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Understanding Teachers' Choice for Implementing the Flipped Classroom Model

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Walden University

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Abstract

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MA, Bowie State University, 2015

BS, University of Maryland, 2000

Dissertation Submitted in Partial Fulfillment

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Doctor of Philosophy

Learning, Instruction, and Innovation

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Abstract

The flipped classroom model has been proven to impact students' learning positively, but many educators are reluctant to implement the flipped learning model in their classrooms. There are few studies addressing educators' choice to implement the flipped classroom model at the middle school level. This qualitative study aimed to explore teachers' choices for implementing the flipped learning model, to provide evidence-based practices and recommendations for the creation of a support system, and to help create a support system to assist teachers to use the flipped learning model successfully. The study centered on two questions regarding how teachers described their choices to implement the flipped learning model in their classes, and their perceptions of the usefulness and ease of the flipped learning model. The conceptual framework that framed this study is Davis' theory of the technology acceptance model (TAM) and Ajzen and Fishbein's theory of planned behavior (TPB). There were two instruments to collect data, a questionnaire and individual interviews from 10 middle school educators. Data were analyzed using initial and axial coding. Findings noted that teachers confirmed the ease of use and usefulness of the flipped learning model, teachers had positive beliefs and attitudes towards the flipped learning model. The study's findings indicated that positive social change might be achieved for those who are designing professional development for teachers to draw on, and the results also confirmed best practices to implement the flipped learning model in their classrooms.

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Dedication

I dedicate my work to the countless women who finished a doctoral study under all circumstances that tested their persistence and perseverance throughout the process. Well done, Ladies. I also dedicate this degree to my mother, a matriarch and a pioneer who consistently provides her children with a better opportunity for a successful life.

Acknowledgments

I want to thank my Creator, who is my redeemer, my guide, my companion, my light at the end of the tunnel, my motivator, my financial supporter, and cheerleader; without His help, I would have quit a long time ago. I also want to thank my son, who stayed patient throughout all these years of rearranging our schedule to satisfy my educational obligations. I want to thank all my friends that helped me in one way or another with their words of encouragement and prayers. I want to thank my coworkers and leaders that helped me stay encourage and focus until I finished.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

The advent of ubiquitous and relatively cheap information technology makes it possible for educators to use new strategies when designing their classrooms and curriculum. Many teachers integrate technology to help prepare their students for challenges specific to 21st-century living (Greene & Hale, 2016), even though many school districts' curriculum does not include digital literacy in their curriculum (Gretter & Yadav, 2016). Teachers are encouraged to find ways to combine traditional teaching with new technologies (Hajhashemi et al., 2017). Lai and Bower (2019) found that when evaluating instructional technology, there are emerging themes (e.g., technology elements, learning outcomes, affective elements, and design), to mention just a few. One of the strategies in educational settings is introducing technology integration within teaching and learning, a teaching format that the flipped learning model fulfills with a high degree of consistency and situational flexibility (Clark, 2015; Schmidt & Ralph, 2016).

According to the pioneers Bergmann and Sams (2012) and the Flipped Learning Network ([FLN], 2014), when they introduced flipped learning model (FLM), there was some confusion in academia between (teachers, the media, and researchers) about the understanding of flipped learning and the flipped classroom model. Educators often have misconceptions about what constitutes flipped learning (FLN, 2014a). Although these terms capture the structure of the model, in which certain course content is moved from

the classroom to at-home assignments, they do not accurately describe the pedagogical elements that make the flipped classroom model innovative (FLN, 2014a). The FLN recently produced a comprehensive definition of flipped learning to "dispel some of the myths repeatedly promulgated by teachers, the media, and researchers" (FLN, 2014a, para. 2). As defined, flipped learning is when teachers shift direct instruction from the classroom to video-based instruction for students to watch at home, and homework is done in class in a cooperative and interactive learning environment. The teachers become facilitators by helping students apply ideas and engage productively with the content matter (FLN, 2014a). Lo and Hew (2017a) defined the flipped learning model as one that minimizes the time teachers spend lecturing—by moving lectures to an online format accessible at home to students—and uses the time with face-to-face instruction in a class where teachers help students to master, analyze, and solve problems by applying their course materials from the online lectures.

