



Short Communication

The Effect of the Flipped Classroom Approach on Preservice Social Studies Teachers

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Abstract

The purpose of this study was to assess the effect of the flipped classroom approach on preservice teachers who were taking a Social Studies Methods class. Our goal as teacher educators is to maximize learning to ensure they reach their potential. Participants were assigned to weekly flipped classrooms. The flipped classroom approach methods had a positive impact on personalized learning, active learning and participants felt it was beneficial.

Keywords: Flipped Classroom, Social Studies, Preservice Teachers

1 Introduction

As teacher educators, we want to ensure our teacher candidates possess the knowledge and skills required to be effective Social Studies educators. Unfortunately, there are a triad of barriers in the Social Studies educational realm that can make this process problematic. First of all, there is a declining shift in instructional time spent on the teaching of Social Studies that has been well documented (Heafner & Fitchett, 2012; Bauml, 2016). Not only does it affect how students learned in their K-12 educational journey, it has provided a deficient amount of effective teaching models for students to observe in their field experience (Hawkman, Castro, Bennett, Barrow, 2015; Bauml, 2016). Perhaps the most critical effect is that our teacher candidates lack content knowledge (Heafner & Fitchett, 2012; Hawkman, Castro, Bennett, Barrow, 2015). Many of our students have expressed concern that it has been a long time since they have taken a History/Social Studies course and that the primary instructional method utilized in their class was a combination of lecture and textbook based instruction emphasizing rote memorization characterized by repetition of facts with little understanding of the content (Tan, 2015).

According to Brown, Roediger and McDaniel (2015), learning requires a foundation of knowledge focusing on students' long-term memory allowing students to make deeper connections in comparison to short-term memory (as in our "google" society). In the day and age of fast information, so much access to information has resulted in decline in

the access to knowledge obtained years ago, such as history lessons in elementary and high schools.

Many research studies have demonstrated the effectiveness of the flipped classroom model on student learning (Goates, Nelson, & Frost, 2017; Tiejun, 2017). Many educators have incorporated this strategy in their instruction in increase class time for "hands-on" learning (Goates, Nelson, & Frost, 2017). Some researchers have even added that it provides a platform for critical thinking and more meaningful discussions (Alnuhayt, 2018). In addition, with the abundance of technology applications that lends itself to the educational realm, it is an opportune time to utilize these types of methods in teaching. Not only does it provide opportunities to maximize instructional class time, it also provides a platform for pre-service teachers to increase their skills in using technology. In addition, the flipped classroom model provides an avenue for personalized learning as students can on their own explore and review content at their own pace (Sams & Aglio, 2017). It adapts instruction to his or her prior learning (Bernacki & Walkington, 2018). This type of model can also increase collaboration among students. Gomez-Lanier (2018) and Motameni (2018) in their work with undergraduate students found that the flipped classroom model increase collaboration skills and a better understanding of others' perspectives.

In flipped classrooms, teachers flip their classes by doing one or all of the following activities. They can have students watch videos, read text and engage students in thought-provoking questions. According to the Flipped Learning Network (2014), in order for teachers to engage in

“flipped learning” teachers should incorporate the following principles in their practice:

- Flexible Environment-Students are offered learning opportunities for content according to their need.
- Learning Culture-A learner-centered approach is the central theme in which students are provided meaningful learning opportunities outside of class and are actively involved in their own learning.
- Intentional Content-Teachers provide relevant learning resources that maximize learning.
- Professional Educator-Teachers provide timely feedback, formative assessments and reflect on their own practice.

Due to barriers in teaching our preservice teachers in the Social Studies methods classes, we wanted to assess if adopting a flipped classroom system would be beneficial to our students.

2 Research Questions

In our study, we sought to answer the following research questions to better understand the impact the flipped classroom model has on learning specifically Social Studies methods students:

1. Is the flipped classroom model beneficial to learning?
2. Does the flipped classroom model contribute to active learning?
3. Does the flipped classroom model contribute to personalize learning?

