



2020 HAWAII UNIVERSITY INTERNATIONAL CONFERENCES
ARTS, HUMANITIES, SOCIAL SCIENCES, & EDUCATION JANUARY 6 - 8, 2020
HAWAII PRINCE HOTEL WAIKIKI, HONOLULU, HAWAII

THE ART OF FLIPPING: PREPARING TEACHER CANDIDATES TO TEACH VISUAL ARTS



CHO, CHRISTINE
SCHULICH SCHOOL OF EDUCATION
NIPISSING UNIVERSITY
NORTH BAY, ONTARIO
CANADA

Dr. Christine Cho
Schulich School of Education
Nipissing University
North Bay, Ontario
Canada

The Art of Flipping: Preparing Teacher Candidates to Teach Visual Arts

Synopsis:

As technologies develop and become more accessible, so too should the capabilities of educators to teach in innovative ways to mobilize knowledge. This paper explores an under-investigated application of the flipped classroom: its use in the teaching of a mandatory initial teacher education visual arts course for non-artists. Data obtained from pre-and post Likert-type surveys collected over a 2-year span as well as findings from anonymous course evaluations will be explored in this session.

The Art of Flipping: Preparing Teacher Candidates to Teach Visual Arts

Abstract

This paper explores an under-investigated application of the flipped classroom: its use in the teaching of a mandatory initial teacher education visual arts course for non-artists. Data obtained from pre-and post Likert-type surveys collected over a 2-year span as well as findings from anonymous course evaluations for 24 classes will be explored in this paper and 2 key findings discussed: first, the students consistently indicated that, because of the design of the course, they felt more prepared to teach visual arts. Second, that by utilizing a flipped classroom approach, students were able to gain a deeper pedagogical understanding of the curriculum design and process from both a student and future teacher perspective.

Keywords: Visual arts, technology, teacher education

Introduction

As technologies develop and become more accessible, so too should the capabilities of educators to use technology in innovative ways to mobilize knowledge. Increasingly, secondary teachers and university instructors are utilizing the power of technology to create more student-centered approaches to instruction (Hamdan, McKnight, McKnight & Arfstrom, 2013). The flipped classroom is one such approach (Baker, 2000; Butt, 2014; Fulton, 2012). For the most part, the types of classes that have been flipped are STEM – science, technology, engineering, or math – courses at the secondary or post-secondary levels.

I have been teaching a mandatory visual arts course in an initial teacher education program in Canada since 2013. There were a number of constraints associated with the course. First, the course was taught during a compacted 6-week semester and which ran 2 hours, twice a week. I had multiple sections of the course (in the beginning 3 sections but by 2018 I had 7 sections of the course). For an initial teacher education program, the class sizes were large (averaging about 40 students per section) and the classroom was relatively small and also did double duty as a science classroom. In short, storage, counter and work space was extremely limited. In designing the course, I determined I had 2 key issues: first, lack of time, both for art making (set up and clean up of the art room takes away valuable time) as well as time for art pedagogy discussions and lectures. A 4 hour block of time would have been preferable. Second, as I began to consider what multiple sections of the course would look like, I was concerned with keeping all classes on the same schedule and ensuring I did not repeat or overlook key material amongst the classes. It was with these concerns in mind that I turned to the concept of the flipped classroom.

Theoretical Framework

The flipped classroom “is a method of teaching that takes events normally done inside the classroom and allows them to happen outside the classroom and vice versa” (Cole & Kritzer, 2009, p. 38). As Hamdan, McKnight, McKnight and Arfstrom (2013) have argued the flipped model “maximizes student learning opportunities in the classroom by deliberately shifting direct instruction to outside of the group learning space” (p. 6). The guiding principle is that in class work and traditional “homework” for class is flipped (Freeman-Herreid & Schiller, 2013). Prior to considering the flipped classroom approach, as I was planning my lectures, I began to realize I was preparing for an audience of passive recipients at the expense of in-class working time. What was preventing my students from listening to, or watching the “lecture” at home so we could maximize our time in class in a more one-on-one situation? This concept would enable my students to benefit from my expertise and receive more personal attention. I also realized that there might be a benefit to creating short videos about

the art activity we would be doing in class. Again, instead of taking up 10-15 minutes demonstrating the art making process, students could watch the video in advance of the class so we could get to work as soon as they arrived. This could also have the added benefit of giving students more time to think about what they wanted to create and how, hopefully increasing their confidence. I structured my flipped classroom using tenets that have subsequently been outlined by Abeysekera and Dawson (2015):

