student feels he or she needs, Amber will try to acquire it if the school has it, such as checking out the iPad cart.

Amber admits to not interacting with technology much in her personal life. While at school she is continuously on the computer for correspondence, at home she says she's been late in adapting to new digital tools. Other than using a social media account to stay in touch with family and friends and working in the Online Masters of Art Education Program through the University of Florida, Amber says she has just the bare minimum of new technology to get by.

Although she personally may go without technology, she is intimately acquainted with many of her students' habits. "[The prevalence of students using technology is] high. It's very high. Have you ever heard of *Minecraft*? I have." She comments that she loves moments when, while using technology in a lesson such as an animated flipbook, her students get excited because they have already done something similar in their own exploration of technology. She believes her students are highly engaged with their own sources of technology and that the more technology is pulled into the classroom the better prepared they will be for the real world situations they will encounter in life.

Amber considers her school digitally proficient when it comes to technology. Each classroom has a projector, an interactive whiteboard a document camera, and a few student computers in most of the individual classrooms. Along with three computer labs on campus that teachers are encouraged to take advantage of, there is an iPad cart and a laptop cart that can be checked out for classroom use. Amber is very decisive on her view of technology in the art classroom, believing that it can be both beneficial and cumbersome depending on the case. As an

art educator who focuses mainly on hands-on building and hand-eye coordination, she only lightly incorporates hands-on use of technology in her classes to start getting her students familiar with technology for later on in their educational career. Much of her technology use is of a supporting role for the lesson.

When using technology in her classroom Amber first considers her students and their needs. In her student-centered classroom she is careful not to push technology on students who dislike using it. Otherwise, students only have to ask to use a piece of technology hardware. Besides using technology hands-on when needed, Amber uses it to enhance lessons with videos, PowerPoint presentations, and picture taking. Students use computers to write along with the art they are making or to select images to use in a newly taught technique of transferring ink-jet printed images on transparency sheets to other mediums. Students also get to connect and chat with artists and authors outside their community through Skype video conferences.

Amber defines student engagement as “when a student is fully a part of whatever is going on in the classroom, whether it be a discussion with other students or with the teacher one-on-one facilitating a lesson or outside of school. “If they’re not engaged they’re not learning.” Engagement is one of the most important things to Amber; she states that it’s an important way to build a rapport with students and, through that connection, she can facilitate learning.

Despite having plenty of technology to use, there are still downfalls Amber has to face. Internet connections can be slow when too many students are online. She also mentions that getting technology fixed can be troublesome as the technology specialists only visit her building once a week. But even with these minor setbacks Amber sees technology as a high contributor to student learning in the future. “When I was in elementary student we couldn’t watch multiple *YouTube*[®] videos on how to do something or a step-by-step process. I think technology is

enhancing student learning in so many different ways and are engaging students in a way that I've never even thought possible so." But even with all this new technology to use, she doesn't believe that it will ever replace the hands-on approach to studio art. She believes that being able to touch and feel the process of making art is a part of the learning experience. It is important for students to be able to create it on their own. "I think that as an educator we have to remember that it's not always important to use technology." Technology is a wonderful enhancement tool for learning but she believes there will always be the need for students to do the hands-on art making themselves. With students already being overloaded with technology in their daily life, sometimes the simplest route is the best.

Candice Blount

Candice and I started our Skype® session by reconnecting and sharing our recent accomplishments. She has recently moved to a new home and a new school and I have just been recognized as 'volunteer of the year' at a local school. On my computer screen, I can that Candice is seated in the corner of a tan colored room with two windows streaming in light beside and behind her. I am seated at my desk, my camera pointing down from atop of my monitor to view my blue room and green carpet. Our conversation derails as she notices a black blur across my carpet and I introduce her to my dachshund. With the silliness over we begin to discuss my interview.

