

**FLIPPED CLASSROOMS: ADVANTAGES AND DISADVANTAGES FROM THE
PERSPECTIVE OF A PRACTICING ART TEACHER**

by

Vanessa M. Rivera

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PERSPECTIVE OF A PRACTICING ART TEACHER

Vanessa M. Rivera

State University of New York at New Paltz

We, the thesis committee for the above candidate for the Master of
Science degree in Art Education, I hereby recommend acceptance
of this thesis.

Beth Thomas, Ph.D., Thesis Advisor
Department of Art Education, SUNY New Paltz

Jessica Poser, Ed.D., Thesis Committee Member
Department of Art Education, SUNY New Paltz

Approved on _____

Submitted in partial fulfillment of the requirements for the Master
of Science degree in Art Education at the State University of New
York at New Paltz

Dedication

I dedicate this research to my many past, present and future students all of whom motivate me to continually improve upon my practice as an art educator.

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Abstract

The following case study investigates the advantages and disadvantages perceived by a practicing art teacher who has used the “flipped classroom” method. Flipping the classroom is the practice of providing online lectures which students can watch from home as a way to replace lecturing in the classroom. Ideally this practice allows more class time to be dedicated to active learning rather than instruction (Bergmann & Sams, 2014). Proponents of the flipped classroom method believe that it provides many benefits including improvements in classroom efficiency and student engagement; others argue that it is difficult to implement and that unequal access to technological resources disadvantages certain populations (Smith, 2016; Tomlinson, 2015).

Despite limitations which restricted the participant to a partially flipped classroom the data was interpreted as generally supportive of flipping. This case study suggests that the advantages of flipped classroom practices outweigh potential disadvantages. It also suggests that issues concerning student access to technology can be successfully mitigated through the use of a partially flipped classroom. In the future a comprehensive study of art teachers who work with different demographics could be conducted to include a wider range of opinions.

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Introduction

When considering the many ways that people rely on technology in their everyday lives it is not surprising to hear that teachers depend on it in their classrooms as well. One might argue that at this point in time it would be a struggle to find an entirely tech free classroom in the United States. As an art teacher, I am reliant on internet based programs to conduct even simple daily tasks such as attendance keeping and grading. The reality is that I am so accustomed to these virtual tools that technical difficulties cause a whole series of simple classroom undertakings to become unexpectedly inconvenient.

In addition to this awareness of my own technological dependencies it has been difficult to avoid noticing the ways that technology influences student behavior and learning. While I have witnessed some negative consequences arise, such as students incessantly checking for social media updates, I have also watched students pull up digital resources to inspire and guide their artmaking. Although not every student I teach has access to their own personal devices I can normally coordinate the usage of school owned laptops during class time with little difficulty.

Recognizing that there is easy access to a great deal of information from the confines of my classroom via the internet I found myself wondering how I may be able to integrate digital teaching strategies into my daily practices and improve student learning outcomes. In particular the idea of a “flipped classroom” intrigued me and inspired me to pursue this study.

Rationale

This research study focuses on the positive and negative effects of flipped teaching methods as described by an art educator who has implemented those strategies.

With the recent widespread availability of computers and internet access current educators are tasked with the endeavor of reassessing what is taught along with how that information is delivered (Bishop & Verleger, 2013). An example of this is that while all students must still learn how to write, many schools have long abandoned cursive as a part of their curriculums in favor of developing students' abilities to type and utilize computer programs.

In fact, we are in an era where developing technological literacy in students can no longer be viewed as an optional aspect of education but rather as an essential objective (Bybee, 2000). If a student graduates from high school without a comprehensive understanding of how to comfortably navigate computer and internet resources they will face significant disadvantages when competing against their tech savvy peers whether they pursue higher education or enter the modern workforce (Wang, 2012). The very task of finding a job or submitting an application increasingly requires a basic level of technological literacy since many employers now conduct their hiring processes online (Parry & Wilson, 2009). Additionally, students who lack technological literacy risk missing out on the various conveniences offered through current technology whether it's shopping, banking, or obtaining a college degree.

These realities of contemporary society have created a sense of urgency within the educational community to integrate technology in the learning process and ensure that students are equipped to participate in 21st century life. In response many school districts across the country now provide tablets or laptops for every individual student while others have set goals to obtain more devices for their schools as soon as possible (Warschauer, 2005). Another solution

to the issue of making technology available in schools has been the adoption of bring-your-own-technology policies so that students who own devices can utilize them during instruction (Hockly, 2012). Even if students only own cellphones, they can often utilize them to gain access to the internet and complete assigned tasks (Barseghian, 2012). Although not every student currently has access to technology it has quickly become more widespread in recent years and is predicted to continue on that trajectory, becoming more readily available over time (Ross, 2015).

The increased availability of technology has led to the development of a variety of strategies for utilizing computers as teaching tools, including the idea of a “flipped classroom.” The basic concept of a flipped classroom involves teachers creating a virtual classroom page and posting lesson lectures online, often in the form of a video, so that students can view it as homework. That then allows teachers to jump directly into active learning activities based upon the lecture topic the students learned about the night before. Through leading a flipped classroom teachers have reported experiencing a wide range of benefits such as being able to utilize class time more efficiently, higher student engagement and more opportunities for differentiation (Bergmann & Sams, 2014).

Literature Review

Often times when a new technology becomes available there are those who resist change and prefer to continue utilizing older methods. For example when photographers who were accustomed to black and white film photography were presented with the ability to photograph in color, or later to transition to digital photography, some felt the advancements detracted from the beauty and artistry of the medium and insisted on continuing with the older formats (Dowling 2015). In the case of photography, disputes about the advantages and disadvantages associated with each technological advancement are ongoing, but what are the implications of a teacher who chooses not to incorporate the use of technology in their classroom? How might the inclusion or exclusion of technology in teaching impact students? Specifically, what advantages or disadvantages have teachers witnessed after instituting a flipped classroom?

The advent of computers has not only impacted nearly every facet of our daily lives, including the ways that we communicate, the media we consume, and how we spend our time, but it may also have also triggered unexpected secondary effects in the ways that we think and learn. For example, there is evidence that our widespread consumption of information through digital mediums has led students to develop strong multi-tasking skills due to their simultaneous interaction with different sources of information and stimulation (de Castell & Jensen, 2004).

According to de Castell and Jensen students have developed:

...highly efficient and effective deployments of partial, subsidiary, and intermittent attention strategies routinely used by students, who have learned to do homework while watching television and listening to music on headsets — with that homework being done on a computer whose multiple screens are simultaneously at work and at play, between Internet research, chat programs, word processing, e-mail, and, of course, online games,

users switching rapidly among the screens to minimize any loss of time associated with waiting for processing, loading, connecting, and the like. (2004, p. 388)

They argue that students growing up with this ability have little patience for sitting and waiting for instruction from a teacher while being told they cannot access the various sources of stimulation they are accustomed to. It is likely that from their perspective being denied access to their technology during class is experienced as an under-utilization of their time (de Castell & Jensen, 2004).

The types of media that students respond to have also been affected by the use of technology. Greenfield (2009) has pointed out that,

Schools often rely on older media such as print and lectures to communicate with learners who increasingly lack the cognitive socialization—the informal education—that would enable them to process these media with maximum efficiency. (p.71)

He proposes that since students regularly interact with technology, which has become increasingly visual in nature, it is perhaps misguided to deliver and assess their knowledge using outdated strategies (Greenfield, 2009).

Some academics have proposed that technology has not only changed the ways that students learn but is actually re-defining the goals and meaning of education itself (Vlieghe, 2014). Vlieghe summarizes this thought beautifully:

What is happening today is perhaps not so much a transformation within education, but of education itself. I take education here in the sense Kant meant when he stated that it is only through education that we come to be the sort of beings we are. This is to say that the use of different educational technologies might go together with the coming into existence of an altogether different type of human subjectivity. (2014, p. 520)

As educators gain an understanding of the ways that technology changes student needs and the role of education it becomes important to reassess the modes of teaching that are used in the classroom and ensure that education remains authentic and relevant to today's world. The teaching environment has evolved and teachers must keep up if they hope to maximize their effectiveness at communicating ideas to their students.

