# EXPERIENCES OF MIDDLE SCHOOL TEACHERS IMPLEMENTING THE FLIPPED CLASSROOM METHOD WITH LACK OF STUDENT PREPAREDNESS: A TRANSCENDENTAL PHENOMENOLOGICAL STUDY

by

Kristine Hickman

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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APPROVED BY:

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## Abstract

The purpose of this qualitative, transcendental phenomenological study was to describe the lived experiences of middle school teachers in the United States implementing the flipped classroom model (FCM) when students are not coming to class prepared. The FCM is a framework in which students engage in passive learning activities at home by watching videos uploaded by their teachers so that they can engage in active learning activities in the classroom. The theory guiding this study is Vygotsky's social-constructivism theory as it promotes critical thinking and problem-solving skills through collaboration, which are very important skills required of today's 21st century learners. The following questions were researched in this study: (a) What are the experiences of middle school teachers in the United States implementing the FCM with student completion of homework?, (b) What are the experiences of middle school teachers in the United States implementing the FCM with student engagement in the active learning process when homework has not been completed?, and (c) What are the experiences of middle school teachers in the United States implementing the FCM with social collaboration among students during the learning process when homework has not been completed? Data collection included interviews, document analysis, and letter writing from 10 participants who have used the FCM for at least two years. Participants were selected from a flipped learning site on social media by completing a questionnaire. Data analysis included epoché, phenomenological reduction, and imaginative variation and then synthesized to determine the essence of the lived experience of the participants. Three themes that emerged from the data analysis were: homework completion improved and builds confidence, noncompletion of homework leads to delayed engagement, and noncompletion of homework causes insufficient collaboration within the classroom. Two outliers were identified in the area of homework completion.

*Keywords*: 21st century skills, critical thinking, flipped classroom model, homework, problem solving skills

**Copyright Page**

## Dedication

I dedicate this dissertation to God who strengthens me to do all things. Without his loving push, I would not have even begun this journey. His plan was different than mine and all those years I swore I would never get my doctorate, he just waited patiently until the time was right to give me the nudge I needed.

To my wonderful husband, Mike, who has spent hours alone and handled all of the cooking so that I could come home from work and head straight back to my office to do "Liberty work" as he would call it. I would never have made it through without your love and support.

To my beautiful daughters, Jordan and Isabella, who may have felt like they did not have a mother for the past four years. Just know that hard work pays off and never stop chasing your dreams.

Finally, to my parents, Rita and Eddie, who have loved and supported me through the ups and downs of life. You instilled a work ethic in me and that dedication to my work has led to this latest chapter in my life. Thank you for making me who I am today!

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Thank you to all my participants who helped to make this study a reality. Your passion for teaching using the Flipped Learning Method was evident and instilled a desire in me to make my classroom as magnificent as yours. I pray you continue to motivate children to learn for years to come.

I would also like to thank Dr. Ferrin for all her prayers, guidance, and support. There were times when I thought I would not make it to the end of this road, but she was always there to offer support and help to see the light at the end of tunnel. Thank you so much for your words of encouragement along the way.

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## List of Abbreviations

Adequate Yearly Process (AYP)

Common Core State Standards Initiative (CCSSI)

Council of Chief State School Officers (CCSSO)

Elementary and Secondary Education Act (ESEA)

Every Student Succeeds Act (ESSA)

Flipped Classroom (FC)

Flipped Classroom Method (FCM)

Information, Communications, and Technology (ICT)

More Knowledgeable Other (MKO)

National Governor's Association (NGA)

Next Generation Science Standards (NGSS)

No Child Left Behind (NCLB)

The Partnership for 21st Century Learning (P21)

Science, Technology, Engineering, and Mathematics (STEM)

Self-Determination Theory (SDT)

Standards Based Education (SBE)

Zone of Proximal Development (ZPD)

# CHAPTER ONE: INTRODUCTION

## Overview

In recent years, educators have been called upon to increase the rigor of the education they provide by utilizing interdisciplinary science, technology, engineering, and mathematics (STEM) education to enhance students' 21st Century skills in order to ensure they are able to compete globally (Asunda & Weitlauf, 2018). Therefore, teachers are now required to be more digitally competent so that they can incorporate technology into their curriculum (Gündüzalp, 2021). Current times necessitate teachers develop technology literacy so they can ensure their instruction meets the needs of current times through the use of technology integration (Yilmaz, 2021). One such educational model which utilizes technology integration is the flipped classroom method (FCM). The FCM is a framework in which students engage in passive learning activities at home by watching videos uploaded by their teachers so that they can engage in active learning activities in the classroom (Bergman & Sams, 2012; Chen et al., 2018; Gough et al., 2017; Hendry et al., 2017; Lencastre et al., 2020; Moran, 2018). Using Vygotsky's (1978) social-constructivism theory as a framework, the purpose of this qualitative, transcendental phenomenology study is to describe the lived experiences of middle school teachers in the United States implementing the FCM. Chapter One includes the background, problem statement, purpose statement, significance of the study, research questions, and definitions.

## Background

The skills needed by students in the future are constantly evolving. The Partnership for 21st Century Skills Framework (P21) directs educational systems to change the way in which they educate students so they will be capable of competing in global economies (Choo, 2018; Hilt et al., 2019; Rahman, 2019). In this framework, the most important skills students will need

in the future are critical thinking, decision-making, problem solving, communication, cooperation, responsibility, and creativity (Hilt et al., 2019), along with technology and interdisciplinary thinking (Asunda & Weitlauf, 2018). Using a constructivist approach in their classrooms, teachers should provide the students opportunities to work collaboratively with other students while promoting active learning strategies (Fernando & Marikar, 2017). Looking at the historical, social, and theoretical backgrounds of the FCM helps to determine future research needed to describe the perceptions and lived experiences of middle school utilizing the FCM in middle school classrooms in the United States.

**Historical Context**

The traditional style of teaching where the teacher presents information to students who must then take notes and repeat what was presented (Noreen & Rana, 2019) which focuses on memorization has been around since the Renaissance when Desiderius Erasmus stressed note taking and memorization by his students (Gutek, 2011). When teachers use the traditional method of teaching, students are not engaged in activities that promote higher level thinking skills such as problem-solving and critical thinking (Çoban & Erol, 2020). Therefore, the effectiveness of the traditional method of teaching has been questioned by many educators (Maheshwari & Seth, 2019; Smallhorn, 2017). The FCM is one constructivist-based approach which uses authentic learning tasks to promote inquiry, problem-solving, and social interaction (Jdaitawi, 2019).

Bergmann and Sams (2012) are credited with creating the FCM after flipping their Woodland Park High School chemistry classrooms (Gough et al., 2017; Stratton et al., 2020). In order to help students who missed school for various sports and activities, they started recording their class PowerPoints as video slides in 2007 so they could be uploaded for the absent students

to watch at a later time. However, students who were in class also enjoyed the ability to rewatch the videos at home if they needed to relearn or refresh their memory about something they had learned in class. As a result, Bergmann and Sams (2012) made flipping the instructional part of the class a regular part of their routine. The following year, Bergman and Sams (2012) filmed all of their PowerPoints into instructional videos for students to watch at home before class and used class time for deeper learning activities that might require more assistance from the teacher. Therefore, students were more actively engaged in their learning. However, Bergmann and Sams were not the first to actually flip their classrooms. College professors began uploading PowerPoints and videos of class information for students to view prior to class starting in the mid 1990's (Lage et al., 2000; Moran, 2018). This was the true precursor to today's FCM where students must watch videos as homework prior to class so they have the information they need to be active participants during the in-class activities.

**Social Context**

Since knowledge alone is no longer adequate in preparing students for future success, today's society necessitates those students are proficient in 21st century skills such as problem solving, communication, metacognition, creativity, and innovation (Rahman, 2019; Yilmaz, 2021). As society has become more digital, it is important for education to also become more digital since students today are digital natives (Gündüzalp, 2021). Digital literacy is an essential 21st century skill that has been added to curricula all over the world because it is considered a prerequisite for creativity, innovation, and entrepreneurship and is needed in order to thrive in today's world (Gündüzalp, 2021). Using advancements in educational technology, the FCM is an educational model in which students use technology to watch and interact with prerecorded videos at home in order to prepare them for collaborative, active learning in the classroom which

emphasizes problem solving and critical thinking (Lo, 2018).

## Theoretical Context

The theoretical context of the FCM is a change in the structure of class time where the passive learning activities are completed at home so that class time can be utilized for active learning and problem-solving activities which are supported by the teacher (Lo, 2018). Vygotsky's (1978) social constructivism and social cultural theories convey that students learn best when they are actively involved in their own learning. Therefore, it is important for teachers to provide opportunities for students to participate in active learning tasks. Through the social interactions during these active learning tasks, students will have the opportunity to solve problems while collaborating with others (Bergman & Sams, 2014; Sun & Wu, 2016; Ye et al., 2019), The FCM relies on the self-directed learning theory (SDL) which allows students to become more autonomous through collaborative peer activities within the classroom, and more confident to participate in challenging activities (Sergis et al., 2018). Bandura's (1986) social cognitive theory asserts that students must observe their surroundings, using the processes of attention, retention, production, and motivation, in order to learn. In the FCM Bandura's (1987) social cognitive theory enhances students' ability to motivate themselves to self-regulate their own learning, assimilate information learned at home to knowledge garnered in the classroom for long term retention (Chen et al., 2021a).

# Problem Statement

The problem is teachers cannot effectively implement the FCM when students are not coming to class prepared to learn because they do not always complete the pre-class activities at home (Sigurðardóttir & Heijstra, 2020; Sooko-Singh & Boisselle, 2018; Unal & Unal, 2017; Yumusak, 2020). If students do not complete the required pre-class homework assignments, then

they do not have the background knowledge required to be successful at the tasks requiring critical thinking and problem-solving (Sigurðardóttir &Heijstra, 2020); therefore, having difficulty participating in the collaborative activities fundamental to the FCM. There is a significant need to understand how not completing homework in the FCM affects students' ability to collaborate and participate in the FCM and ultimately their success in the classroom. Although the FCM has been studied extensively at the tertiary level (Adams & Dove, 2018; Baepler et al., 2014; Jdaitawi,2019; Kim & Ahn, 2018; Maheshwari & Seth, 2019; Phurikultong & Tuntiwongwanich, 2021; Sigurðardóttir & Heijstra, 2020; Smallhorn, 2017; Sun & Wu, 2016; Talan & Batdi, 2020; Yumuşak, 2020), fewer studies have addressed the high school level (Bond, 2019; Dixon &Wendt, 2021; Florence & Kolski, 2021; Gelgoot et al., 2020; Jong, 2017; Leo & Puzio, 2016; Reinoso et al., 2021; Sookoo-Singh & Boisselle, 2018) and even less has been studied at the middle school level (Fazal & Bryant, 2019; Gough et al., 2017; Moran, 2018; Stratton et al., 2020; Unal & Unal, 2017). The studies that have been conducted at the middle school level have focused on student achievement (Fazal & Bryant, 2019; Stratton et al, 2020; Unal & Unal, 2017), teacher perceptions of the FCM (Gough et al., 2017; Unal & Unal, 2017), student perceptions of the FCM (Gough et al., 2017; Moran, 2018; Stratton et al., 2020; Unal & Unal, 2017), and student engagement during the active learning in class activities (Moran, 2018; Stratton et al., 2020). With the homework piece being an important part of the FCM, lack of student completion has been mentioned in literature (Bicen & Taspolat, 2019; Unal & Unal, 2017; Webb et al., 2021).

Hallatt et al. (2017) researched homework completion rates comparing digital submissions to traditional paper submissions and found that students were more likely to submit homework if it was completed on paper. Fan et al. (2017) completed a meta-analysis on math and

science which showed the connection homework completion had on a student's academic achievement waned in middle school. Although this researcher found one study that connected student responsibility to homework completion in the FCM, it was at the elementary level (Bursa & Cengelci Kose, 2020). Therefore, a gap in the literature indicates that further studies need to determine how middle school teachers ensure collaboration and active learning in their classrooms even when students may not complete their homework in the FCM.

## Purpose Statement

The purpose of this qualitative, transcendental phenomenological study is to describe the lived experiences of middle school teachers in the United States implementing the flipped classroom model (FCM) when students are not coming to class prepared. At this stage in the research, FCM is generally defined as students watching short videos at home and answering questions or taking notes on basic information needed for use in active class activities (Bergman & Sams, 2014). The theory guiding this study is Vygotsky's (1978) social constructivism theory as it develops students' critical thinking and problem-solving skills.

## Significance of the Study

The theoretical significance of this study stems from Vygotsky's (1978) social constructivist theory where students must be active participants in their learning. Teachers have found they do not have time to teach everything the curriculum requires, and class time is spent on filling in worksheets, but the FCM is a framework that helps them transform their classrooms into active learning centers filled with inquiry and problem-solving (Bergmann & Sams, 2014). In order for the FCM to be successful, students must watch the pre-class videos, so they have the background knowledge to participate in the class activities (Sigurðardóttir & Heijstra, 2020). Typically, homework completion rates tend to be low in the middle school as "[a]pproximately

28% of average-achieving students without disabilities and 56% of students with learning disabilities have problems completing their homework" (Merriman et al., 2016, p.457). The results of this study may render theoretical significance by providing teachers with suggestions on how to better ensure homework completion by students in their flipped classroom so that students can follow the social constructivist theory and become active participants in their own learning.

The empirical significance of this study comes from the perceptions and lived experiences of middle school teachers regarding student collaboration and participation in active learning activities while utilizing the FCM. The empirical data might help other teachers design a flipped classroom that ensures collaboration and active learning even when all students do not complete the pre-class homework assignments as one challenge to the FCM is students hindering the learning process by not completing these required assignments (Unal & Unal, 2017). When students do not complete their homework in the FCM, they are unable to evaluate information needed in order to participate in the learning activities in class (Kim & Ahn, 2018; Ye et al., 2019). In his study, Çetinkaya (2017) found that students who do not learn the needed theoretical information prior to class are unable to improve their creative thinking skills. According to Jong (2017), by assigning pre-class homework videos in the FCM teachers are providing scaffolds that will help students to assimilate new knowledge. This study helped to narrow the gap in the literature by providing research into how middle school teachers ensure collaboration and active learning in their classrooms even when students may not complete their homework in the FCM.

From a practical point of view, today's students must show competence in digital literacy, and other 21st century skills such as problem-solving and critical thinking: therefore, they must be incorporated into today's curriculum (Asunda & Weitlauf, 2018; Montiel et al., 2020). The

FCM is a framework which allows for all of these skills to be incorporated into the curriculum. By delivering some of the basic, lower-level content through pre-class video homework assignments, class time is utilized for more collaborative, higher-level student-centered problems which will increase problem-solving and critical thinking skills, student interaction, and teacher interaction (Bergman & Sams, 2012; Chen et al., 2018; Hendry et al., 2017; Lencastre et al., 2020; Stratton, 2020; Tawfik et al., 2020). For the FCM to be a success, it is important for students to watch and internalize the videos at home prior to class so that they can apply that knowledge in the classroom during the hands-on activities (Sigurðardóttir & Heijstra, 2020)**.** Exposing middle school teachers' perspectives on how to best ensure student homework completion using the FCM, a framework utilizing active-learning strategies in coordination with 21st century skills, will provide valuable information as to how teachers might be able to make this framework work successfully in their classrooms so that they can educate students using the rigor required by today's standards.

## Research Questions

The purpose of this study was to describe middle school teachers' experience in the FCM and how they ensure collaboration and active learning occur even when students do not complete the homework piece of the lesson. This study provided beneficial information to teachers of all experiences who are currently using the FCM in their classroom or who may be considering using the FCM in their classroom. The following three research questions guided my study:

### Central Research Question

What are the experiences of middle school teachers in the United States implementing the flipped classroom model (FCM) with student completion of homework?

### Sub-Question One

What are the experiences of middle school teachers in the United States implementing the FCM with student engagement in the active learning process when homework has not been completed?

**Sub-Question Two**

What are the experiences of middle school teachers in the United States implementing the FCM with social collaboration among students during the learning process when homework has not been completed?

## Definitions

1. *21st-century skills* – The set of knowledge, skills, work habits, and character traits that a student must possess in order to be successful in today's world as well as in the future (Rahman, 2019).
2. *Active learning* – Students take responsibility for their learning by participating in activities that allow them to explore, connect and question (Bergmann & Sams, 2014).
3. *Collaboration* – An active learning process that promotes higher-order thinking skills through sharing and construction of knowledge via peer interactions (Chen et al., 2021).
4. *Constructivist learning theory* – A theory which states that students are active participants in the learning process where they construct knowledge based on social and cultural interactions (Fernando & Marikar, 2017).
5. *Critical thinking* – thinking processes in which allow a person to reason, analyze, and evaluate (Çoban & Erol, 2020).

6. *Digital literacy* – The ability to use technology effectively to complete various tasks (Pacheco-Guffrey, H., 2021).
7. *Flipped classroom method (FCM)*- Students watch prerecorded videos of class lectures at home so that in school students can complete hands on, collaborative activities (Bergmann & Sams, 2012).
8. *Homework* – The at home instruction through recorded videos to gain a basic understanding of learning materials needed for class activities (Sigurðardóttir & Heijstra, 2020).
9. *Interdisciplinary education*- Instead of curriculum being taught in isolation by subject area, students are taught using experiences developed around a theme that incorporates several different subject areas (Asunda & Weitlauf, 2018).
10. *More Knowledgeable Other (MKO)*- Anyone, including other students, who knows or understands more about the historical and cultural practices of the concept being taught or the task at hand (Abtahi, 2017).
11. *Passive learning*- Teacher directed instruction where students sit at a desk and given information (Bergmann & Sams, 2014)
12. *Problem solving* - "An individual's capacity to engage in cognitive processing to understand and resolve problem situations where a method of solution is not immediately obvious. It includes the willingness to engage with such situations in order to achieve one's potential as a constructive and reflective citizen" (OECD, 2013, p. 122).
13. *STEM* – Science, Technology, Engineering, and Mathematics (Moran, 2018).

14. *Student centered instruction* – An instructional belief that students take control of their learning by participating in inquiry and problem-solving activities (Talbert et al., 2019).
15. *Teacher centered instruction* – Direct instruction by a teacher using explanations and modeling (van Loon et al., 2021).
16. *Technological integration* – Including various technological developments into the education process (Yilmaz, 2020).
17. *Technology*- Digital tools such as videos, blogs, web quests, simulations, voting mechanisms, and digital libraries used to enhance teaching and learning (Aidinopoulou & Sampson, 2017).
18. *Zone of Proximal Development (ZPD)* - The distance between students' actual independent learning level and their potential collaborative learning level (Vygotsky, 1978).

## Summary

This chapter provided background information on the need for students to use technology to develop 21st century skills (Asunda & Weitlauf, 2018). One educational framework created to help students develop the 21st century skills of problem-solving and critical thinking while being active participants in their learning is the FCM (Bergman & Sams, 2012; Chen et al., 2018; Gough et al., 2017; Hendry et al., 2017; Lencastre et al., 2020; Moran, 2018; Srilaphat & Jantakoon, 2019). To be competitive in today's society, students also have to be proficient in digital literacy (Gündüzalp, 2021). The FCM promotes digital literacy through the use of homework, or the uploaded videos of basic class information that students must watch prior to coming to class (Lo, 2018). Unfortunately, teachers find that not all students complete the

required pre-class homework assignments (Unal & Unal, 2017), which leads to the problem of this study. Not completing the pre-class homework assignments impedes the students' in-class learning (Sigurðardóttir & Heijstra, 2020). Therefore, research must be conducted to describe how teachers are able to ensure collaboration and active learning in their FCM even when students have not completed the required homework.

# CHAPTER TWO: LITERATURE REVIEW

## Overview

A systematic review of the literature was conducted to compare teacher centered versus student centered teaching styles, explore curricula reforms that led to a change in instructional methods, the essential elements of instruction using the flipped classroom method, and to review the relationship between student homework completion and student achievement in the FCM. This chapter presents a review of the current literature related to the topic of study. In the first section, the theory relevant to students' cognitive development, Vygotsky's social constructivist theory, is discussed, followed by a synthesis of recent literature regarding teaching styles and curricula reforms that have occurred in the United States, history and use of the flipped classroom model, as well as benefits and challenges of its uses. Lastly, student motivation and self-regulated learning required to complete homework assignments is discussed. In the end, a gap in the literature is identified, presenting a viable need for the current study.

## Theoretical Framework

This study was guided by Vygotsky's (1978) social-constructivist theory by exploring middle school teachers' perspectives on collaboration and active learning by students in their FC. In Vygotsky's (1978) social constructivist theory, students take an active role in their learning and construct their own knowledge through an inquiry process. The FCM is one teaching method that utilizes the social constructivist learning theory to develop students' critical thinking and problem-solving skills (Srilaphat & Jantakoon, 2019). In the FCM, the passive learning activities are assigned for homework, so that class time can be spent on student-centered active learning experiences including problem-solving activities, collaboration with a group, and hands on lab activities (Khasanah & Anggoro, 2022).

## Social Constructivism Theory

Vygotsky's (1978) social constructivism theory was based on his belief that society and culture played a pivotal role in a child's cognitive development. Vygotsky (1962) emphasized that the relationship of the psychological processes; perceiving, learning, and remembering, is dependent upon cultural forms of human behavior because thinking begins with the social and ends with the individual (Faldet & Skrefsrud, 2020; Lingaiah & Dhanapal, 2020; Medina-Liberty, 2020; Soysal, 2020). Vygotsky's (1978) social constructivism theory suggests that human development is a socially mediated process where students collaborate with more knowledgeable others using culture-specific tools, private speech, and the zone of proximal development to acquire and enhance their cultural beliefs, values, and problem-solving skills (McLeod, 2018). Vygotsky (1978) wrote his social constructivist theory because he believed children learned best when they were actively involved in their own learning. When learning in a constructivist approach, it is important to remember that higher mental functions are found in psychological tools and interpersonal relationships rather than within the individual (Daniels, 2003).

### *More Knowledgeable Other*

Vygotsky's social constructivism theory is based on two principles - More Knowledgeable Other (MKO), and The Zone of Proximal Development (ZPD). Vygotsky's (1978) theory identifies the MKO as anyone, including other students, who knows or understands more about the historical and cultural practices of the concept being taught or the task at hand (Abtahi, 2017). A child's cognitive, specifically language, development is advanced through social interactions with an MKO (Faldet & Skrefsrud, 2020). As a result, Vygotsky

promotes interaction, dialogue, and context in educational settings in order for students' learning and development to be enhanced (Faldet & Skrefsrud, 2020; McLeod, 2018).

### *Zone of Proximal Development*

The MKO is used in conjunction with the ZPD. Vygotsky (1978) stated, that when students work with "more capable peers" (p. 86) they can reach the ZPD which is the distance between their actual independent learning level and their potential collaborative learning level. In the social-constructivist theory, the ZPD represents the level of development of the learner from the beginning of the process to the end through the interaction with an MKO by connecting a psychological viewpoint of child development with an educational viewpoint on instructional practices (Daneshfar & Moharami, 2018; Daniels, 2003). Vygotsky (1978) believed that teachers just presenting facts to students would not lead to guidance from the teacher or collaboration with peers which is needed for true learning to occur. In order for true cognition to occur, Vygotsky (1978) felt that the social interactions within the zone of proximal development would awaken students' development processes so they could internalize what they are learning. Vygotsky (1978) urged teachers to use the ZPD to guide students through tasks at school in order to move them towards formal learning (Daniels, 2003).