- (1) move most information-transmission teaching out of class
- (2) use class time for learning activities that are active and social and
- (3) require students to complete pre- and/or post-class activities to fully benefit from in-class work. (p.3)

The information-transmission teaching was moved outside the class through a video or series of videos regarding the theory of visual arts education (such as the critical analysis process, children's artistic development, assessment in visual arts and curriculum design). To ensure class time was focused on the learning activities, the students were also provided a short video to watch which was an overview of the art activity we would be making in class. To ensure full benefit from the in-class work and connection to the theory components, in advance of the studio class, the theory and practice videos were to be viewed and an online quiz completed. After the studio session, I also required the students to upload a self-assessment of the in-class studio work which was closely tied to visual art critique, the critical analysis process and the creative process.

It should be noted that the students in my classes typically do not have a degree in visual arts. Many only have a mandatory high school arts credit, and that is not necessarily in visual arts. In short, the discomfort level in the class tends to be quite high. I am also conscious to not overload the students. The course was 24 hours and so by putting 2 hours per week of lecture and instruction online, in addition to the readings and assignments, I had to ensure the students were not overloaded with work. As such they were not required to be on campus for 4 of the classes.

It was my intent that the students would become "agents of their own learning" (Hamdan et al, 2013, p. 7). According to Michael (2006), when students learn in an active manner, they build mental models of what is learned, deliberately test these models and then fix faulty models; a more likely way to achieve meaningful learning than simple online, blended, or distance models.

Setting up the Flipped Classroom

My primary goal in teaching the visual arts course was to build confidence and some subject-specific competency with future generalist elementary teachers. My methods, techniques and approaches were developed and refined with each iteration of the course. In the beginning (2013), I simply posted my powerpoint slides with a voiceover recording of the lecture notes and the automatic slide show feature turned on. This proved problematic for many users as the files were large and not always compatible with some software programs. I tried various ways to overcome this deficit but it proved to be frustrating for the students. For my second attempt (2014), I decided to make videos instead of powerpoint lectures. While time consuming, I was able to post the links in a private YouTube channel which reduced the data size and enabled all the students to watch the videos. It was during this time that I wanted to explore the impact that the flipped classroom model might be having on my students, as future teachers. As such, I posed the research question, "What pedagogical insights are gleaned by pre-service teachers as a result of participating in a flipped classroom learning environment?" I also wanted to enquire if they envisioned themselves creating or utilizing aspects of the flipped classroom in their future work in schools.

Data Collection

With Tri-council ethics approval (REB), a survey was administered to the students in the visual arts course regarding how they might implement a flipped classroom model at the elementary level and in non-STEM courses. An invitation to participate in the research was sent out by a research assistant to all 135 students enrolled in the visual arts course in 2014. The process was repeated with the 120 students enrolled in the course in 2015. Each time, participants were asked to share insights/feedback on an anonymous Likert-type survey which was posted throughout the duration of the course. I designed the survey questions to reflect the advantages and limitations noted in the existing research. In terms of the 2014-2015 survey data, 15% of the students enrolled in the courses chose to participate, (n=31).