The FLM gives students more time to practice critical skills with teachers during class, as opposed to struggling with these skills at home, where students may have minimal support (Gilboy et al., 2015; Lo et al., 2018). The model thus places those elements of student-teacher contact, direct instruction (i.e., lecturing) in contexts where little connection is possible (in the home) and uses class time for interactive instruction, collaborative work, and skill-building (Sergis et al., 2018). Students were sent home to complete homework alone without the needed support of their teachers. By contrast, in

the flipped classroom, teachers and students have more time to work together to understand the concepts taught before leaving their classrooms.

Some scholars considered the flipped classroom model relatively untested (Chen, 2016; Gilboy et al., 2015) or approached it with caution (Clark, 2015; Graziano & Hall, 2017; Jensen et al., 2015; Schmidt & Ralph, 2016). However, the FLM has gained momentum across the United States and internationally (Bond, 2020; Fautch, 2015; Gough et al., 2017; Hermanns et al., 2015; Shnai, 2017). Therefore, with the increasing use of FLM, this study provided data on teachers' choice when implementing FLM to inform academia of ways to transform teaching and learning in middle school classrooms and provided the support educators might need when implementing FLM. This study's potential social change stemmed from the study's results to transform educators' behavior towards the flipped learning model. Additionally, the results could be used to formulate professional development for educators, provide the support teachers say they need to implement FLM, and improve students' learning quality (Bond, 2020). In this study, I explored teachers' choices to implement FLM by collecting data from teachers about their choices to implement the FLM in their classroom.

There are 12 components in this chapter delineating the study. The first four components outlined the study's background, the problem statement, the purpose of the study, and the research questions. The next sections displayed the conceptual framework, the study's nature, the definitions of keywords, and some assumptions. The last four

sections explained the study's scope and delimitations, its limitations and significance, the chapter's summary, and a transition to Chapter 2.

Background of the Study

Bergmann and Sams (2012) first brought attention to the flipped classroom model. They later helped develop the FLN to provide a community platform for teachers using the method in their classrooms to collaborate and support one another (Bergmann & Sams, 2012; D'addato & Miller, 2016). Kostaris et al. (2017) noted that FLM had gained momentum. However, some educators inverted only the location of direct instruction or interactive instruction, but they did not fully implement the flipped learning model. It is essential to understand why there is such a difference in teachers' implementation of the flipped learning model (FLM) (Kostaris et al., 2017; Kurshan, 2020).

Researchers have conducted several studies on the FLM within a myriad of contexts. Gough et al. (2017) conducted a qualitative study of secondary teachers' perceptions of the model. They found that teachers perceived it as helpful for students who were often absent or had struggled with academic concepts. Additionally, they noticed that FLM provided more opportunities for active learning, student-teacher interaction, and personalized learning in the classroom to help all students. In a case study of three teachers who have flipped their classrooms, the teachers reported that, by

implementing the model, they witnessed significant improvements in their students' performance by considerably improving their test scores (Schmidt & Ralph, 2016).

Similarly, D'addato and Miller (2016) conducted an action research study to develop an understanding of FLM's effectiveness on fourth-grade Mathematics students in a disadvantaged socioeconomic setting. Their results showed an increase in student responsibility, as well as an improvement in student engagement. They noted an increase in a higher rate of task completion, better behavior, and better student-to-student collaboration in the classroom. There were additional studies that used other methodologies to collect data about the FLM. The result demonstrated a slight increase in students' test scores in the flipped classroom compared to the traditional classroom (Chen, 2016).

Furthermore, in the flipped classroom, students engaged in more group discussions. Consequently, overall, the students ranked more highly in both engagement and achievement. Clark (2015) used a mixed-methods study to assess the flipped classroom model's influence on ninth-grade students' attention and academic performance. The results showed an increase in students' active participation in the learning processes, adequately improved communication among peers, and much better collaboration in the classroom.

These findings were consistent with those from quantitative studies as well. Kirvan et al. (2015) conducted a quasi-quantitative experiment to determine whether

flipping a middle school algebra classroom helped students learn linear equations. They concluded that students in that specific flipped classroom did show more considerable progress in their ability to solve systems of linear equations than did their peers in a traditional classroom. Van Alten et al. (2020) conducted a quasi-quantitative experiment to collect students' self-regulated learning data. This skill is crucial for students to be successful in a flipped learning classroom. The results indicated a positive effect on students' self-regulated learning in terms of watching instructional videos. However, they could not find a correlation between self-regulated learning and other learning outcomes. They noted that implementing self-regulated learning was not successful in secondary education because students are not used to regulating their learning. Some of the prompts were a distraction from learning the concepts.