Candice Blount lives in Texas and teaches pre-kindergarten through fifth grade, with roughly 700 students in her school. She has been shifting her teaching style after being in the Online Master's Program from heavily dictated, step-by-step lessons that all result in the same artwork to being more of a facilitator for learning, giving her students more of guidelines and assisting them as they move through the process. She says of her students, "I want to teach them

the basics, so they can move forward technically but I want them to discover their voices in art, not mine.” She says it has been hard, but fun, to break out of her old teaching method and that her students are just as tentative about their new freedom over creativity and mediums, but enjoying it nonetheless.

Referring to her laptop as her best friend during the interview, Candice uses technology frequently in her home life. It’s her technology use at school that is at the opposite end of the spectrum. With the use of only a laptop and a digital projector at her command, Candice says she is already missing her former classroom and its single iPad. Without even the ability for her students to take and upload their own artworks with accompanying artist statements to an online art gallery she feels as if she’s traveled back in time by ten years. “So I feel like that’s one place that in the art classroom we’re lacking and we’re the last ones to get it, especially in elementary.” Candice was happy to share that she had heard her school was getting a *Computer on Wheels* (COW) System. Since her school’s lab is usually full for testing, she hopes that she will be able to check out the COW System for her students at length.

Candice admits that simply using the laptop and projector in her classroom keeps the students engaged and attentive. In her previous classroom the addition of an iPad made a large difference in how she taught. Candice used art applications such as photo-editing or movie-making software on the iPad to teach her student new mediums and keep them engaged. Now with only the use of a laptop available to her, Candice makes the most of it by having students research questions regarding the topics and lesson they are working on or look up an artist. Engagement is important to all teachers and Candice believes it is a mixture of excitement, interest, and curiosity. She says the worst thing that can happen is a student who looks bored, “Because I’m like ‘what am I doing wrong? How do I reel them in?’” But if students are asking

questions or are excited to share something she feels like they are making progress and are engaged.

Candice looks towards technology as a way to keep students engaged. She believes that using technology in the classroom is a simple way to stimulate student engagement. “I think they’re always interested. I think that the biggest thing is that the teacher be open to it.” For children who don’t have regular access to technology at home it’s a new and novel thing. For students who have used it before it’s a way to share their knowledge with their peers and their teacher. Either way, Candice believes using technology in the art classroom is always beneficial to her and her students.

Grace Ho

Grace and I meet on Skype on a Wednesday morning at 10 am (Figure 1). Her camera is at a low vantage point where she sits, angled up to view the high vaulted white ceiling of the room she is in. It’s been over a year since we last saw each other at the 2013 Summer Studio printmaking class. We spent the first few minutes reflecting on our individual Capstone projects for the program and on our mutual excitement on graduating soon.

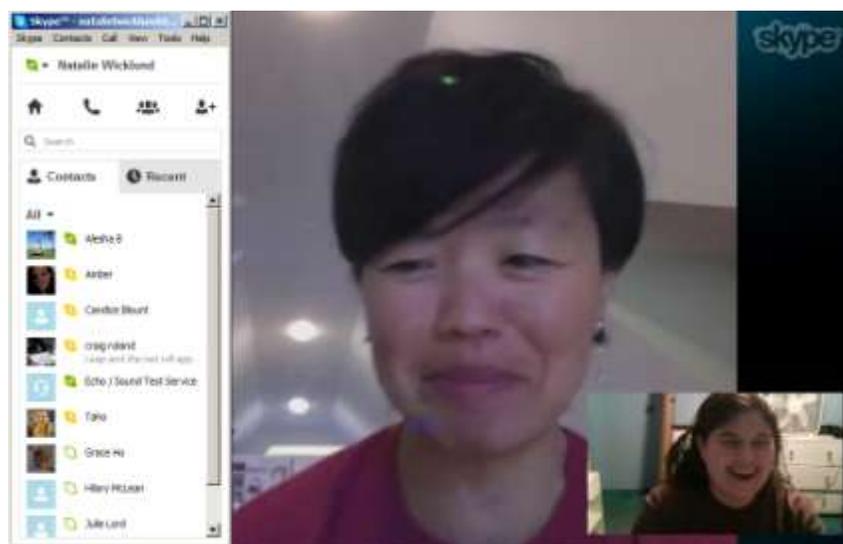


Figure 2. Screenshot of Grace Ho and Natalie Wicklund on a video call using Skype®.