From 2014-2018, I also analyzed the data from anonymous course evaluations. In my institution, at the completion of a course, typically on the last day, students are asked to complete an anonymous course evaluation which is composed of two parts: first, a Likert-style questionnaire with 24 questions (8 questions specific to the course and 16 questions pertaining to the instructor); second, students can provide additional anecdotal comments on the course presentation, the instructor and any general comments they wish to provide. Between 2014-2018, anonymous comment sheets were collected from 453 students (96 comments sheets in 2014; 109 in 2015; 150 in 2016; 171 in 2017; and, 248 in 2018). The data was analyzed using what Tesch (1990) describes as “de-contextualization” to “separate relevant portions of data from their context” (p. 118) in order to identify themes and coding categories and “re-contextualization” or the reassembling of the data to create "pools of meanings" (p. 122) to present a unified and coherent picture. The data was triangulated for reoccurring themes among the participants using the techniques described by Bogdan and Biklen (1998).

There is a significant distinction between the 1 section of the 2018 students (representing 31 surveys) and the rest of the 2014-2018 students. The 2014-2018 students were enrolled in a now defunct concurrent education program. The students took the visual arts course when they were in their final year of a five-year program at a satellite campus. They had been completing their education degree with a degree in contemporary studies and all were credentialing to teach at either the elementary (Primary-Junior) or Intermediate (Junior-Intermediate) level. All the participants in the 2014-2015 data collection were only Primary-Junior teacher candidates. One section of 2018 students were part of a 2-year consecutive program.

In 2015 the province of Ontario, in Canada, began a mandatory 2-year program for obtaining a teaching degree, doubling the previous requirement (see Kitchen & Petrarca, 2015 for a full account). The 2-year program begins after successful completion of a 4-year undergraduate degree. This change in legislation meant that a concurrent degree could conceivably take 6 years to complete. This longer time frame, coupled with a decrease in the total number of available seats in teacher education programs (caps implemented and overseen by the provincial government) as well as other fiscal constraints meant the closure of the concurrent program and the satellite campus. So, in 2018 I taught the visual arts course, using the flipped classroom method, in both the concurrent and the consecutive program at two different campuses first in the winter term concurrent program (January-February, 2018) and in the fall term consecutive program (September-December, 2018). The consecutive course ran 36 hours, twice a week with a 5-week break in the middle during which time students were on practicum.

Findings

The response to the flipped classroom approach, when commented upon, was favorable. For example, in 2014-2015, 38% of the student respondents specifically commented positively on the flipped classroom. In those same years, 8% specifically expressed dislike. From 2016-2018 about 40% of students specifically mentioned enjoying the flipped classroom with only 2% expressing dislike.

In terms of the course itself, as I worked to refine the course and the quality and quantity of the flipped classroom materials, I could see a positive correlation in terms of the course scores (from the 8 questions specific to the course).

Year	Division	Mean Score (/5.00)
2014*	PJ	3.97
2015	PJ	4.25
2016	PJ	4.37
2016	JJ	4.59
2017*	PJ	3.98
2017*	JJ	4.33
2018	PJ	4.50
2018	JJ	4.49
2018	JJ**	4.58

* no quizzes used

** consecutive program

Table 1

The lowest mean score, 3.97, was the first year I began collecting data on the flipped classroom. This was a new way of learning for the students and the materials I created still needed refinement. Also, in the first iteration of the course, I did not include quizzes for the theory component (an accountability check that I implemented in 2015). Interestingly, the year I removed the quizzes from the course (2017*) also saw a dip in the mean scores. I reimplemented the quizzes in 2018 and the scores again improved. Briefly, the quizzes concerned the content of the theory components and had to be completed before students arrived for class. I wanted to ensure flexibility was built into the course as well as some parameters with respect to timelines. I organized the videos into “modules” that corresponded to the art making that would take place in the studio that week. So, for example, while students were free to watch all the module videos in advance and complete the quizzes, they could also complete 1 module per week. The only restriction I implemented was that the corresponding module had to be watched and the quiz completed before the studio class commenced. I arranged for the quizzes to go off line at a pre-determined time that was indicated on the syllabus and in the online platform. With the odd exception, all the students completed the quizzes on time. Quizzes were also randomly organized so no two people would get the quiz questions in the same order as I realized many of the students watched the videos together and took the quizzes at the same time. The purpose of the quiz was designed to be a contractual check that the videos had been watched and would certainly be considered a form of extrinsic motivation.