3 Theoretical Framework

According to the National Center for Education Evaluation and Regional Assistance (2016), approximately one-third of students entering higher education do not possess the necessary skills in at least one subject to perform college-level work. In fact, one instructional intervention recommended by NCES is teaching students to become self-regulated learners which is a major feature of the flipped classroom approach. There has been much documented research on implementing this practice and its impact on learning (Wanner & Palmer, 2015; Hashemifardnia, Namaziandost & Shafiee, 2018; Alnuhayt 2018; Dommett, 2018; Nielsin, Bean & Larsen, 2018). Both Constructivism and Personalized Learning Theories are embedded in Flipped Classroom practices.

Constructivism

There has been much research on the impact of constructivist theory on learning. According to Von Glaserfeld (1993) knowledge must be created by the individual learner. He or she must be an active agent in his or her own learning. There must be an environment that fosters student-led instruction. Abdal-Haqq (1998) stresses the importance of active engagement, inquiry, and problem solving has key components to constructivism learning. The teacher’s role is one of a facilitator or guide and the students is one of an active learner to question, discuss their ideas and explore new ideas from peers (Abdal-Haqq 1988). This is in contrast with traditional methods in which didactic teaching is emphasized (Namgyel, 2013). Fosnot (2005) shares that the constructivist view of learning provides “learners meaningful experiences through their search for patterns; raises questions and models, interprets, and defends their strategies and ideas” (p. ix).

Fosnot (2005) suggested the following principles in regard to constructivism in education:

1. “Learning is not the result of development; learning is development” (p. 33). Teachers should stress that students have ownership in their own learning and take an active role.
2. Errors and misconceptions are part of learning. Providing time for discussion and questions provide opportunities for students to entertain and evaluate a variety of options.
3. Classroom dialogue is a powerful tool toward extended thinking.

Personalized Learning

Personalized learning prioritizes the learning for each individual student. It focuses on students’ academic level and goals. It is not a one-size-fits all system of instruction.

Bray and McClaskey (2015) define personalized learning in which the learner does the following:

- Leads his/her learning.
- Demonstrates mastery of content.
- Uses appropriate resources to support his/her learning.
- Is a self-regulated learner who monitors his/her own progress.

Teachers become partners in the learning process (Bray & McClaskey, 2015) establishing environments that engage students in this methodical process.

4 Literature Review

Flipped classroom practices feature both constructivism and personalized learning in several unique ways. With flipped classroom practices, students are encouraged to progress at his or her own pace. In most recent years, there has been numerous studies indicating that flipped classroom practices can have a positive impact on content learning (Hashemifardnia, Namaziandost & Shafiee, 2018; Alnuhayt 2018; Dommett, 2018; Nielsin, Bean & Larsen, 2018).

In their study with undergraduate statistic students, Nielsen, Bean and Larsen (2018) found that utilizing the flipped classroom approach had a positive impact on the academic learning of their students versus traditional approaches. Hashemifardnia, Namaziandost and Shafiee (2018) found similar results with their high school students and reading comprehension. Referencing the cognitive load theory (Sweller, 2007), working load is limited and that learning will be affected if too much capacity is needed for new learning (Namaziandost, et. al, 2018). In her study with ELF students, Alnuhayt, (2018) found students preferred using the flipped classroom approach than the traditional methods of lecture. Wanner and Palmer (2015) found that students felt the flipped classroom approach met their needs as learners. Thai, De Wever and Valcke (2017) found that the flipped classroom approach had a positive effect on their students’ intrinsic motivation and self-efficacy in an undergraduate course. In fact helps individualize learning meeting students at their own academic level. It also promotes self-regulation because students monitor their own progress with content.

5 Method

Participants

Participants were undergraduate students a medium size university north of Houston. The sample (N=46) were elementary education majors in

their methods semester, which is taken the semester before student teaching. The participants were divided into two classes taught by the same instructor. Their ages ranged from 20-43.

Instruments of the Study

Students were given a pre-study test (See Table 1) to assess their attitudes toward teaching Social Studies before the first day of Methods class. They were given a post-study test (See Table 2) after the last day of class to assess their attitude toward their experience in participating in the flipped classroom model for their Social Studies Methods class. The survey was confidential and was completed online with 100 percent completion rate. The survey was a Likert scale with open-ended questions.