Grace Ho is a community-based art educator who lives in North Carolina. She teaches five separate afterschool semi-private art lessons to students ranging from kindergarten to 12th grade. With a background in art history, Grace has never used a fully structured lesson plan but rather has, as she calls them, lesson ideas. Her students supply the overarching theme, or big idea, of the lesson and she adds in the technical skills she wants them to learn. With the control of the classroom's direction in students' hands they end up shaping the way they learn. This is more predominant in the second half of the school year when it is up to the students to come up with a project and implement it with two of the materials and skills they have previously learned.

Grace is adamant to admit that she is not the most skilled with technology and like her students she uses it primarily for connecting with others via social media and research. Her use of technology stems from self-motivation to learn and the feeling of needing to keep up with her students and her own children. "When I had a choice I would rather not use technology and sit down and have a conversation with somebody. But because of where I live and the remote setting, the rural setting that I'm in, [technology] gives me opportunities."

Because her students have limited technology use at their school, Grace says she knew when she started teaching that she wanted them to have it available to use in the studio. She makes sure to have her laptop and iPad available for her students to look up questions and tells them to bring in their own devices for research. Grace says she's always searching online and wants her students to be able to create their own inquiry process as well. Even if she knows the answer she lets the students look it up themselves and once they find an answer she has a short discussion with them. "So I'll try to create a different environment. Where, you know what? You have a question now? Let's look it up and move on with it. Does it change what we do?" Grace uses technology primarily as a tool for student inquiry and research. Through it may seem

minimal, for her classroom she judges this form of technology engagement as one of the best art educators can offer students. Along with researching she says she measures student engagement through their energy level. With a small class size it's easy for students to talk among themselves about their progress and not be overwhelmed.

Along with research, Grace uses online references to engage her students. As an art history major she tries to combine not only historical and contemporary works but artwork from children across the country and outside of the classroom for her students. She believes this gives them the ability to look beyond their regular classrooms and make broader connections.

Grace believes that technology is something that can't be, and shouldn't be, ignored. As someone who is not always a fan of technology, she still strives to expand and improve her understanding of it and its numerous uses. She does not incorporate it into the art making process, but rather into the intellectual exploration that naturally takes place in the classroom. Grace is a classicist when it comes to use of physical media to create art, but she sees the necessity of incorporating technology into her classroom.

Hilary McLean

Hilary and I planned to meet on Skype on a Thursday night, 10 pm Florida time and 7pm in California. She is highly active online as an art educator and researcher and was one of the first people I contacted for these interviews. We had to push back the meeting time by an hour due to technical difficulties and eventually ended up with video on both sides but only audio coming from her. Neither of us miss the irony of this and laugh off the problems as I resign to type my questions into the message box.

Hilary McLean lives in California and has recently changed positions from teaching middle school studio art to high school drawing. Being in a new classroom Hilary decided it was

time to change her teaching methods. She has begun to use choice-based teaching in her classroom and uses the Spiral Workshop online lesson plans and the art educational scholar Olivia Gude as guides. With her giving up some control of the classroom to allow for more student freedom, Hilary now tries to focus more on teaching problem solving, risk taking, and experimentation in the studio.

Hilary shares her students' infatuation with technology but unlike them, she uses it as much for Facebook as she does for her own scholastic inquiry. Try as she might, Hilary can't seem to get her students to use their technology for research. She assigned them a simple homework task of finding and printing out artwork images they liked. The students did not turn it in and she doesn't know if it was from a lack of caring or if the students didn't have the available technology at home. Hilary has just as much trouble being able to do simple online tasks in class. In her classroom she has an eight-year-old laptop, document camera, and projector. As of our interview she had been waiting for two months for a cord to connect her laptop to the projector. To make due she points the document camera at the laptop screen, and while it gives off some glare it's still useable.