For the purposes of this paper, I found two key findings. First, the students consistently indicated that, because of the design of the course, they felt more prepared to teach visual arts. Second, that by utilizing a flipped classroom approach, students were able to gain a deeper pedagogical understanding of the curriculum design and process from both a student and future teacher perspective. I begin with a discussion of preparedness.

Prepared to Teach Visual Arts

“The video instructions were effective. They made sense and prepared you for the class ahead”

While Li (1999) found no statistical difference in perceived preparedness levels between concurrent and consecutive education students at the end of their respective programs, there seems to be a false belief on the part of associate teachers that concurrent education students are better prepared for the classroom with a greater commitment to teaching. However, proponents of concurrent programs argue that most students coming into university straight out of high school may apply for concurrent education programs because they are not sure what to do with their lives and see teaching as a potential fallback plan, obtaining two degrees at the same time. The students are on course overload throughout their studies which tends to draw a more disciplined and organized student who can handle the additional pressures. Consecutive students, it is argued, already have a degree and perhaps more life experience and are possibly more serious about a choosing a career in education. As Sederevičiūtė-Pačiauskienė and Bainorytė (2015) argue, consecutive programs have the advantage of producing teachers in a shorter period of time and in a program that is just focused on the study of education. Concurrent students, on the other hand, have a longer time to explore the study of education with the potential for more field or practicum experience. A key finding by Zuzovsky and Smadar Donitsa-Schmidt (2015) determined that,

...graduates of the consecutive model outperformed graduates of the concurrent model in most of the measures utilised. [One explanation that] might account for the superiority of the consecutive model The consecutive model recruits older, more educated candidates with greater abilities and previous work experience. (p. 426)

While I only taught 1 section of visual arts to a consecutive class, I did observe their anecdotal feedback to be more robust and richer in description with greater connection to the course theory than any of the 23 sections of concurrent visual arts I taught.

In 2018 I taught the course at the satellite campus in January-February (concurrent program) and again in the Fall semester at the main campus (consecutive program). This cohort has been marked with a double asterisk in table 1. The JI consecutive students at the main campus provided the most anecdotal comments. In terms of feedback, 46 % of the students specifically commented that the flipped classroom approach made them better prepared to teach visual arts. As one student commented,

The flipped classroom worked extremely well for this course. I found it very beneficial to our learning as it gave us the opportunity to actually partake in the construction of art. I think it is important that we have time to experience as much of the hands-on experience so that we can understand how our students could be feeling when doing similar activities. (anonymous JI consecutive course comment, 2018)

More and more, it seems, we are rushing students through the curriculum. There is no time to marinate in ideas. The 2-year program was implemented precisely because various stakeholders felt that more time was needed to fully prepare teachers for today's classroom. Rather than slowing things down, we seem to be adding more in in the rush to finish and compact as much knowledge as possible.

Another student commented thusly,

I enjoyed the flipped classroom because I was able to use the art period to be productive. I came into each class knowing what I wanted to do because of the flipped classroom! I also enjoyed that I could pause and rewind the videos to fully understand the content and the art process. (anonymous JI consecutive course comment, 2018)

The “pause and rewind” feature was an unexpected advantage. When I began making the “how to” instructional videos in 2016, I noticed a number of students, part way through the class would be re-watching a segment of a particular technique that they needed to review. The “how to” videos also meant that when a student was absent or there was inclement weather, the student would not get behind. Rather, I encouraged them to complete the art project on their own time and submit a photo or bring it to the next class. Students were invited to get the necessary materials they needed from me and/or join another class.

Another unexpected advantage to the flipped classroom materials occurred in the summer of 2018. I was teaching the visual arts course during a 2-week intensive program. I did not run the course using the flipped classroom approach. However, at the end of the first week, I had a family emergency that necessitated me leaving the campus. I made all the flipped classroom materials available to the students and while I missed a day, when I returned, the students had completed the art and theory components scheduled for that day and we did not get behind.