One important facet of the ZPD is the idea of scaffolding. According to Vygotsky (1978), scaffolding is how teachers and others provide support for their students. Vygotsky maintained that students receive full support from their MKO in the beginning of the learning process, but as they move through the ZPD towards becoming independent learners, support is weaned from the students (Lingaiah & Dhanapal, 2020).

Vygotsky also regarded assessment of children's learning in terms of collaboration and their ZPD. Vygotsky (1978) asserted that collaboration was a better indicator of a child's ability

than a traditional independent test because through collaboration with a MKO, students are asked to solve problems that would be past their individual mental ability (Daneshfar & Moharami, 2018). Thus, teachers are able to describe how the students are able to learn as opposed to what they have learned. Vygotsky's social-cultural theory (1978) was the precursor to today's constructivist movement in education. Many education models today, such as inquiry-based learning, project-based learning, and flipped classroom learning follow both Vygotsky's social-cultural theory (1978) and social constructivism theory (1978) and are being incorporated into curricula.

**Connection of Theory to Learning**

Specifically, Vygotsky's (1978) social constructivism theory demonstrates the relationship between active learning in the flipped classroom model (FCM) and student achievement. Prior research has indicated that active learning has led to higher learning achievements of students (Chen et al., 2018; Jdaitawi, 2019, Lencastre et al., 2020). According to Vygotsky's (1978) theory, students learn through social encounters with others, and the FCM provides students with the opportunities to use problem solving skills while collaborating with others (Bergman & Sams, 2014; Sun & Wu, 2016; Ye et al., 2019).

Using concepts from Vygotsky's (1978) social constructivist theory, the FCM places the responsibility of learning back onto the student. When students are responsible for their learning, the teacher can use the ZPD to scaffold instruction to meet their needs. Because learning based on Vygotsky's theory is socially encompassed, when students take responsibility for their learning, they are taking responsibility for their classmates' learning as well (Ayish & Deveci, 2019). Using Vygotsky's social constructivism theory in the classroom with the FCM provides students with the opportunities to learn by socially collaborating with other learners, interacting

with teachers and MKO to increase the rigor of learning, and construct knowledge through the use of an inquiry process.

Vygotsky's (1978) social constructivist theory will be used as the framework to guide this study in order to understand how teachers use collaboration and active learning in their FCM. Research questions guided the direction of the study by addressing the need to understand how teachers use collaboration and active learning in their FCM. The results will add empirical evidence to the literature which suggests that by delivering some of the basic, lower-level content through pre-class video homework assignments, class time is utilized for more collaborative, higher-level student-centered problems which will increase problem-solving and critical thinking skills, student interaction, and teacher interaction (Bergman & Sams, 2012; Chen et al., 2018; Hendry et al., 2017; Lencastre et al., 2020; Stratton, 2020; Tawfik et al., 2020).

## Related Literature

The literature review comprised data on teaching styles and curricula reforms throughout the years leading to pedagogy change. Notably, once such pedagogy change which relies on Vygotsky's (1978) social constructivist theory is the flipped classroom method (FCM). Evidence from the literature review underscores benefits to students learning in the FCM, as well as presenting its challenges: namely, student completion of the pre-class homework assignments (Unal & Unal, 2017), which is a major tenet of the FCM. Student motivation and self-regulated learning required to complete the homework assignments are discussed. This comprehensive review of the literature led to a gap in the literature which provided the basis for this study.

### Teaching Styles

Teachers impact their students in many ways every day. One way they impact their students' learning is through their teaching style. A teacher's teaching style can have an

enormous psychological impact on students as a determining factor in the students' comfort level in the classroom environment (Inayat & Ali, 2020). When students perceive their teacher as friendly and compassionate, they are happier and more interested in what they are learning (Inayat & Ali, 2020; Skinner & Belmont, 1993). As a result, participation in class and academic achievement is often increased (Inayat & Ali, 2020).

Furthermore, it has been understood for many years that students have varying learning styles and these differences in their learning styles affect their educational journey (Hurriyetoglu, & Kilicoglu, 2020). When teachers' instructional styles positively correlate with students' learning styles, then the academic achievement of students is also positively influenced (Hurriyetoglu, & Kilicoglu, 2020; Simsek, 2002). A well-matched teaching/learning style between teacher and student will lead to greater motivation by students to learn (Chetty et al., 2019). When students' learning styles match with teachers' teaching styles, then students learn and retain more information as well as perform better on assignments and assessments (Chetty et al., 2019). Therefore, student performance is more likely to increase in classes taught with a variety of teaching styles as opposed to just one style (Lage et al., 2000). Teaching styles vary from teacher-centered approaches to student-centered approaches.

### *Teacher-Centered Instructional Approach (Traditional Teaching)*

A teacher-centered instructional approach is often referred to as the traditional style of teaching. Most classrooms are primarily educated in this manor where desks are lined up in rows, so students are facing the instructor (Noreen & Rana, 2019). In the traditional style of teaching, teachers are considered the most important people in the lesson because they have the most knowledge (Arman, 2018). Friere (1970/2014) refers to the teacher-centered instructional approach as the banking approach since the teacher deposits information into students by doing

all the talking while the students just listen. Consequently, students are not engaged in any active learning strategies in a teacher- centered instructional approach (Timothy & Kelly, 2019).

Furthermore, the traditional style of teaching is a deductive strategy for teaching where the teacher gives the students rules for the concept being taught, then examples of that rule, and finally the students get to practice that rule. Content is the main focus of a classroom utilizing the traditional style of teaching (Noreen & Rana, 2019). Teachers precisely explain and model the connections students are expected to make to the learning (van Loon et al., 2021). As a result, students are passive learners which results in them losing interest approximately 15 to 20 minutes after the lecture (Zafar & Akhtar, 2021). Because of this, many disadvantages have been cited for the traditional style of teaching (Kolenda & Vidak, 2021; Noreen & Rana, 2019; Raja & Najmonnisa, 2018)

***Disadvantages of Traditional Teaching***

In recent years, the traditional style of teaching has been criticized as not being an effective model of instruction for today's students. Students do not learn as well in a traditional classroom because teachers place higher demands on working memory which results in an insufficient ability to learn and retain information (Kolenda & Vidak, 2021). Additionally, traditional teaching has been criticized for not meeting the needs of today's 21st century students in helping them to become global citizens (Arslan, 2020). Traditional teaching focuses on using class time efficiently to transfer information to students and does not allow for flexible, higher-level activities (Talbert et al., 2019). Critical thinking is an important skill for today's learner and the traditional style of teaching does not require students to use critical thinking skills as they are passive learners in this environment (Raja & Najmonnisa, 2018). Consequently, retention and long-term learning does not occur in a teacher-centered classroom (Förster et al., 2022). Students only tend to remember 20% of what they hear in a traditional, lecture-based classroom (Wilson

& Korn, 2007). Due to the restrictions placed on intellectual capabilities in the traditional teaching style, students often lose interest in what they are learning (Noreen & Rana, 2019). Therefore, students tend to be demotivated and negligent in staying on top of their learning (Förster et al., 2022). As a result, student-centered instruction is being promoted as the preferred teaching style in today's classrooms (Yamagata, 2018; Zafar & Akhtar, 2021)

### *Student-Centered Instruction*

Classrooms with a student-centered instructional focus have desks formed in groups so the students can work together as they learn (Ardeleanu, 2019). Accordingly, student-centered instruction places ownership of the learning onto the students. Students are not just sitting around waiting for a teacher's response to move on to the next level of learning. Instead, students are talking to and listening to each other to form conclusions and make connections about what they are learning (Arman, 2018; van Loon et al., 2021). As a result, the teacher's role changes from one of lecturer to one of assessor (Keiler, 2018). Most importantly, the teacher must assess students' understanding and knowledge of the concepts in order to know how to guide them to the next steps in the learning process (Keiler, 2018).

Additionally, in a student-centered classroom inductive learning is occurring. In an inductive learning environment, students start with examples and determine the rules from the examples. Specifically, students are actively learning by participating in hands-on activities which allow them to make abstract connections to concrete observations in a student-centered environment (Noreen & Rana, 2019). In this environment, students are required to use critical thinking skills and learn through applying what they have learned which also builds interpersonal and communication skills (Raja & Najmonnisa, 2018).

### *Benefits of Student-Centered Instruction*

When learning in a student-centered approach, students are immersed in the learning process, by working collaboratively with classmates to solve problems and construct ideas about what they are learning (Talbert et al., 2019). Notably, studies show that students instructed in a student-centered learning approach as opposed to a teacher-centered learning approach utilize higher order thinking skills (Keiler, 2018; Moustafa et al., 2013; Yamagata, 2018). Furthermore, research also indicates that students instructed in a student-centered classroom have increased learning, and motivation (Keiler, 2018; Moustafa et al., 2013), and are more able to make connections in what they are learning (Elmaadaway, 2018). Additionally, students report being more prepared for class in student-centered classes as opposed to traditional classes (Russell et al., 2017), and this has been proven through research that has shown higher exam scores by students instructed with student centered instruction vs. traditional instruction (Freeman et al., 2014; Russell et al., 2017; Russell et al., 2016). However, in order to be more prepared for class, students must first interact with the course material or content at home (Russell et al., 2017). Specifically, Vygotsky's (1978) social constructivist theory is the driving force behind the pedagogy change to student-centered teaching (Arman, 2018). As a result, several curricula reforms have occurred in the United States in recent years to change the momentum of education.

## Curricula Reforms

Notably, traditional teaching represents the stark contrast of Vygotsky's social constructivist theory. Yet, traditional teaching with its teacher directed lectures can still be found in 60% of the classrooms today (Jong, 2017), even though it has been found to be an unsuccessful teaching style (Wei et al., 2020). When traditional teaching is present, students are inactive participants of the lesson, only copying down what may be written on the board or

screen (Noreen & Rana, 2019), thus not really demonstrating any learning at all. As a result, a nationwide initiative known as standards-based education (SBE) was launched in the 1990's in an effort to produce world class students (Parkay et al., 2014). According to Parkay et al. (2014), "[s]tandards-based education is premised on the belief that *all* students are capable of meeting high standards" (p. 302). Acknowledging the demand for higher standards, curricula reforms were initiated, most notably the No Child Left Behind Act (NCLB) of 2001 and the Common Core State Standards Initiative (CCSSI) of 2011.

***No Child Left Behind Act***

The first major curricula reform came in 2002 when President George W. Bush signed Public Law 107-110 of the 107th Congress into law, fulfilling a campaign pledge to "leave no child behind" (Parkay et al., 2014). This bill became known as No Child Left Behind (NCLB), which amended and extended the Elementary and Secondary Education Act (ESEA) through 2007 (NCLB, 2002). Subsequently, with the signing of NCLB came very stringent requirements for school districts to meet. These requirements included a standards-based assessment in mathematics and reading for grades 3-8 beginning in 2005-2006 school year, and a science assessment in three different grade levels beginning in 2007-2007 school year (No Child Left Behind Act, 2002). Additionally, states had to ensure that all students would be on grade level by the 2013-2014 school year by making adequate yearly progress (AYP) towards that goal (NCLB, 2002). Consequently, any school district who did not meet AYP requirements then had to provide resources, which included transportation to a better performing school, to their students. (NCLB, 2002).

Although the main goal of NCLB was to close the achievement gap between white students and minority students, opponents have argued that it negatively impacted students'

social and emotional development (Dollarhide & Lemberger, 2006; Paone & Lepkowski, 2007). As a result of stringent academic requirements, many schools eliminated socially based activities such as recess, physical education and fine arts classes and shortened lunch time (Cook, 2004; Dollarhide & Lemberger, 2006; Paone & Lepkowski, 2007). Others found curriculum during the time of NCLB to be basic, focusing only on what was going to be tested (Gentry, 2006; Paone & Lepkowski, 2007) as opposed to higher levels of engagement as suggested by Vygotsky. Since Vygotsky (1978) viewed learning as a social experience, NCLB was the antithesis of Vygotsky's social constructivist theory. Ultimately, NCLB was replaced in 2015 with the signing of Every Student Succeeds Act (ESSA) of 2015.

### *Every Student Succeeds Act*

The Every Student Succeeds Act (ESSA, 2015) was signed into law by President Barrack Obama on December 10, 2015 to reauthorize the Elementary and Secondary Education Act (ESEA) of 1965 and to repeal NCLB (Darrow, 2016). Similar to NCLB, ESSA requires standards-based assessment in reading, math, and science in grades three through eight, and once in the high school, but allowed the states and local school districts to be in charge of accountability and improving failing schools instead of the federal government (Darrow, 2016; Duff, 2019). However, unlike NCLB, ESSA includes provisions for gifted students as well as students with disabilities (Darrow, 2016). Whereas NCLB stressed core academic programs, ESSA stresses a well-rounded program which includes music and the arts (Tuttle, 2020).

One of the main goals, in particular, of ESSA is to prepare students to be college or career ready when they graduate high school (Darrow, 2016). Policy makers of ESSA felt that students still in high school should not be required to choose between going to college or starting a career but should be adequately prepared with knowledge and skills for both (Malin et al.,

2017). As a result, schools are required to enhance certain skills such as students' digital literacy (Johns & Kachel, 2017). Specifically, one way to enhance students' digital literacy is to create technology supported "personalized learning experiences" (Johns & Kachel, 2017, p. 8). Personalized learning experiences allow teachers to use technology to provide instruction to students in a manner which best suits their style of learning as well as their strengths and interests (Bingham & Dimandja, 2017). Accordingly, personalized learning experiences as supported in ESSA follows Vygostsky's (1978) social constructivist theory.

### *Common Core State Standards Initiative*

Although many people believe the Common Core State Standards Initiative (CCSSI) of 2011 is a major component of ESSA, it is not. The CCSSI was spearheaded by the Council of Chief State School Officers (CCSSO) and the National Governors Association (NGA) in order to create a set of uniform standards for grades K-12 in the areas of mathematics and English/language arts (Barnett & Fay, 2013, Parkay et al., 2014) to replace the failing NCLB act (Ametepee et al., 2014). The Common Core is a set of learning goals which clearly state what the students should know and be able to do at the end of each grade, as well as to ensure students graduate from high school with the skills needed to be college and career ready in the 21st century as well as the ability to compete globally (Ametepee et al., 2014; Common Core State Standards, 2011). They were designed to bridge the gap between what high schools require graduates and colleges expect incoming freshmen to be able to do (Barnett & Fay, 2013). Because of their dependence upon both students and teachers in the learning process, and reliance on collaboration to obtain the necessary 21st century skills (Karge & Moore, 2015), the CCSI emulates Vygotsky's (1978) social constructivist theory.

### *21st Century Skills*

Additionally, professional associations have joined national, state, and local initiatives to raise standards that students need to be successful in the 21st century. As well as the mathematics and English/ language arts standards that were instituted with CCSSI, Next Generation Science Standards (NGSS) have implemented new, rigorous standards in science, as well as the National Council for the Social Studies has written the College, Career, and Civic C3 Framework for Social Studies State Standards. According to the National Council for the Social Studies, the purpose of the C3 Framework is to enhance the rigor of all social studies disciplines by building critical thinking and problem-solving skills and aligning social studies curriculum with the Common Core State Standards for English Language Arts through interdisciplinary lessons. (National Council for the Social Studies, n.d.). Similarly, the NGSS were developed to help schools use innovative methods to help students use critical thinking and problem-solving skills in order to better prepare them for life and careers in an ever-changing world (Dixon & Wendt, 2021). The Partnership for 21st Century Learning (P21) is the professional organization that has advocated for students to learn a set of 21st century skills (P21, 2016). Notably, they suggested the following interdisciplinary themes be interwoven into core subjects so that students can understand content at a higher level: global awareness; financial, economic, business, and entrepreneurial literacy; civic literacy; health literacy; and environmental literacy (Parkay et al., 2014; P21, 2016). Thus, the three main skills for the 21st century by the P21 (2016) are "Life and Career Skills," "Information Media and Technology Skills," and "Learning and Innovation Skills," each having their own subset of skills.

**Life and Career Skills.** Subset skills in the "Life and Career Skills" group include flexibility and adaptability, initiative and self-direction, social and cross-cultural skills, productivity and accountability, and leadership and responsibility (P21, 2016). Since almost any

skill required in life or in a future career requires students to work well with others, working together cooperatively in the classroom is an important strategy to help build these skills. In particular, Soysal and Karatay (2021), found that when students participated in cooperative learning activities such as those recommended by Vygotsky (1978), then development of their life and career skills is enhanced. Furthermore, when students work together collaboratively, they build their leadership skills by setting goals, taking risks, respecting others, and finding solutions to challenges (Soysal & Karatay, 2021).

**Information, Media and Technology Skills.** Subset skills in the "Information, Media and Technology Skills" group include information literacy, media literacy, and ICT (information, communications, and technology) literacy (P21, 2016). Ever since the world transformed to a digital paradigm, information, media, and technology skills have become critical skills for students to learn in order to become productive citizens (Hazar & Ozkurt, 2021). By mastering these skills, students are able to control their own learning by being able to independently access information needed to enhance their learning (Hazar & Ozkurt, 2021). Consequently, students are able to construct knowledge as suggested in Vygotsky's (1978) social constructivist theory when they utilize skills learned under the "Information, Media and Technology Skills" group of the P21 (2016) framework.

**Learning and Innovation Skills**. Subset skills in the "Learning and Innovation Skills" group include creativity and innovation, critical thinking and problem solving, communication, and collaboration (P21, 2016). Ultimately, problem solving is considered to be the most advanced skill a student can achieve because they must use a variety of cognitive functions all at the same time (Govindasamy & Kwe, 2020). The use of critical thinking to solve problems is a desired attribute in the global market (Govindasamy & Kwe, 2020). Since students have to be

taught how to effectively solve real-world problems, scaffolding instruction to bridge students' actual development level to their ZPD helps them to achieve the desired outcome. Through the use of a MKO, students can learn to solve real world problems from the most simplistic to the most complex. Considering how students need to learn to become better problem solvers, Vygotsky's (1978) social constructivist theory best helps to develop a students' 21st century skills. Because of the advanced skills students need to be able to perform in order to be college and career ready by the time they graduate from high school, many schools are looking at alternative teaching styles to the traditional method (Jony, 2016). One such alternative is the flipped classroom model (FCM).

**The Flipped Classroom Model**

The FCM began during the time of increased technology availability and a push for more rigorous education in the form of standards-based education. Although Bergman and Sams (2012) are credited as being the creators of the FCM (Gough et al., 2017; Stratton et al., 2020), others before them were using this model, mainly in tertiary settings. J. Wesley Baker was a professor at Cedarville University in Ohio in 1995 and published his PowerPoint presentation for his class ahead of time on the school's network and asked the students to read over it prior to coming to class (Moran, 2018). When students came to class, Baker was able to break his class down into small groups to do learning activities based on what they had previously read on the PowerPoint (Moran, 2018). Incidentally, a couple years later, Baker was the first to call his process the "Classroom Flip" (Moran, 2018, p.2). Additionally, in 1996, Lage et al. (2000), inverted their Miami University economics classes. Students were required to read articles about microeconomics and watch videotaped lectures on the topic in order to prepare themselves for class discussions (Lage et al., 2000). Following the class discussions, students would participate

in class experiments or labs so that they could see what they had been learning about in action (Lage et al., 2000).

Furthermore, Baker and State (2013) have credited the prominent website Khan Academy (2022) with increasing the popularity of using videos to teach skills in the flipped classroom. Sal Kahn started Khan Academy in 2005 to help tutor his cousins in math, and now teachers, parents, and students use it all over the world to help students learn at their own pace (Kahn Academy, 2022). Finally, in 2007, Jonathan Bergmann and Aaron Sams, chemistry teachers at Woodland Park High School, started recording their lectures and posting them online for absent students to watch (Bergmann & Sams, 2012). The following school year, they decided to prerecord all of their lectures to give to students in advance and found they had more time for labs and problem solving in class (Bergmann & Sams, 2012). While Bergmann and Sams (2012) admit they were not the creators of the FCM, they were the first to bring it to a secondary setting.

As educators have questioned the effectiveness of traditional instruction on student learning and achievement (Maheshwari & Seth, 2019; Say & Yildirim, 2020; Smallhorn, 2017) the FCM was created as a constructivist -based approach to develop the whole learner (Hendry et al., 2017). The constructivist learning approach integrates the learning of knowledge and skills with authentic learning tasks (Jdaitawi, 2019). Specifically, Vygotsky (1978) explains that authentic learning tasks are composed to use real life scenarios to encourage the use of inquiry and problem-solving skills, as well as social interactions with others (Jdaitawi, 2019). Thus, using the FCM allows students to participate in authentic learning tasks with advanced concepts by collaborating with others (Maheshwari & Seth, 2019). The FCM creates a student-centered classroom which requires students to participate in hands on activities (Russell et al., 2017) which activate their higher order thinking skills (Arslan, 2020). Additionally, in the FCM,

students are required to develop self-regulated learning skills and become responsible for their learning which occurs both inside and outside of the classroom (Aydin et al., 2021). According to Jong (2017), research (Baelper et al.,2014; Sahin et al., 2015; Zummo & Brown, 2016) indicates most FC are in the science, technology, engineering, and mathematics (STEM) classes, but can be utilized in all disciplines.

### *Blended Learning*

Likewise, blended learning is an instructional model that uses technology to help deliver instruction and allows teachers to differentiate instruction (Fazal & Bryant, 2019). According to Fazal and Brayant (2019) the differentiation of instruction to meet students' learning goals should be the primary goal of blended learning programs. Research has indicated that blended learning leads to greater autonomy by students, motivation to learn (Günes & Alagözlü, 2021; Wong et al., 2020) and academic achievement (Günes & Alagözlü, 2021). As a result, blended learning is framed to help close achievement gaps while promoting 21st century skills (Fazal & Bryant, 2019). Furthermore, the use of blended learning in the classroom allows for collaboration, problem-solving, self-assessment, and reflection (Longo, 2016). Longo (2016) suggests the use of blended learning along with inquiry-based instruction as a way to challenge students while addressing the need to scaffold instruction for students as well.

In the traditional learning method, teacher centered instruction is utilized, but in blended learning methods, student centered instruction is utilized. Notably, Vygotsky's (1978) work, which demonstrated how students learn, paved the way for student centered instruction (Jony, 2016). In the past decade, the FCM has been garnering a lot of attention in the education arena as the newest strategy capable of captivating apathetic students (Jong, 2017; Moran, 2018) and stimulating critical thinking (Longo, 2016). Although there is no one set description of a FC, it is

primarily identified with blended learning that removes the traditional lecture format from the classroom to independent learning at home via some form of technology so that class time can be spent on more meaningful activities (Bergman & Sams, 2012; Chen et al., 2018; Gough et al., 2017; Hendry et al., 2017; Lencastre et al., 2020; Moran, 2018).