It is within this context that educational leaders began looking to technology for solutions. Among the solutions developed was an idea pursued in 2007 by high school science teachers Jonathan Bergmann and Aaron Sams (Noonoo, 2012). Their thought was that by recording and pre-broadcasting their lectures for students to watch online they could create more time and opportunity to actively work with students and clarify concepts while in class (Noonoo, 2012; Bull, Ferster and Kjellstrom, 2012). This became the basis for a new pedagogical approach referred to as a flipped classroom. Although it has evolved since its conception and a few variants now exist, flipping the classroom entails a teacher providing information that would traditionally be covered through an oral, in class lecture via video or digitally based media that students can access at home and re-visit if needed. This frees up class time that can instead be dedicated to hands on learning or direct engagement and interaction with students (Bull, Ferster and Kjellstrom, 2012). Essentially the goal was to utilize technology to maximize the efficiency and effectiveness of class time.

Advantages of Flipped Classrooms

With the popularity of flipped classroom instruction growing every year, a wide variety of opinions and observations have been expressed about its effectiveness (Hall & DuFrene, 2016). One benefit is an increased efficiency of time usage. Since a flipped classroom typically involves watching video versions of course material online as homework, students can then come

to class the next day ready to actively engage in the material (Martin, 2015). It also allows teachers to spend more time individually interacting with students, which creates more opportunities to check for understanding and clear up misconceptions (Bergmann & Sams, 2014). An additional benefit regarding time efficiency is that once teachers have recorded and chronicled course materials online they can easily refer to it in the future, which saves them the time of repeating themselves and allows them to focus their productivity addressing other student needs (American School Board, 2014).

Improvements in student engagement are also frequently supported by existing research. This could be because the flipped classroom approach presents material through digital mediums which students can more easily relate to (Greenfield, 2009). Considering most of today's youth grew up with a reliance on web based forms of information consumption and communication perhaps computer based modes of learning resonate with them more naturally (Bergmann & Sams, 2012; Goodwin & Miller, 2013). Another explanation for students finding video lectures more engaging than traditional lectures is founded in research into human nature and physiology, which has found that learners typically lose interest in an activity after about ten minutes (Medina, 2008; Goodwin & Miller 2013). This works perfectly with the structure of a flipped classroom since the video lectures used are kept short in order to remain engaging (Engin & Donanci, 2015).

Additionally some schools have found that student performance appears to improve when utilizing flipped classroom techniques. One high school outside of Detroit which was struggling with high failure rates was able to cut their student failure rate by two-thirds after assigning video lectures as homework and completing assignments together in class (Rix 2012). This is not an isolated finding but rather an effect that has been experienced across age levels and

content areas. At an elementary school that decided to provide students with iPads and change the way they approached their curriculum researchers witnessed that,

After just one semester, these students have the highest math and reading scores, the best attendance, and the fewest instances of out-of-school suspension in the district. Why?

Because, as both students and parents say, they're "more engaged in their learning."

(Smith, 2016, p. 24)

It appears that some preliminary nonscientific data supports that teachers share a favorable view of flipping as well. In a survey of 453 teachers who flipped their classrooms a majority of the teachers reported improvements in student performance and attitudes and 99% of the teachers agreed that they would continue to use the flipped classroom approach in the following school year (Flipped Learning Network, 2012).

Another strength of the flipping is that it allows students to re-visit material at their own pace by re-playing video lectures or reviewing content at a later date. In other words, flipping allows students to enjoy the benefits of self-paced learning or differentiation (Sams & Bergmann, 2013). Students may learn at slightly different paces from one another, with some zipping through concepts on the first try and others needing to have concepts repeated and clarified before they can really grasp what was said. The ability for students to access lectures online and watch them repeatedly if needed means that a major weakness of traditional oral lectures, namely the inability to revisit content, can be bypassed (Keene, 2013). Teachers also have more time to give one-on-one support or challenge gifted students during class because less time is dedicated to delivering instruction (Hall & DuFrene, 2016). Sams and Bergmann (2013), the original developers of flipping, have also shared that a component of their approach to flipping involves allowing students to re-take tests or quizzes. Since they consider self-paced learning to be an

important benefit of flipping, this policy gives students a chance to demonstrate that they have mastered course content even if they required additional time to do so. They shun the idea that assessment scores must remain static or punitive and encourage the use of flexibility in assessment as a component of flipping (Sams & Bergmann, 2013).

Flipped classroom strategies are also conducive to improvements in communication. Since course content is shared online through videos on blogs or other virtual classroom spaces it is much easier for students to stay informed about what a teacher is covering in class and parents can also watch over student progress and take a more active role in their child's education. Online sharing also facilitates the distribution of teaching resources and best practices with others in the educational community so that wisdom can be shared collectively (Christensen, Horn & Johnson, 2008). On a smaller scale students who are unable to attend school due to illness or other personal circumstances can remain up-to-date on assignments by checking what has been posted online. Conversely if a teacher is absent they can easily share that day's lesson with a substitute teacher by directing them to their website (Bergmann & Sams, 2012). This fosters a stronger sense of connection between home and school and allows for increased transparency.

It has also been cited that students become more empowered through the use of technology in and out of the classroom and are able to take a more active role in their own education (November, 2009). By teaching students to use technology as a tool for acquiring knowledge teachers can enable them to pursue learning independently. Looking into the future it is predicted that digital learning platforms will become sophisticated enough to meet the needs, interests and abilities of each individual student and will eventually lead to teachers playing a more supportive than directive role in education (Christensen, Horn & Johnson, 2008).

Disadvantages of Flipped Classrooms

Though there are clearly many vocal supporters of flipping there are also several opposing perspectives that have been conveyed in recent literature. This section will explore some of the obstacles encountered by those who adopt flipped classrooms as well as other points of criticism.

One problem that has been identified as an obstacle in the adoption of flipped classrooms is that many educators react to new teaching strategies, including flipped classrooms, with skepticism and suspicion (Fulton, 2012). Since educators are met with a constant barrage of new techniques and trends in education, they will require significant reassurance that flipping is more beneficial than the numerous other educational strategies that have been touted in the past before they commit to deviating from their current teaching practices. They may wonder whether flipping is just another fad or buzzword and ultimately question what significant improvements it offers regarding the effectiveness of their teaching. Specific concerns included the possibility that flipped classrooms might be a money making scheme along with doubt that the use of videos rather than readings as homework revolutionizes the efficiency of class time (Young, 2015). When teachers approach the integration of technology in their curriculums with a negative attitude it is far less likely to result in positive outcomes so the issue of teacher's willingness to embrace change must be considered (Ertmer, 2012).

Several school districts who have invested in technology for their students ultimately discovered no differences in student achievement so it seems that teachers' doubts about whether improved outcomes could be produced via technology may be well founded (Hu, 2007). Reaching a 1:1 student to computer ratio has become a popular goal among school districts, however many districts that made lofty investments into laptops and other devices, including multi-million dollar initiatives, have seen disappointing or inconsistent data regarding whether

the new technology had been well utilized or contributed to improved student learning outcomes (Weston & Bain, 2010). In one study which tracked the impact of 1:1 computing in Ohio schools over 5-8 years no significant changes in students' math, reading, science, social studies, and writing scores were found (Williams & Larwin, 2016). On the contrary some schools reported that providing devices for students resulted in various forms of mischief such as exchanging answers during tests, hacking, downloading pornography, and misusing class time (Hu, 2007). Evidence suggests that it is unrealistic to expect that simply bringing computers into schools will result in transformational learning experiences without also providing teachers with the training and support necessary to implement new strategies (Inan & Lowther, 2010).

The issue then is finding the time for teachers to gain that training and support. With the barriers of restrictive scheduling and curricular demands teachers often have very limited planning time and can feel too overwhelmed to experiment with new strategies (Buabeng-Andoh, 2012). Teachers have lamented the increased workload created by digital communications with students outside of school hours, learning new tech skills, course maintenance, and the stress of remaining aware of quickly evolving technological resources (Buabeng-Andoh, 2012). In a study of online-based high school teachers one participant commented that, "asking [teachers] to take on board yet another task in an already overcrowded curriculum and extremely busy work day is pushing many teachers to the limit and in some cases beyond" (Neyland, 2011, p.11). If educators were granted time during the workday to focus on revitalizing their teaching strategies and course material they might be more welcoming to the idea of change; however it is rather unlikely that teacher workloads will decrease significantly anytime soon and overworked teachers are understandably hesitant to accept additional responsibilities (Fisher, 2011).

An additional concern is that some students will be uncomfortable with the move towards a tech-based approach (Herreid & Schiller, 2013). It would not be wise to neglect that individual students have different learning styles and may prefer in class lectures over videos or other digital media (Keene, 2013). Although many students seem to respond well to video lectures there is evidence that many still rely on teachers reviewing concepts in class with them (Engin & Donanci, 2015).

While students arriving to class confused about the concepts presented in the previous night's homework assignment would not be a phenomenon isolated to digitally based assignments, research by Pamela Kachka finds that there is another similarity between conventional written homework and the video lectures typical to flipped classrooms.