One for getting her hands messy, Hilary still says that if she had access to more technology she would use it since it makes the creation and documentation processes quicker. Currently she takes her students to the library to access the student computers there to do research.

When asked what she would do if she had the available technology she said she would like to have her kids experiment with different forms of digital mediums. Previously she had her middle school students do photo manipulation and saw success in many of her students. She says it's frustrating to browse the Internet and read what other art educators are doing with their

technology. She says even a single iPad would make a world of difference in the classroom. At the moment she is trying to figure out how to do stop motion animation with a single document camera.

What Hilary hopes to gain for her students is to make art meaningful to them. “I think a lot of kids are like ‘how am I going to use this in real life’ and if it’s engaging they don’t care.” She says it takes a trust between the students and the teacher to create that kind of engagement. If she had the availability of technology one way she would like to work with that kind of engagement would be to have her students create mini-documentaries for art history. The Art 21 videos are popular with art educators but only focus on contemporary artists. Hilary complains that a lot of art history videos are out dated and not that appealing to students. But having students create their own short video segments on researched subjects from art history might be a fun way to tie in technology they are already using with a subject they don’t engage with often.

Madeleine Pinaire

It was a great surprise to me when I found out that there was another student in the Master’s Program living in my mid-sized town. That surprise doubled when I realized she was the new art teacher at the elementary school that I had attended. I only had to drive a few miles up the road to Madeleine’s apartment and we sat in her cozy living room late one Sunday morning, discussing the graduate program and attending to her two friendly cats before getting to the interview so we could then go out to eat.

Madeleine Pinaire has been teaching in Florida for four years and current teaches kindergarten through fifth grade. What has affected her teaching style the most is her students. Feeling as if her students previously weren’t allowed to problem solve with their artwork she now tries to give them open-ended projects to explore and more opportunities to be creative. To

have her students actively coming up with their own questions and solutions to problems is what Madeleine views as student engagement.

Only using technology outside the classroom for social media sites, Madeleine is not a big user. Her students on the other hand are constantly on their cellphones and she has been told by even her younger elementary students she needs to join sites like Instagram.

Her use of technology in her professional life mirrors her personal life. She would rather have her students get messy instead. In her classroom are a laptop, a projector, and a document camera that she uses to show videos of art processes or personally demonstrates projects for them to watch on the overhead projector. She says that use of technology makes her job easier, as walking around the classroom showing thirty-two kindergarteners how to paint doesn't give them a close up and continuous view as the document camera does.

The main problem Madeleine faces with technology is that she is just not used to it. She thinks there could be more teacher training and professional development on the subject. But that may only be useful if she had access to technology. While there is a computer lab and a newly purchased Chrome book cart it is almost impossible to book an entire week for a grade level as both technology sources are usually booked for testing.

When asked what she would do if she did have any technology available to her she said she wouldn't change her curriculum too much and is almost glad she doesn't have those resources. "I feel like if we had them we'd have to come up with ways to use them because the county gives them to us." She feels tangible works of art are special for younger students and would rather focus on that.

Sara Gurney

Sara was one of the first people I asked to interview when I decided to inquire on technology practices in the classroom. We spent two weeks rooming together over the summer at the intensive summer studio classes in Gainesville. During that time she had discussed with myself and our two other roommates about how she received an iPad cart for ten weeks and how she used them with her students. Our Skype session started at 4pm on a Monday not long after she had gotten home from work and we jumped right into the interview.

Sara Gurney has been teaching in Florida for five years and has just changed elementary schools in her county. She believes that every child can be successful in art, plus that anyone can create and use various forms of media to do so. She has recently begun adding more student inquiry into her classroom routines so that it's no longer her in front of the class lecturing. Instead, she is presenting an issue for the students to think about and solve in their own way.