By delivering some of the content through video as homework assignments, the FCM offers several benefits including freeing class time for engaging hands-on, student centered lessons that will increase problem-solving skills, increased student collaboration with peers, interaction with teachers, increasing engagement and differentiation, developing student self-efficacy and motivation, and student performance, (Bergman & Sams, 2012; Chen et al., 2018; Hendry et al., 2017; Lencastre et al., 2020; Stratton, 2020; Tawfik et al., 2020). Moreover, by segmenting information which would typically be presented in longer class periods into shorter videos, teachers are reducing the cognitive load on students and allowing them to have more working memory to perform at the top levels of Bloom's Taxonomy (Casselman et al., 2020; Ranga, 2020). Also, teachers in a FC have more time than teachers in a traditional classroom to work individually with students and provide instructional feedback to encourage and enhance learning (Wei et al., 2020). Rather than eliminating teaching and learning in the classroom, the FCM bridges the out of class activities with the in-class activities so that the learning process is uninterrupted (Talan & Batdi, 2020). Student centered instruction includes active learning such as inquiry-based activities which will ultimately lead to the students acquiring critical thinking and creative problem-solving skills (Jony, 2016).

### *Inquiry-Based Learning*

Particularly, students' interactions with the prerecorded videos at home fall at the bottom of Bloom's (1956) taxonomy for learning (remembering and understanding), whereas the in-

class activities immerse students in more cognitive learning from the upper areas of Bloom's taxonomy (applying, analyzing, evaluating, and creating) (Jong, 2017). It is in these in-class activities where the constructivist approach to learning is applied. Specifically, inquiry-based learning is one such constructivist approach that is recommended for promoting higher order thinking skills in students (Ye et al., 2019).

In order for blended learning approaches, such as the FCM, to be effectively combined with inquiry-based learning approaches, teachers must captivate learners' interest by utilizing activities based on real life scenarios (Longo, 2016). Tawfik et al. (2016) posit that inquiry-based instruction will induce self-efficacy in students through problem-solving. Bandura (1997) defines self-efficacy as "the belief in one's ability to successfully complete the requisite actions for a given task" (p. 3). Notably, self-efficacy is an important indicator as to when teachers need to provide support during inquiry-based instruction (Tawfik et al., 2016). Since students are constructing knowledge, they have to have the belief that they can do what is asked of them or the teacher will have to provide scaffolding in order for students to reach their ZPD.

Furthermore, inquiry-based learning is a pedagogical practice in which students make inquiries about a topic in order to draw conclusions (Phurikultong & Tuntiwongwanich, 2021). For true inquiry-based learning to take place, students must be deeply involved in activities that help them to make sense of a situation and have the opportunity to collaborate with peers so they can create solutions to problems (Kim & Ahn, 2018). An important aspect of inquiry-based learning is that students must be interested in the inquiry (Kucan & Cho, 2019). Therefore, it is essential that teachers scaffold resources and support to meet the needs of students in their classrooms (Martell, 2020). Considering the support teachers give students, using the flipped learning model is one means of scaffolding in the classroom.

### *Layered Flipped Learning Model*

Based on Confucius' theory of teaching students on their individual levels (Liu, Wei & Gao, 2016), two versions of the layered flipped learning model have been developed (Ökmen & Kiliç, 2021). In Liu, Wei and Gao's (2016) version, students are divided into five different levels, A-E, based on their ability and the teacher must plan five leveled micro-courses for the students to complete independently (Ökmen & Kiliç, 2021). Conversely, in Ökmen's (2020) version, the teaching process is divided into three different levels, A-C based on skill level of the activity, and students can choose which activities they wish to complete at each level (Ökmen & Kiliç, 2021). Indeed, the layered flipped learning model allows for student autonomy over their learning, and engaged interactions between teachers and classmates (Liu, Wei & Gao, 2016). This permits the teacher to focus on the required outcomes of the lesson while the students choose the best mode for reaching those outcomes (Lage et al., 2000). Ultimately, the use of technology is crucial to the success of the layered flipped learning model.

### *Technology-Supported Pedagogy*

Since technology literacy is a crucial component of the 21st century skills (P21, 2016) in which all students are required to show competence, it must effectively be incorporated into today's curricula (Montiel et al., 2020). Depending on whether educators work at the primary, secondary, or tertiary level, they mostly teach "Millenials" or "Generation Zers." Anyone categorized as a Millenial was born between the years 1981-1996, and Generation Z students were born between 1997-2012 (Dimcock, 2019).

Technology plays a huge role in the lives of Millenials and Generation Zers. The explosion of the internet occurred during the years Millenials were growing up, and computers, internet, iphones, and social media have been a part of Generation Zers lives all along (Dimcock,

2019). As a result, students who belong in the Generation Z era can integrate technology into their lives faster than any other previous generation (Say & Yildirim, 2020). Due to the increase of availability in technology, today's students interact more with a screen than they do with other people (Montiel et al., 2020). Therefore, in order to adapt to a new generation of students, technology must be incorporated into curricula (Montiel et al., 2020). Primarily, Millenials believe that being able to do something is more important than knowing what something is, and therefore should be taught using active learning techniques which utilize technology (Adams & Dove, 2018). The FC model has been defined as a "technology-supported pedagogy" (Unal & Unal, 2017) and thus is an excellent model to use with today's technology immersed students.

***Benefits of FCM***

Considering benefits such as content mastery, critical thinking development, problem-solving skills development, and improved social skills have been credited to the use of the FC model (Unal & Unal, 2017) and it is crucial for students to become better problem-solvers in the 21st century world, the transition to the FCM is seen as the catalyst to developing innovative critical thinkers (Dixon &Wendt, 2021; Moore & Chung, 2015). Additionally, other benefits reported include an increase in student achievement and engagement, classroom time being used effectively, and the technology use is appropriate for 21st century learning requirements (Aidinopoulou & Sampson, 2017; Unal & Unal, 2017). The FCM also positively impacts the emotional development of students (Bahadur & Akhtar, 2021) by allowing teachers to identify slower learners and provide formative assessments and scaffolding for these learners (Bahadur & Akhtar, 2021; Kostaris et al., 2017).

Another benefit includes a greater connection between the teacher and the more technologically immersed student (Stratton et al., 2020) maximizing the effect of learning within

the classroom (Zheng et al., 2021). By using the FCM, teachers are awarded the benefit of time in which they can provide their students with an active learning environment that emphasizes collaboration with the teacher and other students (Ökmen & Kiliç, 2021). With this time, teachers are able to assess students' performance with the content and how well they are able to apply that content on a deeper level while working and collaborating with other students (Arslan, 2020). As a result, classroom time is more meaningful when using the FCM.

If the FCM is implemented correctly, students become active learners instead of passive learners (Stratton et al., 2020). Therefore, their interest in learning is stimulated as well as developing both independent and cooperative learning strategies (Zeng, 2021). Peer interaction and collaboration are credited with being the most advantageous part of the FCM because in the traditional teaching style, students are given very little opportunities to interact with each other (Arslan, 2020). According to research from the National Science Foundation, 55% more students fail courses taught using the traditional lecture-based method than in courses taught using some type of active learning such as the FCM (Kim & Ahn, 2018). Consequently, these active learning approaches ensure that students are taking responsibility for their learning by communicating with each other and challenging their thinking to promote higher level cognitive thinking skills (Kim & Ahn, 2018).

### *Student Achievement*

Nevertheless, results are mixed on the effectiveness of the flipped classroom on student achievement. Some studies have found that flipped learning had a positive impact on student learning and achievement over traditional teaching (Adams & Dove, 2018; Maheshwari & Seth, 2019; Sudarmika et al, 2020; Sun & Wu, 2016; Talan & Batdi, 2020; Wei et al., 2020), whereas others have indicated the FCM has no bearing, positive or negative, on student learning (Jensen

et al, 2015; Stratton et al., 2020). However, it is reported that students instructed in teacher centered environments fail courses at a higher rate than students instructed in student-centered environments (Dixon & Wendt, 2021). The FCM is one of the premier student-centered environments favored in today's educational system.

Particularly, Sudarmika et al. (2020) contribute the group learning discussions to the increased learning that takes place in the FCM. Other studies reported improved student engagement and improved student communication skills as a result of the FCM (Bhagat et al.; 2016; Huang and Hong 2016; Lee, 2018). Additionally, students report enjoying the learning process when they get to be active learners (Lee, 2018). Regarding the learning process, Lee's (2018) study emphasized the impact the FCM could have on closing the achievement gap due to the personalized instruction students were able to receive to meet their learning needs.

### *Student Perceptions of the FCM*

Furthermore, studies indicate student perceptions of the FCM have been mostly positive (Stratton et al., 2020; Unal & Unal, 2017), but do range from extreme dissatisfaction to overwhelming satisfaction (Moran, 2018). Students report they enjoyed working in the FCM more than a traditional classroom because they were able to work at their own pace instead of staying with the entire class (Unal & Unal, 2017). Some students also report that they learned more in the FCM than in a traditional classroom (Stratton et al., 2020). In her study, Moran (2018) found that students who liked the FCM enjoyed the variety of classroom activities and those that did not like the flip were bored with the classroom activities.

### *Challenges of FCM*

However, the FC model is not without its challenges. First, teachers must adjust to a new way of teaching. Teachers find it difficult to know the exact extent of a students' learning since

the theoretical learning piece occurs outside of the classroom (Bicen & Taspolat, 2019). Teachers also may not be comfortable with the new technology required to make their own videos, thus creating low quality videos for students to watch which results in students not understanding the content (Lam et al., 2019). Additionally, using the FC model is time consuming for teachers, requiring them to create the video lessons for homework, as well as the learning activities that must be completed in class (Aidinopoulou & Sampson, 2017; Elmaadaway, 2018; Unal & Unal, 2017). In order to create the pre-class videos as well as the in class active learning activities could potentially take teachers six times longer to prepare for a FC lesson than a traditional lecture-based lesson (Akçayır & Akçayır, 2018). However, McLaughlin et al. (2014) found that instructors would invest 127% more preparation time for an initial course flip and 57% more time to maintain the course requirements every subsequent year, as opposed to instructors utilizing the traditional teaching style.

Secondly, students must adjust to a new way of teaching and learning. The majority of disadvantages related to students can be classified as motivation, content, or learning (Cabi, 2018). Students who are used to the traditional teaching model often are unaware of how their role in the learning process changes and must be trained in how to effectively utilize the FC method (Aidinopoulou & Sampson, 2017; Weiß & Friege, 2021). Weiß and Friege (2021) cite Werner et al. (2018) who posit that just because students are digital natives and use technology all the time does not mean they understand how to learn independently from digital media. Furthermore, studies reveal that students prefer learning from a teacher in the classroom as opposed to learning information themselves at home (Cabi, 2018). Likewise, Webb et al. (2021) found that students interacted with less than half of the online materials needed for class throughout an entire course. However, homework load could be a reason for lack of interaction

with the online materials. Students also have homework in other classes, so teachers need to be mindful of the amount of pre-class assignments they are assigning so they are not negatively impacting the students' learning in other classes as well (Elmaadaway, 2018). Roehling et al. (2017) recommend teaching students skills required for "avoiding distractions and taking notes while watching the videos" (p. 190) as a way to help them learn to be successful in the FCM.

Specifically, student motivation, both at home and at school, is a major challenge to the success of the FCM. At home students often take short cuts, such as multitasking while watching the videos or just skimming any reading assignments, which hinders the ability of the students to be prepared for class activities (Roehling et al., 2017). Teachers also report that when using the FCM, it is challenging to motivate students to complete the class activities and to manage their class time wisely (Ökmen & Kiliç, 2020). Another disadvantage to using the FCM is that students who have completed all of the required tasks for a lesson must wait for other students to finish (Ökmen & Kiliç, 2020).

Finally, teachers also reported that students were not watching the videos prior to class (Bicen & Taspolat, 2019; Unal & Unal, 2017) which hinders the active learning piece in the classroom. Even if students attempted to watch the videos at home, many students are daunted by the length of the video. Akçayır and Akçayır (2018) found that students were less inclined to watch or rewatch videos the longer they were. Students also report that not being able to receive immediate feedback or instruction when at home as a disadvantage to the FCM (Akçayır & Akçayır, 2018, Bicen & Taspolat, 2019). Since the FCM relies heavily on students becoming independent learners, the weaker students are at a disadvantage since they do not have teacher support at home (Weiß & Friege, 2021). In addition, many students do not have access to

technology and internet at home (Elmaadaway, 2018; Talan & Batdi, 2020) which undermines the entire FC process.

**Homework Use in School**

Indeed, homework can be a contentious issue, both in and out of schools. Some people say homework is important (Dettmers et al., 2019; Zimmerman and Kitsantas, 2005), while others say it provides no benefits to students (Kohn, 2006). Depending which decade, a child went to school determined the perception on the importance of homework. In the early 1900's homework was positively perceived, believing that children needed repetition and practice to enhance their learning (Ergen & Durmus, 2021). By the 1940's homework was perceived negatively as interfering with family life (Ergen & Durmus, 2021). However, with Russia's launch of *Sputnik* in the 1950's, many thought American students could not compete with other nationalities and homework once again was positively perceived (Cooper. 2001). By the end of the 1960's it was decided that homework was putting too much pressure on children, but in the 1980's it was once again thought that homework was needed to improve students' academic growth after the report *Nation at Risk* (National Commission on Excellence in Education, 1983) was published (Cooper. 2001). By the year 2000, parents were complaining that homework was causing their children to be stressed out (Cooper. 2001). However, educators advocating for the constructivist approach to education pushed for new studies into the effects of homework onto students (Ergen & Durmus, 2021). During the first decade of the 2000's, studies confirmed the positive effects homework had on students (Brock et al., 2007; Cooper et al., 2006; Jong et al., 2000).

Today, homework is assigned because it is considered an instructional tool to help improve student learning (Pfeiffer, 2018). Vale et al.'s (2016) study corroborated this belief by

showing a relationship between students' academic achievement in the last two years of elementary school and the amount of homework they completed. However, Bennett (2017) cites a study by Krashen (2005) which indicated doing homework might lead to higher grades, but not higher achievement on standardized tests. Gibson and Jefferson (2006) also remind educators of the importance of self-esteem and self-efficacy, especially at the middle school level. They suggest that at this age, self-esteem and self-efficacy is more important than academic achievement (Bennett, 2017; Gibson & Jefferson, 2006). Nonetheless, homework is an essential element of the FCM.

### *Importance of Homework in FCM*

The FCM is premised on the idea that students will learn basic knowledge at home through the use of videos so that class time can be used for higher-level learning (Bergmann & Sams, 2012; Yumuşak, 2020). Therefore, homework is an important part of the FCM. For the FCM to be a success, it is important for students to watch and internalize the videos at home prior to class so that they can apply that knowledge in the classroom during the hands-on activities (Sigurðardóttir & Heijstra, 2020). According to Yumuşak (2020), students who completed the homework assignments ahead of time came to class prepared which allowed them to be more engaged in the class activities. Similarly, Sigurðardóttir and Heijstra (2020) found that if the students did not come to the class having completed the at home learning assignments, the in-class activities were not beneficial to students. Ultimately, for the FCM to work, students must complete the required homework assignments so they can come to class prepared to engage in the lesson. Completion of the pre-class homework assignments is critical for students to be able to effectively participate in class activities and for comprehensive learning (Förster et al., 2022).

In order for the FCM to be advantageous, the students must believe they are responsible for their own learning (Santos & Serpa, 2020). Consequently, in order for students to reap the benefits of the FCM, they must prepare for class by attaining the knowledge needed in order to be able to actively participate in class (Burke & Fedorek, 2017). This is done by watching the pre-class video assignments. After watching the pre-class video assignments, students must discern the information learned and apply it to inquiry based to problems in the classroom (Shih et al., 2019). Hence, Ranga (2020) found that student completion of the pre-class homework assignments was a direct indictor for their success on summative assessments.

***Student Motivation Towards Homework***

Notably, Valle et al., (2016) posit that "students self-set goals and their motives for doing homework are among the most critical motivational variables when students decide to engage in homework" (p. 3). Also, the time spent learning at home is important for a student's personal development because it promotes learning at individualized paces (Lencastre et al., 2020). Additionally, Unal and Unal (2017) report that students enjoyed the FC model because they appreciated having the opportunity to rewatch and pause the videos as often as they needed to ensure understanding of the topic. That same freedom would not be afforded if the students were watching the video in the classroom. However, research has indicated that older students spend more time watching and rewatching the prerecorded videos than younger students. (Heijstra & Sigurdardottir, 2018). Heijstra and Sigurdardottir's (2018) study also showed that female students spent more minutes than male students watching the prerecorded videos. Yet, research also reveals that students prefer watching the videos over reading texts as the predominant form of homework (Snyder et al, 2014; Unal & Unal, 2017).

Considering, in their study Valle et al. (2016) found that student motivation to increase learning affected their approach to homework management, then students who are motivated to learn will probably do more homework and outperform their peers. Furthermore, Yilmaz (2017) found that students' motivation was directly correlated to their readiness for e-learning. According to Igna (2021), student motivation must be sustained and strengthened. Yilmaz (2017) suggests identifying the level at which students are ready for e-learning so teachers can work towards increasing students' satisfaction and motivation (Cabi, 2018). Additionally, teachers can sustain and strengthen student motivation through the use of cognitive and performance goals, so the students understand why they are learning and doing a particular activity (Igna, 2021). Student motivation can also be sustained with scaffolding (Muñoz-Restrepo et al., 2020). Not all students will need the same assistance, and that includes the homework portion of the lesson as well. Scaffolding instruction to meet the students' needs will help to maintain their motivation to learn (Muñoz-Restrepo et al., 2020). Thus, ensuring they are preparing for class by completing the pre-class homework assignments.

Finally, task value is the importance and usefulness given to a specific task such as homework (Sun et al., 2021). When students feel an assignment has a positive task value, or is worthwhile, they are more likely to put forth more effort into completing the assignment resulting in higher achievement (Sun et al., 2021). Task value plays an important role in a student's motivation towards completing assignments and their ability to self-regulate (Ökmen & Kiliç, 2020). Following the constructivist approach to learning, self-regulation allows students to take control of their learning by setting goals, and regulating their thoughts, feelings, and behaviors (Ökmen & Kiliç, 2020). In their study, Sun et al., (2020) found that self-regulation and academic motivation positively correlate with homework effort and homework completion in

middle school students. In Burriss and Sneads' (2017) study, middle school students indicated they understood that homework is important as a follow-up to instruction and to prepare for the future. With this realization in place, students within a FCM should understand that homework is a vital part of the program.

### *Self-Regulated Learning and Homework*

Ultimately, the success of a FC is completely dependent upon students' abilities to become more independent learners (Sletten, 2017). The flexibility afforded to students with their homework in the FCM to watch and rewatch videos as often as needed allows them to take ownership of and self-regulate their learning (Shih et al., 2019). Zimmerman (1989) states that in order for students to be self-regulated, they must be "metacognitively, motivationally, and behaviorally active participants in their own learning process" (p. 329). In order for students to be able to meet their learning goals, they must be able to self-manage their time, resources and learning strategies (Shih et al, 2019).

In the FCM, learning of the content by the students is completed as a pre-class homework assignment by watching a short video, which focuses on the lowest levels in Bloom's (1956) taxonomy, remembering and understanding (Hosseini et al., 2020). Because students mainly learn content information on their own in the FCM, it is important that students are able to self-regulate their learning and ensure they complete the required pre-class assignments, even when they do not have their teachers or classmates right there with them to keep them on track (Shih et al., 2019). However, research is inconclusive about the effect of the FCM on students' self-regulation. Hava and Gelibolu (2018) found that learning in the FCM had no effect, positive or negative, on students' self-regulated learning skills, but Hosseini et al., (2020) found that content presented in a microlearning form in the FCM significantly increased students' self-regulation

skills of metacognition, cognition, and motivation. Regardless, students must have self - regulation skills in order for the FCM to be a success.

If students are not able to self-regulate their own learning and complete the required pre-class activities, they derail the FCM process with the inability to actively engage in the classroom activities (Tomas et al., 2019). Since students have difficulty regulating their own learning at all age levels, it is important for the learning environment to be designed in a way that intentionally provides support and encouragement in the development of students' self-regulation skills (Kim et al, 2021). Following a social constructivist viewpoint, teachers in a FC should be able to encourage students to become more autonomous and improve their self-regulated learning (Kim et al., 2021). One important way teachers can help students to improve their self-regulated learning is by connecting the pre-class assignments with the in-class assignments. In their study, Shih et al. (2019) found that when in-class activities were directly related to the pre-class, online activities, then students were more likely to perceive the assignments as useful and complete them. As a result, students who consider the online activities to be useful and have a positive perception on the impact between online self-regulated learning and in-class active learning activities, will be more likely to embrace the FCM including the at home requirements (Shih et al., 2019).

**Literature Observations and the Need for the Present Study**

While the FCM has been studied extensively at the tertiary level (Adams & Dove, 2018; Baepler et al., 2014; Jdaitawi,2019; Kim & Ahn, 2018; Maheshwari, & Seth, 2019; Phurikultong & Tuntiwongwanich, 2021; Sigurðardóttir, & Heijstra,, 2020; Smallhorn, 2017; Sun & Wu, 2016; Talan & Batdi, 2020; Yumuşak, 2020), fewer studies have addressed the high school level (Bond, 2019; Dixon &Wendt, 2021; Florence & Kolski, 2021; Gelgoot et al., 2020; Jong, 2017;

Leo & Puzio, 2016; Reinoso et al., 2021; Sookoo-Singh & Boisselle, 2018) and even less has been studied at the middle school level (Fazal & Bryant, 2019; Gough et al., 2017; Moran, 2018; Stratton et al., 2020; Unal & Unal, 2017). The studies that have been conducted at the middle school level have focused on student achievement (Fazal & Bryant, 2019; Stratton et al, 2020; Unal & Unal, 2017), teacher perceptions of the FCM (Gough et al., 2017; Unal & Unal, 2017), student perceptions of the FCM (Moran, 2018; Stratton et al., 2020; Unal & Unal, 2017), and student engagement during the active learning in class activities (Moran, 2018; Stratton et al., 2020). With the homework piece being an important part of the FCM, lack of student completion has been mentioned in literature (Bicen & Taspolat, 2019; Unal & Unal, 2017; Webb et al., 2021).

Hallatt et al. (2017) researched homework completion rates comparing digital submissions to traditional paper submissions and found that students were more likely to submit homework if it was completed on paper. Fan et al. (2017) completed a meta-analysis on math and science which showed the connection homework completion had on a student's academic achievement waned in middle school. While this researcher found one study that connected student responsibility to homework completion in the FCM, it was at the elementary level (Bursa & Cengelci Kose, 2020). Therefore, a gap in the literature indicates that further studies are needed to determine how middle school teachers ensure collaboration and active learning in their classrooms even when students may not complete their homework in the FCM.