The other big concern exists through all stages of education history. What if the student does not do the homework? As long as there has been homework, there have been students who fail to complete homework and simply show up for class unprepared. (2012, p.2)

The reality is that many teachers have seen that their students are unlikely to complete their homework whether it's in the form of a short and engaging video lecture or a boring worksheet. Although teachers can make accommodations for unprepared students or explain things verbally in class that can negate the in-class lecture time saving benefits that the flipped classroom method often touts as its' primary advantage (Aviles, 2014).

Whereas some teachers worry about how to address students who don't do their homework (digitally or otherwise) others argue that it is better not to assign homework at all and view the flipped classroom negatively due to its reliance on an at-home component. Research has found that the correlation between homework completion and student achievement is low or non-

existent yet students spent 51% more time on homework in 2004 than they did in 1981 (Bennet & Kalish, 2006). Although these types of findings have led many teachers to critique or abandon their homework policies it is notable that online homework, such as the type typically assigned by flipped classroom teachers, is better received by most students and can lead to increases in student performance (Dillard-Eggers, Wooten, Childs, Coker, 2008).

Either way the conversations surrounding homework in a flipped classroom most often reflect on the issue of student access to technology. While a majority of American K-12 public schools provide internet access to their students the quality of that access becomes significantly lower in schools with high rates of poverty (Ross, 2015). When compared to national school connectivity goals only 14% of low income schools meet current standards (Ross, 2015).

Although many low income families report having access to the internet it is often limited to access via cell phone and collected data suggests that at least 38% of low income students have no web access from home at all, while those who do are likely to be under-connected (Zickuhr & Smith, 2012). Since students are increasingly expected to utilize the internet to conduct research, hand in assignments or communicate with peers and instructors a students' ability to access the internet has become perceptibly linked to the ease of their academic success (Smith, 2016).

While the U.S. has made tremendous progress over the past decades regarding school internet access (Tomlinson, 2015), substantial digital inequalities persist and a disproportionate number of the students who do not have reliable internet access are African American or Latino (Smith, 2016). This means that participating in a flipped classroom would present a hardship for a considerable population of American students.

Variations of the Flipped Classroom

While flipping typically involves students using the internet at home to complete the lecture portions of their classes, some teachers have found it impractical to limit themselves to that format and instead rely on variations of flipping that are more suitable to the needs of their students.

One obstacle experienced during flipping is that many students still lack reliable internet access at home. This is an especially prevalent issue in low income communities where a higher number of families may find the cost of technology and internet service prohibitive. To circumvent this problem, teachers have distributed DVD versions of their video lectures that can be watched by students whose families own a DVD player but not a computer with internet access (Butrymowicz, 2012).

Students whose internet access is limited to a cell phone or other handheld device such as an iPod may have inconsistent or unreliable internet connectivity dependent upon whether the device requires a Wi-Fi connection and whether they have Wi-Fi access from home (Ross, 2015). This represents a problem which disproportionately affects low income students and has led some leaders in the field of education to point out that the tech movement, and inequality in access to internet resources, is now contributing to the achievement gap which already existed between low income students and their more privileged peers (Rich, 2014).

As a solution to the issue of connectivity, there are many teachers who instead allow students to view their video lectures at the start of class. As another alternative some teachers provide students with the option of viewing a digital lecture or reading a text based version of the same information so that students can choose the medium that best suits their learning style or access to technology (Ash, 2012).

By embracing aspects of the flipped classroom that work for their specific teaching environment, teachers have been able to avoid problems that arise from a lack of internet access at home, differences in student learning styles and other disruptive aspects of a traditionally flipped format. For example, “microflipping” entails using technology together during class time combined with short lectures and conversations so that teachers can experience the increased engagement and encouragement of self-motivated learning seen in flipped classrooms while bypassing the problem of students showing up without their “homework” completed (Buemi, 2014). Many other terms have also been used to describe variations on the flipped classroom including partially flipped, partially inverted, in-class flip, and blended classroom (Dawes & Fox, 2013; Fathy & Li, 2015; Brown, 2016; Montgomery, 2013).

The term flip implies an all-or-nothing reversal, but that is not the case... The way a flipped classroom may be most effective depends on the context of a class, so there is not a single flipped classroom method. Use and adoption depends on the instructor.

(Bull, Ferster & Kjellstrom, 2012)

It appears that implementing modified versions of flipping is common practice and can present teachers with many benefits since it makes the transition to a new method more fluid and can be shaped to the needs of their students.

Methods

This research was conducted as a qualitative case study and sought the opinion of a practicing art teacher who could share their experiences with flipped classroom teaching methods. An emphasis was placed on gathering information about the advantages or disadvantages the teacher came across while implementing flipped classroom techniques versus a more traditional in-class oral lecture model with the hope of informing the practices of current and future art teachers. A leading goal of the study was to determine what an art teacher, who implements a flipped classroom, perceives as the pros and cons of the teaching strategy and whether they found the process worthwhile. An assumption was made that the participating art teacher would have discovered both advantages and disadvantages throughout the process of exploring the flipped classroom approach and that the participant would have insight to share about the benefits and obstacles encountered. My research questions were guided by a desire to investigate what those advantages and disadvantages may be, specifically from the perspective of an art teacher who has experienced them personally in real life teaching scenarios.

My primary research question was:

-What advantages and disadvantages does a practicing art teacher perceive in a flipped classroom?

My sub questions were:

-What are some advantages of a flipped classroom from the perspective of a practicing art teacher?

-What are some disadvantages of a flipped classroom from the perspective of a practicing art teacher?

My sub questions were intentionally open ended in order to remove any pre-conceptions I held about the advantages and disadvantages a flipped classroom might present. I wanted to seek feedback about the advantages and disadvantages of a flipped classroom from the perspective of a teacher who has already implemented the strategies and hear what advantages and disadvantages they identified through real world experience rather than project my own ideas or concerns found in pre-existing writings about the possible advantages and disadvantages of the method.

Setting

All research during this study was conducted and gathered via publically available resources on the internet or remotely via telephone contact with my single participant. The criteria for participation in this study included that the participant be a practicing art teacher in a school environment with experience developing and implementing a flipped classroom. I did not limit myself to participants in any specific district or state because I wanted to leave myself open to speaking with a knowledgeable participant outside of my local area if necessary. My one geographic limitation was that the art teacher be teaching within the United States.

Participant

The participant, Rachel Hessing-Wintemberg, runs a classroom blog titled *The Helpful Art Teacher* which serves as a virtual classroom resource for both her students and the thousands of people who visit it regularly.

Mrs. Wintemberg works in a large, urban, northeastern district in the United States with a high population of Latino students and English language learners. The school district she works in is under constant pressure to improve standardized test scores which effects the way schedules and resources are allocated. She also reported that it is a very low income district and qualifies

for a higher level of public funding meant to increase educational opportunities for disadvantaged student populations. She currently sees her middle school students three times a week but the frequency of her time with students has fluctuated over the course of her 28-year career. The school provides access to technology including a projector, computers, and iPads or Chromebooks which are available for use in classrooms during the school day. However, the students do not take devices home and many do not have internet access or personal devices available outside of school.

Despite the limitations which prevent Mrs. Wintemberg from running a fully flipped classroom, I decided to continue exploring my study based on her experiences because the obstacles she encountered reflect circumstances similar to those that many teachers and students are navigating across the country at this time.

Data Collection

The primary method of data collection in this study involved a phone interview with my participant. I developed a list of fifteen questions designed to gather data about the advantages and disadvantages experienced by my participant while implementing flipped classroom approaches. I also included several optional follow up questions for use in cases where more detailed clarification about the responses might be needed [See Appendix B]. The phone interview was recorded with the consent of the participant and lasted approximately an hour and a half. Additionally some information was gathered from Mrs. Wintemberg's websites including *The Helpful Art Teacher* blog, Facebook, and YouTube pages. The information gathered from these sites was comprised of usage data such as number of online visitors and followers, along with confirmation of details mentioned by the participant during the interview.

Data Analysis and Interpretation

This case study was conducted to investigate the advantages and disadvantages perceived by a practicing art teacher in a flipped classroom. During my review of the gathered data, six main themes emerged: *accessibility*, *efficiency*, *differentiation*, *student engagement*, *communication* and *art advocacy*. The identified themes were then analyzed through the lens of what advantages or disadvantages were discussed by the participating art teacher.

Accessibility refers to the ways that incorporating flipped techniques appeared to ease or complicate student access to information.

Efficiency addresses the ways that flipping affected the convenience of completing various teaching tasks and time needed to do so.