There are several common themes among these findings that were important for this study. Bond (2020), Kirvan et al. (2015), Kostaris et al. (2017), and Smallhorn (2017) noted a link between student engagement as a factor promoted by the flipped classroom model. They also pointed out a positive outcome of student achievement, using GPA. Clark (2015) offered credence to such a link by showing that the flipped classroom model directly increases student engagement, communication, and collaboration. On the other hand, some teachers admitted that FLM did not improve specific areas of their jobs. For example, they did not see any definite increase in students' responsibilities; their

classroom discipline remained an issue; and more importantly, many students did not like the structure of FLN (Gough et al., 2017).

Although there are benefits to FLM, there are several challenges to implementing the model. From the literature, some of the barriers came from students' perceptions, not from educators. For example, researchers listed the following barriers from students' perception: students' attitudes, the need for at-home resources for students, and teachers' willingness and ability to change their educational style and practices (Chen, 2016; Erlinda, 2019; Gough et al., 2017). At the time of this study, little is known about the factors influencing teachers' choices to implement FLM. This lack of understanding of teachers' choice to implement FLM is a gap in the literature; bridging that gap was the focus of this study (Graziano & Hall, 2017; Jensen et al., 2015; Kostaris et al., 2017).

The lack of understanding of why teachers are not implementing the flipped classroom model regularly in their classrooms is problematic because the flipped classroom model has been shown to improve students' performance (Baytiyeh, 2017; Chen, 2016; Schmidt & Ralph, 2016). FLM could be a clear path to facilitate both students' learning and teachers' instruction, a methodology that could be an effective strategy to build students' digital literacy, critical thinking and to acquire 21st-century skills (Erlinda, 2019; Kurshan, 2020; Sarkar et al., 2019; Van Alten et al., 2020). Hence, the need for this study was to collect data on teachers' choice to implement FLM.

Problem Statement

The problem identified in this study was that despite evidence that the flipped classroom model can help students at all grade levels learn better in school, teachers are not implementing the strategy (DeSantis et al., 2015; McLean et al., 2016; Olakanmi, 2017). Although there are many educational models and strategies available for educators to integrate technology into their classrooms, many teachers are still reluctant to incorporate technology in their classrooms, especially FLM (Bond, 2020; Graziano & Hall, 2017). The problem addressed by this qualitative study was the need to understand what influences teachers' choices to implement FLM. Many educational equity goals, such as technological literacy, communication skills, and global competence, are improved by FLM (D'addato & Miller, 2016; International Society for Technology in Education [ISTE], 2016; Sarkar et al., 2019). Educators must be able to overcome their discomfort and prepare their students to meet the Partnership for 21st Century Skills' [P21] (2016) set goals (Pugh et al., 2018; Slutsky, 2016). One of the efficient, evidence-based options for teachers is implementing FLM in their classrooms. Some educators considered doing so; however, the traditional model is still being used. This study explored why this is the case.

Flipped classrooms could help educators overcome many of the challenges they faced when preparing students to acquire 21st Century Skills, making its implementation

a prompt and essential issue (Lai & Hwang, 2016). Instead, teachers are continuing to use traditional lecture-based methods of instruction.

The problem with these traditional methods is that when class time is spent introducing new concepts, students often do not get enough help learning how to apply them (Chen, 2016). "The problem with lectures," Chen wrote, "is how much can students learn in the limited class time" (2016, p. 414) when their attention is limited physiologically. In addition to introducing the content to students, teachers must accommodate students' need for practice, especially individuals struggling with the material. Lectures make this more difficult, and homework cannot fix the problem if students need support to get the work done. Besides, "students live in a digital age, and many students can comprehend and follow directions better online than they do through listening and reading book instructions" (Chen, 2016, p. 419). Most students do not use technology to access the curricular materials or engage with course content regularly for active learning (Baytiyeh, 2017; Leo & Puzio, 2016; Newman et al., 2016; Slutsky, 2016).