## Summary

The theoretical framework guiding this study is Vygotsky's (1978) social constructivist theory, which was used to examine the use of active learning strategies in the FCM. The flipped classroom model (FCM) is a blended learning model preparing students to become global

citizens which removes the direct instruction of basic skills from the classroom to independent learning at home via some form of technology, usually teacher made videos (Bergman & Sams, 2012; Chen et al., 2018; Gough et al., 2017; Hendry et al., 2017; Lencastre et al., 2020; Moran, 2018). This allows classroom time to be spent on more meaningful, higher order, inquiry-based activities (Hendry et al., 2017; Chen et al., 2018; Moran, 2018; Lencastre et al., 2020). This study, through the lens of Vygotsky's (1978) theory suggests the FCM is only beneficial to students when they are able to collaborate with others in active learning class activities and if they do not watch the required videos at home, they will not come to school ready to learn in the FCM (Sigurðardóttir & Heijstra, 2020; Sooko-Singh & Boisselle, 2018; Unal & Unal, 2017; Yumusak, 2020). The gap in the literature indicates that further studies are needed to determine how middle school teachers ensure collaboration and active learning in their classrooms even when students may not complete their homework in the FCM. This study is different from previous studies as it seeks to describe middle school teachers' experiences with the FCM which is an understudied population.

# CHAPTER THREE: METHODS

## Overview

Using Vygotsky's (1978) social constructivism theory as a framework, the purpose of this qualitative, transcendental phenomenological study was to describe the lived experiences of middle school teachers in the United States implementing the flipped classroom model (FCM) when students are not coming to class prepared. When completing this study, I used interviews, document analysis, and letter writing to collect data. This chapter provided a description of the research design, research questions that framed the study, setting and participant requirements, philosophical assumptions, and procedures for obtaining permissions and participants, and how data was collected, analyzed, and synthesized. I also discussed how I proved trustworthiness in my study as well as explaining ethical considerations that needed to be thought out.

## Research Design

In seeking to describe the perceptions of teachers utilizing the FCM, my goal was to understand ways these teachers were able to ensure all students are actively involved in the learning process and collaborating with other students in the FC even when they may not have completed the required pre-class homework assignments. A qualitative research design is used when an authentic description of the event is required (Turale, 2020). Instead of using numbers as a data source as in quantitative research, qualitative research uses descriptions about how people perceive their experiences as a data source (Ahmed & Muhammad, 2018). Therefore, a qualitative research design was used for this study.

Of the five main approaches to qualitative research, I chose to use a phenomenological research design. Phenomenology was founded by German philosopher and mathematician Edmund Husserl (1931/2017) and is defined as the detailed descriptions of the lived experiences

of people in their own words (Tassone, 2017). The purpose of my study was to describe the shared, lived experiences of middle school teachers in the United States who use the FCM, which makes phenomenology an appropriate approach for this study (Creswell & Poth, 2018; Moustakas, 1994). Phenomenology has two different approaches, transcendental and hermeneutical. Transcendental phenomenology, which was first designed by Husserl, then clearly explained by Moustakas in his seminal book, is a philosophical research approach in which the researcher attempts to understand the experiences of the participants (Husserl 1931/2017, Moustakas, 1994). Conversely, hermeneutical phenomenology is a research approach in which the researcher attempts to interpret the experiences of the participants (Van Manen, 2014). A transcendental phenomenological study was chosen because I described the data obtained, as opposed to hermeneutical which interprets the data (Moustakas, 1994; Van Manen, 2014).

With a transcendental phenomenological research design, my goal was to narrow the gap in the literature that indicated further studies needed to be conducted to determine how middle school teachers ensure collaboration and active learning in their classrooms even when students may not complete their homework in the FCM. This method of research was chosen so other teachers can understand the process of providing students with collaborative, active learning lessons in the FCM regardless of whether they have completed the pre-class homework assignments. Once the study was completed, I provided recommendations by teachers regarding strategies for student collaboration and active learning in the FCM along with ways to ensure these processes occur even when students do not complete the homework piece of the lesson.

## Research Questions

This study provided beneficial information to teachers of all experiences who are currently using the FCM in their classroom or who may be considering using the FCM in their classroom. The following three research questions guided my study:

### Central Research Question

What are the experiences of middle school teachers in the United States implementing the flipped classroom model (FCM) with student completion of homework?

### Sub-Question One

What are the experiences of middle school teachers in the United States implementing the FCM with student engagement in the active learning process when homework has not been completed?

### Sub-Question Two

What are the experiences of middle school teachers in the United States implementing the FCM with social collaboration among students during the learning process when homework has not been completed?

## Setting and Participants

This study, using middle school teachers in the United States, provided insight into how teachers include student collaboration and active learning in the FCM along with ways to ensure these processes occur even when students do not complete the homework piece of the lesson. Purposive sampling was utilized to choose participants for this study since qualitative research requires the identification of participants who have experienced the same phenomenon (Ellis, 2020). The phenomenon all teachers experienced was teaching using the FCM in a middle school setting in the United States.

The two types of purposive sampling that was used were criterion sampling and snowball sampling. When using criterion sampling, a predetermined criteria is established to identify eligible participants (Moser & Korstjens, 2018). Snowball sampling occurs when selected participants recommend other participants who meet the criterion for the study as well (Moser & Korstjens, 2018). Criterion for this study included certified middle school teachers in the United States who have used the FCM for at least two years and include collaboration and active learning strategies in their lessons.

**Setting**

The setting for this study took place in the "Flipped Learning Teachers" site on Facebook in the United States. Classrooms selected were from middle schools around the United States and have a teacher who has previously used the FCM model for at least two years and include collaboration and active learning strategies in their lessons. The schools could be either public or private since the organizational structure of the school setting did not affect the outcomes of the study. As participants were identified on the "Flipped Learning Teachers" Facebook site, minimal snowball sampling was utilized to identify additional participants. Therefore, there was not one distinct setting for this study. All interviews were conducted digitally through the Zoom platform. Participation in the study was voluntary and participants had the opportunity to withdraw from the study at any time and for any reason. I did not need to obtain school district permission to complete this study since none of the meetings with teachers took place inside the school buildings.

**Participants**

All participants in this study were current middle school teachers who met the criterion requirements for participation in this study of having a valid teaching certificate in the United

States, having used the FCM for at least two years in a middle school classroom, and include collaboration and active learning activities in their lessons. Age, ethnicity, and gender are not relevant factors in this study. To recruit participants, I contacted potential participants who belong to the “Flipped Learning Teachers” group on the Facebook social media platform and have discussed using the FCM in their classrooms (Appendix B). To ensure these potential participants were actual teachers using the FCM, I included several questions on the questionnaire to become a participant (Appendix C). I also researched their Facebook posts on the “Flipped Learning Teachers” group to ensure they were teachers who have used the method in their classrooms.

## Researcher Positionality

Lei (2009) states that a graduate student's decision about a topic for their dissertation should be based on their "personal, academic, and career goals" (p. 1324). Since my degree is Curriculum and Instruction, I wanted my topic to be related to curriculum and instruction. I also wanted to learn something from this process, so I wanted a topic that was fairly new to me. I am a huge proponent of using inquiry-based learning in the classroom and the FCM is a model that incorporates inquiry-based learning. Therefore, I started with the very broad topic of flipped classrooms.

Through my research, I found studies on academic outcomes of flipped classrooms at the high school or tertiary level (Adams & Dave, 2018; AlJaser, 2017; Chen et al, 2018; Debbag & Yildiz, 2021; Langdon & Sturges, 2018 ; Sookoo-Singh & Boisselle, 2018; Sun et al., 2016; Webb & Doman, 2016;), student satisfaction with flipped classrooms at the high school or tertiary level (Adams & Dove, 2018; AlJaser, 2017; Gelgoot, 2020; Langdon & Sturges, 2018; Sun et al., 2016; Xuesong et al., 2017;), and effectiveness of the FCM in higher education

(Maheshwari & Seth, 2019). Two studies were found that addressed middle school students' perceptions of the FCM (Rogers et al., 2017; Stratton et al., 2019), one study that addressed the FCM's effect on middle school students' engagement, and the impact FCM has on homework completion (Rogers et al., 2017), and one study was found that addressed the effect of the FCM on middle school students' learning performance (Wei et al., 2020), but I have not found any research on how teachers successfully ensure collaboration and active learning in the classrooms even when students may not complete their homework so the FCM can be an effective model of instruction for all students. I have taught at both the elementary and middle levels in my school district and homework completion is always a problem. The topic of whether homework should be given or not has been debated frequently, so I did not want to write about the importance of homework. Therefore, within my topic of "Experiences of Middle School Teachers Implementing the Flipped Classroom Method" I chose to study teachers' experiences with student completion of homework as well as their experiences with active learning and collaboration in the FCM. This research was conducted using a phenomenological approach which describes the experiences of multiple individuals experiencing the same phenomenon (Creswell & Poth, 2018), which was teaching using the FCM in a middle school setting in the United States.

**Interpretive Framework**

Much like Vygotsky's (1978) theory of social constructivism where students work with others to construct meaning of what they are learning, the social constructivism interpretive framework is a worldview in which subjects are trying to construct meaning about the world in which they live (Creswell & Poth, 2018). In the social constructivism framework, reality is subjectively formulated by researchers who use inquiry in conjunction with social and

collaborative processes to inductively construct meaning (Burr, 2015; Creswell & Poth, 2018). The constructivist worldview is often used in phenomenological studies in which participants describe their lived experiences (Creswell & Poth, 2018; Moustakas, 1994). This study sought to describe the lived experiences of middle school teachers who have used the FCM for at least two years and how they ensure collaboration and active learning experiences in their lessons even when students may not have completed the pre-class homework assignments.

## Philosophical Assumptions

Understanding the researcher's philosophical assumptions is important because they are the personal beliefs brought into the research. The theoretical or interpretive framework chosen for use in a research study depicts these beliefs (Creswell & Poth, 2018). Qualitative research describes human experience using three different philosophical assumptions; ontology, which is assumptions about the nature of the world; epistemology, which is the researcher's knowledge about the world; and axiology, which is assumptions about the role of values in producing knowledge (Leavy, 2020).

### *Ontological Assumption*

The ontological assumption in the social constructivism framework states that multiple realities can exist at the same time because reality is based on social contexts (Leavy, 2020). As a Christian, I may have a single reality that there is one God in three forms, the father, the son, and the holy spirit, but understand that the perspectives of different individuals help them to understand the events of the Bible differently. The same was true in Jesus' time as different individuals had different understandings of his actions. In Mark 2:13-17 Jesus eats with sinners. The Pharisees could not understand why Jesus would belittle himself to eat dinner with tax collectors and sinners who were some of the most despised people on earth at the time. Jesus

replied to the Pharisees, “It is not the healthy who need a doctor, but the sick. I have not come to call the righteous, but sinners” (*NIV Church Bible,* 2011, Mark 2:17). Jesus and the Pharisees had different realities or perspectives as to on whom Jesus should be focusing his preaching. Ontological is one philosophical assumption that led to this choice of research because I was reporting on the perspectives of different teachers regarding their use of collaboration and active learning strategies in the FCM. Phenomenological studies often follow the ontological assumption because they report on how participants view their experiences differently (Creswell & Poth, 2018).

### *Epistemological Assumption*

The epistemological assumption in the social constructivism framework states that through mutual influence between the researcher and participant, knowledge is being actively constructed (Leavy, 2020). In an epistemological assumption, the researcher obtains subjective evidence in the form of quotes from the participants (Creswell & Poth, 2018). The important component of the epistemological assumption utilized in this study was the use of thoughts and feelings of participants.

### *Axiological Assumption*

The axiological assumption details how a researcher’s values and assumptions might influence their research process (Leavy, 2020). In an axiological assumption, the researcher is forthcoming about biases and values in a given study (Creswell & Poth, 2018). This research also followed an axiological assumption as the researcher has taught for 26 years in both elementary and middle schools and personally has felt the burdens of students not completing required homework. This researcher also has only just begun to use the FCM in her classroom and wondered about the best strategies for ensuring effective active learning activities when not

all students enter the class prepared.

**Researcher's Role**

I am a doctoral student at Liberty University pursuing a PhD in Curriculum and Instruction. I also have a BS in Elementary Education and a MA in Curriculum and Instruction from Wesley College. I have been teaching for 26 years at both the elementary and middle school levels. I first heard about the FCM during the Covid-19 pandemic when we were teaching in a hybrid situation. My principal mentioned in passing that we might consider flipping our homework so that it would be pre-teaching the skills students would need on the days they were in school. I had not heard of this method prior to this, so I chose to research the FCM and make it part of my assignments at Liberty. I became extremely interested in the FCM method and have begun to implement it in my own classroom. However, I do not know of any other teachers in my district who are using this method. Understanding ways in which other teachers successfully incorporate collaboration and active learning strategies even when all students do not enter the classroom prepared, will help to ensure that the use of the FCM is successful. Since I did not personally know the participants of my study, I did not have any authority over them.

## Procedures

In order to conduct this study, I needed to first obtain approval from the Institutional Review Board (IRB) at Liberty University (Appendix A). Once I received approval, I reached out to members of "Flipped Learning Teachers" page on Facebook to see who would be willing to participate in this study and to elicit their email address (Appendix B). Once their email addresses were received, a questionnaire (Appendix C) was sent to the potential participants to determine who met the requirements of the study. Once participants were identified, have signed the consent form (Appendix D), and completed an online demographic survey (Appendix E) then

I began the interview process. After their interview, participants were given a copy of the interview transcript to review for clarity. Following the interview process, teachers submitted lesson plans, and wrote a letter to a teacher new to the FCM (Appendix F). Once all of the data were collected, Moustakas' (1994) data analysis approach to phenomenological research, consisting of epoché, phenomenological reduction, and imaginative variation, was used in conjunction with the Delve computer software program to identify the themes that emerged from the study. Once themes were identified, then a synthesis of the information was completed and written.

**Permissions**

I received approval from the Institutional Review Board (IRB) (Appendix A) at Liberty University before I could begin any data collection or conversations with participants. After receiving approval from the IRB at Liberty University, I reached out to potential participants. Once the participants were identified as meeting the criteria required for participation in the study, I had them sign consent (Appendix D) for participation in the study.

**Recruitment Plan**

In phenomenology, sample size should be predetermined prior to starting research (Ellis, 2020). However, it is also important to continue to collect data until you reach saturation (Ellis, 2020; Hennik & Kaiser, 2021), so sometimes sample size cannot be predetermined. In their research, Hennik and Kaiser (2021) found that most data indicate saturation occurs between 9 and 17 interviews. Liberty University requires a minimum of 10 participants; therefore, I planned to have a range of between 10 and 17 participants so that I will reach saturation in my study. Saturation will occur when no new insights or ideas can be gleaned from additional participants, making further data collection superfluous (Hennik & Kaiser, 2021). Since I wanted participants

who currently use the FCM in their classroom and have been using it for at least two years so their strategies can be analyzed, I used purposive sampling. In purposive sampling, the researcher intentionally selects the participants that will best fit the study (Creswell & Poth, 2018). In order to select participants, I first posted an inquiry for needed participants on the "Flipped Learning Teachers" Facebook page (Appendix B). After responses from that inquiry or from snowballing, an email with an attached questionnaire (Appendix C) was sent to select recipients who meet the criteria of the study. Once the recipients had been selected, they were required to sign a consent form which details their rights as a participant (see appendix D).

## Data Collection Plan

Phenomenological research relies on analyzing the life experiences of others, and in order to obtain the data needed to analyze, researchers must build relationships with their participants (Moustakas, 1994). Many options for data collection are available to the researcher of a qualitative study (Jordan et al., 2021). The data collection sources utilized in this study were individual interviews, document analysis, and letter writing.

### Individual Interviews

In a qualitative study, interviews have become invaluable as a data collection source in which to expound upon the experiences or perspectives of individuals experiencing a phenomenon (Jordan et al., 2021). An interview occurs when the interviewer is able to construct knowledge about a topic from a conversation based on a social interaction with an interviewee (Creswell & Poth, 2018). The interview was conducted virtually over Zoom and the questions were designed so that they address the study's research questions. Questions in the interview must be open ended and rely more on the "how" and "why" a phenomenon has occurred (Jordan et al., 2021). All questions in my study were open ended and most are "how" questions with a

few being “what” questions.

Jordan et al. (2021) recommends that during the interview process, the interviewer engages the interviewee by actively listening and maintaining eye contact. Therefore, during the interview, I audio recorded the interview and took minimal notes. After the interview was completed, I transcribed the interview verbatim and shared the transcription with the participant to verify the validity of its contents. All participants were assigned a pseudonym in order to protect their identity in the study.

***Individual Interview Questions***

1. Please describe your educational background and career through your current position. Central Research Question (CRQ)
2. What is your philosophy on teaching and learning? CRQ
3. Please describe how you utilize the FCM in your classroom. CRQ
4. What do you notice about homework completion by the students in your flipped classroom? CRQ
5. When students do complete the required pre-class homework, how does this affect their ability to be successful in your flipped classroom? CRQ
6. When students do not complete the required pre-class homework, how does this affect their ability to be successful in your flipped classroom? CRQ
7. How do you ensure your students are able to participate in the class activities in your flipped classroom if they have not completed the pre-class homework? Sub-question 1 (SQ1)
8. Please describe your best practices for student engagement in the active learning process in your FCM? SQ1

9. Please describe the challenges you encounter with the active learning process in the FCM. SQ1
10. What else would you like to add to our discussion of your experiences with student engagement in the active learning process in the FCM that we haven't discussed? SQ1
11. Please describe your best practices for student collaboration in the FCM. Sub-question 2 (SQ2)
12. Please describe the challenges you have encountered with student collaboration in the FCM. SQ2
13. What would you like to add about student collaboration in the FCM that we haven't discussed? SQ2
14. What else would you like to add to our discussion of your experiences in the FCM that we haven't discussed? CRQ, SQ1, and SQ2

The FCM is a current technique in the classroom that allows students to learn by socially collaborating with other learners, interacting with teachers or any more knowledgeable other (MKO), to increase the rigor of learning, and construct knowledge through the use of an inquiry process. However, the FCM will not work if students do not take responsibility for their learning and complete the required pre-class homework assignments. Students who complete the homework assignments ahead of time, come to class prepared to be an active participant in the in-class activities (Yumusak, 2020). If students do not complete the at home learning assignments, the in-class activities are not beneficial to students (Sigurðardóttir & Heijstra, 2020). In this regard, the mindset of homework must change from being a review of learned material, to being preparation for upcoming learning experiences.

Questions 1-3, and 5-7 in the interview set allows me to see if teachers support research that states homework provides no benefits to students (Kohn, 2006), or if they agree with research that says homework is an instructional tool to help improve student learning (Pfeiffer, 2018). Question 4 focuses primarily on what teachers notice about student non-completion of homework because research by Ergen and Dermus (2021) states that the biggest problem teachers encounter is students not caring about their homework. Ergen and Dermus' (2021) study also found that most teachers gave homework to reinforce learning that had already occurred but suggested that they assign homework that "will help students improve their production and exploration skills" (p. 311). This suggestion is in alignment with the FCM model and supports questions 8-14.

***Individual Interview Data Analysis Plan***

Data analysis procedures followed the phenomenological process set forth by Husserl (1931/2017) and Moustakas (1994) which includes epoché, phenomenological reduction and imaginative variation. Epoché occurs when the researcher ignores any preconceived ideas about the phenomenon being studied (Moustakas, 1994). This process allows the researcher to clearly understand the experiences of the participants in the study (Creswell & Poth, 2018).

The phenomenological reduction phase encompasses three phases within itself. The first phase of phenomenological reduction is bracketing and occurs when the researcher puts the focus of the research in brackets and ignores everything else so that the research focuses only on the topic and research questions (Moustakas, 1994). The second phase of phenomenological reduction, horizonalization, is when the researcher lists every statement about a given topic. This process allows the researcher to "view and perceive each object on the horizon, which enables us to move closer to an understanding of the complexity of the entire phenomenon" (Gilstrap, 2007,

p. 2). The final phase of phenomenological reduction, clusters of meaning, occurs when the researcher clusters all the listed statements into themes, making sure to remove any statements that are the same (Creswell & Poth, 2018). This process allows the researcher to describe the essence of the phenomenon.

Once phenomenological reduction has been completed, the final step of phenomenological data analysis is imaginative variation. In the imaginative variation step, the researcher reflects upon different possibilities as to how the experience of the phenomenon came to be (Moustakas, 1994). Imaginative variation is the use of imagination by the researcher to analyze the phenomenon being studied from different perspectives (Moustakas, 1994). Husserl (1931/2017) states that the parts of the experience of the phenomenon that does not change between participants will not change in imaginative variation either. This process allows the researcher to identify the unchanging structural themes in order to describe the context of how the participants experienced the phenomenon (Moustakas, 1994).

After the interviews, I transcribed each one and I entered epoché so that I could completely analyze the responses of the interviews without any preconceived notions. Once I achieved epoché, I had completed phenomenological reduction which includes bracketing the focus the of the research, horizonalizing every statement made by participants, clustering the horizons into themes, and then organizing the horizons and themes into a description of the phenomenon being studied (Moustakas, 1994).

By bracketing my experiences and questions about the phenomenon being studied (Creswell & Poth, 2018), the FCM, I was able to focus on the participants' experiences with the FCM. I read through all the transcripts and horizonalized them into topics. Horizonalization is the belief that every statement is equal in importance which allows the researcher to seek the

essence of the phenomenon (Moustakas, 1994). Finally, all the horizonalized statements were clustered into themes by removing any repetitive statements (Moustakas, 1994). In this process, holistic coding was the first coding method used as it allows the researcher to determine basic themes in the data (Saldana, 2021). I used the Delve computer software program to help with the storage of all the data collected.

In the final step of the data analysis plan, I used imaginative variation to develop structural meanings or themes that were exemplified in the phenomenological reduction stage (Moustakas, 1994). A structural description of the phenomenon was written as a collective story. The structural description describes the essence of the phenomenon being studied (Cresswell & Poth, 2018). .

**Document Analysis**

Document analysis is a procedure for evaluating various documents to examine data in order to elicit empirical knowledge (Bowen, 2009; Morgan, 2022). Three important reasons for documents to be used as a research method are they provide supplementary data, act as a means for tracking change and development, and can either verify a researcher's findings or corroborate evidence from other sources (Bowen, 2009; Morgan, 2022). Documents submitted for analysis were teacher lesson plans utilizing collaboration and active learning activities in the FCM which require the use of information students learned in the pre-class homework assignments. This allowed for evaluation of student success in the FCM in relation to completion of the required pre-class homework assignments and helped to answer all four research questions guiding this study. In order to mask their identity, teachers were assigned the same pseudonym they were assigned for the interview.

***Document Analysis Data Analysis Plan***

When evaluating documents, researchers must analyze the data differently than when evaluating interview transcripts. In a document analysis, the researcher will first have to determine the document's relevance to the study's problem and purpose, then evaluate the document so that empirical knowledge related to the study can be produced (Bowen, 2009). Using these documents, themes can be determined in the research. Once again, data analysis procedures followed the phenomenological process set forth by Husserl (1931/2017) and Moustakas (1994) which included epoché, phenomenological reduction and imaginative variation. I was able to get a clear understanding as to the importance of the pre-class homework assignments on the success of students' ability to participate in the active learning activities in the FCM.

I first entered epoché so that I could analyze the lesson plans submitted without any preconceived ideas as to how I would have taught that lesson. Then I bracketed my experiences, or lack thereof, with the phenomenon so I can focus on the participants' experiences with the phenomenon. Once I read over the lesson plans, I had to horizontalize the themes that emerge from them into topics. The horizonalized statements were clustered into themes by removing any repetitive statements (Moustakas, 1994). In this process holistic coding was the first coding method used as it allowed the researcher to determine basic themes in the data (Saldana, 2021). I used the Delve computer software program to help with the storage of all the data collected.