Differentiation will cover data points concerning the participating teacher's ability to individualize lessons to specific student needs.

Student engagement focuses on whether student attention and motivation was maintained during class time and what changes resulted following the use of flipped teaching strategies.

Communication concentrates on my participant's ability to share information about her teaching practice with students and families.

Art Advocacy examines the ways my participant was able to increase the visibility of her art program to administrators and the teaching community at large after her adoption of flipped practices and the subsequent outcomes.

Analysis

Although Mrs. Wintenberg incorporates some aspects of the flipped model into her teaching practice she has run into several limitations and used personal judgement to develop a combination of flipped and traditional teaching methods that work best for her and her student

population. Despite employing a partially flipped teaching approach rather than a fully flipped classroom, her perspective remained relevant to the goals of my study and presented me with the following data regarding the advantages and disadvantages of flipping.

Accessibility. *Accessibility* refers to the ways that incorporating flipped techniques appeared to ease or complicate student access to information. Increasing student access to art instruction was among Mrs. Wintemberg's main motivators as she first launched her classroom blog *The Helpful Art Teacher* in 2010. Although she was not originally aiming to achieve a flipped classroom, various factors at play in her school environment pushed her in the direction of a partially flipped teaching approach. Severe budget and staffing cuts around that time and an increased focus on math and English testing scores resulted in reduced art instructional time at the middle school where she had been working. The school had originally been staffed by two art teachers but with the cuts that were implemented Mrs. Wintemberg became the sole art teacher. Her students, who had been accustomed to having art everyday, were suddenly limited to having art just once or twice a week and often for shorter class periods. She became very unsatisfied with the amount of artwork that the students were able to produce and the quality of her student's work suffered visibly. The newly reduced schedule also meant that she no longer had the time needed to properly cover her thoughtfully developed curriculum. This presented her students with a severe disadvantage regarding their access to art education and motivated her to find a solution.

Advantages Mrs. Wintemberg saw the creation of a classroom blog as a potential remedy for reduced art instructional time. In some cases students identified as academically underperforming lost access to their art classes entirely in order to accommodate additional academic support into their daily schedules. Her hope was that by making her full curriculum

available online some students would be encouraged to create art work outside of class and at least partially compensate for their diminished art instruction. As she explained:

My main idea was that, if we only had one art teacher, that means only a certain number of kids were getting art. And if you have all these kids who are deficient in basic skills and they're getting these skills improvement programs, they're not getting art. So, wouldn't it be cool if they could still get art?

Although not every student was able or attracted to exploring her online art resources or creating artwork during their own time, she was encouraged by hearing other staff members mention that students were logging onto her website when given permission to use the internet at school. She also noticed that students no longer enrolled in her class or whose schedules did not permit them to take art began reaching out to her for information about online resources. This provides some evidence that her virtual art room resources, a component of flipping, led to an increase in student accessibility to educational opportunities. As an example she mentioned:

For instance the computer teacher, if she finished early she'd say "OK guys you can go on The Helpful Art Teacher now" and [the students] would go to my blog and look at my videos just for fun for the last five minutes of class.

As she continued to receive positive feedback from students about how “cool” her posts and video uploads were she realized that her efforts to increase student accessibility to art resources via her blog had begun to make an impact. Early successes such as this encouraged her to continue exploring the possibilities of her new blog as a virtual classroom resource.

Disadvantages The typical structure of a fully flipped art classroom involves students using the internet to watch their video lectures at home so that class time can be fully dedicated to studio time rather than instruction (Fulton, 2012). However, making the use of computers and

internet access at home a mandatory component of her teaching would require that all students have easy access to technology outside of school hours in order to keep up with course material.

Mrs. Wintemberg summarized the problem this creates by saying:

I do have iPads in my classroom but a lot of my students don't have technology at home.

I know a lot of school districts have a program where the kids have stuff they can take

home or they live in neighborhoods where it's pretty common for families to have Wi-Fi

service but I work in a very high poverty district.

Although many of her students might have internet access through the use of a cell phone or personal device at home, she did not feel comfortable mandating the use of technology to complete assignments or view video lectures outside of class due to the inconsistent availability of internet access among her student population. This presents a significant disadvantage when attempting to adopt a fully flipped classroom; however she remained committed to utilizing technology during class time and found that playing her video lectures during class and giving students the option of utilizing online resources at home was an effective solution.

Efficiency. *Efficiency* addresses the ways that flipping affected the convenience of completing various teaching tasks and time needed to do so.

Advantages. The participant reported that she found the benefits of designing and utilizing instructional video lessons or lectures and sharing lesson resources on her blog contributed to greater efficiency in the classroom. Mrs. Wintemberg asserted that once she adapted to the use of new technology, the video lessons and other online resources she posted online such as visuals, document attachments, and written directions, ultimately led to a more efficient use of class time. In her own words:

I get a lot of kids who transfer into my class from another class or they suddenly move to the school and generally when that happens we're in the middle of a project. It's really not that uncommon for me to say to them "Ok take out an iPad, go to the Helpful Art Teacher site, click on this assignment and catch yourself up. This is what we're working on.

Making lesson materials available online enabled students to refer to it on their own and allowed Mrs. Wintenberg to avoid repeating directions and focus on more meaningful classroom support. Without the ability to direct students to the comprehensive online resources she has compiled on her website, individually bringing new or absent students up to speed could become very disruptive. Instead this aspect of a flipped classroom allows her to efficiently provide clearly outlined instructions with accompanying visuals that students can re-visit whenever needed.

Disadvantages. Early on Mrs. Wintenberg ran into some setbacks involving decisions about which websites or applications would be best for her needs. She had no prior experience or training in setting up a website and learned as she went addressing needs as they arose. This required some commitment and she initially invested a large amount of time and energy into the research of her digital classroom options. By utilizing online resources and talking with other teachers through online forums she was able to find some suggestions but she mostly began experimenting with the use of technology to facilitate and share lessons through some trial and error. Details such as which online platforms would allow the photo storage she required along with user-friendliness were a couple of her determining factors. A sudden block on access to YouTube via the school based internet connection and complications with properly saving and locating student files between class periods were additional obstacles. Initially she was able to

resolve these obstacles by utilizing Dropbox, a program which allows for the online storage of files, but students have more recently been assigned Google accounts which allow them to store files in their Google Drive folders.

Differentiation. *Differentiation* will cover data points concerning the participating teacher's ability to individualize lessons to specific student needs.

Advantages. Due to the high population of recent immigrants from Latin American countries in Mrs. Wintenberg's district it is fairly common for her classes to include students who have limited English comprehension. Handily, she has been able to differentiate her instruction to the needs of these students through the use of a translation widget available on her teaching blog. By utilizing this technology students are able to translate their lessons into Spanish or a variety of other languages quickly and easily. As an example, she brought up the following incident:

Once, I came across a bunch of non-English speaking students and they were all on their phones. I was about to go over and discipline them and then all of a sudden I realized they'd found that day's lesson on my blog and they had hit the translate widget, and translated it into Spanish and they were sitting there together as a group trying to figure out what I was saying!

Following this incident Mrs. Wintenberg said she was happy to allow students who had phones to utilize them as translation tools.

Disadvantages. The participant did not express any disadvantages regarding differentiation, however there may be some hidden issues which were not discussed.

Student Engagement. *Student engagement* focuses on whether student attention and motivation was maintained during class time and what changes resulted following the use of

flipped teaching strategies. I will also be including observations about behavior management in this section since they appear to be linked to the points made about student engagement.

Advantages. In addition to providing a great tool for differentiation, the ability for students to translate lessons from her website and follow along in class seemed to have aided student engagement. Mrs. Wintenberg expressed that the use of partially flipped classroom approaches, such as playing video lessons during class, allowed her to alleviate the number of interruptions experienced during instructional time. Particularly because art time was reduced to a few days a week rather than everyday she felt there was an increased tendency for her students to take art class less seriously and become talkative or otherwise defiant. As a result the number of interruptions that occurred during the introduction of lessons became overly disruptive and she was happy to see that her online classroom could be utilized as a way to mediate the issue. She recalled:

...Nobody can give me a problem like this and tell me it's insurmountable, "Oh the kids are disrespectful so therefore they're not going to learn." No that doesn't seem acceptable to me. So what I did was I would make these videos on YouTube and I would say to the kids "This video is three minutes and eight seconds. Anybody could be quiet and listen for three minutes and eight seconds! And now you can't tell me I'm talking for too long because I timed it!"