FLM helps alleviate many of these challenges for students. In addition to alleviating the challenges mentioned earlier, the flipped classroom approach has been linked to many beneficial effects and improvements and learning outcomes from these previous studies (see Table 1).

Table 1

List of Benefits of Flipped Classroom Approach

Benefits	Authors
Increased time for active learning activities in the classroom	Gough et al., 2017
Increased time for higher-order thinking and reflection on materials.	Gough et al., 2017
Improved student interest and engagement with materials	Kirvan et al., 2015 Kostaris et al., 2017 Smallhorn, 2017
More frequent time and opportunities for student-to-students collaboration Greater student autonomy	Kirvan et al., 2015
The possibility of helping absent students recover from missing instructional content	Gough et al., 2017
Providing struggling students with a means to manage the pace of learning both in the classroom and at home	Gough et al., 2017
Improving students' scores in assessments and performance	Kostaris et al., 2017; Scovotti, 2016

The benefits are why some researchers have suggested why the flipped classroom structure has such positive effects on students' achievement. These claims are supported by the findings that peer collaboration positively affects students' performance (D'addato & Miller, 2016). Also, students' engagement (i.e., contributing to class discussion,

preparation for class, class attendance, completion of homework) is a predictor of students' performance (DeSantis et al., 2015; McLean et al., 2016).

This research suggested that the flipped classroom model can support many students who struggle in traditionally structured learning environments while also improving the learning experience for students already doing well. Thus, when teachers choose to use traditional lecture-based instruction methods rather than the interactive teaching style typical of a flipped classroom, they missed an essential opportunity to connect with millennial students. Chen (2016) stated that "teachers are overlooking a successful mode of instruction that has the potential to enhance student learning while incorporating all mandated state's learning standards in a modern way" in the classroom (p. 419). Thus, a lack of data on what influences teachers' choice to implement FLM warranted attention.

This lack of widespread adoption of the model has not been studied well. Although it has been the subject of research at educational levels ranging from middle school to college, which has been conducted in several countries, the available information was still limited for middle school. Perhaps most significantly, the majority of the available research is focused on students' academic performance and their perception of FLM, with little to no attention paid to what influences teachers' choice to implement FLM. Subsequently, the existing literature dealing with FLM's implementation noted some factors that may influence teachers' choice for

implementation (see Table 2). It was time to collect more data on teachers' choice to implement FLM.

Table 2

List of Choices of Flipped Classroom Approach.

Choice	Authors
Extensive initial preparation of new lessons	Hermanns et al. (2015); Unal & Unal (2017)
Lack of time to plan an engaging in-class activity	Chen (2016); D'addato and Miller (2016); Hermanns et al. (2015); Schmidt and Ralph (2016)
Concern about students' access to technology	Schmidt and Ralph (2016); PT and FLN (2015)
Concern about the disruption caused by technological failures	Hermanns et al. (2015)

It was important to understand teachers' choice to implement FLM, which did not differ drastically from any other choice when implementing or using any other teaching methods. Thus, the lack of understanding of why teachers chose to implement FLM represented a gap in middle school teachers' literature. That gap was problematic because FLM has been shown in the literature to improve students' academic performance (Chen, 2016; Schmidt & Ralph, 2016). Presently, little is known about why teachers choose to implement the flipped classroom model and their rationale for their decisions. Howitt and

Pegrum (2015) said it best, "it is time that research is conducted from the teacher's perspective" (p. 461).

Purpose of the Study

This generic qualitative study explored teachers' choices for implementing FLM and provided evidence-based practices and recommendations for the creation of a support system, for the transfer of knowledge to teachers' professional practice, and to help create a support system capable of assisting teachers in their own attempt to use FLM successfully in their classroom. The interpretive epistemology was best suited for this study because it investigated teachers' choice to implement FLM in their classroom (Kivunja & Kuyini, 2017). Recognizing how to implement the flipped classroom model may be used to "guide to support educators and administrators who are interested in this innovative approach to learning" (PT & FLN, 2015, p. 4). Thus, the project bore directly on one of the focuses of educational policy in the current era of technological advancement and professional development (Baytiyeh, 2017; Teo & Milutinovic, 2015). Similarly, it might inform decisions about the value and appropriateness of implementing the model in specific educational settings, such as highly diverse classrooms (Simonson, 2017). Finally, understanding the choices inherent in implementing the flipped classroom model might help drive the development of workable guidelines, making it easier for middle school teachers to take advantage of what the model offers (Graziano, 2017).