In the final step of the data analysis plan, I used imaginative variation to develop structural meanings or themes that were exemplified in the phenomenological reduction stage (Moustakas, 1994). A structural description of the phenomenon was written as a collective story. The structural description describes the essence of the phenomenon being studied (Cresswell & Poth, 2018).

## Letter-Writing

Letter writing can be an important data source because it provides details into the participants' experiences (Flick & Flick, 2018). It is used in qualitative research so that the researcher can record information about the participants' experiences in their own environment (Hayman et al., 2012). According to Hayman et al., the main purpose for journaling, or letter writing, is for participants to reflect on their experiences and for researchers to document what they have learned. In this study, participants were asked to write a letter to a teacher new to the FCM and explain what they have learned from their own process, what they would do differently if they were starting all over, and what has worked well for them (see Appendix F). In order to mask their identity, teachers were given the same pseudonym they were given for the interview. This allowed for an open and candidate reflection on their experiences with the FCM.

### *Letter-Writing Data Analysis Plan*

While reading the letters written by participants, I made sure I had entered epoché so that I could analyze them without any preconceived notions. Then, I completed a phenomenological reduction using Moustakas' (1994) process. I bracketed my experiences, or lack thereof, with the phenomenon so I could focus on the participants' experiences with the phenomenon. Once I read over the letters written, I had to horizonalize the themes that emerged from them into topics. The horizonalized statements were clustered into themes by removing any repetitive statements (Moustakas, 1994). In this process holistic coding was the first coding method used as it allows the researcher to determine basic themes in the data (Saldana, 2021). I used the Delve computer software program to help with the storage of all the data collected. Finally using imaginative variation, I identified the unchanging structural themes in order to clearly explain the participants' experience with the FCM. A structural description of the phenomenon was written

as a collective story. The structural description describes the essence of the phenomenon being studied (Cresswell & Poth, 2018).

### Data Synthesis

Following Moustakas' (1994) model for phenomenological research, the final step of the research process is to synthesize the structural and textural descriptions, written in the imaginative variation stage, into a composite description of the essence of lived experiences of teachers using the FCM. I took the different structural descriptions and wrote paragraphs that explain both what the participants experienced in the FCM and how they experienced it. This data was synthesized and related back to the research questions before writing a sentence to describe the essence of the lived experience of the participants.

## Trustworthiness

Transparency and trustworthiness in research are qualities expected throughout the data analysis process (Aguinis et al., 2017; Aguinis et al., 2018; O'Kane et al., 2021). Transparency is the degree in which a researcher discloses all procedures, information, and decisions made during a study (Aguinis et al., 2018; O'Kane et al., 2021). Trustworthiness is the concept by which a person's research is judged based on confirmability, dependability, and transferability (Denzin & Lincoln, 1994; O'Kane et al., 2021). In my research study I was both transparent and trustworthy as I was not deceptive to my participants or readers about the content of the study or results.

### Credibility

Credibility is the ability of others to believe an author's claim about a study's phenomenon (Kvale, 1996; Liao, & Hitchcock, 2018), and is believed by researchers to be an essential part of a valid qualitative study (Liao, & Hitchcock, 2018; Lincoln & Gaba, 1985;

Onwuegbuzie &Leech, 2006). Primary credibility techniques include design elements such as sampling, participants, and data collection, whereas additional credibility techniques include prolonged engagement, triangulation, and member checks (Liao, & Hitchcock, 2018). In order to obtain credibility, I presented my design elements upfront, maintained a prolonged engagement with my participants, had participants complete member checks to ensure accuracy of data, and triangulated my data using all sources.

**Transferability**

Transferability is the ability of the results to be replicated in other settings (Lincoln & Gaba, 1985). In order to enhance transferability, the researcher must provide a clear description of the research content and assumptions (Ahmed & Muhammad, 2018). To ensure transferability, I have reported on the requirements for participation in this study, and data collection procedures. Once the study was completed, I provided documentation on number of participants and their demographics, detailed all data collection and analysis, and remained transparent throughout the entire process.

**Dependability**

Dependability shows how consistent the results of the study are and their ability to be repeated (Lincoln & Guba, 1985). Descriptions of my procedures were clearly stated, and supported by literature, so they could be replicated by another researcher. The dissertation committee and Qualitative Research Director reviewed my procedures to ensure that they were detailed enough to be replicated by another researcher.

**Confirmability**

Confirmability is based on the idea that each researcher has their own ideas or perspectives about a topic (Ahmed & Muhammad, 2018). However, it is important the results are

based on participants' responses and not researcher bias, motivation, or interest (Lincoln & Gaba, 1985). Strategies for ensuring confirmability include triangulation, descriptions of negative incidences, and data audits on data collection and analysis procedures (Ahmed & Muhammad, 2018). To ensure conformability when I completed my study, I maintained a detail audit trail of all procedures and data that can be tracked if needed, I transcribed any negative incidences that might have occurred during the study between myself and any of the participants, and triangulation of data was conducted to ensure that data analysis was accurate, and no researcher bias was affecting the results.

### Ethical Considerations

To ensure ethical practices, I did not begin my study until I had approval from IRB. Once I had that approval, I elicited participant consent which explained the procedures of the study, ensuring their anonymity, and verifying their right to withdraw consent at any time. Participants' anonymity was guaranteed by assigning each one a pseudonym by which they would only be known on all data and references made in the final dissertation. I did not need to obtain site approval as I did not conduct any of my research on a specific site. Data will be stored in password protected electronic files. Data will be destroyed after three years, per Liberty University policy.

## Summary

Based on the social constructivism framework, I completed a qualitative, transcendental phenomenological study to describe the lived experiences of middle school teachers utilizing the FCM. I purposefully selected 10 -17 middle school teachers who have used the FCM in their classrooms for at least two years. I used interviews, documents, and letter writing to collect data from participants about their perceptions on homework completion by students and how they

ensure collaboration and active learning activities in the class even when the homework may not have been completed. My data analysis included epoché, phenomenological reduction, and imaginative variation, which was synthesized in order to describe the essence of the phenomenon. I used ethical practices throughout this study to safeguard privacy.

# CHAPTER FOUR: FINDINGS

## Overview

The purpose of this qualitative, transcendental phenomenological study was to describe the lived experiences of middle school teachers in the United States implementing the flipped classroom model (FCM) when students are not coming to class prepared. Chapter Four includes a description of the participants, as well as themes that emerged from the data analysis, two outliers that also materialized, and how those themes answer the research questions. A summary of the findings concludes this chapter.

## Participants

I used purposive sampling to select participants for this study (Creswell & Poth, 2018). Participants included 10 middle school teachers from all over the United States who have used the flipped classroom method (FCM) in a range from two to ten years. All participants were assigned a pseudonym to ensure their confidentiality. Table 1 outlines the participant demographics used in this study and is followed by a description of each participant.

**Table 1**

*Teacher Participants*

| Pseudonym | State | Grade Level | Content Area | Years Using FCM | % of Students completing Pre-Class Homework |
|---|---|---|---|---|---|
| Alice | NJ | 7th | Math | 4-5 | 81%-90% |
| Cassidy | VA | 6th | Math & Social Studies | 2-3 | 81%-90% |
| Donovan | OH | 7th & 8th | Social Studies | 6- 10 | 81%–90% |
| Layla | NM | 6th | Math | 4-5 | 81%-90% |
| Lizzie | OH | 8th | Math | 6-10 | 91%-100% |

| | | | | | |
|---|---|---|---|---|---|
| McKenna | OH | 6th | Music | 6-10 | 11%-20% |
| Morgan | GA | 8th | Math | 2-3 | 81%-90% |
| Rebecca | OK | 7th | Math | 2-3 | 71%-80% |
| Sally | FL | 6th & 7th | Math | 2-3 | 81%-90% |
| Sasha | MA | 8th | ELA & Social Studies | 4-5 | 21%-30% |

**Alice**

Alice teaches math in an affluent district in New Jersey. She believes "math should be engaging and full of projects and real-life examples to keep kids interested." She has around a 90% homework completion rate in her FCM and attributes that to the students realizing the whole class just "runs smoother" when they complete the homework. Alice has been using the FCM for 4-5 years and says she'll "never go back to a traditional classroom."

**Cassidy**

Cassidy teaches math and social studies to sixth graders in a private school. She supports discovery learning because she wants her students "to take ownership of what they are learning" by "getting their brains thinking about what [she] want[s] them to learn without her just telling them the information." She is not currently using the FCM but did use it recently for 2-3 years and had a high homework completion rate. She considers "collaboration amongst students [to be] extremely important" in the FCM.

**Donovan**

Donovan is a 7th and 8th grade social studies teacher who has been using the FCM for 10 years. He credits the FCM for transforming his passion for the classroom. He says he was "extremely burned out and . . . ready to go to work at a retail establishment" until he found a new way to teach with the FCM. He teaches at a high poverty school and has been very successful

using the FCM in his classroom. His homework completion rate is between 81%-90% which allows his students to be more "motivated and engaged in the learning process." He feels that classroom discussions and time to work with students are essential for an effective classroom.

**Layla**

Layla has used the FCM in her 6th grade math classes for 4-5 years. As the only 6th grade math teacher in her building, she has seen great success with the FCM. Her homework completion rate is around 90%, which she maintains is due to students wanting to have peer interaction, which they lose if their homework is not completed. Layla claims that "flipping the classroom . . . transformed [her] teaching" because it allows her to "focus on small groups and individual students during class time."

**Lizzie**

Lizzie is an 8th grade math teacher who has been using the FCM for 8-10 years. She says "flipping [her] classroom" was the best decision [she] ever made as a teacher because she has "more time to interact with the students." She works in a rural school district in Ohio and has a 91% - 100% homework completion rate. Because of her high homework completion rate, her students are working together and collaborating with each other to master the skill which they are learning. She reiterates that she "would never be able to go back and teach the way [she] did before [she] did the flipped classroom."

**McKenna**

McKenna is a 6th grade music teacher in a suburban area school district. However, she has taught all grades from kindergarten to grade 12 at some point during her career. She also has a teaching license in English but prefers to teach music. Her goal is for her students to become

"lifelong learners" in music and likes to keep her students "active during class." McKenna has been using the FCM for 6-10 years but only has an 11%-20% homework completion rate.

**Morgan**

Morgan teaches 8th grade math in a suburban school district in Georgia. She has been using the FCM for 2-3 years and states that "to really do justice to the flipped model classroom, the classwork assignments should involve student engagement, collaboration, math talk, and opportunities to ask questions of each other and of you [the teacher]." She works in an affluent school district, so her students all have access to Chromebooks and the internet. Her homework completion rate is between 81% - 90%

**Rebecca**

Rebecca has used the FCM in her 7th grade math class for 2-3 years. She is based in Oklahoma but teaches virtually all to students all over the country. Her homework completion rate is 71% - 80% but feels this would be the same rate if she were in a traditional brick and mortar school. Teaching is a second career for Rebecca, and she believes that teaching "is one of the most rewarding jobs in the world." She expresses, "Watching their little light bulbs go off in their brains when they finally understand how something works is very rewarding."

**Sally**

Sally teaches 6th and 7th math in Florida. Prior to last she had used the FCM for 2-3 years. She did not use it last year because she had moved to a new school district but plans to use it again next year now that she is familiar with the curriculum. When she used the FCM, her homework completion rate was 81%-90%. Sally is excited to use the FCM again next year because she says it is "the most successful teaching tool that I've used in my 10 years for math. I'm really glad I tried it and it's something I want to keep doing."

### Sasha

Sasha is an 8th grade ELA and social studies teacher. She teaches in a high poverty urban school district in Massachusetts. She has used the FCM for 4-5 years and believes it is a "phenomenal idea." However, she does acknowledge the challenges associated with implementation of the FCM, most notably lack of homework completion. Sasha's homework completion rate is 21%-30%. She attributes this low completion rate to everyone's busy schedules and inability to manage their time appropriately.

## Results

The results of the data analysis of this study are presented in this section. Data collection included interviews, document analysis, and letter writing which were then coded and analyzed to identify themes. The results are categorized into three overall themes with two sub-themes each. Two outliers are also identified within this data. Once themes were identified, they were used to answer the three research questions.

### Homework Completion Improved and Helped to Build Student Confidence

Traditionally, homework completion has been a problem in both traditional and flipped classroom models (FCM). However, the majority of participants in this study reported their homework completion in the FCM improved and as a result helped to build student confidence within the classroom. Sally explained, "Students were so excited about the prospect of less time for homework and only one concept to think about at home, there was a lot of buy-in." Moreover, she asserted that "student confidence also shot way up because practicing one concept at home was so much less frustrating than trying to remember 10 or 12." Lizzie concurred that student confidence shot up because she said, "it really gives them a good jump start on what's expected in class."

Additionally, Donovan postulated the correlation of homework completion to engaging classroom lessons. In his interview, Donovan opined, “The more engaging you can make an active learning process it will boost homework completion because if the activities are the things the students want to participate in, they are going to get the work done.” Donovan continued to express that if students “desperately want to be engaged in those things, you’re going to see your homework completion grow by leaps and bounds.” Similarly, McKenna explains that “students these days need to be entertained to get their attention.” Therefore, she “found that it works best if [she] do[es] a more fun lesson or activity as the virtual work before the in-person class.”

***Success***

In order for true learning to take place in the FCM, students have to acknowledge the importance of completing all pre-class homework assignments. Participants with a high rate of homework completion reported that students are able to be successful in class due to the nature of the pre-class homework assignments in the FCM. According to Morgan, “watching the videos helps students to be successful as it offers them the first exposure to new topics and most concepts require multiple opportunities to engage with it to be successful.” Furthermore, Rebecca reported that when students are able to see the new topic ahead of time in the pre-class homework assignment, then “they’re more able to really retain the information and really work and engage with you during the lesson.”

Having the ability to preview a new topic prior to entering the class helps to alleviate fear in certain students. Donovan provides his students “with as many different ways as possible to present the content” so they can choose the way they learn best. Sally often found her students hated math class in the traditional format, but when she started using the FCM, her homework “completion rates skyrocketed” and her excitement grew “because of the success [she was]

seeing." Likewise, she conveyed "it was nice to see students who didn't dread coming into math class." Sally attributed her students' lack of fear to their knowledge that they would not be sitting in their seats working on something they did not know so they "felt more comfortable asking questions."

***Confidence***

In addition to alleviating students' fear about a new instructional topic, the pre-class homework in the FCM helped to boost students' confidence in their ability to complete the in-class assignments. Layla recalled that the confidence of students who struggle was "very, very, very low" in her traditional format classroom because "their knowledge [was] low" and they didn't "feel like they [could] share" with the class. However, in her FCM she noticed those same students raising their hands and participating. Layla declared her students' newfound confidence was "because they have watched the video and seen the question of which [she] is about to talk" prior to class starting. Sally also found her students' confidence improved in the FCM. As a result, "there was less copying homework because students were more easily able to do it themselves in a short time."

When students' confidence improves, so does their engagement in class activities. Sally stated that her "class engagement was much higher" because her "students felt more confidence and most students were happy to talk through a problem and explain to a partner or work at the white boards to explain their thinking." In her interview, McKenna shared a similar sentiment. She mentioned that her students "were more willing to discuss what they know already and participate because they did a little bit of work before class." Once students' confidence improves, Cassidy found that start thinking on their own and have approached her and said, "Do

you mean I could use (whatever math concept) in this way?" This is when true learning transpires.

**Delayed Engagement**

While homework completion as well as student confidence and engagement improved in the FCM, according to the participants in this study when students did not complete the pre-class homework assignment, their engagement in the in-class activities was delayed. Rebecca claimed that her students who did not complete the homework were "lost because they don't understand the topic we're going over." Alice concurred, stating that "when students do not complete the pre-class homework, they are instantly starting the lesson behind." Furthermore, she said, they cannot interact with other students because "they are sitting there alone with headphones on watching the video." Sasha indicated students could not engage with other students immediately since they had to "do a lot more check ins" with the teacher "because they are all over the place instead of being on the same page where they're supposed to be."

***Grace for Noncompletion***

Since all class activities in the FCM rely on learning of the information in the pre-class homework assignments, 8 out of 10 participants showed grace to their students for noncompletion of the pre-class homework assignments. Donovan disclosed that he is "not going to yell at [students] because work didn't get done." He continued by saying, "I still expect work to be done, but there's a level of grace involved because I know there are times when things get really hectic at home." Similarly, Alice required students who did not complete the pre-class homework to "spend a portion of the first day making up the homework in class." After that, they were then able to "work with their peers. Therefore, they are still able to participate in class activities."

Cassidy also explained that she "didn't make a big deal" over the fact that her students had not completed the pre-class homework assignment. She just "hand[s] the student an I-pad and give[s] them the allotted time to watch." She added, "The student can rejoin the rest of the class afterwards." Similarly, Sally has her students "watch the video and skip the Check for Understanding at the beginning so that they can move into the class activities with [them]." Therefore, noncompletion of homework does not prevent students from participating in class activities but will delay their ability to engage with other students until after they have learned the information presented in the homework videos.

***Peer Interaction***

Morgan believes that "to really do justice to the flipped model classroom, the classwork assignments should involve student engagement, collaboration, and opportunities to ask questions of each other and of you." Yet, the level of peer interaction in the FCM directly correlates to student completion of homework. Rebecca noticed in her classroom that "the students who actually come prepared to class understand what we're going over and are able to engage and interact better." However, when they come to class unprepared, they "lack engagement and understanding." In order to help unprepared students gain understanding, Layla "works with them individually," further delaying peer interaction.

Alternately, Alice determined that "students will quickly realize that spending the class period watching the video instead of working in groups with their friends is not how they want to spend their time." As a result, "missed assignments will be few and far between." Likewise, Donovan perceived the lure peer interaction has on students. He explained that his students who are on the side completing the missed homework assignment typically "are desperately wanting to get to the activity because it is usually something that is fun, but also something that they want

to reengage with a group. So, it is something for them to want to work towards." In the end, all students are able to engage with peers, but the level of interaction depends upon whether or not homework is completed at home or in school.

**Insufficient Collaboration**

Rebecca best sums up the FCM with "Collaboration among students happens during class. Engagement along with collaboration are necessary for students to succeed. Without all of these factors, they will not be able to succeed." When students do not complete the pre-class homework assignments, their ability to collaborate with other students is hindered. Morgan had her students "work as a collaborative group to help each other [and] challenge each other." However, if students have not completed the homework in order to understand the material, then they cannot engage with other students enough to collaborate with or challenge each other. Hence, the typical problem of one person in the group doing all the work arises. Although, Donovan did express that the lack of homework "doesn't necessarily affect their ability to be successful, only delay it in a way." The delay to student success is often caused by insufficient collaboration due to students' lack of preparedness for class.

***Lack of Preparedness for Class***

Students who do not complete their pre-class homework assignments in the FCM are not prepared for class because they lack the content knowledge to allow them to collaborate and engage with other students. Morgan declared that "challenges with collaboration are connected directly with [students] not having watched the videos." Sasha frequently used a jigsaw activity in her classroom where each student had to take one part in an activity and teach it to the rest of the students in their group. She relayed groups "being stuck" because "people just didn't do their parts." If the students did not do the first part, which is the homework, then they could not do the

second part where they had to teach their group about a section of the story they had read. In this situation, students' lack of preparedness for class not only affected their ability to be successful in class, but also their classmates' ability to be successful.

***Struggles***

Not being prepared for class causes students to struggle with the in-class assignments in the FCM. Rebecca stated that "those who don't do the homework are going to struggle more in class because they didn't do what they were supposed to do before coming." When Layla would have her students collaborate, she had her students solve a problem first. Then, she would ask her students, "How did you solve this? Come show the rest of the class how you solved this problem or turn and talk with your partner. Share your solution with your partner." Because the homework was not completed, her students struggled to complete the problem and were unable to share their solution with their classmates.

Peer instruction is a strategy used by many teachers in the FCM to increase student engagement and collaboration. Layla "usually [has] students who struggle or traditionally students who habitually forget to do their homework placed with someone who is helpful and supportive." Cassidy loved peer instruction to help her struggling students because "you have students helping each other rather than them just hearing it from me all the time." Cassidy continued with "my high-level learners are engaged in teaching my other learners who are maybe struggling a little more. These students are helping them to understand more difficult problems and applying those problems." This peer instruction helped students to gain the knowledge they were lacking but is often one sided and is not sufficient for a true collaborative experience in the classroom because the struggling student often "does not want to collaborate" as Layla saw in her classroom.

## Outlier Data and Findings

The data analysis presented showed common themes represented in the data obtained during this study. However, two outliers arose from the data. This section describes the findings of the two outliers and presents alternative perspectives on noncompletion of homework in the FCM and what to do with students who do not complete the homework.

### *Outlier Finding #1*

While the majority of the participants in this study discussed the relationship between engaging class lessons and homework completion, one participant found that was not the situation in her classroom. McKenna teaches music and has a very engaging class where her students get to learn about the history of Rock and Roll and compose their own music. However, her homework completion was the lowest at between 11%-20%. The difference is that in her district, grades are not given in any of the unified arts classes. Therefore, McKenna conveyed the challenge it was for her to get her students to do the homework since "they don't earn grades, there's not really an incentive for them to do it."

### *Outlier Finding #2*

Although 80% of the participants in this study provided grace to their students for noncompletion of homework and allowed them to work on it in class, two participants did not. McKenna said she "just [has] to go with it" since almost the entire class has not completed the homework and it would be "even more of a distraction" to have that many students try to complete it in class. Morgan also does "not reteach the lesson to individual students during class and [she] does not let them watch in class instead of doing the activity." She discovered that peer pressure from the group solved the problem of no homework for her. She said, "as the school

year progresses more and more watch the videos because their peers start calling them out about not watching and the problem solves itself."

## Research Question Responses

Answers to the research questions are presented in this section. All answers relate back to the themes identified in the data analysis of interviews, documents, and letters written. The responses to three research questions address the problem of the study.

### Central Research Question

What are the experiences of middle school teachers in the United States implementing the flipped classroom model (FCM) with student completion of homework? The participants' perspective is that homework completion improved and helped the students to feel successful, thus boosting their confidence in themselves. Sally described her homework completion as "absolutely skyrocketed" once she implemented the FCM. According to Sally, prior to flipping her class she had 40% of her students completing the homework, but afterwards that amount went up to 90%. She also noticed student confidence improving because students were no longer "trying to fly under the radar. They were more willing to ask questions. Very few students were checked out. So, it made a big difference."

### Sub-Question One

What are the experiences of middle school teachers in the United States implementing FCM with student engagement in the active learning process when homework has not been completed? The participants' perspective is that students who do not complete the homework can still engage with their peers, but that engagement is delayed because they must first complete the homework in class. Lizzie described how her students were struggling when they had not completed the homework so she would "make them sit off to the side for a little bit and get on

their Chromebook and make them get the gist of the notes they missed, especially the steps or the self-reflecting questions from the video." Layla also had her students "sit off to the side and go watch the video." She emphasized "that didn't last very long. They started doing their homework because they wanted to have that interaction with their peers." Rebecca encourages her students to "engage no matter if they completed [the homework] or not" but acknowledges that "they're going to struggle."