This adjustment in the way that she introduced information made her lessons more concise and encouraged students to pay attention. These changes seemed to have increased student engagement and also decreased the occurrence of misbehaviors during instruction. Rather than standing at the front of the room and repeating herself when students became disruptive, she would just pause, rewind the video and say:

...if you don't give me three minutes and eight seconds of respect, you're not going to do work today. You'll do it after school, you'll do it in detention, I'll call your parents, you'll do it during your lunch, we'll find a way for you to do it, but I'm not giving you the materials for you to do the whole thing wrong!

To her approval students seemed to respond well to this new video based approach.

Another advantage she noted was that after the students became more engaged the quality of their work increased. She said students seemed to respect and appreciate the video format of lessons more than her verbally explaining things in person. In her own words:

Me standing in front of them just didn't seem all that legit. But somehow or another when I was online, I became interesting! It worked you know, it was pretty miraculous.

There were now less student misunderstandings of lesson goals and the kids seemed to take more pride in the work they made.

An additional way that Mrs. Wintenberg was able to increase student engagement was through the use of social media. After projects were completed she would photograph and share student work on her website or Facebook page. Since students now knew their work might be online where they could potentially share links and photographs with their family members (both locally and internationally) they demonstrated a higher level of investment in the creation of their work. She said that students seemed to think:

"Yeah, this site is really cool, these videos are really neat", and all of a sudden it became a thing! It ended up that somehow the kids came to art with a better attitude and they ended up producing better art and more interesting art.

Again, through the use of her partially flipped classroom methods and technologically savvy approaches she was able to increase student interest and engagement in artmaking.

Disadvantages. One danger Mrs. Wintemberg warned against when considering student engagement issues was the risk of a teacher developing so much of an over reliance on technology that they forget how to engage students without it. For example, a teacher must be prepared for instances when technology is not an option.

... heaven forbid, the bulb on the projector blows out, or the internet goes dead, or whatever, I'm like... "Ok guys, we're using these instead."

As an experienced art teacher she has developed a wide range of teaching strategies and believes it is important to maintain some flexibility in case a tech based lesson runs into an issue. She pointed out that a classroom can become distracted and unruly rather quickly if there are interruptions and having a back-up plan for navigating around technical malfunctions is always good practice.

Communication. *Communication* concentrates on my participant's ability to share information about her teaching practice with students and families.

Advantages. An increased ability to communicate with students occurred shortly after she introduced her blog and YouTube channel to her students. She recalled that at first students joked that they would go to her YouTube page to "dislike" all of her posts but, to her surprise, she instead began receiving lots of new online followers and said her classroom blog and corresponding YouTube page became popular very quickly. She stated that:

All of the sudden, I would get, "so and so is following you" and "so and so is following you" and it was my students! And I'd get messages saying "If I follow you will you follow me back?" And I'm like "oh my gosh!" It was... suddenly cool that I had a YouTube channel...

She said she began receiving questions from students who had visited her pages and was excited to hear them asking about the videos and lessons she had posted. Knowing that students were utilizing and enjoying the instructions, demonstrations, lectures, student artwork and art related resources shared online reinforced her desire to continue building the virtual components of her teaching.

A couple of years after starting her blog and YouTube channel, she decided to start a Facebook page to share student work and classroom projects on as well. This provided yet another way for students, families and others to stay updated on the work being done in her classroom.

We'd do a project and... I'd create an album and I'd put everybody's artwork on the Facebook page. So then it was like the kids could go on the Facebook page, they could click "like" on the Facebook page, the parents could click "like" on the Facebook page, they could download the photos and upload them to their Instagram or send them to a grandmother and make them public, and it became, basically, I was able to somehow get to my students via social media..

This strategy was so popular that she now has nearly 11,000 “likes” on her *The Helpful Art Teacher* Facebook page in addition to thousands of daily visits to her classroom blog and YouTube channel.

Disadvantages. There did not seem to be any negative effects on communication with students and families resulting from the use of the virtual classroom resources Mrs. Wintenberg created. It is notable however that the previously covered issues concerning internet accessibility from home means that not all students and families are engaged via these methods.

Art Advocacy. *Art Advocacy* examines the ways my participant was able to increase the visibility of her art program to administrators and the teaching community at large after her adoption of flipped practices and the subsequent outcomes.

Advantages. Through the use of online classroom resources Mrs. Wintenberg was able to connect with fellow teachers, including those who taught in other content areas. This allowed her to help build interdisciplinary connections with teachers in other subjects and share meaningful ways to integrate art in their classrooms. Since she could quickly search through the cataloged examples on her website sharing strategies with colleagues also became quicker and more convenient. As she described, by providing an English teacher with a:

...three or four minute tutorial on how to illustrate your own stories, they can show it in their classroom, and then suddenly the kids write these great stories and the illustrations they make are better than they would have been and you now have a better process, product and project. I mean... wouldn't it be cool to be able to figure out ways to make art indispensable in the average classroom?!

She discussed several similar instances in which she was able to easily provide resources to teachers in math or history as well and went on to connect this newfound benefit with a larger advantage that occurred after the adoption of her partially flipped teaching approach.

I could now say "Wow, you know this Language Arts teacher did this great project and one of the resources she used came from me."

In this way she was able to take on a larger role in her teaching community, draw positive attention towards her contributions to the school, and advocate for the value of her art program all at once. Although Mrs. Wintenberg was enthusiastic about all of these advantages, another factor which motivated her were the persistent threats that budget and staffing cuts posed to her

art position and art programs in general. The risk of job insecurity fueled an added desire for her to distinguish herself as an essential part of the staff and demonstrate to administrators that art was contributing to student learning in important ways. She said:

I just felt like I had this extreme urge to win. So, the term flipped classroom wasn't necessarily part of my vocabulary, it was more, how do I preserve my job and make myself completely indispensable so that the subject of eliminating me won't even be a topic of discussion.

This need for self-preservation drove her to continue seeking innovative ways to share and bring visibility to the impact her teaching was having on students and advocate for the importance of art education in her school. Ultimately her technologically savvy approaches appear to have been an effective way to emphasize the value she added to the school since she has maintained support for her art program.

Another example of Mrs. Wintemberg successfully using her online classroom resources to advocate for the role of art in schools involved a request she received to participate in a statewide anti-bullying initiative. She had been exploring new possibilities for art-making on the schools iPads at the time and was thrilled to find a way to utilize digital media and participate in the initiative through the following scenario:

One of the apps that I downloaded was Animation Creator. And I'm like "Oh my god, you can make cartoons!" And so ... a former student who was on the Board of Ed, said "Well you know the state has adopted these new anti-bullying laws and we really want art teachers to make some anti-bullying posters." And the principal turned to me and said "[The Board of Ed.] wants anti-bullying posters." And I said "well, you know what about anti-bullying animations?"

By utilizing a digital medium Mrs. Wintenberg was able to introduce students to a new art making tool while also creating something that facilitated important conversations among the students and generated positive publicity for the school after being shared online. It eventually gained the attention of her state's Board of Education and was touted as an exemplary project. She also ended up being promoted and praised on social media by the developers of the animation app she used for the lesson. Additionally this project gained her positive recognition from local administrators.

Disadvantages. While her personal experiences point out positive effects on art advocacy, Mrs. Wintenberg did bring up a possible disadvantage. Her concern involved the ease with which teachers can copy lessons from online without investing any of their own personal energy or creativity into their curriculums. Specifically, she referenced Melissa Purtee's (2016) article "How Pinterest is Ruining Your Lessons." and elaborated that:

The danger is that you could get somebody who's an absolutely terrible teacher, who's just getting lessons off of Pinterest and just getting lessons off of my blog or I mean, the whole reason why they hired you as an art professional is that you're creative and you're dynamic, and you come up with ideas that [other staff] couldn't possibly come up with.

Her fear was that the wide availability of pre-designed lessons and ideas shared on the web may lead to an increase in teachers who become overly dependent on the ideas of others. She also feared that this could in effect homogenize the types of lessons seen across various schools. She enjoys sharing her projects with other teachers and believes it is fine to draw inspiration from online occasionally but also stated that teachers should strive to remain passionate and invested in the assignments that they present to students. She believes teachers need to remain authentic to their selves and personalize their instruction so that projects feel genuine. She also expressed that

echoing lessons found online can detract from a teacher's individual voice as an artist and educator.

Interpretation

Overall it appears that Mrs. Wintenberg holds a largely positive opinion of the effects she experienced as a result of utilizing a partially flipped teaching approach. By creating and utilizing new tech based resources such as her blog, instructional videos and social media page, along with integrating technology into class time she was able to positively impact a wide variety of her classroom needs including accessibility, efficiency, differentiation, student engagement, communication and art advocacy.