While I set aside time (4, 2 hour blocks of the course) I was cognizant that students would choose to complete the flipped classroom components on their own time, as evidenced by this quote, “I loved the flipped classroom because it allowed me to take advantage of periods during the day when I was more mentally ready to soak in information” (anonymous JI consecutive course comment, 2018). As teachers, we have to remember that the so-called “modern” concept of schooling germinated in the 1840s. Much has changed in almost 180 years and yet, many of our pedagogical approaches remain unchanged. Creating and providing space for students to engage with material at a time that suits them could be one such small, but important change that the flipped classroom model provides.

In addition, it should also be noted that it will take time for students to adjust to the flipped classroom approach. As Freeman-Herreid and Schiller (2013) found, students new to the flipped classroom may initially respond with resistance due to the required at-home work. There is greater responsibility on the student for self-directed, active learning. As I also found, the short quizzes worked to curb the resistance and provided immediate and on-going feedback for the students. The year I did not include the online quizzes, I received comments like, “I did not benefit from the videos” (PJ concurrent, 2017) and “I did not enjoy the flipped classroom. I feel that I didn’t learn that much in this course and the videos were not engaging.” (PJ concurrent, 2017). It is difficult to know what other factors may have influenced this cohort’s more negative view of the flipped classroom. There appeared to be about 5 students who made very similar comments “didn’t learn much”; “videos were dull”; and “teacher didn’t really teach us”. Because I took out the quiz component that year, I replaced them with a unit plan which the students found onerous. In addition, the students seemed to lack the fundamental underpinnings of long range planning that I had expected they would have, being in their fifth and final year of the program (and the final course of their program). It should also be noted that the 2017 cohort of students were feeling the effects of the campus closure with numerous changes occurring at an administrative level (as support staff for example left for new jobs but were not replaced) which could have added an additional layer of angst.

Developing Deeper Pedagogical Understandings

As I analysed the data, one of the things that stood out for me was what was not said, particularly by the concurrent students. I did not find any strong evidence of theory-practice connections. That is, my desire to model the flipped classroom for them was not always reflected in specific comments on their course evaluations. While “liking” the flipped classroom was mentioned in numerous comments it was usually that “the flipped classroom worked really well for me” (anonymous comment, concurrent PJ, 2018). However, there was a comment from a PJ concurrent student in 2017 who wrote,

I enjoyed doing the flipped classroom. As a university student I found it much better to do my work in class after learning about it. Taught me to be a guide on the side not sage on the stage.

This comment suggests a deeper understanding of the pedagogical implications of the flipped classroom for teachers and the potential benefits for students.

In terms of recognizing possible drawbacks, a PJ concurrent student, 2018, wrote, “I enjoyed the flipped classroom but it would be difficult for students who are not motivated.” As Abeysekera and Dawson (2015) write, “[t]he flipped classroom’s success relies upon students undertaking substantial out-of-class work – and being motivated to do so independently” (p. 4). Their findings suggest, however, that there is a great potential for the flipped classroom to increase intrinsic and extrinsic motivation as well as enable students to better manage their cognitive load. Student comments suggest to me that a broader discussion about the merits of a flipped classroom are required at the curriculum methodology level.

In contrast to the concurrent student comments, 30% of the consecutive students specifically commented that other professors have mentioned the flipped classroom but they had not been shown how it works until now, as in this comment,

I really enjoyed the flipped classroom model incorporated into the course. Several of my professors have mentioned the flipped classroom as a teaching/learning strategy, but no one has demonstrated in until now. After this experience, I feel comfortable incorporating the strategy into my future classroom. I also understand the strategy from the perspective of the student, thanks to this course. (anonymous JI consecutive course comment, 2018)

In the 2014-2015 survey questionnaire, none of the students believed a flipped classroom was suitable for elementary students with 73% strongly agreeing it was most suitable for the post-secondary level. An anonymous comment on the 2018 consecutive comment sheet revealed the following,

I liked seeing the flipped classroom as I would like to try using it in my own classroom. I think it would benefit my students. I have heard about the flipped classroom before but have never seen it done. Thank you for showing us how it works.