Research Questions

There are two research questions for this study.

RQ1. How do teachers describe their choices to implement the flipped learning model in their classes?

RQ2. How do teachers perceive the usefulness and ease of use of the flipped learning model?

Conceptual Framework

This study's conceptual framework was based on theories addressing teachers' choice to implement FLM and its construct. One of these theories is Davis' (1989) technology acceptance model (TAM). In flipped classrooms, educators typically used technology to disseminate course content to students (Fautch, 2015; PT & FLN, 2014, 2015). The TAM has not been used to approach this subject matter before, and as such, it provided a novel perspective on FLM. Earlier studies that used the TAM were used to explore the technology acceptance of the user. However, in the context of flipped classrooms, previous studies focused exclusively on students' willingness to accept direct instruction that was technologically mediated (e.g., Hsieh et al., 2017; Mikalef et al., 2016), not on the teachers' choices. These studies thus omitted teachers' perspectives. Other works employing the TAM explored teachers' acceptance of technology in education. These studies dealt with teachers and their use of instructional technology to

support students' development skills based on the Partnership for 21st Century Skills [P21] (2016) such as: (a) critical thinking, (b) decision making, (c) problem solving, and (d) communication (Teo & Milutinovic, 2015). They did not connect the TAM to FLM in terms of teachers' choices once again. To get a complete understanding of teachers' choice for implementing FLM, the aspects of Ajzen and Fishbein's (1972) theory of planned behavior (TPB)—Davis used in developing the TAM—also independently supported the use of the TAM to examine instructors' choices to implement FLM. Each of those theories could be directly or indirectly tied to teachers' choice when implementing the model (See Table 3).

Table 3

Alignment of Theory to this Study

Authors	Theory	Alignment
Davis (1989)	Technology acceptance (TAM)	Educators may be apprehensive about using technology because it is unreliable.
Ajzen and Fishbein's (1972)	Planned behavior (TPB)	To understand the specific choices (e. g., computer Proficiency, time

Authors	Theory	Alignment
		management, or students' learning) to educators' choice of implementing the flipped learning model.

Thus, the study used the TAM and Ajzen and Fishbein's (1972) planned behavior as its conceptual frameworks to focus on teachers' choice of implementing FLM. The elements of the framework also guided choices made about the study's method. Because the most obvious source of direct information about teachers' choices is the teachers themselves, the study involved qualitative data collected from teachers. The TAM also provided context for developing the study's research questions, as did the theory from which the TAM was developed (TPB).

Nature of the Study

This generic qualitative study explored teachers' choices for implementing FLM and provided evidence-based practices and recommendations for the creation of a support system, for the transfer of knowledge to teachers' professional practice, and to help create a support system capable of assisting teachers in their own attempt to use FLM successfully in their classroom. Researchers used generic qualitative studies to gain a

general understanding of a process, a perspective, or experiences of the people involved (Astroth & Chung, 2018; Merriam & Tisdell, 2016; Percy et al., 2015). Generic qualitative research could be adopted when other qualitative designs were not aligned with the research questions (see Chapter 3 for in-depth discussion; cf. Astroth & Chung, 2018; Merriam & Tisdell, 2016; Patton, 2015; Percy et al., 2015). Besides, due to the complexity of the topic and how teachers' choice relates to actual decision-making about the model it was necessary to collect rich data to understand the subject thoroughly. The study involved semistructured interviews and a questionnaire. The written responses collected from teacher participants supplied a rich data source that allowed an open-ended analysis of teachers' choice to implement FLM.

This study used a questionnaire to gather general background information. Face-to-face interviews with teacher-participants were conducted to collect data on teachers' choice to implement FLM. The interview questions were written based on the research questions and developed through the TAM's conceptual lens and the theory that makes up TAM. I reached out through social media networks with a questionnaire to identify 10 to 15 full-time secondary teachers (Grade 6 to 8) who were currently teaching in a classroom but have implemented FLM. I used the HyperResearch software tool to analyze teachers' responses to the interview questions. I used Google forms to analyze participants' responses to the questionnaire.