In the category of accessibility Mrs. Wintenberg noted an increase in student access to her art resources outside of class, mainly through her blog and instructional videos. The main disadvantage Mrs. Wintenberg experienced in the area of accessibility revolved around inconsistent access to technology from home among her low income student population. Despite this obstacle she was able to develop a mix of traditional and flipped teaching strategies that ensured all of her students could benefit from the virtual classroom resources she created either during or after school hours.

While examining her comments on efficiency it seems that familiarizing herself with new technology and adapting to new teaching approaches was initially burdensome and presented a disadvantage. However, the initial investment of time required to develop and employ new virtual tools ultimately proved worthwhile for her since it improved the efficiency of many other teaching related tasks long afterwards. For example her blog allows her to provide absent students with missed lesson content more easily and avoids the need to individually repeat instructions to students since they can review content on the devices provided during class time.

The use of flipped strategies such as online video lectures to present instruction also provided advantages in differentiation since students could re-visit lessons at their own pace when they needed clarification. Instead of needing to repeat material to students who might be confused students could go back and review her online materials for as long as necessary. Online widgets also made it easy to translate her lessons so that non-English speaking students could follow along. There did not seem to be any disadvantages in regards to differentiation.

Improvements to student engagement also came to light after Mrs. Wintemberg's adoption of a partially flipped teaching approach. She pointed out several examples in support of this such as a decrease in the number of misbehaviors and disruptions experienced during class. She also mentioned that the quality of her student's art work increased and students seemed more motivated during class time. The use of technology, including her classroom blog, instructional videos, and social media page seemed to really resonate and connect with her students. A potential disadvantage to student engagement expressed by the participant was the risk of teachers developing an over reliance on technology as a tool for maintaining engagement. She believes that teachers should be prepared to teach without those types of tools if needed since technological malfunctions are often unpredictable.

Among the many advantages Mrs. Wintemberg experienced after implementing a partially flipped classroom were an increased ability to communicate with students and families. Examples mentioned were that students and family members began to connect with her through her classroom YouTube channel and Facebook page. Through these websites she was able to facilitate increased communication about student's projects to their family members while also empowering students to send and share their artwork with others themselves. The adoption of

these new resources did not have any perceptible negative consequences regarding communication.

The larger audience of people she was able to share information with after adopting flipped approaches also benefitted the participant in the area of art advocacy. She had witnessed staff and budget cuts throughout her career and felt a strong need to advocate for the importance of her role as an art educator. The use of her online teaching resources simplified and improved her ability to share the positive impact her art program was having on her students and increased visibility beyond her school and classroom. Through sharing her lesson materials and student work online she was able to gain recognition from teachers and educational leaders across her state and broader online teaching communities. Although she warned that a possible disadvantage of sharing lessons and ideas online is that they may provide an easy way for other teachers to duplicate lessons without taking the time to personalize them to their interests and teaching environment this does not dissuade her from making her resources available online.

After reviewing the data it seems that despite some concerns and disadvantages the participant plans to continue utilizing her web based resources and feels they have contributed many positive changes to her teaching environment. Mrs. Wintenberg appears to have experienced far more advantages than disadvantages as a result of her shift towards tech based teaching resources and partially flipped classroom format.

Discussion

With the use of technology becoming more prevalent in both personal and professional activities, the need to prepare students for participation in a digitally driven society has become an increasingly important matter for teachers to consider in their curriculums. As an art educator myself, this study has allowed me to gain a greater understanding of the factors at play and what the potential benefits of utilizing technology in my own classroom via a flipped approach to teaching might provide. I also hoped that sharing my findings might be helpful to other art teachers who may be feeling unsure about whether to attempt flipping their own classrooms since there seems to be a lack of in depth information about flipped classrooms from the perspective of art educators.

Findings

My primary research goals involved examining the advantages and disadvantages that a practicing art teacher experiences in a flipped classroom. The advantages that resulted from my participant's use of flipped teaching approaches included benefits in accessibility, efficiency, differentiation, student engagement, communication, and art advocacy. My participant also spoke on disadvantages that flipped teaching approaches create in these categories but the general consensus was that the negative issues and concerns were outweighed by the benefits.

Although it could be argued that because Mrs. Wintenberg does not implement a fully flipped classroom her perspective is not an accurate representation of what advantages or disadvantages are experienced in a flipped classroom, I would like to re-visit a point from the literature which clarified that while some people assume flipping entails a full reversal of teaching strategies, the method is commonly adapted to the needs of a specific course, instructor, and student population (Bull, Ferster & Kjellstrom, 2012). Flipping exists in many variations and

while it is worth considering that the factors unique to each teacher's instructional preferences and classroom environment may affect their opinion of the practice, those factors do not invalidate the participant's opinions in relation to this study.

Advantages

Something that I found striking when reviewing Mrs. Wintenberg's responses was how closely her experiences seemed to hit upon main points discussed in existing literature. I intentionally allowed her to speak about her experiences in an organic way and was careful not to guide the interview based upon my own pre-conceptions so it was surprising when she began bringing up familiar themes. I had expected that as an art teacher my participant would have some input that deviated from the experiences of teachers in other content areas, which she did, however her comments generally fell in line with the advantages expressed by many of the sources I had reviewed.

I also anticipated that the high poverty level and limited availability of internet access from home among my participant's student population would impede upon her ability to achieve the same advantages discussed by teachers whose students had greater access to computer resources. Yet I was again surprised to see that she managed to build many of the same opportunities into her lessons and provided her students with benefits similar to those seen in more privileged teaching circumstances (Bergmann & Sams, 2014). This seems to indicate that flipped strategies can be modified to the needs of art teachers who serve in high poverty schools without sacrificing many of the benefits reported in conventionally flipped teaching environments.

For example, one of my interview questions asked "What motivated you to adopt a flipped approach? What were your goals?" to which she provided a lengthy response that weaved

in supporting information on all of the main points of this study; this includes accessibility, efficiency, differentiation, student engagement, communication and art advocacy. This provides evidence that flipping can be successful despite the limitations that art teachers working in low income communities may face.

Accessibility. During a time when her district was experiencing major budget cuts and many programs and staff positions were being cut, Mrs. Wintemberg thought it may be helpful if she made her lessons and art resources available online so that students could continue making art independently despite cuts to the art program. Although not all of her students had internet access from home she did notice that her virtual classroom resources became popular very quickly and was happy to see that her efforts to improve accessibility appeared to be successful.

She decided not to mandate that her students access her online resources outside of class, which means her class structure is only partially flipped, but due to inconsistent internet access among her transient and low income students she felt a fully flipped class structure would not be appropriate. Despite this the option of accessing art resources on their own time made it possible for students to take a more active role in their own education. This benefit was cited as an advantage of technologically integrated teaching strategies in pre-existing literature and made a noticeable difference for Mrs. Wintemberg's students (November, 2009). This approach also encouraged students to use technology as a tool for acquiring knowledge and empowered them with the ability to pursue their interests independently (Christensen, Horn & Johnson, 2008). Additionally the International Society for Technology in Education (2016) has listed the need for students to be comfortable and fluent with digital mediums as a means of engaging in lifelong learning within their top standards. This is meaningful because students in flipped classrooms are given the opportunity to understand that technology can be utilized as a means of pursuing their

intellectual interests, serving as an important introduction to the idea of technology as a route to self- education. Digital literacy has been identified as an important skill to instill students with and flipped classrooms provide a way to help students develop those skills.

Efficiency. In consideration of the limited computer and internet resources that her students had available from home, Mrs. Wintemberg made the decision to continue dedicating some class time to instruction rather than requiring students to watch video lessons at home. A typical flipped classroom would involve the assignment of video lectures as homework so that students can jump right into active discussion or studio time at school. Since she opted to continue sacrificing some class-time to instruction the efficiency in her teaching scenario is not quite on par with what a teacher in a fully flipped classroom gains (Martin, 2015). However, she still noticed improvements in efficiency since she began to use short, pre-recorded videos rather than traditional lectures and students could be given an iPad during class if they needed to refer to lessons they were absent for or confused about without disturbing the flow of class time. This confirms the findings of previous researchers who noted improvements to efficiency in flipped classrooms (Bergmann & Sams, 2014; American School Board, 2014). This may be particularly relevant to art teaching contexts because many art teachers, such as my participant Mrs. Wintemberg, work within the limitations of short class periods or reduced art schedules, meaning that every minute of class time becomes precious. It is also worth considering that the various factors of an art teacher's school environment such as the grade levels they serve, the needs of their students, resources, scheduling and other individual circumstances are likely impact the perceived benefits or disadvantages presented by flipping in the area of efficiency. For example, very young students may experience difficulty navigating new technology, completing digital

homework assignments independently, or following instructions from a website, although solutions and modifications in a teacher's approach to flipping could remedy those obstacles.