**Sub-Question Two**

What are the experiences of middle school teachers in the United States implementing the FCM with social collaboration among students during the learning process when homework has not been completed? The participants' perspective is that students who do not complete their homework are unable to collaborate sufficiently with their peers due to their lack of preparation for class. Rebecca witnessed students in her class who had not completed the homework "not wanting to talk with each other because they think they are going to be wrong." Layla also noticed in her classroom that the students who did not complete the homework did not want to collaborate with their group at all. She explained that they would just "sit down, shut up, and let me tell them the answer." She further relayed that in order to encourage collaboration she would

> walk up and ask the person [she could] tell has not really participated, "What strategy are you using?" When they can't tell me, I tell them, "I'm going to be back in 5 minutes and everybody needs to understand the strategy."

## Summary

This chapter included a description of each of the participants in the study which incorporated certain demographic information such as the content area they teach, how many years they have been using the FCM, and their homework completion rate while using the FCM. After analyzing

data from interviews, documents, and letters written, three themes emerged. These themes were homework completion improved and builds confidence, noncompletion of homework leads to delayed engagement, and noncompletion of homework causes insufficient collaboration within the classroom. Two outliers were identified in the area of homework completion. Finally, the three research questions were answered using the themes identified from the data analysis.

# CHAPTER FIVE: CONCLUSION

## Overview

The purpose of this qualitative, transcendental phenomenological study was to describe the lived experiences of middle school teachers in the United States implementing the flipped classroom model (FCM) when students are not coming to class prepared. The problem is teachers cannot effectively implement the FCM when students are not coming to class prepared to learn because they do not always complete the pre-class activities at home (Sigurðardóttir & Heijstra, 2020; Sooko-Singh & Boisselle, 2018; Unal & Unal, 2017; Yumusak, 2020). Data were collected using interviews, document analysis, and letter writing, then analyzed using the three-step phenomenological process set forth by Husserl (1931/2017) and Moustakas (1994) which includes epoché, phenomenological reduction and imaginative variation. Chapter Five consists of sections which will discuss interpretation of findings, implications for policy and practice, theoretical and methodological implications, limitations and delimitations, and recommendations for future research.

## Discussion

Research related to homework completion in the FCM in middle school is scarce. The available research indicates student completion of homework in the FCM can be a challenge (Unal & Unal, 2017), which impedes student learning (Sigurðardóttir & Heijstra, 2020). After exploring the lack of homework completion by middle school students in the FCM, findings from the analysis of the data revealed that often homework completion is not a challenge in the FCM but even when it is not completed student learning can still occur, albeit delayed and with insufficient communication. Based on participants' opinions and viewpoints, this researcher

determined the most paramount needs in the FCM are student responsibility, opportunities for learning, and having an engaging class where students are completing authentic tasks.

## Interpretation of Findings

This section summarizes the themes and sub-themes that were identified in Chapter Four. The three identified themes were homework completion improved and builds confidence, delayed engagement, and insufficient collaboration. The interpretation of findings is discussed in this section and are utilized to answer the research questions. The findings of this study verified the importance of authentic active learning activities in the class to encourage not only homework completion, but also learning.

### *Summary of Thematic Findings*

Three themes were identified in this study to address how middle school teachers ensure collaboration and active learning in their classrooms even when students may not complete homework in their FCM. The identified themes are homework completion improved and builds confidence, delayed engagement, and insufficient collaboration. Each of these themes help to answer the research questions: What are the experiences of middle school teachers in the United States implementing the flipped classroom model (FCM) with student completion of homework, What are the experiences of middle school teachers in the United States implementing the FCM with student engagement in the active learning process when homework has not been completed, and What are the experiences of middle school teachers in the United States implementing the FCM with social collaboration among students during the learning process when homework has not been completed. Three interpretations of these themes are discussed below.

**Student Responsibility.** In order for the FCM to be successful, students must complete the pre-class homework assignment. If they do not complete it at home, then the majority of the

participants in this researcher's study had the students complete it at the beginning of class. Thus, making the students responsible for completing the homework assignment before they can engage in the class assignments. Students taking responsibility for their learning is the true facet of the FCM (Brewer & Movahedazarhouligh, 2018; Carhill-Poza, 2019). In contrast to Gough et al.'s (2017) study, Bond (2019) determined that students utilizing the FCM have a strong commitment to learning new things and completing all of their assignments, both at home and at school. The participants in this study agreed that students must be held accountable for their learning which includes their homework.

**Opportunities for Learning.** One of the benefits of the FCM is the different opportunities for learning that can occur in the classroom. These opportunities for learning can range from differentiated tasks which includes remediation for struggling students and enrichment for advanced students. These opportunities can transpire if the homework has been completed or not. This differentiation allows for each students' strengths and weaknesses to be considered and classroom instruction to be more individualized (Carhill-Poza, 2019). Participants agreed that they are able to pull students into small groups in their FCM and meet them at their level.

**Having Engaging Lessons Where Students are Completing Authentic Tasks.** In order for true learning to occur in the FCM, students must be actively engaged in authentic tasks. Additionally, having authentic tasks for students to engage with encourages homework completion since the latter must be completed first. Collaboration is an important aspect of students interacting with their peers to complete engaging lessons. Additionally, Ritter and Arslan-Ari (2023) determined that collaboration was paramount in students mastering the class

content. All of the participants agreed that when the lessons were engaging and authentic, then both student participation and collaboration increased.

## Implications for Policy or Practice

This section includes suggestions for policy and practice. The implications for policy include recommendations for higher education institutions. The implications for practice include recommendations for educators and school districts. The specific implications for policy and practice are listed below.

### *Implications for Policy*

In order for the FCM to be successful, students must accept responsibility for their learning. This responsibility includes the pre-class homework assignment that occurs outside of the classroom. Responsibility is not often an intrinsic trait of middle school-aged students. Middle school teachers must teach their students how to hold themselves accountable for their learning. However, Little (2000) argues that teachers cannot instill autonomy in their learners if they first have not been taught how to be an autonomous learner. Therefore, policy implications indicate preparatory programs for pre-service teachers should include more training on how to learn in a FCM and become an autonomous learner. The data from Dooly and Sadler's (2020) study supports the idea that training in a flipped format helped future teachers to become autonomous learners.

### *Implications for Practice*

Practically, the implication of this study is that students must complete the pre-class homework assignment in the FCM so they can engage and collaborate in the class activities. When students do not complete this homework, participants feel the best practice is to have the students complete it at the beginning of class so they can rejoin the class activities later. Thus,

the students still have the opportunity to be successful even though it may be delayed until after they complete the homework. Participants agree that as the year progresses, noncompletion of homework will decrease because students will not want to be isolated from their peers and miss out on any of the active learning opportunities.

Additionally, teachers implementing the FCM must effectively communicate to both students and parents what the FCM is and how it is different than the traditional teaching method. Teachers should explain how the FCM better prepares students to master the 21st century skills needed to be college and career ready when they graduate high school. It is also imperative that this communication includes the importance of the pre-class homework assignments in aiding student engagement and collaboration in the classroom. One approach to introduce parents and students to this method may be with an "Introduction to FCM" night at the beginning of the school year so teachers can physically show how the FCM works in their classrooms and can answer any questions parents and students might have.

Similarly, school districts could have informational sessions about how the FCM works and benefits to using it in the classroom as opposed to the traditional teaching method. Teachers who have previously used the FCM could model how they use it in their classroom and offer pointers and suggestions to any new teacher willing to try this format. A cohort of new FCM teachers could be formed so teachers do not feel like they have to carry the burden alone. Since not all teachers have the technology training to create videos for their students, the teachers in the cohort could help each other. Additionally, if there is more than one teacher in the same content area per grade, they can split the work and share it with each other.

**Theoretical and Empirical Implications**

The themes that materialized from this research study described the essences of the experiences of middle school teachers using the FCM when they had students who did not complete the pre-class homework assignments and how that affects engagement and collaboration in the classroom. These themes validate Vygotsky's (1978) social-constructivist theory. The theoretical and empirical implications of this study are discussed in this section.

### *Theoretical Implications*

The theoretical framework that guided this study was Vygotsky's (1978) social-constructivist theory by exploring middle school teachers' perspectives on collaboration and active learning by students in their FC when the pre-class homework was not completed. Vygotsky's (1978) social constructivist theory states that students take an active role in their learning and construct their own knowledge through an inquiry process. The findings from the present study corroborated this theory. As participants described their experiences in their flipped classrooms, they all resembled the research on the FCM where the passive learning activities are assigned for homework, so that class time can be spent on student-centered active learning experiences including problem-solving activities, collaboration with a group, and hands on lab activities (Khasanah & Anggoro, 2022).

As stated in Chapter Two, Vygotsky's social constructivism theory is based on two principles - More Knowledgeable Other (MKO), and The Zone of Proximal Development (ZPD). Vygotsky's (1978) theory identifies the MKO as anyone, including other students, who knows or understands more about the historical and cultural practices of the concept being taught or the task at hand (Abtahi, 2017). A child's cognitive, specifically language, development is advanced through social interactions with an MKO (Faldet & Skrefsrud, 2020). Consequently, when a student does not complete the pre-class homework assignment, then social interactions are

delayed causing insufficient collaborations. As a result, a child's cognitive development could also be delayed.

### *Empirical Implications*

Empirically, this research adds to the growing research on the FCM. Lack of student completion of homework in the FCM has been mentioned in literature (Bicen & Taspolat, 2019; Unal & Unal, 2017; Webb et al., 2021). The noncompletion of homework has been documented as being a contributing factor to lack of student success in the FCM in previous studies (Unal & Unal, 2017). Alternately, this study shows that with teacher grace, students can still be successful in the classroom even when they do not complete the pre-class homework assignment at home. The homework piece must be completed for students to be successful, but teachers can opt to allow students time in class to complete it before engaging with the rest of the class.

When students are actively engaged in a student-centered classroom such as a FC they are talking to and listening to each other to form conclusions and make connections about what they are learning (Arman, 2018; van Loon et al., 2021). However, when students do not complete their homework in the FCM, they are unable to evaluate information needed in order to participate in the learning activities in class (Kim & Ahm, 2018, Ye et al., 2019), leading to delayed engagement (Alebrahim & Ku, 2020). Therefore, this study corroborates the findings of previous studies that when traditional "homework" is completed in class and "lectures" are completed at home as videos students are not only able to comprehend and retain the information better, but also maximizes their engagement and collaboration with peers (Djamàa, 2020). When analyzing the data, participants agreed that without the information from the homework, student engagement is delayed until they can obtain the information and collaboration is insufficient since they may not have the knowledge required to fully participate. The findings of this study

add to the literature to clarify the role the pre-class homework assignment contributes to in class engagement and collaboration activities.

## Limitations and Delimitations

Limitations in a research study are potential weaknesses or flaws that cannot be controlled by the researcher but could potentially affect the outcome of the study. In this study two limitations have been identified and are discussed below. Delimitations are deliberate decisions made by the researcher to specify certain parameters of the study. In this study two delimitations have been identified and are discussed below.

### *Limitations*

One remarkable limitation in this research study was with participants committing to volunteer to engage in the study. The first issue found by this researcher was that when the recruitment ad was posted online, many people "liked" it, but did not send an email expressing interest in participation. Additionally, several potential participants expressed interest in volunteering to engage in the study and even filled out the IRB consent form. Unfortunately, after that they never responded to any other email or Facebook Messenger post. Furthermore, the participants who did commit were not timely in completing all the requirements of the study. As a result, it took eight months to obtain 10 participants and collect all of the data.

The second limitation found in this study was with the target population. The target population was current middle school teachers who have used the FCM for at least two years. The teachers could be from either public or private schools since the organizational structure of the school setting did not affect the outcomes of the study and they could teach any content area. Unfortunately, my study was heavily populated with math teachers, which is a limitation. Out of the 10 participants, 7 were math teachers, 1 was music, 1 was social studies, and 1 was ELA and

social studies. In addition, only 1 teacher was male, and the rest were female, which is another limitation.

### *Delimitations*

Delimitations set the parameters of this study to include only participants who are middle school teachers in the United States who have been implementing the FCM for at least two years. Previous research has studied the FCM extensively at the tertiary level (Adams & Dove, 2018; Baepler et al., 2014; Jdaitawi,2019; Kim & Ahn, 2018; Maheshwari, & Seth, 2019; Phurikultong & Tuntiwongwanich, 2021; Sigurðardóttir, & Heijstra,, 2020; Smallhorn, 2017; Sun & Wu, 2016; Talan & Batdi, 2020; Yumuşak, 2020). Fewer studies have addressed the high school level (Bond, 2019; Dixon &Wendt, 2021; Florence & Kolski, 2021; Gelgoot et al., 2020; Jong, 2017; Leo & Puzio, 2016; Reinoso et al., 2021; Sookoo-Singh & Boisselle, 2018) and even less has been studied at the middle school level (Fazal & Bryant, 2019; Gough et al., 2017; Moran, 2018; Stratton et al., 2020; Unal & Unal, 2017). Therefore, it was important to delimit this study to middle school teachers implementing the FCM in order to address a gap in the literature. Participants in this study were all middle school teachers and have been using the FCM anywhere from 2 years to 10 years.

## Recommendations for Future Research

The purpose of education is to prepare students for the future. In order to be college and career ready when they graduate, today's students must show competence in digital literacy, and other 21st century skills such as problem-solving and critical thinking and therefore must be incorporated into today's curriculum (Asunda & Weitlauf, 2018; Montiel et al., 2020). When implemented with fidelity, the FCM is a framework which allows for all of these skills to be incorporated into the curriculum. The recommendations below are based on these ideas.

The majority of this study's results are based on the teachers' grace. When students do not complete the pre-class homework assignments at home, most teachers just give students the time to complete it in school before engaging with other students in the class activities. However, by not completing the homework at home, then students truly are not following the FCM with fidelity. Further studies can include the effects of noncompletion of homework on student engagement and collaboration when teacher grace is not granted. This study might give a more accurate view of the effects of noncompletion of homework on student engagement and collaboration in the FCM.

Additionally, it is important to understand the FCM's effect on a student's ability to develop 21st century skills. Active engagement in hands on learning activities and collaboration with other students help to build some of those skills such as problem solving and critical thinking. Therefore, another beneficial study could be a case study to follow a class of students who are taught using the FCM each year starting in middle school through high school graduation. Following the same students for six or seven years could produce sufficient data on the 21st century skills these students learned or did not learn, as well as whether they were college and career ready at graduation.

## Conclusion

The data from this study enhanced the previous research on the flipped classroom method (FCM). A qualitative, transcendental phenomenological research design was utilized to describe the essence of the lived experiences of middle school teachers' experience in the FCM and how they ensure collaboration and active learning occur even when students do not complete the homework piece of the lesson. The theoretical framework that guided this study was Vygotsky's (1978) social-constructivist theory which states that students take an active role in their learning

and construct their own knowledge through an inquiry process. Research was conducted using interviews, document analysis, and letter writing from 10 participants. Participants included 7 math teachers, 1 music teacher, 1 social studies teacher, and 1 ELA and social studies teacher from both public and private schools in the United States. Data was analyzed using procedures following the phenomenological process set forth by Husserl (1931/2017) and Moustakas (1994) which includes epoché, phenomenological reduction and imaginative variation. The findings indicated that homework completion in the FCM improved and helped to build student confidence, but when it was not completed it delayed students' ability to engage with their peers and led to insufficient collaboration due to lack of content knowledge.

## References

Abtahi, Y. (2017). The “more knowledgeable other”: A necessity in the zone of proximal development? *For the Learning of Mathematics, 37*(1), 35–39. https://www.jstor.org/stable/44382744

Adams, C., & Dove, A. (2018). Calculus students flipped out: The impact of flipped learning on calculus students’ achievement and perceptions of learning. *PRIMUS, 28*(6), 600–615. http://dx.doi.org/10.1080/10511970.2017.1332701

Aguinis, H., Cascio, W. F., Ramani, R. S. (2017). Science’s reproducibility and replicability crisis: International business is not immune. *Journal of International Business Studies, 48*, 653–663.

Aguinis, H., Ramani, R., Alabduljader, N. (2018). What you see is what you get? Enhancing methodological transparency in management research. *Academy of Management Annals, 12*, 83–110.

Ahmed, A., & Muhammad, M. (2018). Rigour in qualitative research: Is there a panacea to it? *Malaysian Journal of Qualitative Research, 4*(1), 60–68.

Aidinopoulou, V., & Sampson, D. G. (2017). An action research study from implementing the flipped classroom model in primary school history teaching and learning. *Educational Technology & Society, 20*(1), 237–247.

Akçayır, G. and Akçayır, M. (2018). The flipped classroom: a review of its advantages and challenges. *Computer and Education, 126*, 334-345.

Alebrahim, F., & Ku, H.-Y. (2020). Perceptions of student engagement in the flipped classroom: a case study. *Educational Media International, 57*(2), 128–147. https://doi.org/10.1080/09523987.2020.1786776

AlJaser, A. M. (2017). Effectiveness of using flipped classroom strategy in academic achievement and self-efficacy among education students of Princess Nourah Bint Abdulrahman University. *English Language Teaching, 10*(4), 67–77.

Ametepee, L. K., Tchinsala, Y., & Agbeh, A. O. (2014). The no child left behind act, the common core state standards, and the school curriculum. *Review of Higher Education & Self-Learning, 7*(25), 111–119.

Ardeleanu, R. (2019). Traditional and modern teaching methods in mathematics. *Journal of Innovation in Psychology, Education & Didactics, 23*(2), 133–140.

Arman, M. S. (2018). Student-centered approach to teaching: It takes two to tango. *Ahfad Journal, 35*(2), 64–71.

Arslan, A. (2020). Instructional design considerations for flipped classroom. *International Journal of Progressive Education, 16*(6), 33–59. https://doi.org/10.29329/ijpe.2020.280.3

Asunda, P. A., & Weitlauf, J. (2018). STEM habits of mind: Enhancing a PBL design challenge--integrated STEM instruction approach. *Technology and Engineering Teacher, 78*(3), 34–38.

Aydin, M., Okmen, B., Sahin, S., & Kilic, A. (2021). The meta-analysis of the studies about the effects of flipped learning on students' achievement. *Turkish Online Journal of Distance Education, 22*(1), 33–51.

Ayish, N., & Deveci, T. (2019). Student perceptions of responsibility for their own learning and for supporting peers' learning in a project-based learning environment. *International Journal of Teaching & Learning in Higher Education, 3*(2), 224–237.

Baepler, P., Walker, J. D., & Driessen, M. (2014). It's not about seat time: Blending, flipping, and efficiency in active learning classrooms. *Computers & Education, 78*, 227–236.

Bahadur, G., & Akhtar, Z. (2021). Effect of teaching with flipped class-room model: A meta-analysis. *FWU Journal of Social Sciences, 15*(3), 96–112. https://doi.org/10.51709/19951272/Fall-2021/6

Baker, L. M., & State, K. (2013). Flipping the classroom and furthering our careers. *NACTA Journal, 57*(3), 75.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. Macmillan.

Barnett, E., & Fay, M. (2013). The common core state standards: Implications for community colleges and student preparedness for college. *National Center for Postsecondary Research.* https://files.eric.ed.gov/fulltext/ED549164.pdf

Bennett, C. A. (2017). "Most won't do it!" Examining homework as a structure for learning in a diverse middle school. *American Secondary Education, 45*(2), 22–38.

Bergmann, J., & Sams, A. (2012). *Flip your classroom: Reach every student in every class every day.* International Society for Technology in Education.

Bergmann, J., & Sams, A. (2014). *Flipped learning: Gateway to student engagement.* International Society for Technology in Education.

Bhagat, K. K., Chang, C. N., & Chang, C. Y. (2016). The impact of the flipped classroom on mathematics concept learning in high school. *Educational Technology and Society, 19*(3), 134–142.

Bicen, H., & Taspolat, A. (2019). Students' views on the teaching process based on social media supported flipped classroom approach. *BRAIN: Broad Research in Artificial Intelligence & Neuroscience, 10*(4), 115–144. https://doi.org/10.18662/brain/08

Bingham, A. J., & Dimandja, O. O. (2017). Staying on track: Examining teachers' experiences in a personalized learning model. *Journal of Ethnographic & Qualitative Research, 12*(2), 75–96.

Bloom, B.S. (Ed.), Engelhart, M.D., Furst, E.J., Hill, W.H., & Krathwohl, D.R. (1956). *Taxonomy of educational objectives: The classification of educational goals. Handbook 1: Cognitive Domain*. David McKay.

Brock, C. H., Lapp, D., Flood, J., Fisher, D., & Han, K. T. (2007). Does homework matter? An investigation of teacher perceptions about homework practices for children from nondominant backgrounds. *Urban Educations*, *42*(4), 349-372. https://doi.org/10.1177%2F0042085907304277

Bond, M. (2019). Flipped learning and parent engagement in secondary schools: A South Australian case study. *British Journal of Educational Technology, 50*(3), 1294–1319. https://doi.org/10.1111/bjet.12765

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal (RMIT Training Pty Ltd Trading as RMIT Publishing)*, *9*(2), 27–40. https://doi.org/10.3316/QRJ0902027

Brewer, R., & Movahedazarhouligh, S. (2018). Successful stories and conflicts: A literature review on the effectiveness of flipped learning in higher education. *Journal of Computer Assisted Learning*, *34*(4), 409–416. https://doi.org/10.1111/jcal.12250

Burke, A. S., & Fedorek, B. (2017). Does flipping promote engagement?: A comparison of a traditional, online, and flipped class. *Active Learning in Higher Education, 18*(1), 11–24.

Burr, V. (2015) *Social Constructionism*, Routledge.

Burriss, K. G., & Snead, D. (2017). Middle school students' perceptions regarding the motivation and effectiveness of homework. *School Community Journal, 27*(2), 193–210.

Bursa, S., & Cengelci Kose, T. (2020). The effect of flipped classroom practices on students' academic achievement and responsibility levels in social studies course. *Turkish Online Journal of Distance Education, 21*(4), 143–159.

Cabi, E. (2018). The impact of the flipped classroom model on students' academic achievement. *International Review of Research in Open & Distance Learning, 19*(3), 202–221. https://doi.org/10.19173/irrodl.v19i3.3482

Carhill-Poza, A. (2019). Defining flipped learning for English learners in an urban secondary school. *Bilingual Research Journal, 42*(1), 90–104. https://doi.org/10.1080/15235882.2018.1561552

Casselman, M. D., Atit, K., Henbest, G., Guregyan, C., Mortezaei, K., & Eichler, J. F. (2020). Dissecting the flipped classroom: Using a randomized controlled trial experiment to determine when student learning occurs. *Journal of Chemical Education, 97*(1), 27–35.