Definitions

21st Century Learning Skills: The following skills are needed for students to be 21st century ready to compete globally: problem-solving, communication, collaboration, critical thinking, creativity, and innovation (Partnership for 21st Century Skills [P21], 2016).

Blended learning: Means a dual method combining online and traditional techniques to teach and learn. The blended learning model expects students to acquire knowledge through self-directed learning online and then attend face-to-face (F2F) class sessions with educators to understand how to apply their knowledge (Burnham & Mascenik, 2018).

Flexible learning environment: Means an environment where a fundamentally modified classroom is designed to ease group-based work (FLN, 2014a).

Flipped learning: An educational approach in which teachers move from teacher-centered (e.g., direct instruction) from the group to student-centered (e. g., personal learning space), typically at home. Within the classroom, the educator supports students to apply learned concepts from the subject matter. The classroom becomes a cooperative environment between teachers and students, resulting in the group space becoming a dynamic and interactive learning environment. (FLN, 2014a).

Innovation: Means an improvement on existing ideas or concepts that may focus on the product, system, or method of doing something (MSDE, 2016).

Instructional technology: "The subset of educational technology that deals directly with teaching and learning applications (as opposed to educational administrative applications)" (Roblyer & Doering, 2013, p. 6)

Inverted classroom: Another word for a flipped classroom, although "inverted classroom" is typically used when referring to higher education specifically (Tolks et al., 2016).

Technology: This term covers both (a) the change of a natural environment to satisfy some pre-conceived human needs and desires and (b) human innovation that involves knowledge and development of systems that solve problems and stretched human capabilities (MSDE, 2016) beyond their limits.

Technology education: The inclusion of technology in pedagogical practices. Students are provided with a chance to use technology to learn the necessary processes and information to tackle problems and develop human capacities (MSDE, 2016).

Traditional teaching methods: An approach on which educators and students are face-to-face, and teachers use the lecture to convey the course content, and the student is expected to self-direct and apply the knowledge outside of class (Burnham & Mascenik, 2018).

Technology integration: This term refers to "technology tools play as delivery media, instructional systems, and technology support, and focuses primarily on those

tools that play a current, high-profile role in supporting teaching and learning" (Roblyer & Doering, 2013, p. 6).

Assumptions

This study was predicated on FLM's established helpfulness in resolving several classroom difficulties and improving students' educational outcomes. These assumptions were necessary to provide scope and parameters when I analyzed the data. As such, its core assumptions were as follows:

1. FLM is beneficial to the teaching and learning environment. For this reason, this study did not examine the impact of FLM on students' academic experience or performance.
2. Teachers had the ability and resources to integrate technology effectively into their teaching repertoire.
3. Participants were open and honest when expressing their perceptions concerning beliefs, attitudes, and behaviors about implementing FLM during the interview process.
4. The assumption was that educators implemented FLM and then stopped.

Scope and Delimitations

This generic qualitative study's scope was limited to only 10 middle school teachers teaching math, science, social studies, and English/Language Arts. This group of teachers were targeted to provide a broad perspective from different contents. Teachers of

the other content areas (e. g., physical education in the arts) were not recruited for this study because those content areas are not tested in state assessments. Educators chose the instructional framework they implement within their classrooms. Given this limited scope, the study's results were suggestive rather than conclusive and should serve as the basis for a larger-scale study in the future.

I chose to use TAM (Davis, 1989) and Ajzen and Fishbein's (1972) theory of planned behavior (TPB) to frame this study. In their research, Sarkar et al. (2019) explained that educators who implemented FLM reported an increase in their students' performance, better course retention, and minimum course content loss. TAM and TPB were better suited for this study because I looked at teachers' choices to implement FLM, that have been documented to increase students' performance and engagement (Sarkar et al., 2019).

This study was delimited to middle school instructors who teach math, science, social studies, and English/language arts in public schools. Another delimitation was an educational setting from grades six to eight, and other locations were not considered. Therefore, this study's transferability was subjective since the data collected was from a small sample to get a full understanding of the teachers' choices to implement FLM. Consequently, this study's transferability was subjective since data collected was from a small sample to fully understand the teachers' choices to implement FLM.