Procedure

Pre-study data was collected before the semester started and the post-study data was collected after the semester ended. Participants were assigned to flipped classroom modules. Each module consisted of supplemental videos, text reading and articles along with an online quiz directly related to the week’s content that would be featured in class. The topics were aligned with the state standards. Students were to complete the module before each class. In class, students were assessed using Plickers quizzes featuring content over the flipped classroom module as well as hands-on activities that incorporated critical thinking skills.

6 Findings

Pre-Study Results

Table 1 and Table 2 show the questions from the Pre-Study Survey. As shown, only 2 out of 46 agreed that they were confident in teaching Social Studies in the K-12 classroom with 40 disagreeing. Similar results were found in their confidence level in Social Studies content with only 4 agreeing they felt confident in their content with 36 disagreeing. The next two questions focused on their own prior learning experiences in Social Studies. Only 8% agreed that their Social Studies instruction was personalized. Only 5% strongly agreed that their Social Studies instruction was student-centered. As shown in Table 2, we wanted to know what was the primary way our participants were taught both at the K-12 level and at the higher education level. For both levels, the majority of the participants were taught primarily with textbook-based instruction.

Table 1. Pre-Study Survey Questions

Survey Item	SA%	A%	N%	D%	SD%
1. I am confident in teaching Social Studies in the K-12 classroom.	0%	4%	4%	86%	6%
2. I am confident in my Social Studies content.	0%	8%	6%	78%	8%
3. My prior Social Studies instruction was personalized.	15%	8%	25%	45%	7%
4. My prior Social Studies instruction was student-centered	5%	28%	17%	36%	14%

SA=Strongly Agree; A=Agree; N=Neither Agree or Disagree; D=Disagree; SD=Strongly Disagree; N=46

Table 2. Pre-Study Survey Questions

Survey Item	TB	V	CD	H	FT
5. Primary way of being taught Social Studies in the K-12 classroom.	85%	2%	5%	5%	3%
6. Primary way of being taught Social Studies in the higher ed classroom	90%	5%	5%	0%	0%

TB=Textbook; V=Video; CD=Class Discussion; H=Hands-on; FT=Field trips; N=46

Post-Study Results

The purpose of this survey was to assess their attitude toward flipped classroom and its effect on learning. There were also open-ended questions included in this survey. Ninety-one percent strongly agreed that the flipped classroom approach was beneficial for them this past semester. Eighty-three strongly agreed that the flipped classroom approach would be beneficial in teaching. Seventy-six percent strongly agreed that the flipped classroom approach leads to personalized learning. Seventy percent strongly agreed that the flipped classroom approach leads to active learning. Seventy-five percent strongly agreed that they would utilize the flipped classroom approach in their classroom.

Table 3. Post-Study Survey Questions

Survey Item	SA%	A%	N%	D%	SD%
1. The flipped classroom approach was beneficial for me this semester.	91%	7%	2%	0%	0%
2. The flipped classroom approach would be beneficial in teaching	83%	11%	6%	0%	0%
3. The flipped classroom approach leads to personalized learning.	76%	13%	11%	0%	0%
4. The flipped classroom approach leads to personalized learning.	70%	10%	18%	2%	0%
5. I will utilize the flipped classroom approach in my own classroom.	75%	10%	13%	2%	0%

SA=Strongly Agree; A=Agree; N=Neither Agree or Disagree; D=Disagree; SD=Strongly Disagree; N=46

Open-ended questions

Open-ended questions were included in the post-study survey, which provided additional insight in regard to flipped classroom approaches (See Table 4).

Table 4. Post-Study Survey Open-Ended Questions

Open-Ended Question
How does or does not the flipped classroom approach lead to personalize learning?
How does or does not the flipped classroom approach lead to active learning?
Why or why not do you see yourself utilizing the flipped classroom approach in your own classroom?