Çetinkaya, M. (2017). Designing and applying web assisted activities to be used in flipped classroom model. *International Journal of Evaluation and Research in Education, 6(*2), 128–137. https://eric.ed.gov/?id=EJ1145236

Chen, K., Monrouxe, L., Lu, Y., Jenq, C., Chang, Y., Chang, Y., & Chai, P. Y. (2018). Academic outcomes of flipped classroom learning: a meta-analysis. *Medical Education, 52*(9), 910–924. https://doi.org/10.1111/medu.13616

Chen, Y-T., Liou, S. & Chen, S-M. (2021a). Flipping the procedural knowledge learning - A case study of software learning. *Interactive Learning Environments, 29*(3), 428–441. https://doi.org/10.1080/10494820.2019.1579231

Chen, W., Tan, J. S. H., & Pi, Z. (2021b). The spiral model of collaborative knowledge improvement: an exploratory study of a networked collaborative classroom. *International Journal of Computer-Supported Collaborative Learning, 16*(1), 7–35. https://doi.org/10.1007/s11412-021-09338-6

Chetty, N. D. S., Handayani, L., Sahabudin, N. A., Ali, Z., Hamzah, N., Rahman, N. S. A., & Kasim, S. (2019). Learning styles and teaching styles determine students' academic performances. *International Journal of Evaluation and Research in Education, 8*(4), 610–615.

Choo, S. S. (2018). Approaching twenty-first century education from a cosmopolitan perspective. *Journal of Curriculum Studies, 50*(2), 162–181. https://doi.org/10.1080/00220272.2017.1313316

Çoban, A., & Erol, M. (2020). Influence of problem-based learning on conceptual understanding and critical thinking regarding quantum physics. *Latin-American Journal of Physics Education, 14*(4), 1–9.

Common Core State Standards Initiative. (2011). In the states. http://www.corestandards.org/standards-in-your-state/

Cook, G. (2004). Good-bye to nap time: Spurred by NCLB, elementary schools get serious. *American School Board Journal, 191*(5),6-8.

Cooper, H. (2001). Homework for all--in moderation. *Educational Leadership, 58*(7), 34–38.

Cooper, H., Robinson, J. & Patall, E. (2006). Does homework improve academic achievement? A synthesis of research, 1987–2003. *Review of Educational Research, 76*, 1–62. http://www.jstor.org/stable/3700582

Creswell, J.W., & Poth, C.N. (2018). *Qualitative inquiry & research design: Choose among five approaches.* Sage Publishing.

Daneshfar, S., & Moharami, M. (2018). Dynamic assessment in Vygotsky's sociocultural theory: Origins and main concepts. *Journal of Language Teaching and Research, 9*(3), 600-607. http://dx.doi.org/10.17507/jltr.0903.20

Daniels, H. (2003). *An introduction to Vygotsky*. Taylor & Francis Routledge.

Darrow, A.-A. (2016). The Every Student Succeeds Act (ESSA). *General Music Today, 30*(1), 41–44. https://doi.org/10.1177/1048371316658327

Debbağ, M., & Yıldız, S. (2021). Effect of the flipped classroom model on academic achievement and motivation in teacher education. *Education & Information Technologies*, *26*(3), 3057–3076. https://doi.org/10.1007/s10639-020-10395-x

Denzin, N. K., Lincoln, Y. S. (1994). *Handbook of qualitative research*. Sage Publications.

Dettmers, S., Yotyodying, S., & Jonkmann, K. (2019). Antecedents and outcomes of parental homework involvement: How do family-school partnerships affect parental homework involvement and student outcomes?. *Frontiers in Psychology, 10*(1041), 1-13. https://doi.org/10.3389/fpsyg.2019.01048

Djamàa, S. (2020). Lecture in the Living Room, Homework in the Classroom: The Effects of Flipped Instruction on Graduate EFL Students' Exam Performance. *Computers in the Schools, 37*(3), 141–167. https://doi.org/10.1080/07380569.2020.1795513

Dimcock, M. (2019, January17). Defining generations: where Millenials end and Generation Z begins. *Pew Research Center. https://www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins/*

Dixon, K., & Wendt, J. L. (2021). Science motivation and achievement among minority urban high school students: An examination of the flipped classroom model. *Journal of Science Education & Technology, 30*(5), 642–657. https://doi.org/10.1007/s10956-021-09909-0

Dollarhide, C. & Lemberger, M. (2006). "No Child Left Behind": Implications for school counselors. *Professional School Counseling, 9,* 295-304. http://www.schoolcounselor.org/content.asp?contentid=235

Dooly, M., & Sadler, R. (2020). "If you don't improve, what's the point?" Investigating the impact of a "flipped" online exchange in teacher education. *ReCALL, 32*(1), 4–24. https://doi.org/10.1017/S0958344019000107

Duff, M. (2019). Negotiating intergovernmental relations under ESSA. *Educational Researcher : a Publication of the American Educational Research Association., 48*(5), 296–308. https://doi.org/10.3102/0013189X19854365

Ellis, P. (2020). Sampling in qualitative research (2). *Wounds UK, 16*(4), 78–79.

Elmaadaway, M. A. N. (2018). The effects of a flipped classroom approach on class engagement and skill performance in a Blackboard course. *British Journal of Educational Technology, 49*(3), 479–491. https://doi.org/10.1111/bjet.12553

Ergen, Y., & Durmus, M. E. (2021). The experiences of classroom teachers on the homework process in teaching mathematics: An interpretative phenomenological analysis. *Journal of Pedagogical Research, 5*(1), 293–314

ESEA (1964). Elemetary and Secondary Education Act of 1965, Pub. L. No. 89-10 § 79 Stat. 27-58.

ESSA (2015). Every Student Succeeds Act of 2015, Pub. L. No. 114-95 § 114 Stat. 1177 (2015-2016)

Faldet, A.C., & Skrefsrud, T.A. (2020). The reception of Vygotsky in pedagogical literature for Norwegian teacher education. *Educational Forum, 32*(2), 11–27. https://doi.org/10.34862/fo.2020.2.0

Fan, H., Xu, J., Cai, Z., He, J., & Fan, X. (2017). Homework and students' achievement in math and science: A 30-year meta- analysis, 1986–2015. *Educational Research Review, 20*, 35–54. https://doi.org/10.1016/j.edurev.2016.11.003

Fazal, M., & Bryant, M. (2019). Blended learning in middle school math: The question of effectiveness. *Journal of Online Learning Research*, *5*(1), 49–64. https://files.eric.ed.gov/fulltext/EJ1208816.pdf

Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. *Proceedings of the National Academy of Sciences of the United States of America, 111*(23), 8410–8415. https://doi.org/10.1073/pnas.1319030111

Freire, P. (2014). *Pedagogy of the oppressed: 30th anniversary edition*. Bloomsbury Academic & Professional. (Original work published 1970)

Fernando, S. Y. J. N., & Marikar, F. M. M. T. (2017). Constructivist teaching/learning theory and participatory teaching methods. *Journal of Curriculum and Teaching, 6*(1), 110–122.

Flick, & Flick, U. (2018). *The Sage handbook of qualitative data collection* . SAGE Publications Ltd.

Förster, M., Maur, A., Weiser, C., & Winkel, K. (2022). Pre-class video watching fosters achievement and knowledge retention in a flipped classroom. *Computers & Education, 179*, 1-14. https://doi.org/10.1016/j.compedu.2021.104399

Gelgoot, E. S., Bulakowski, P. F., & Worrell, F. C. (2020). Flipping a classroom for academically talented students. *Journal of Advanced Academics, 31*(4), 451–469.

Gentry, M. (2006). No child left behind: Gifted children and school counselors. *Professional School Counseling*, 10, 73-81. http://www.schoolcounselor.org/content.asp?contentid=235

Günes, S., & Alagözlü, N. (2021). Asynchronous distance learning and blended learning in terms of learner autonomy, motivation and academic success. *Turkish Online Journal of Educational Technology - TOJET, 20*(3), 54–65.

Gibson, D. M., & Jefferson, R. (2006). The effect of perceived parental involvement and the use of growth-fostering relationships on self-concept in adolescents participating in "gear up." *Adolescence, 41*(161), 111-125.

Gilstrap, D. L. (2007). Phenomenological reduction and emergent design: Complementary methods for leadership narrative interpretation and metanarrative development. *International Journal of Qualitative Methods, 6*(1), 95–113.

Gough, E., DeJong, D., Grundmeyer, T., & Baron, M. (2017). K-12 teacher perceptions regarding the flipped classroom model for teaching and learning. *Journal of Educational Technology Systems, 45*(3), 390–423. https://doi.org/10.1177/0047239516658444

Govindasamy, M. K., & Kwe, N. M. (2020). Scaffolding problem solving in teaching and learning the DPACE model -- A design thinking approach. *Research in Social Sciences and Technology, 5*(2), 93–112. https://doi.org/10.46303/ressat.05.02.6

Gündüzalp, S. (2021). 21st century skills for sustainable education: Prediction level of teachers' information literacy skills on their digital literacy Sskills. *Discourse & Communication for Sustainable Education, 12*(1), 85–101. https://doi.org/10.2478/dcse-2021-0007

Gutek, G. (2011). *Historical and philosophical foundations of education: A Biographical Introduction* (5th ed). Pearson.

Florence, E. A., & Kolski, T. (2021). Investigating the flipped classroom model in a high school writing course: Action research to impact student writing achievement and engagement. *TechTrends: Linking Research and Practice to Improve Learning, 65*(6), 1042–1052.

Hallatt, D., Huss, M. A., Unsbee, C., Al-Bataineh, A., & Chumpavan, S. (2017). Homework completion: Perceptions and comparisons of 6th-12th grade students using traditional and digital submission. *International Journal of Arts & Sciences, 10*(1), 197–212.

Hava, K., & Gelibolu, M. F. (2018). The impact of digital citizenship instruction through flipped classroom model on various variables. *Contemporary Educational Technology, 9*(4), 390–404.

Hayman, B., Wilkes, L., & Jackson, D. (2012). Journaling: Identification of challenges and reflection on strategies. *Nurse Researcher, 19*(3), 27–31.

Hazar, E., & Ozkurt, B. (2021). Information, media and technology skills of sport sciences students. *International Journal of Social Inquiry*, *14*(1), 231–254. https://doi.org/10.37093/ijsi.950584

Heijstra, T. M., & Sigurðardóttir, M. S. (2018). The flipped classroom: Does viewing the recordings matter?. *Active Learning in Higher Education*, *19*(3), 211-223. https://doi.org/10.1177/1469787417723217

Hendry, A., Hays, G., Challinor, K., & Lynch, D. (2017). Undertaking educational research following the introduction, implementation, evolution, and hybridization of constructivist

instructional models in an Australian PBL high school. *Interdisciplinary Journal of Problem-Based Learning, 11*(2), 1-17. https://doi.org/10.7771/1541-5015.1688

Hennink, M., & Kaiser, B. N. (2021). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. Social Science & Medicine (1982), 114523. https://doi.org/10.1016/j.socscimed.2021.114523

Hilt, L. T., Riese, H., & Søreide, G. E. (2019). Narrow identity resources for future students: The 21st century skills movement encounters the Norwegian education policy context. *Journal of Curriculum Studies, 51*(3), 384–402. https://doi.org/10.1080/00220272.2018.1502356

Huang, Y. N., & Hong, Z. R. (2016). The effects of a flipped English classroom intervention on students' information and communication technology and English reading comprehension. *Educational Technology Research and Development, 64*(2), 175–193. https://doi.org/10.1007/s11423-015-9412-7

Hurriyetoglu, N., & Kilicoglu, E. (2020). Teaching styles scale: Validity and reliability study. *Educational Policy Analysis and Strategic Research, 15*(2), 222–237.

Hosseini, H. M., Ejtehadi, A., & Hosseini, M. M. (2020). Flipping microlearning-based EFL classroom to enhance learners' self-regulation. *Language Teaching Research Quarterly, 20*, 43–59.

Husserl. E. (1931/2017). *Ideas: General introduction to pure phenomenology.* Martino Fine Books.

Inayat, A., & Ali, A. Z. (2020). Influence of teaching style on students' engagement, curiosity and exploration in the classroom. *Journal of Education and Educational Development, 7*(1), 87–102.

Igna, C. V. (2021). Academic motivation of students for learning. *Journal Plus Education / Educatia Plus, 28*(1), 55–62.

Jdaitawi, M. (2019). The effect of flipped classroom strategy on students learning outcome. *International Journal of Instruction, 12*(3), 665–680. https://doi.org/10.29333/iji.2019.12340a

Johns, S. K., & Kachel, D. E. (2017). ESSA. *Teacher Librarian, 44*(4), 8–11.

Jong, M. S.-Y. (2017). Empowering students in the process of social inquiry learning through flipping the classroom. *Educational Technology & Society, 20*(1), 306–322. http://www.ifets.info/journals/20_1/26.pdf

Jong, R., Westerhof, K. J. & Creemers, B. P. M. (2000). Homework and student math achievement in junior high schools. *Educational Research and Evaluation, 6*, 130–157. https://doi.org/10.1076/1380- 3611(200006)6:2;1-E;F130

Jony, S. (2016). Student centered instruction for interactive and effective teaching learning: Perceptions of teachers in Bangladesh. *International Journal of Advanced Research in Education & Technology (IJARET), 3*(3), 172-178.

Jordan, J., Clarke, S. O., & Coates, W. C. (2021). A practical guide for conducting qualitative research in medical education: Part 1-How to interview. *AEM Education and Training, 5*(3), e10646. https://doi.org/10.1002/aet2.10646

Karge, B. D., & Moore, R. K. (2015). Common core: Teaching optimum topic exploration (TOTE). *Contemporary Issues in Education Research, 8*(1), 45–48. https://files.eric.ed.gov/fulltext/EJ1058148.pdf

Keiler, L. S. (2018). Teachers' roles and identities in student-centered classrooms. *International Journal of STEM Education, 5*(1), 1-20. http://dx.doi.org/10.1186/s40594-018-0131-6

Khan Academy. (2022). https://www.khanacademy.org/ (Accessed February 7, 2022)

Khasanah, U., & Anggoro, K. J. (2022). Accessible flipped classroom model for pronunciation instruction: Its effectiveness and students' perception. *International Journal of Instruction, 15*(1), 185-196. https://doi.org/10.29333/iji.2022.15111a

Kim, N.H., So, H.J., & Joo, Y.J. (2021). Flipped learning design fidelity, self-regulated learning, satisfaction, and continuance intention in a university flipped learning course. *Australasian Journal of Educational Technology, 37*(4), 1–19. https://doi.org/10.14742/ajet.6046

Kim, Y., & Ahn, C. (2018). Effect of combined use of flipped learning and inquiry-based learning on a system modeling and control course. *IEEE Transactions on Education, 61*, 136–142. http://dx.doi.org/10.1109/TE.2017.2774194

Kohn, A. (2006). *The homework myth: Why our kids get too much of a bad thing*. De Capo Lifelong Books.

Kolenda, D., & Vidak, A. (2021). Seeking the right balance between three teaching approaches: a quasiexperimental study in the context of learning about thermal phenomena. *Bulletin of the Chemists & Technologists of Bosnia & Herzegovina, 57*, 1–8. https://doi.org/10.35666/2232-7266.2021.57.01

Kostaris, C., Sergis, S., Sampson, D. G., Giannakos, M. N.& Pelliccione, L. (2017). Investigating the potential of the flipped classroom model in k-12 ICT teaching and learning: an action research study. *Educational Technology & Society, 20* (1), 261–273.

Krashen, S. (2005). The hard work hypothesis: Is doing your homework enough to overcome the effects of poverty? *Multicultural Education, 12*(4), 16. https://eric.ed.gov/?id=EJ727795

Kucan, L., Rainey, E., & Cho, B. (2019). Engaging middle school students in disciplinary literacy through culturally relevant historical inquiry. *Journal of Adolescent & Adult Literacy, 63*(1), 15–27. https://doi.org/10.1002/jaal.940

Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing*. Sage Publications, Inc.

Lage, M. J., Platt, G. J., & Treglia, M. (2000). Inverting the classroom: A gateway to creating an inclusive learning environment. *Journal of Economic Education, 31*(1), 30–43. https://doi.org/http://www.tandfonline.com/loi/vece20

Lam, P., Lau, C. K. M., & Chan, C. H. (2019). Collective wisdom of flipped classrooms in Hong Kong higher education: Preparing for potential challenges. *International Association for Development of the Information Society*. 65-74. https://files.eric.ed.gov/fulltext/ED601187.pdf

Langdon, J., & Sturges, D. (2018). Flipping the classroom: Effects on course experience, academic motivation, and performance in an undergraduate exercise science research methods course. *Journal of the Scholarship of Teaching and Learning, 18*(4), 13–27.

Leavy, P. (2020). *The oxford handbook of qualitative research* (2nd ed.). Oxford University Press.

Lee, M.-K. (2018). Flipped classroom as an alternative future class model?:Implications of South Korea's social experiment. *Educational Technology Research & Development, 66*(3), 837–857. https://doi.org/10.1007/s11423-018-9587-9

Lei, S. A. (2009). Strategies for finding and selecting an ideal thesis or dissertation topic: A review of literature. *College Student Journal, 43*(4), 1324–1332

Lencastre, J. A., Morgado, J. C., Freires, T., & Bento, M. (2020). A systematic review on the flipped classroom model as a promoter of curriculum innovation. *International Journal of Instruction, 13*(4), 575–592. https://doi.org/10.29333/iji.2020.13436a

Leo, J., & Puzio, K. (2016). Flipped instruction in a high school science classroom. *Journal of Science Education and Technology*, *25*(5), 775–781.

Little, D. (2000) We're all in it together: Exploring the interdependence of teacher and learner autonomy. In Karlsson L., Kjisik F., & Nordlund J. (eds.), *All together now: Papers from the 7th Nordic Conference and Workshop on Autonomous Language Learning*. Helsinki: University of Helsinki Language Centre, 45–56.

Liao, H., & Hitchcock, J. (2018). Reported credibility techniques in higher education evaluation studies that use qualitative methods: A research synthesis. *Evaluation & Program Planning, 68,* 157–165. https://doi.org/10.1016/j.evalprogplan.2018.03.005

Lincoln, Y.S. & Guba, E.G. (1985). *Naturalistic inquiry.* Sage.

Lingaiah, J. & Dhanapal, S. (2020). Use of graphic organiser and instructional scaffolding as a teaching strategy for TESL undergraduates: An overview of students' experiences. *Journal of Humanities and Social Sciences Research*, *2*(1), 87-102. https://doi.org/10.37534/bp.jhssr.2020.v2.n1.id1026.p87

Liu, Z., Wei, L., & Gao, X. (2016). A study on self-regulated micro-course learning and implicitly layered flipped classroom. *Theory and Practice in Language Studies*, *6*(4), 870-877.

Lo, C. K. (2018). Grounding the flipped classroom approach in the foundations of educational technology. *Educational Technology Research & Development, 66*(3), 793–811. https://doi.org/10.1007/s11423-018-9578-x

Longo, C. M. (2016). Changing the instructional model: Utilizing blended learning as a tool of inquiry instruction in middle school science. *Middle School Journal, 47*(3), 33–40. http://dx.doi.org/10.1080/00940771.2016.1135098

Maheshwari, P., & Seth, N. (2019). Effectiveness of flipped classrooms. *The International Journal of Educational Management, 33*(5), 860-885. https://doi.org/10.1108/IJEM-10-2017-0282

Malin, J. R., Bragg, D. D., & Hackmann, D. G. (2017). College and Career Readiness and the Every Student Succeeds Act. Educational Administration Quarterly, 53(5), 809–838. https://doi.org/10.1177/0013161X17714845

Martell, C. C. (2020). Barriers to inquiry-based instruction: A longitudinal study of history teachers. *Journal of Teacher Education, 71*(3), 279–291. https://doi.org/10.1177/0022487119841880

McLeod, S. A. (2018, August 05). ***Lev Vygotsky***. *Simply Psychology*. https://www.simplypsychology.org/vygotsky.html

Medina-Liberty, A. (2020). After Vygotsky. *International Journal of Humanities and Social Sciences Invention, 9*(11), 23-26 https://www.academia.edu/44448535/After_Vygotsky

Merriman, D., Codding, R. S., Tryon, G. S., & Minami, T. (2016). The effects of group coaching on the homework problems experienced by secondary students with and without disabilities. *Psychology in the Schools, 53*(5), 457–470. https://doi.org/10.1002/pits.21918

Montiel, I., Delgado-Ceballos, J., Ortiz-de-Mandojana, N., & Antolin-Lopez, R. (2020). New ways of teaching: Using technology and mobile apps to educate on societal grand

challenges. *Journal of Business Ethics, 161*(2), 243–251.https://doi.org/10.1007/s10551-019-04184-x

Moore, C., & Chung, C. (2015). Students' attitudes, perceptions, and engagement within a FCM as related to learning mathematics. *Journal of Studies in Education, 5*(3), 286–308.

Moran, C. M. (2018). "Just don't bore us to death": Seventh graders' perceptions of flipping a technology-mediated English language arts unit. *Middle Grades Review, 4*(1).

Morgan, H. (2022). Conducting a qualitative document analysis. *The Qualitative Report, 27*(1), 64-77. https://doi.org/10.46743/2160-3715/2022.5044

Moser, A., & Korstjens, I. (2018). Series: Practical guidance to qualitative research. Part 3: Sampling, data collection and analysis. *The European Journal of General Practice, 24*(1), 9–18. https://doi.org/10.1080/13814788.2017.1375091

Moustafa, A., Ben-Zvi-Assaraf, O., & Eshach, H. (2013). Do junior high school students perceive their learning environment as constructivist? *Journal of Science Education and Technology*, *22*(4), 418–431.

Moustakas, C. (1994). *Phenomenological research methods.* Sage.

Muñoz-Restrepo, A., Ramirez, M., & Gaviria, S. (2020). Strategies to enhance or maintain motivation in learning a foreign language. *PROFILE: Issues in Teachers' Professional Development, 22*(1), 175–188.https://doi.org/10.15446/profile.v22n1.73733

National Commission on the Excellence in Education. (1983). *A nation at risk: The imperative for educational reform.* U.S. Department of Education.

National Council for the Social Studies. (n.d.). https://www.socialstudies.org/standards/c3

*New International Version (NIV) Church Bible.* (2011). Zondervan.

No Child Left Behind Act of 2001, Pub. L. No. 107-110, 115 Stat. 1425 (2002).

https://www.congress.gov/107/plaws/publ110/PLAW-107publ110.pdf

Noreen, R., & Rana, A. M. K. (2019). Activity-based teaching versus traditional method of teaching in mathematics at elementary level. *Bulletin of Education and Research, 41*(2), 145–159.

OECD (2013). *PISA 2012 assessment and analytical framework: Mathematics, reading, science, problem solving and financial literacy*. OECD Publishing.

O'Kane, P., Smith, A., & Lerman, M. P. (2021). Building transparency and trustworthiness in inductive research through computer-aided qualitative data analysis software. *Organizational Research Methods, 24*(1), 104–139. https://doi.org/10.1177/1094428119865016

Ökmen, B., & Kiliç, A. (2021). The effect of layered flipped learning model on academic success. *Participatory Educational Research, 8*(3), 300–322. https://eric.ed.gov/?id=EJ1290492

Ökmen, B., & Kiliç, A. (2020). The effect of layered flipped learning model on students' attitudes and self-regulation skills. *International Journal of Research in Education and Science, 6*(3), 409–426. https://eric.ed.gov/?id=EJ1258484

Onwuegbuzie, A. J., & Leech, N. L. (2006). Validity and qualitative research: An oxy-moron? *Quality & Quantity, 41*(2), 233–249. http://dx.doi.org/10.1007/s11135-006-9000-3

Pacheco-Guffrey, H. (2021). Cultivating digital literacy. *Science & Children, 58*(5), 10–13.