Technology is a big part of Sara's life and teaching practice. At home she says both her and her husband are constantly on their iPads or Macs. At school she tries to incorporate technology as much as she can into her lessons for her students' benefit. This year she says her students also use technology frequently and talk about downloading apps or programs they have used in the classroom on their personal tablets. At her previous school it was the opposite case, in that for many of the students the school's iPad lab was their first major use of technology and each class needed a day of basic training on how to use the iPads. Sara believes schools should be implementing more technology into the classroom because it's an educator's job to prepare students for the world they will be going into and technology in the real world is only going to increase. Sara believes that not to teach students with technology would only hinder them.

In her classroom Sara uses technology to engage her students by simply using it day to day. “[They] just love it. You know, they really are interested in it baseline. They want to do it.” She doesn’t believe it takes much with technology to spark student interest to lead their inquiry process, what she defines as engagement. This is the first year her school will be getting an iPad cart and the students are enthusiastically waiting for their turn. The lessons she uses during the ten weeks while she has the iPad cart build on techniques the students already have used in traditional mediums and allows them to explore the digital mediums (Figure 3). For her older students they take pictures of their previous works and use the iPads to manipulate the images. When it comes to technology, Sara doesn’t believe it’s hard to start student engagement.



Figure 3. Image of Sara Gurney and student.

Even with her ten weeks of technology use in her classroom, Sara still thinks it is important to have a balance between digital and traditional mediums. She says that a talented art educator will know that you have to have both, that there is a happy medium in all forms of

teaching. Overall Sara believes the best thing educators can do for their students is to find a form of engagement and help them discover their own method of inquiry so they can take learning into their own hands.

Tammy Hoppe

While looking for participants for the interview I noticed the frequency that Tammy posted on the University of Florida's Art Education private Facebook group. We scheduled the interview on a Monday evening when Tammy would be available during conferences in her classroom. Her video showed a corner of her room where her desk was with a whiteboard and a large blue flag in the background. We spent the first few minutes of the interview talking about how odd it was that we had both attended two weeks of summer studio classes in Gainesville but never met.

Tammy Hoppe lives in South Dakota and teaches high school art. In her classroom she prefers her students to lead and she acts as their guide while focuses their learning on big ideas and themes. Her classroom is one of collaboration and community. She believes that when students are sharing with one another their ideas and the products of their artwork they are fully engaged in the learning process. She is an advocate for technology and uses as much as possible in her classroom. All of her lessons, worksheets, and other documents she uploads to online servers for quick access anywhere.

Tammy happily boasts that her school is open to student and teacher use of technology and that there hasn't been anything her school hasn't let her have access to in terms of technology. In her classroom she has an interactive whiteboard and laptop computers. Her classroom is not equipped with a document camera so on her own time she makes videos of demonstrations and uploads them to YouTube to show to her class at a later date.

To understand how much her students know about technology, Tammy surveys them at the start of a lesson on what they know about a particular device or program that they will use. She likes to get feedback from her students before starting out in case they don't know the technology at hand and need a review or if they have already used it before and want to learn something different. It makes it easier for her when everyone is at the same level and are building on previous skills. For example, when her students already know how to use the audio recording ability in PowerPoint Tammy shifted the lesson to include making podcasts instead, something most of them had never done. Now her students can make self-assessment responses through the podcast recordings.

Tammy is glad to see the rise of new technology in the classroom. Instead of teaching them step-by-step she feels like teachers now can let students have the ability to learn on their own, give feedback on what they know and what they can produce with the new knowledge given to them.

To keep her students engaged she uses technology as a teaching tool and as a medium for student use. "I like to have them spend time using it also because ultimately they're the ones who need to know how to do this stuff and use this stuff safely." As much as Tammy believes technology to be useful she still thinks it should not be forgotten that technology is a tool in the end and shouldn't be the goal itself. With the wide scope of available technology today, Tammy also hopes that schools might begin producing *tips of the month* to highlight resources teachers might not know they have or know how to use.