Another student wrote, “Also a lot of our teachers have talked about the benefits of a flipped classroom but this was the only chance I got to experience it and truly understand how it works” (anonymous JI consecutive course comment, 2018). To be truly effective I believe more time should be spent exploring the flipped classroom in other subject areas with specific suggestions as to how to create the necessary online components.

Conclusion

My desire to flip a visual arts classroom was borne out of necessity: a way to manage numerous sections of what can be a messy and time-consuming course. I also wanted to build my students' confidence in a subject area in which the majority lacked experience. I really wanted to develop self-determined students and model for them a new approach to using technology and engaging with their future students. For the instructor, there is a lot of preparation required: making or finding appropriate videos, ensuring relevant pre and post activities and establishing collaborative, peer learning activities. I was not only teaching my students how to teach visual arts, but also, how to teach using the flipped classroom. Based on their anonymous feedback I was able to refine the course and respond to things that were not working and making improvements to both the content and the structure of the course.

My work with the flipped classroom has the potential to create opportunities for teacher candidates to develop new instructional methods and to consider the possibilities for technology in the future, particularly in the area of the humanities and the arts. I believe the next steps lie in making those connections more transparent and using the available tools in more innovative and effective ways.

Acknowledgement

This research was supported by an internal Start-Up Research Grant from Nipissing

References

- Abeyssekera, L., & Dawson, P. (2015). Motivation and cognitive load in the flipped classroom: definition, rationale and a call for research. *Higher Education Research & Development, 34*(1), 1-14.
- Baker, J. W. (2000). The "classroom flip. Using web course management tools to become the guide by the side.
- Bogdan, R., & Biklen, S. (1998). *Qualitative Research for Education: An Introduction to Theory and Methods* (3rd ed.). Toronto, ON: Allyn & Bacon.
- Butt, A. (2014). Student views on the use of a flipped classroom approach: Evidence from Australia. *Business Education & Accreditation, 6*(1), 33.
- Cole, J. E., & Kritzer, J. B. (2009). Strategies for success: Teaching an online course. *Rural Special Education Quarterly, 28*(4), 36-40.
- Freeman-Her Reid, C., & Schiller, N. A. (2013). Case studies and the flipped classroom. *Journal of College Science Teaching, 42*(5), 62-66.
- Fulton, K. (2012). Upside down and inside out: Flip your classroom to improve student learning. *Learning and Leading with Technology, 39*(8), 12-17.
- Hamdan, N., McKnight, P., McKnight, K., & Arfstrom, K. M. (2013). A review of flipped learning. Flipped Learning Network, Retrieved from http://flippedlearning.org/cms/lib07/VA01923112/Centricity/Domain/41/LitReview_FlippedLearning.pdf
- Kitchen, J., & Petrarca, D. (2015). Initial teacher education in Ontario: On the cusp of change. *Handbook of Canadian Research in Initial Teacher Education, 61*.
- Li, X. (1999). Preparedness to teach: A comparison between consecutive and concurrent education students. *Alberta journal of educational research, 45*(2).

- Michael, J. E. (2006). Where's the evidence that active learning works?. *Advances in Physiology Education*, 30(1), 159-167. doi: 10.1152/advan.00053.2006
- Sederevičiūtė-Pačiauskienė, Ž., & Bainorytė, B. (2015). The concurrent and consecutive models of initial teacher training: Problematics and tendencies. *Rural Environment. Education. Personality*, 15-16.
- Tesch, R. (1990). *Qualitative research: Analysis types and software tools*. NY: The Falmer Press.
- Zuzovsky, R., & Donitsa-Schmidt, S. (2017). Comparing the effectiveness of two models of initial teacher education programmes in Israel: concurrent vs. consecutive. *European Journal of Teacher Education*, 40(3), 413-431.