Limitations

In addition to the study's restricted scope, it was subject to several other limitations. Due to the desire to explore teachers' choices to implement FLM, the participant pool included only math, science, social studies, and English/language arts teachers. The teachers implemented FLM, which may affect the findings. Additionally, only participants that chose to participate in video interviews were part of the sample. I used snowball sampling, meaning that the study's results might not apply to other sample groups of participants. Another limitation of this study is the limited number of participants within the eastern part of the United States, which may not be comparable to a larger sample from other parts of the United States or Internationally. Also, all data were self-reported, so that participants' honesty and openness to the study were essential to its success.

This study ensured transferability by collecting data using two methods: a) questionnaire and b) one-on-one semi-structured interviews, in conjunction, with detailed analysis and coding procedures that might yield similar results in similar educational settings. Additionally, I chose to conduct video interviews, document participants' responses, and the software that was used to analyze and cross-check these responses ensured dependability (Merriam & Tisdell, 2016). My support for FLM were potential biases that could have influenced this study's outcomes. Measures were taken to address and minimize these biases. Additionally, I used HyperResearch software to analyze the

data and provided participants a copy of the interview transcripts to ensure accuracy in capturing teachers' choice to implement FLM.

Significance of the Study

FLM has been shown to improve students' performance and engagement, as well as providing more time for peer interaction and student-teacher contact (Chen, 2016; D'addato & Miller, 2016; Delozier & Rhodes, 2017; Sarkar et al., 2019; Schmidt & Ralph, 2016). The implementation of the model was desirable for this reason. However, little was known as to why teachers chose to implement the model in their classrooms. This study has contributed to the existing literature on FLM by developing a better understanding of teacher choices as they implemented an innovative classroom strategy.

Significance to Practice

This study generated insights into the reasons why teachers chose to adopt the flipped classroom model. This study shed light on the support that teachers need to promote innovative teaching strategies and meet technology-related educational goals of 21st Century Skills. If teachers could understand these choices to implement the flipped classroom model, implementing FLM might have the potential for positive student outcomes. Although the model itself is not new, teachers' approach to having students watch videos for instruction, as required in the flipped learning model proposed in this study, is both contemporary and innovative.

Significance to Theory

TAM's theoretical framework provided a useful perspective for analyzing teachers' choices for implementing the flipped learning model. In particular, the TAM suggested that teachers might not use the flipped learning model because they did not accept having to use technology as the main conduit for direct instruction. Therefore, the study's results added data to theory by affixing that technology was not a barrier or motivation for teachers to implement the flipped learning model.

Significance to Social Change

The study's findings could affect educational accessibility at the local, district, and state levels. D'addato and Miller (2016) and Graziano (2017) suggested that understanding the challenges of technology-based learning provided a context for making decisions about addressing the needs of struggling students (e. g., flipped learning model). In this way, this study could promote positive social change in the classroom. The study's findings could guide educators to draw best practices to implement FLM in their classrooms. Additionally, this study's findings could help formulate professional development for middle school educators on implementing FLM to help prepare students for 21st-century skills effectively.

Summary and Transition

Technology is changing, and its reach is growing faster than educators can keep up with it. It is more important now than ever before to understand the types of decisions

teachers make around technology use. Additionally, schools need to make informed decisions about how best to support educators on the proper way to integrate technology into their curriculum for teaching and learning (Gleason & Von Gillern, 2018; Leo & Puzio, 2016; Newman et al., 2016); to develop specific professional development training opportunities to support teachers.

FLM is one of the evidence-based and positively attested models available for adding technology. However, because it is a relatively recent instructional approach (Chen, 2016), educators have been reluctant to implement it, especially in the absence of adequate training and support. Therefore, this study explored teachers' choices to implement FLM in their classrooms. This study's results could increase the use of the model in school districts and beyond. This study provided evidence that might support both state and district goals concerning educational technology to teach, foster, and increase their students' digital literacy.