In regard to if the participants felt the flipped classroom approach was beneficial to learning, here are a few of their comments:

- I think that a flipped classroom requires a higher level of accountability from students, so they have to plan accordingly. As I mentioned before, they do have a choice to spread out their learning and review, but they have to plan to be accountable. Furthermore, when they have had the opportunity to take as much time needed to review content before class, they develop a better understanding of what their strengths and struggles are. I would also say that having more time available in the classroom with their teacher to practice what they have reviewed at home, would lead to more active learning. All in all, I think that having the students do more on their own is purposeful which is how I see a flipped classroom.
- By learning the content at home, students can participate in hands on activities in the classroom. This is a win-win for teachers, parents and students. It also helps with struggling learners. In fact, it meets the students' academic needs.
- I'm of two thoughts on this. One - if the teacher is relying on the lecture at home to be the main learning point then that definitely is not active learning. If the lecture is supplemented by active classroom teaching then it'll be just fine for active learning. I think in fact, it would increase the amount of time for active learning.
- The students can actively participate in the discussion during class time because they have some background knowledge about the subject.

In the regards to the participants' comments, they felt that the flipped classroom approach leads to active learning because this approach provides background knowledge to help them be more prepared for hands-on learning in class.

In response to how the flipped classroom model does/does not lead to personalize learning, here are a few of the participants' responses:

- I think that the flipped classroom model contributes to personalized learning by students having choice on how much and when to review their content before going to class. There would be deadlines, of course, but students still have the choice to spread out their review. Again, if a student does not

understand a certain concept, he or she can formulate those questions and come ready to inquire on those questions when they go to class. I see this as a way for students to understand what their own learning needs.

- Flipped classroom I feel is more of a generalized learning environment. From what I experienced in Social Studies, the activities and PowerPoints weren't specific or differentiated. However, the creation of artifacts allowed for creative freedom.
- While the student is doing their "homework", the teacher is right there to be able to personalize that learning to the individual student. It also builds confidence for the learner because it can even the playing field for all levels.
- You're offering students different ways to attain knowledge. Each learner is different and some need to study on their own before they can fully understand what is being taught in the classroom.

In regard to participants' responses, the flipped classroom approach leads to personalize learning because it can meet a variety of academic levels and the students is ultimately responsible in determine what he or she needs to review to be prepared for class.

Lastly, in response to why or why not the participants envision themselves utilizing the flipped classroom approach in their own classroom, here are a few responses:

- I would definitely use this approach in my classroom because I think it could not only help students but it could help parents understand what we are doing in the classroom.
- I think I would incorporate it in small steps because I will be a new teacher and I do not want to be too overwhelmed. I would like to try using it in one subject matter first and see how it goes. Then I could perfect it and possibly incorporate other subjects.
- This could benefit students and provide more instructional time to deepen understanding. I think it could also build student confidence level because it meets students where they are and helps them in being prepared.

In regard to if the participants would incorporate this approach in the classroom, many of the responses were positive in that it would help in maximizing class time as well as help parents at home work with their student.

7 Discussion

This study provided insight on the impact of the flipped classroom on our pre-service methods classes. Our ultimate goal was to discover ways to strengthen our teacher preparation classes. As previously mentioned, one barrier we currently have is the limited amount of time we have with our students. We thought the flipped classroom approach might be a good solution to maximizing our face-to-face time in the classroom. We were pleasantly surprised with our results and it provides inspiration to expand the flipped classroom to other content areas such as math and science. In addition, we think this type of approach would be beneficial for our preservice teachers because it is a practice that they could incorporate in their own classroom. In regards, to the participants' responses to the Pre-Study survey, there is cause for concern in how K-12 and higher education Social Studies instruction is delivered. This warrants more

awareness especially for teacher education programs to incorporate a variety of researched-based instruction.

8 Limitations

In most research studies, there is a control and experimental group. Perhaps in the future, we could possibly compare the flipped classroom students with traditionally taught students especially in the realm of content. Another limitation is the implementation time period. Unfortunately, we only have one semester with our students. It would ideally to implement this type of approach in a full academic year.

9 Concluding Thoughts

We hope to inspire other teacher educators, preservice teachers and in-service teachers to incorporate innovative approaches such as the flipped classroom model. As educators, our priority is to maximize learning and incorporate effective teaching practices that benefit our students as well as help them become self-regulated learners.

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