Summary of Findings

All the art educators I interviewed used technology as a means to promote student learning. They all focus on or were beginning to implement student-based learning in their

classrooms. Only one out of the eight art educators commented on not wanting to implement technology in her classroom, because she didn't have much training in technology and she didn't find it appealing for her students' use. Besides this one educator all other participants wanted to bring more technology into the art classroom and used what they had to the full extent. In addition to using technology as a replacement for an old teaching or learning method, some art educators were using technology as a means to enhance student learning in ways previously unavailable such as connecting with other art classrooms in real time across the United States. The majority of educators I interviewed stated that their students were easy to engage with the assistance of technology. Lastly, although they use technology and stress the benefits from it the majority of the educators interviewed thought that technology was a tool to be used to facilitate learning and art making and should not be the sole focus of their instruction.

Discussion and Conclusion

The goals of my research were to better understand what current art educator's pedagogies are, how they are using technology in their classrooms, and how they are using technology to foster student engagement. With technology being one of the main topics of discussion in schools today scholars remind us that technology should be used as a tool for learning and the use of it should not be the end product (Black & Browning, 2011; Dempsey, Hofer, & Harris, 2013; Wilks, Cutcher, & Wilks, 2012). Additionally, scholars state that educators must stay on par with their students' technological practices and list many ways for teachers to begin to familiarize themselves with technology and its many uses in the classroom (Black & Browning, 2011; Gregory, 2009; Huffman, 2013; Prensky, 2005).

While the art educators interviewed are not doing anything completely innovative and new they are still using technology in ways that their students will benefit from, even when faced

with limited technology. Prinskey (2005) states that technology integration is “a four-step process: (1) dabbling, (2) doing old things in old ways, (3) doing old things in new ways, (4) doing new things in new ways.” The teachers interviewed were all using technology to do old things in old ways, such as using a digital projector to show reproductions, but some were also using it to do old things in new ways. “When we begin adding digital demonstrations through video and Flash animation, we are giving students new, better ways to get information” (Prensky, 2005). What Prinskey determines to be the next step in technology integration is not just renovating and adapting current ideas to new technology but starting over again with new ideas, new teaching methods, and new forms for every aspect of the classroom – new things in new ways.

Discussion and Interpretation of Findings

As an aspiring art educator, what I have found through these interviews has been completely enlightening. Though my research pool was small it was still greatly different than my own community and gave me a new insight to teaching art. As a digital native who sat through long lectures in school I am pleased to find that art educators are beginning to find ways to assist 21st century learners and that there are multiple ways to do so.

Likewise, while technology can be used as a tool to create art, there are just as many ways, if not more, to use technology to engage students, to get them thinking and connecting with the world outside the classroom. While the addition of technology in the art classroom is a great help to education as a whole it must be remembered that it is the quality of teaching that students are receiving is what matters the most. In the end, technology can only be used as well as an educator can teach, no computer can substitute for an educator who places the value of student learning over all else.

Significance, Implications, and Recommendations

The underlining significance of my research is that art education is going in a steady, rising path. It is important that art educators doesn't stop this but continues to forge a path in art classrooms to enhance learning and begin to use technology to transform student learning into something new and different. Aspiring art educators like myself will hopefully find this research project as enlightening as it has been for me. If possible one day I would like to expand this research to a wider scope of art educators to include those who have one-to-one technology systems for their classrooms. I would also like to interview art educators who are taking technology use in the classroom a step above the rest by creating new technology out of old technology parts and art educators who use low-tech solutions for high-tech problems. Perhaps there is a different way of looking at teaching, technology, and student engagement that they are seeing or a different way of instruction they are doing that leads them down a different path—a path that transforms art education into something new.