Differentiation. It is notable that most of the points Mrs. Wintenberg made in reference to differentiation involved a discussion of the advantages which resulted after her adoption of a partially flipped classroom. As discussed by the literature, a strength of the flipped classroom is that it allows students to re-visit material at their own pace by re-playing video lectures or reviewing content at a later date (Sams & Bergmann, 2013). Students typically learn at slightly different paces from one another so making lesson and lecture materials available online gave students the ability to re-visit material if needed (Keene, 2013). She was also able to differentiate her lessons to non-English speaking students through the use of translation features on her classroom blog which provided a quick solution to meeting their needs. Flipping also provided here with more time to give one-on-one support since she no longer needed to spend as much time individually repeating or clarifying directions given that students could use the iPads or Chromebooks available in class to review material. This is in agreement with statements cited by Hall and DuFrene in my literature review (2016). Sams and Bergmann (2013), the original developers of flipping, have also supported the idea that differentiation and self-paced learning are an important benefit of flipping. Improvements in my participant's ability to differentiate her material to student needs also appears to link with positive changes in student engagement. For example, Spanish speaking students who may have become confused or disengaged prior to the online availability of her lessons and subsequent translation widget could now follow along more easily, leading to greater engagement and comprehension.

Student Engagement. Previous research has observed that students respond and learn best when presented with mediums that feel comfortable and authentic to them (Greenfield, 2009).

Since kids don't attend lectures and read textbooks during their own time, why should teachers expect that they would find those mediums engaging during school hours? Today's youth are much more familiar with technology and visual modes of communication, which are the types of strategies used to deliver information in a flipped classroom (Greenfield, 2009, Fulton, 2012). By seeking innovative ways to integrate technology into her teaching approaches Mrs. Wintenberg was able to see a visible improvement in student engagement which ultimately led to higher quality artmaking and final products. There was also a perceptible change for the better regarding student behavior which appears to be linked to the increased level of student engagement that resulted after her transition to a more technologically integrated approach towards teaching. She observed that students seemed to prefer the video format over conventional lecture methods and came to class with a better attitude. This matters because students who are engaged during class are more likely to learn.

Communication. Improvements to communication due to flipping were also noted by my participant and are supported by others in the flipping community (Bergmann & Sams, 2012). Flipped classrooms make class resources available online and facilitates new ways for students and families to stay informed and communicate about what is being covered in class. As an example Mrs. Wintenberg noted that students and families began watching her video lessons and following her YouTube page and classroom Facebook group. This provides the advantage of fostering a closer connection with those in her school community.

In addition it appears that flipping provided an avenue through which Mrs. Wintenberg began receiving both direct and indirect feedback from families and students, meaning that her website and social media platforms facilitated two-way conversations and sharing of information between herself and her students and families. This is significant because it means that her role

in a way shifted from her dominating and directing conversations with students and families, towards families and students being able to more easily reach out to her and take part in new dialogues.

Art Advocacy. Her move towards flipped teaching methods also allowed her to expand the audience of people who could learn about what was going on in her classroom beyond direct community members. Her classroom blog receives thousands of visitors per day and allows her to share best practices while also gaining wider recognition for the value and power of arts education. This advantage was also mentioned by others who believe in the benefits of sharing information with the broader educational community so that knowledge is spread collectively (Christensen, Horn & Johnson, 2008). This is important because arts programs are often underfunded and finding ways to share classroom successes validates the importance of art education.

Disadvantages

Accessibility. The use of computers and internet access at home is typically a large component of a flipped classroom (Fulton, 2012). That puts students and schools with limited internet and computer access at a disadvantage when attempting to implement a flipped classroom (Tomlinson, 2015). For example, Mrs. Wintenberg did not feel comfortable making online work from home a mandatory component of participation in her course since many of her low income students lacked reliable access to technology outside of school hours. My participant was able to find an appropriate solution in the form of a partially flipped classroom though, which means there are ways for teachers and students to navigate this problem. Others have also found success in providing students with DVD versions of their video lessons so that they can watch video lectures from home without the need for internet access (Butrymowicz, 2012). This

means that although there may be some problem solving involved in order for a teacher to implement a flipped classroom, flipping can be catered to fit the needs of individual teaching scenarios.

Efficiency. The only issues my participant came across in regards to efficiency revolved around the time needed to learn about and set up the online resources and videos typical to a flipped classroom. While she expressed that there was some trial and error involved in learning about creating a classroom website that would meet her needs she expressed that she found the frustration worthwhile in the end since her online resources made other aspects of teaching more streamlined and effective.

While many teachers might find the transition to a flipped approach manageable and worthwhile I did come across several arguments that teachers are oftentimes already struggling to stay on top of their current workloads and feel that finding the time to develop and implement new lessons and teaching approaches (as would be required when beginning to flip) represents a significant hurdle in their adoption of the method (Neyland, 2011). A teacher's comfort level with technology would also impact their willingness to embrace a flipped classroom (Ertmer, 2012). With these potential obstacles in mind I find it understandable that a number of teachers may hesitate or refuse to move away from their current teaching practices.

Differentiation. During the interview my participant did not mention any disadvantages regarding differentiation but others have pointed out that some students may prefer traditional teaching formats over those used in a flipped classroom (Herreid & Schiller, 2013). While it seems that Mrs. Wintemberg's students really enjoyed her use of video lessons and online resources, it is worth considering that every student has a different learning style and some may actually prefer conventional lectures and textbooks (Keene, 2013). Although there is some

concern over how some students respond to digital mediums, this does not seem to pose a significant obstacle and teachers could always provide students with verbal clarification or printed materials dependent on student needs and preferences. In my personal experience as a teacher, I have found it beneficial to incorporate several different modes of conveying information. For example, if I play a video demonstrating a project or concept at the start of class, I may additionally review the information verbally, provide a finished visual sample, and supplement the directions with a printed project outline or rubric so that I can meet the needs of students with different learning styles.

I find this important because I believe educators have a responsibility to ensure that they connect with the individual needs of their students. If a teacher's goal is to teach, then it would seem reasonable to assume that they must also consider and understand the mediums through which their students learn.

Student Engagement. My participant generally saw improvements in student engagement after utilizing flipped strategies but she did mention the risk of a teacher becoming overly reliant on videos and websites. She warned that technology can be fickle and a teacher should always have a backup plan for days when the school's Wi-Fi is down or a video refuses to play. I would also add that students could become overly accustomed to receiving information through quick and exciting videos and perhaps educators should be careful to ensure that students maintain their ability to learn through conventional means. After all, students should still be able to respectfully sit through a lecture or read a book, even if it's not their preferred learning style.

A review of prior publications also shows that some schools have experienced a decrease in student engagement when they began providing devices for students and saw an increase in

off task behavior and other issues such as students sending each other answers during tests (Hu, 2007).

This leads me to the thought that while the need to develop digital literacy in today's students is difficult to argue against when considering the prevalence of technology in contemporary society, perhaps we must reflect on what sacrifices or consequences are occurring in other arenas in order to accommodate this shift.

Communication. While Mrs. Wintemberg did not bring up any negative effects on communication with students and families which resulted from her use of flipped classroom methods it is possible that there are negative effects she was not aware of. One consideration is that students and families who don't have internet access are not engaged via these methods and could possibly feel alienated. This also implies that schools whose students and families have less access to computers and internet connections would experience a less noticeable change in levels of communication. However, it does seem that the perceived benefits to communication may outweigh possible negative effects as long as teachers remain conscious of the resources available to their students and adapt their expectations of flipping accordingly.

Art Advocacy. Sharing classroom successes and spreading information about her classroom practices does not cause any disadvantages on its own, but Mrs. Wintemberg did point to the possibility that teachers might lose touch with their own creative voices and begin to rely on lessons found on Pinterest or other teacher's blogs and websites (Purtee, 2016). She believes there is value in a teacher leading lessons that feel authentic to them and that students thrive when a teacher is passionate about the material they teach. It seems reasonable to assume that there is some truth in this statement although it could be argued that students benefit from lessons whether a teacher created them or not.

Conclusion

Throughout this research many positive and negative points were brought up regarding the implementation of a flipped classroom art curriculum. However, after weighing the various advantages and disadvantages presented my overall conclusion is that the benefits of pursuing the format appear to outweigh any obstacles that may be encountered. My participant's experiences provided evidence that even in teaching scenarios which deviate from the ideal flipped classroom environment it is possible for teachers and students to see benefits.