Paone, T. R., & Lepkowski, W. J. (2007). No "childhood" left behind: Advocating for the personal and social development of children. *Journal of School Counseling, 5*(25).

Parkay, F.W., Anctil, E.J., & Hass, G. (2014). *Curriculum leadership: Readings for developing quality educational programs* (Custom 10th ed.). Allyn & Bacon.

Partnership for 21st Century Learning (P21). (2016). *Framework for 21st Century Learning*. https://web.archive.org/web/20160909050313/http://www.p21.org/storage/documents/docs/P21_framework_0816.pdf

Pfeiffer, V. (2018). Homework policy review: A case study of a public school in the Western Cape Province. *South African Journal of Education, 38*(1), 1-10. https://doi.org/10.15700/saje.v38n1a1462

Phurikultong, N., & Tuntiwongwanich, S. (2021). Using digital storytelling to enhance Thai student analytical thinking and learning achievement by use of a flipped classroom environment model and inquiry-based learning (Ibl). *PalArch's Journal of Archaeology of Egypt/Egyptology, 18*(3), 4446–4466.

Rahman, M. M. (2019). 21st century skill "problem solving": Defining the concept*, Asian Journal of Interdisciplinary Research, 2*(1), 71–81. https://eric.ed.gov/?id=ED593994

Raja, F. U., & Najmonnisa. (2018). Comparing traditional teaching method and experiential teaching method using experimental research. *Journal of Education and Educational Development, 5*(2), 276–288. https://eric.ed.gov/?id=EJ1200262

Ranga, J. S. (2020). Factors influencing student learning in semi-flipped general chemistry courses. *Journal of Chemical Education, 97*(8), 2130–2139.

Reinoso Tapia, R., Collazos Martínez, M. Á., Martínez Martínez, M. del C., & Delgado Iglesias, J. (2021). Flipped classroom for teaching digestive system to high school students: Performance, perception and inquiry competence Level. *Journal of Technology and Science Education, 11*(1), 194–209.

Ritter, N., & Arslan-Ari, I. (2023). The flipped classroom approach in high school psychology: An action research study. *TechTrends: Linking Research & Practice to Improve Learning, 67*(2), 245–259. https://doi.org/10.1007/s11528-022-00789-8

Roehling, P. V., Root Luna, L.M., Richie, F. J., & Shaughnessy, J. J. (2017). The benefits, drawbacks, and challenges of using the flipped classroom in an introduction to psychology course. *Teaching of Psychology, 44*(3), 183-192.

Rogers, R. M., Rogers, D. W., Choins, J., & Cox, H. (2017). Deliberate investigations of a flipped class. *School-University Partnerships, 10*(4), 95–111.

Russell, J.-E., Andersland, M. S., Van Horne, S., Gikonyo, J., & Sloan, L. (2017). Large lecture transformation: Improving student engagement and performance through In-class practice in an electrical circuits course. *Advances in Engineering Education, 6*(2), 1–24. https://doi.org/10.18260/3-1-370.620-31324

Russell, J., Van Horne, S., Ward, A., Bettis, E. A., Sipola, M., Colombo, M., & Rocheford, M. (2016). Large lecture transformation: Adopting evidence-based practices to increase student engagement and performance in an introductory science course. *Journal of Geocience Education, 64*, 37–51.https://doi.org/10.5408/15-084.1

Sahin, A., Cavlazoglu, B., & Zeytuncu, Y. E. (2015*). Flipping a college calculus course: A Case study. Educational Technology & Society, 18*(3), 142–152.

Saldana, J. (2021). *The coding manual for qualitative researchers.* (4th ed.). Sage Publications.

Santos, A. I., & Serpa, S. (2020). Flipped classroom for an active learning. *Journal of Education and E-Learning Research, 7*(2), 167–173.

Say, F. S., & Yildirim, F. S. (2020). Flipped classroom implementation in science teaching. *International Online Journal of Education and Teaching, 7*(2), 606–620 https://eric.ed.gov/?id=EJ1250573

Sergis, S., Sampson, D. G., & Pelliccione, L. (2018). Investigating the impact of flipped classroom on students' learning experiences: A self-determination theory approach. *Computers in Human Behavior, 78*, 368–378. https://doi.org/10.1016/j.chb.2017.08.011

Shih, M., Liang, J.C., & Tsai, C.C. (2019). Exploring the role of university students' online self-regulated learning in the flipped classroom: A structural equation model. *Interactive Learning Environments, 27*(8), 1192–1206.

Sigurðardóttir, M. S., & Heijstra, T. M. (2020). Mixed approaches to learning in the flipped classroom: How students approach the learning environment. *Canadian Journal for the Scholarship of Teaching and Learning, 11*(1), 1-17. https://doi.org/10.5206/cjsotl-rcacea.2020.1.8098

Simsek, N. (2002). BİG 16 learning modality inventory. *Educational Sciences and Practice, 1*(1), 33-47.

Skinner, E. A., & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. *Journal of Educational Psychology, 85*(4), 571-581.

Sletten, S. R. (2017). Investigating flipped learning: Student self-regulated learning, perceptions, and achievement in an introductory biology course. *Journal of Science Education and Technology, 26*(3), 347–358.

Smallhorn, M. (2017). The flipped classroom: A learning model to increase student engagement

not academic achievement. *Student Success, 8*(2), 43. https://doi.org/10.5204/ssj.v8i2.381.

Snyder, C., Paska, L. M., & Besozzi, D. (2014). Cast from the past: using screencasting in the social studies classroom. *The Social Studies, 105*(6), 310–314. https://doi.org/10.1080/00377996.2014.951472

Sookoo-Singh N, & Boisselle LN. (2018). How does the "flipped classroom model" impact on student motivation and academic achievement in a chemistry classroom? *Science Education International. 29*(4). 201-212. https://doi:10.33828/sei.v29.i4.2

Soysal, Y. (2020). Establishing the norms of the Vygotskian teaching in the science classroom. *Ilkogretim Online - Elementary Education Online, 19*(3). 1838-1857. https://doi.org/10.17051/ilkonline.2020.735202

Soysal, T., & Karatay, H. (2021). The impact of cooperative learning activities in Turkish courses on 21st century learning and innovation skills development. *International Online Journal of Educational Sciences, 13*(5), 1539–1559. https://doi.org/10.15345/iojes.2021.05.015

Srilaphat, E., & Jantakoon, T. (2019). Ubiquitous flipped classroom instructional model with learning process of scientific to enhance problem-solving skills for higher education (UFC-PS Model). *Higher Education Studies, 9*(1), 76–85. https://eric.ed.gov/?id=EJ1200988

Stratton, E., Chitiyo, G., Mathende, A. M., & Davis, K. M. (2020). Evaluating flipped versus face-to-face classrooms in middle school on science achievement and student perceptions. *Contemporary Educational Technology, 11*(1), 131–142. https://doi.org/10.30935/cet.646888

Sudarmika, P., Santyasa, I. W., & Divayana, D. G. H. (2020). Comparison between group discussion flipped classroom and lecture on student achievement and student characters. *International Journal of Instruction, 13*(3), 171–186.

Sun, J. C.-Y., & Wu, Y.-T. (2016). Analysis of learning achievement and teacher-student interactions in flipped and conventional classrooms. *International Review of Research in Open and Distributed Learning, 17*(1), 79–99. https://doi-org/10.1080/10494820.2018.1495651

Sun, M., Du, J., & Xu, J. (2021). Are homework purposes and student achievement reciprocally related? A longitudinal study. *Current Psychology*, *40*(10), 4945–4956. https://doi.org/10.1007/s12144-019-00447-y

Sun, M., Du, J., & Xu, J. (2020). Math homework purpose scale for preadolescents: a psychometric evaluation. *Current Psychology, 39*(5), 1740–1748. https://doi.org/10.1007/s12144-018-9870-2

Talan, T., & Batdi, V. (2020). Evaluating the flipped classroom model through the multi-complementary approach. *Turkish Online Journal of Distance Education (TOJDE), 21*(4), 31–67. https://doi.org/10.17718/tojde.803351

Talbert, E., Hofkens, T., & Wang, M.-T. (2019). Does student-centered instruction engage students differently? The moderation effect of student ethnicity. *Journal of Educational Research, 112*(3), 327–341. https://doi.org/10.1080/00220671.2018.1519690

Tassone, B. (2017). The relevance of Husserl's phenomenological exploration of interiority to contemporary epistemology. *Palgrave Communications, 3*(17066), 1-11. https://doi.org/10.1057/palcomms.2017.66

Tawfik, A. A., Woei Hung, & Giabbanelli, P. J. (2020). Comparing how different inquiry-based approaches impact learning outcomes. *Interdisciplinary Journal of Problem-Based Learning*, *14*(1), 25–40. https://doi.org/10.14434/ijpbl.v14i1.28624

Timothy, M., & Kelly, O. O. (2019). Understanding students attitude towards the use of computers in learning scientific concepts. *Annals. Computer Science Series*, *17*(2), 283–291.

Tomas, L., Evans, N., Doyle, T., & Skamp, K. (2019). Are first year students ready for a flipped classroom? A case for a flipped learning continuum. *International Journal of Educational Technology in Higher Education*, *16*(5), 1-22. https://doi.org/10.1186/s41239-019-0135-4

Turale, S. (2020). A brief introduction to qualitative description: A research design worth using. *Pacific Rim International Journal of Nursing Research*, *24*(3), 289–291.

Tuttle, L. (2020). Using ESSA to leverage arts education policy. *State Education Standard*, *20*(1), 6–9.

Unal, Z., & Unal, A. (2017). Comparison of student performance, student perception, and teacher satisfaction with traditional versus flipped classroom models. *International Journal of Instruction*, *10*(4), 145–164. https://eric.ed.gov/?id=EJ1155632

Valle, A., Regueiro, B., Núñez, J. C., Rodríguez, S., Piñeiro, I., & Rosário, P. (2016). Academic goals, student homework engagement, and academic achievement in elementary school. *Frontiers in Psychology*, *7*(463), 1-10. https://doi.org/10.3389/fpsyg.2016.00463

van Loon, M. H., Bayard, N. S., Steiner, M., & Roebers, C. M. (2021). Connecting teachers' classroom instructions with children's metacognition and learning in elementary school. *Metacognition & Learning*, *16*(3), 623–650. https://doi.org/10.1007/s11409-020-09248-2

Van Manen, M. (2014). *Phenomenology of practice.* Routledge.

Vygotsky, L. S. (1962). *Thought and language.* MIT Press

Vygotsky, L.S. (1978). *Mind in society: Development of higher psychological processes.* Harvard University Press

Webb, M., & Doman, E. (2016). Does the flipped classroom lead to increased gains on learning outcomes in ESL/EFL contexts? *CATESOL Journal*, *28*(1), 39–67.

Webb, R., Watson, D., Shepherd, C., & Cook, S. (2021). Flipping the classroom: Is it the type of flipping that adds value? *Studies in Higher Education, 46*(8), 1649–1663. https://doi.org/10.1080/03075079.2019.1698535

Wei, X., Cheng, I.-L., Chen, N.-S., Yang, X., Liu, Y., Dong, Y., Zhai, X., & Kinshuk. (2020). Effect of the flipped classroom on the mathematics performance of middle school students. *Educational Technology Research and Development, 68*(3), 1461–1484.

Weiß, L.-F., & Friege, G. (2021). The flipped classroom: Media hype or empirically based effectiveness? *Problems of Education in the 21st Century, 79*(2), 312–332.https://doi.org/10.33225/pec/21.79.312

Werner, J., Ebel, C., & Spannagel, C. (2018). *Flipped Classroom – Zeit für deinen Unterricht. Praxisbeispiele, Erfahrungen und Handlungsempfehlungen [Flipped Classroom - Time for your lessons. Practical examples, experiences and recommendations for action].* Bertelsmann Stiftung.

Wilson, K., & Korn, J. H. (2007). Attention during lectures: Beyond ten minutes. *Teaching of Psychology, 34*(2), 85–89.

Wong, K. T., Hwang, G. J., Choo Goh, P. S., & Mohd Arrif, S. K. (2020). Effects of blended learning pedagogical practices on students' motivation and autonomy for the teaching of

short stories in upper secondary English. *Interactive Learning Environments, 28* (4), 512-525

Xuesong Zhai, Jibao Gu, Hefu Liu, Jyh-Chong Liang, & Chin-Chung Tsai. (2017). An experiential learning perspective on students' satisfaction model in a flipped classroom context. *Journal of Educational Technology & Society*, *20*(1), 198–210.

Yamagata, S. (2018). Comparing core-image-based basic verb learning in an EFL junior high school: Learner-centered and teacher-centered approaches. *Language Teaching Research.*, *22*(1), 65–93.https://doi-org.ezproxy.liberty.edu/10.1177/1362168816659784

Ye, X.-D, Chang, Y.-H., & Lai, C.-L. (2019). An interactive problem-posing guiding approach to bridging and facilitating pre- and in-class learning for flipped classrooms. *Interactive Learning Environment.*, *27*(8), 1075–1092. http://dx.doi.org/10.1080/10494820.2018.1495651

Yilmaz, A. (2021). The effect of technology integration in education on prospective teachers' critical and creative thinking, multidimensional 21st century skills and academic achievements. *Participatory Educational Research, 8*(2), 163–199.

Yilmaz, R. (2017). Exploring the role of e-learning readiness on student satisfaction and motivation in flipped classroom. *Computers in Human Behavior, 70*, 251-260. https://doi.org/10.1016/j.chb.2016.12.085

Yumuşak, G. (2020). Preparation before class or homework after class? Flipped teaching practice in higher education. *International Journal of Progressive Education, 16*(2), 297–307. https://doi.org/10.29329/ijpe.2020.241.20

Zafar, H., & Akhtar, S. H. (2021). Analyzing the effectiveness of activity based teaching and traditional teaching method through students' achievement in sub domain knowledge at secondary level. *Language in India*, *21*(4), 149–162.

Zeng, Y. (2021). Application of flipped classroom model driven by big data and neural network in oral english teaching. *Wireless Communications & Mobile Computing*, 1–7. https://doi.org/10.1155/2021/5828129

Zheng, P., Wang, X., & Li, J. (2021). Exploration and practice of curriculum ideological and political construction reform——Take "information security" course as an example. *ASP Transactions on Computers*, *1*(1), 1-5.

Zimmerman, B.J. (1989) A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, *81*, 329-339. https://doi.org/10.1037/0022-0663.81.3.329

Zimmerman, B. J., and Kitsantas, A. (2005). Homework practices and academic achievement: The mediating role of self-efficacy and perceived responsibility beliefs. *Contemporary Educational Psychoogy.* 30, 397–417. http://dx.doi.org/10.1016/j.cedpsych.2005.05.003

Zummo, L., & Brown, B. A. (2016, April). *Implementing flipped instruction in high school biology classrooms: Learning outcomes and student perceptions*. Paper presented at America Educational Research Association Annual Meeting 2016 (AERA 2016), Washington, DC.

# Appendix A

## IRB Approval Form

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

September 9, 2022

Kristine Hickman
Patricia Ferrin

Re: IRB Exemption - IRB-FY21-22-1150 Experiences of Middle School Teachers Implementing the Flipped Classroom Method: A Transcendental Phenomenological Study

Dear Kristine Hickman, Patricia Ferrin,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

Category 2.(iii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).

**Your stamped consent form(s) and final versions of your study documents can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB.** Your stamped consent form(s) should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document(s) should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,
**G. Michele Baker, MA, CIP**
*Administrative Chair of Institutional Research*
**Research Ethics Office**

## Appendix B
## Social Media Recruitment Template

ATTENTION FACEBOOK FRIENDS AND FELLOW TEACHERS: I am conducting research as part of the requirements for a Doctor of Philosophy degree at Liberty University. The purpose of my research is to describe the experiences of middle school teachers in the United States implementing the flipped classroom model and how they ensure collaboration and active learning when students do not complete the required pre-class homework assignments. To participate, you must be a certified teacher teaching middle school in the United States and have used the flipped learning model for at least 2 years. Participants will be asked to complete a demographic questionnaire (5 minutes); an interview which should take about 45 minutes to complete, provide a sample lesson plan utilizing active learning strategies and student collaboration in the classroom, and write a letter to a teacher new to the flipped classroom model, which should take about 30 minutes to complete. If you would like to participate and meet the study criteria, please email me at xxxxxxxxx@liberty.edu and I will send you a quick questionnaire to complete to ensure you meet the study criteria. This questionnaire will only take 2 minutes to complete. A consent document will be provided to you to sign if you are selected to participate in this study.

**Appendix C**
**Screening Questions to Select Participants**

Please answer the following questions truthfully to determine your eligibility for participation in this study. Highlight the correct answer.

1. Do you hold a valid teaching license in the United States?
   YES/NO

2. Are you a middle school teacher (grades 6, 7, or 8)?
   YES/NO

3. Do you use the Flipped Classroom Method in your classroom?
   YES/NO

4. If you answered yes to question #4, have you been using the Flipped Classroom Method in your classroom for 2 years or longer?
   YES/NO

Please email me your responses to khickman3@liberty.edu.

## Appendix D
## Consent Form

# Consent

**Title of the Project:** Experiences of Middle School Teachers Implementing The Flipped Classroom Method: A Transcendental Phenomenological Study.
**Principal Investigator:** Kristine Hickman, Doctoral Student, Liberty University

**Invitation to be Part of a Research Study**

You are invited to participate in a research study. In order to participate, you must be a licensed teacher in the United States working at either a public or private middle school. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research project.

**What is the study about and why is it being done?**

The purpose of this study is to describe the lived experiences of middle school teachers in the United States implementing the flipped classroom model (FCM). The problem is the FCM is ineffective for student success when students are not able to participate in class activities because they do not always watch the required videos at home (Siguroardottir & Heijstra, 2020; Sooko-sing & Boisselle, 2018; Unal & Unal, 2017; Yumusak, 2020). The results of this study will provide teachers with suggestions regarding strategies for student collaboration and active learning in the FCM along with ways to ensure these processes occur even when students do not complete the homework piece of the lesson.

**What will happen if you take part in this study?**

If you agree to be in this study, I will ask you to do the following things:

1. Questionnaire- You will be asked to complete a brief questionnaire on your background as a teacher and your use of the FCM. This will help to determine your eligibility for participation in this study. This questionnaire should only take about 4 minutes to complete.
2. Interview- At the beginning of the study you will be asked to participate in an interview with the researcher. You will be asked open ended questions about your philosophy of teaching and learning, how you utilize the FCM in your classroom, what your best practices for collaboration and student engagement during the active learning process are, and what happens when students do not complete the required pre-class homework assignments. The interview will be virtual through Zoom and will be recorded. The interview will probably be about 45 minutes long.
3. Document Analysis- You will be asked to submit one lesson or in class activity that you utilize which incorporates collaboration and active learning strategies based on what the students learned from their pre-class homework assignment.
4. Letter Writing – I will also ask all participants to write a letter to a teacher (can be fictional) who is brand new to the FCM concept. In your letter you will be asked to explain how you utilize the FCM in your classroom, what you have learned from your

own process, what you would do differently if you were starting all over, and what has worked well for you.

**How could you or others benefit from this study?**

Participants should not expect to receive a direct benefit from taking part in this study.

**What risks might you experience from being in this study?**

"The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life."

**How will personal information be protected?**

The records of this study will be kept private. Published reports will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher will have access to the records.

- Participant responses will be kept confidential through the use of pseudonyms/codes.
- Data will be stored on a password-locked computer and may be used in future presentations. After three years, all electronic records will be deleted.
- Interviews will be recorded and transcribed. Recordings will be stored on a password locked computer for three years and then erased. Only the researcher will have access to these recordings.

**How will you be compensated for being part of the study?**

Participants will not be compensated for participating in this study.

**Is study participation voluntary?**

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to withdraw at any time without affecting those relationships.

**What should you do if you decide to withdraw from the study?**

If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you, will be destroyed immediately and will not be included in this study.

**Whom do you contact if you have questions or concerns about the study?**

The researcher conducting this study is Kristine Hickman of Liberty University. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at 443-480-1190 or xxxxxxxxx@liberty.edu. You may also contact the researcher's faculty sponsor, Dr. Patricia Ferrin, at xxxxxxxx@liberty.edu.

**Whom do you contact if you have questions about your rights as a research participant?**

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu

*Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.*

**Your Consent**

Before agreeing to be part of the research, please be sure that you understand what the study is about. You can print a copy of the document for your records. If you have any questions about the study later, you can contact the researcher using the information provided above.

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

*I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.*

☐ The researcher has my permission to audio-record/video-record me as part of my participation in this study.

_____
Printed Subject Name

_____
Signature & Date

**Appendix E**
**Demographic Survey**

# DEMOGRAPHIC QUESTIONNAIRE FOR SELECTED PARTICIPANTS

Please highlight your answer to the multiple-choice questions and type in your answer to the open response questions.

1.What is your gender? Required to answer. Single choice.

- Male
- Female
- Binary
- Prefer not to state

2.What is your age? Required to answer. Single choice.

- 20-29
- 30-39
- 40-49
- 50-59
- 60-69
- 70+

3.What is your race or ethnicity? Required to answer. Single choice.

- African American/Black
- Caucasian/White
- Hispanic/Latino
- Asian
- Native Hawaiian or Other Pacific Islander
- American Indian/Alaskan Native
- Multi-Racial

4.How many years have you been teaching? Required to answer. Single choice.

- This is my first year.
- 2-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- 21-25 years
- 26-30 years
- 31 years or more

5. In which state do you teach?  Required to answer.

6. In what school district do you teach? Required to answer.

7.Do you hold a valid teaching license for the state in which you teach? Required to answer. Single choice.

- Yes
- No
- I'm in the process of getting it.

8.In what type of area do you teach?  Required to answer. Single choice.

- Urban
- Suburban
- Rural

9. What grade do you teach?  Required to answer. Multiple choice.

- 6th grade
- 7th grade
- 8th grade

10. What content area do you teach?  Required to answer. Multiple choice.

- ELA
- Math
- Science
- Social Studies
- Foreign Language

11. How many years have you used the Flipped Classroom Method of Instruction? Required to answer. Single choice.

- This is my first year
- 2-3 years
- 4-5 years
- 6-10 years
- 11 years or more

12. Are you currently using the Flipped Classroom Method of instruction? Required to answer. Single choice.

- Yes
- No

13. On average, what percentage of your students complete the pre-class homework assignments each night? Required to answer. Single choice.

0-10%
11-20%
21-30%
31-40%
41-50%
51-60%
61-70%
71-80%
81-90%
91-100%

## Appendix F
## Letter Writing Prompt

Please write a letter to a teacher who may be brand new to the flipped classroom model process. In your letter, please explain what you have learned from your own process, what you would do differently if you were starting all over, and what has worked well for you. Please make sure you also address collaboration among students in your FCM, active learning in the classroom, and how student completion of the pre-class homework assignments affects your lessons.