Conclusion

While there is still much for me to learn as an aspiring art educator I believe that art education and art educators are working hard to keep the needs of 21st century student at the forefront. What I have learned throughout this capstone project will be the foundation of my pedagogy and I hope to join other art educators in continuing to shape the future of art education.

References

- Andrews, B. H. (2010). Student Ownership: Learning in a student-centered art room. *Art Education, 63*(4), 40–47.
- Battaglia, M. (2008). Purposive sample. In P. Lavrakas (Ed.), *Encyclopedia of survey research methods*. (p. 646). Thousand Oaks, CA: SAGE Publications, Inc.
- Black, J. & Browning, K. (2011). Creativity in digital art education teaching practices. *Art Education, 64*(5), 19–34.
- Dempsey, J., Hofer, M., & Harris, J. (2013). Grounded technology integration: Visual arts. *Learning & Leading with Technology, 40*(5), 36–38.
- Dierckx de Casterlé, B., Gastmans, C., Bryon, E., & Denier, Y. (2012). Quagol: A guide for qualitative data analysis. *International Journal of Nursing Studies, 49*(3), 360–371.
- Dilley, P. (2014). Conducting successful interviews : Tips for intrepid research. *Theory into Practice, 39*(3), 131–137.
- Gregory, D. (2009). Boxes with fires: Wisely integrating learning technologies into the art classroom. *Art Education, 62*(3), 47–55.
- Huffman, S. (2013). Benefits and pitfalls: Simple guidelines for the use of social networking. *Education, 134*(2), 154–160.
- Ito, M., Horst, H. A., Bittanti, M., Boyd, D., Herr-Stephenson, B., Lange, P. G., ... Robinson, L. (2008). Living and learning with new media: Summary of findings from the digital youth project. *The John D. and Catherine T. MacArthur Foundation Reports on Digital Media and Learning*, (November).
- Jacob, S., & Furgerson, S. (2012). Writing interview protocols and conducting interviews: Tips for students new to the field of qualitative research. *Qualitative Report, 17*(6), 1–10.

- Keengwe, J., & Georgina, D. (2013). Supporting digital natives to learn effectively with technology tools. *International Journal of Information and Communication Technology Education*, 9(1), 51–59.
- Lin, C. (2011). A learning ecology perspective: School systems sustaining art teaching with technology. *Art Education*, 64(4), 12–18.
- Prinsky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5), 1–6.
- Prinsky, M. (2005). Shaping Tech for the Classroom: 21st-century schools need 21st-century technology. Retrieved November 23, 2014, from <http://www.edutopia.org/adopt-and-adapt-shaping-tech-for-classroom>
- Roehl, A., Reddy, S., & Shannon, G. (2013). The flipped classroom: An opportunity to engage millennial students through active learning strategies. *Journal of Family & Consumer Sciences*, 105(2), 44–49.
- Rowley, J. (2012). Conducting research interviews. *Management Research Review*, 35(3/4), 260–271.
- Seng, E. L. K. (2014). Investigating teachers' views of student-centered learning approach. *International Education Studies*, 7(7), 143–148.
- Shernoff, D. J. (2013). Measuring student engagement in high school classrooms and what we have learned. In *Optimal Learning Environments to Promote Student Engagement* (77-96). New York: Springer.
- Smith, J., & Firth, J. (2011). Qualitative data analysis: the framework approach. *Nurse Researcher*, 18(2), 52-62.
- The John D. and Catherine T. MacArthur Foundation Reports on Digital Media and Learning. (2008). Living and learning with new media: Summary of findings from the digital youth

project. Cambridge: Ito, M., Horst, H. A., Bittanti, M., Boyd, D., Herr-Stephenson, B., Lange, P. G., & Robinson, L.

Wilks, J., Cutcher, A., & Wilks, S. (2012). Digital technology in the visual arts classroom: an easy partnership. *Studies in Art Education*, 54(1), 54–65.