While issues may arise when adapting to the use of new technology, online resources are nearly always available to teachers who are interested in leading a fully or partially flipped classroom. Learning about and setting up online classroom resources does require an initial investment of time and energy but the data shared by my participant suggests that it makes lessons easier to access and share in the future.

Another recurring obstacle mentioned throughout my research is that some students may experience difficulties accessing online resources from home, particularly in low income districts. Although this does present a significant hardship, analysis of my participant's experiences working in a high poverty district lead me to believe that art teachers in a wide variety of scenarios may find success in pursuing a flipped classroom approach.

Depending upon an individual educator's teaching environment adopting a flipped classroom may need to diverge from the traditional conception of a flipped classroom but students will likely benefit in similar ways. For example, the limited access to technology at home among my participant's low income students restricted her to conducting a partially flipped classroom rather than a conventionally flipped classroom but she is nonetheless able to

experience many of the same benefits that teachers have touted in environments where students have easier access to online materials from home.

Based upon evidence found in the gathered data there were significant improvements in the areas of accessibility, efficiency, differentiation, student engagement, communication and art advocacy after my participant's adoption of a partially flipped classroom. My participant was able to recall several specific examples of times that she witnessed benefits in each of these areas and stated that she has no intention of ever abandoning the use of her technological resources. By constructing a technologically integrated learning environment that utilizes virtual classroom resources such as a blog, YouTube channel, and Facebook page, Mrs. Wintemberg's partially flipped classroom enables her students to learn in dynamic ways and take full advantage of their class time. Additionally these virtual resources increase student accessibility to her art resources outside of class and facilitate greater awareness of what her students are able to accomplish through her art program to parents, staff members and the art education community at large.

Although Mrs. Wintemberg's experiences represent a perspective that a significant proportion of teachers could likely relate to it is also important to realize that this study only examines the opinions of a single teacher who works under very specific circumstances. She is a middle school art teacher with twenty eight years of teaching experience whose students include large populations of recent Latin American immigrants with limited English speaking skills and many low income students who do not have technology at home. While it would be incorrect to assume that any teacher in either a similar or different teaching environment would experience identical outcomes, the success Mrs. Wintemberg was able to achieve by adapting flipped classroom approaches to meet the needs of her students leads me to believe that other teachers could replicate similar benefits.

Some ways that future research could build upon the findings of this case study would be to conduct a more comprehensive research project that seeks a diverse range of voices regarding art educator's experiences with flipped classrooms. Considering that my participant could only share what she observed from her perspective as an art educator at a middle school within a low income district, a wider variety of teachers who cover different student demographics would need to be represented in order to formulate more comprehensive conclusions. Some variables to be considered in future studies might include an investigation of the experiences of art teachers who work at different grade levels or within districts with higher income families. It would also be interesting to seek the opinion of an art teacher who implemented a flipped classroom only to later abandon it and hear what difficulties they encountered.

With the findings of this research in mind I believe that the possible advantages of implementing a flipped art classroom far outweigh any disadvantages that may arise. Even if a teacher is in a scenario which presents limitations a partially flipped classroom appears to present many benefits that make the endeavor worthwhile. Technology has become increasingly prevalent and accessible in student's lives over recent years and today's educators should continue to seek ways to make use of whatever new resources become available. Considering all of the benefits discussed, it appears there are few reasons for an art educator to hesitate when considering flipping.

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Appendix A

Recruitment Script

**Flipped Classrooms: Advantages and Disadvantages from the
Perspective of a Practicing Art Teacher**

Vanessa Rivera- Principal Investigator- Graduate Student
Professor Beth Thomas- Faculty Sponsor
State University of New York at New Paltz
Fine Arts Department, Visual Arts Education

Dear _____,

My name is Vanessa Rivera and I am conducting a study at the State University of New York at New Paltz under the direction of Professor Beth Thomas. My research investigates what advantages and disadvantages a practicing art teacher perceives when implementing a flipped art curriculum. I am contacting you because it appears that you are familiar with the practice and I am hoping you may be interested in sharing your experiences. This study is an opportunity for you to take part in expanding upon existing research and inform the practice of current and future art teachers. The study will examine the experiences of a single art teacher so if you are interested and meet my requirements, you would be the sole participant. It is a phone interview based case study so if you choose to participate you would not be required to travel.

If you think you may want to participate, please respond to this message with your phone number and you will be contacted for a brief phone interview with the potential for a follow up interview if needed. Your estimated time commitment will be approximately 1 hour. The conversation will be recorded for later reference and analysis but your name will not be included in the recording and every measure will be taken to ensure your confidentiality. If you choose to participate, you will receive a \$25 Amazon gift card as a token of my appreciation. I hope you will choose to take part in this study and look forward to hearing from you.

To clarify, you will not be named or directly referenced in the study. No identifying information will be used and your identity will remain strictly confidential. All data collected will be held privately and remain password protected. You can choose to terminate your participation at any time. Alternatively, if it is determined that you are not eligible for participation, you will be excused. I do not anticipate any likely risks or discomfort beyond what might be encountered in everyday scenarios will occur as a result of your participation. This study has met Human Research Ethics Board (HREB) requirements and this letter meets the needs of informed consent to participate [Interview/Survey research exemption 45CFR46.101(b)(2)].

If you have any questions please do not hesitate to contact me directly at (518) 641-8056. You may also contact my faculty sponsor Professor Beth Thomas (845) 257-3850 or the HREB department at my University (845) 257-3282 with any concerns. Your consideration is greatly appreciated, thank you.

Sincerely,
Vanessa Rivera
Principal Investigator- Graduate Student
State University of New York at New Paltz
Fine Arts Department, Visual Arts Education
(518) 641-8056

Appendix B

Interview Script

- Hello and thank you for participating in my study. I really appreciate you taking the time to answer my questions about your experience with flipped classrooms and visual arts education. -Participant response

- Before we move forward, I just want to give you an idea of what to expect. I will be asking you a series of questions meant to identify some of the advantages and disadvantages you've encountered after adopting a flipped classroom approach in your art room. I'm anticipating that the conversation will last approximately 45 minutes but we may end earlier or later. Please feel free to abstain from any of the questions asked or let me know if you would like any clarification. You are also permitted to withdraw from the study at any time. Also, as a reminder I will be recording the call so that I can review your responses later and will not be directly mentioning your name during this recording. I also will not be including any identifying information in my study to ensure your responses remain anonymous. Does this sound okay? - Participant Response

Questions:

1. I'd like to start by discussing a little of your background and experience. How many years have you been teaching and at what grade levels?
- Participant response

2. Great, thank you. Can you tell me a little more about the student populations you work with, class sizes and the resources you're provided with in your district (such as art supplies, technology, and class environment)?
- Participant response

3. Ok, how did you first hear about flipped classrooms?
*If needed- What was your initial impression of the flipped classroom approach?
- Participant response

4. How long into your teaching career was that?
- Participant response

5. What motivated you to adopt a flipped approach? What were your goals?
*If needed- Did you adopt the flipped classroom approach voluntarily?
- Participant response

6. What goals did you hope to achieve by implementing a flipped approach? What were you hoping to see happen?
- Participant response

7. How would you describe your comfort level with technology prior to implementing a flipped classroom? Did your comfort level change at all during implementation?

- Participant response

8. Was transitioning into a flipped classroom approach smooth? Did you encounter any issues throughout the process? (Ask participant to elaborate in order to get full answers)

- Participant response

9. Ok, were there any resources you used to help you establish a flipped classroom? (Colleagues, Websites, Professional Development, Books, Etc.)

* If needed- Was it easy to find supportive resources for implementing the new model?

- Participant response

10. What do you feel were some of the benefits or advantages witnessed as a result of adopting the flipped approach?

- Participant response

11. Can you identify any disadvantages you experienced after implementing the flipped approach?

* If needed- Did you notice any changes in student engagement? Can you speak about access to technology and whether it was an issue? Do you feel that flipping your curriculum has led to changes in how efficiently class time is used? Any unexpected advantages or disadvantages? Was there anything you anticipated that did not end up happening?

- Participant response

12. Do you think you will continue teaching in this manner? If so, were there any specific successes that encourage you to continue?

- Participant response

13. Have you at any point considered returning to your previous format? If so, what were the sources of your frustration?

- Participant response

14. Is there anything else concerning the advantages or disadvantages of flipping that you'd like to talk about? Is there anything you would like to point out that we haven't had a chance to discuss?

- Participant response

15. Great! Well, that concludes the questions I had for you. Do you have any questions for me before we end?

- Participant response

Thank you so much for your participation, I really appreciate you taking the time to speak with me and will follow up with you soon.

- Participant response