Yazzie-mintz, E., & McCormick, K. (2012). Finding the Humanity in the Data: Understanding, Measuring, and Strengthening Student Engagement. In S. L. Christenson, A. L. Reschly, & C. Wylie (1st Eds.), *Handbook of Research on Student Engagement* (743-761). New York: Springer.

Appendix A

Natalie Wicklund
120 SE Mojave Way
Lake City, FL 32025
Nlw09c@ufl.edu

Informed Consent Notice

Dear Art Educator:

I am a graduate student at the University of Florida. As part of my capstone project I am conducting interviews of art educators for the purpose of learning how they are using technology in their classroom to engage students. The results of this study will help my study gain insight into how and in what ways, as a collective, art educators are and are not making progress with student engagement with regards to technology. I am asking you to participate in this survey because you have been identified as a motivated and technically-proficient educator.

Participants will be asked to meet at a scheduled time online over a video messaging service such as Skype or Google+ for an hour and be asked ten to fifteen open-ended questions on your educational practices as well as a possible follow-up interview for no longer than thirty minutes. Participants will be video recorded, which to be transcribed immediately after the interview. You will not have to answer any question you do not wish to answer and may quit the interview at any time. Only I and the University of Florida will have access to the recorded video for verification purposes, which will be deleted at the end of the study. I will only publish your name upon your consent. Otherwise I will remove any identifiers so your identity will be kept confidential to the extent provided by law.

There are no known risks or immediate benefits to the participants. No compensation is offered for participation. You are free to withdraw your consent to participate and may discontinue your participation in the interview at any time without consequence. If you have any questions about this research protocol, please contact me at (386) 697-9248. Questions or concerns about your rights as a research participant rights may be directed to the IRB02 office, University of Florida, Box 112250, Gainesville, FL 32611; (352) 392-0433.

By signing the following form and returning it via printing, scanning, and emailing, you are giving me permission to report your responses, either anonymously or identified, in the final manuscript to be submitted to my faculty supervisor as part of my course work.

Thank you,

Natalie Wicklund

Informed Consent Notice

I, _____, have read the procedure described above. I voluntarily give my consent to participate in Natalie Wicklund's study of the use of technology in the art classroom to engage 21st century students. I have received a copy of the research description.

Please mark one:

_____ I consent to the use of my name in this study.

_____ I DO NOT consent to the use of my name in this study and wish to be anonymously identified.

Signature

Date

Appendix B

Interview Questions

1. Tell me about yourself and your teaching pedagogy.
 - a. What is your opinion of technology in the classroom?
2. How do you personally define student engagement?
3. How do you assess student engagement?
4. What do you know about your students' engagement with digital technology outside the classroom?
 - a. What kind of technology do you interact with outside the classroom?
5. What kind of technology do you have access to at your school and in your classroom?
 - a. What challenges do you face with your technology?
6. In what ways do you use technologies to engage your students?
7. How do you incorporate technology into a new lesson?
8. How do you see new technologies contributing to classroom learning?
9. Is there anything else you would like to add or comment on with regards to engaging students with technology?

List of Figures and Captions

Figure 1. Screenshot of ISSUU document.

Figure 2. Screenshot of Grace Ho and Natalie Wicklund on a video call using *Skype*[®].

Figure 3. Image of Sara Gurney and student using an iPad to manipulate student's photo.

Author Biography

Natalie Wicklund was born in Lake City, FL. She can trace her family line of educators to her great-grandmother down to her mother, her sister, aunt, and elder cousin who currently work for the public education system. After an accident left her partially disabled in 2000 she spent her middle school years homebound and in front of a computer making friends across the globe when she couldn't even go outside. Natalie graduated from Florida State University with her Bachelor's Degree in Studio Art in 2011 where she realized her love for teaching art rather than making it. While unable to work and waiting on a hip replacement, Natalie began pursuing a Master's Degree in Art Education from the University of Florida in 2012. She has been voted the 2014-2015 Adult Volunteer of the Year at Westside Elementary School and is now looking forward to accomplishing her dream of becoming an art teacher in 2015.