The remainder of this study will consist of four more chapters. In Chapter 2, the components will expound on conceptual support and background of this study, as well as a review of relevant literature that covers an overview of the flipped classroom model, the advantages and disadvantages of the model, technology integration, the study's conceptual framework, Federal and State's mandates, and a summary. The different components of Chapter 3 are the research study design and rationale for the study, data collection, and analysis. Additionally, I explained my role as a researcher and will discuss

methodology, participant selection and recruitment, and instruments. I will explain the recruitment procedures, participant selection logic, issues of trustworthiness, and ethical procedures. Chapter 4 contains detailed descriptions of the study's settings, data collection and analysis process, results, and summary. Finally, in Chapter 5, there is an interpretation of the study's findings, limitations of the study, recommendations, implications, and a conclusion.

Chapter 2: Literature Review

Technology continually changes many aspects of society, from business to politics to education. Within the educational system, technology is playing a critical role in teaching and learning. Since the introduction of FLM, there has been momentum in its usage as an effective instructional strategy to support students' engagement and academic performance, yet many educators have reservations about implementing the model in their classroom (Francom, 2020; Shnai, 2017; Webb & Doman, 2016). This generic qualitative research study explored teachers' choices for implementing FLMFLM, and provided evidence-based practices and recommendations for the creation of a support system, the transfer of knowledge to teachers' professional practice, and to help create a support system capable of assisting teachers in their own attempt to use FLM successfully in their classroom. From Bergmann and Sams (2012) to now, FLM has gained popularity among educators at all levels (elementary, secondary, and higher education) within the United States and internationally.

The flipped classroom model occurred when a teacher switched or inverted the class instruction from face-to-face to an online instructional video to view lectures; then, students came to class to do their homework-practice with their teachers (Bergmann & Sams, 2012). As FLM's popularity increased within the educational field, few results have been documented concerning teachers' choices to implement FLM at the secondary level from grades 6 to 8 (Simonson, 2017). Research was needed to address the teachers'

choices to implement FLM and to manage those choices (Francom, 2020; Shnai, 2017; Webb & Doman, 2016).

In this chapter, I evaluated recent studies of FLM's use and implementation and the flipped classroom's impact on learning and teaching. A description of the theoretical framework that provided the structure for this research study and research questions is included in this chapter. The major topics covered in the literature review are a definition of FLM, advantages, and disadvantages of FLM. This chapter also includes the theoretical framework, technology integration, differentiated instruction, federal and state mandates. Finally, there is a summary and a description of the content of the next chapter.

Literature Search Strategy

I conducted an exhaustive literature review as preparation for this study by exploring professional research journals. I looked for the most recent studies available through Walden University Library. The search focused on FLM and its implementation. I used nine different databases, such as ERIC, Google Scholar, ProQuest Central, EBSCOhost, Education Search Complete, Education Resource Information Center, JSTOR, ScienceDirect, and SAGE Journals Online. The following topic was part of the searches in the literature review. The topics included were flipped classroom and teachers' choices, flipped classroom and technology, flipped classroom, and flipped classroom and teachers' choice. Other keywords or search phrases were: *flipped classroom and technology integration, differentiated instruction, blended learning,*

constructivism, teachers' perception, and flipped classroom, choices to flipping, teachers' choices, federal and state mandates and technology, 21st-century learning and teaching, middle school instruction, assessments, and flipped classroom, technology innovation, educational technology, collaborative learning, professional development, teacher training, self-efficacy, self-determination, technology acceptance model, and flipped classroom. First, I limited the search to peer-reviewed articles published within the last five years. Second, I set up search alerts in EBSCO, ProQuest, and Google Scholar for the most recent studies focusing on the flipped classroom with middle school teachers. Additionally, I read the peer-reviewed articles referenced in the studies that were relevant to this project as an additional opportunity to exhaust all literature focused on FLM.

After working with the Walden Librarian, after an exhaustive literature search, we identified a minimal number of research studies focusing on implementing the flipped classroom and teachers' choices (Bond, 2020; Hsieh et al., 2017; Mikalef et al., 2016; Simonson, 2017). Although they were studies conducted on teachers implementing the flip classroom, some of the studies were conducted outside the United States or with a focus on higher institutions, and none was found to address this research, which is focusing on middle schools, grade six to eight (Bond, 2020; Hsieh et al., 2017; Mikalef et al., 2016; Simonson, 2017). The literature review, in this chapter, contains an explanation of the advantages and disadvantages of FLM. It also includes a review of other studies

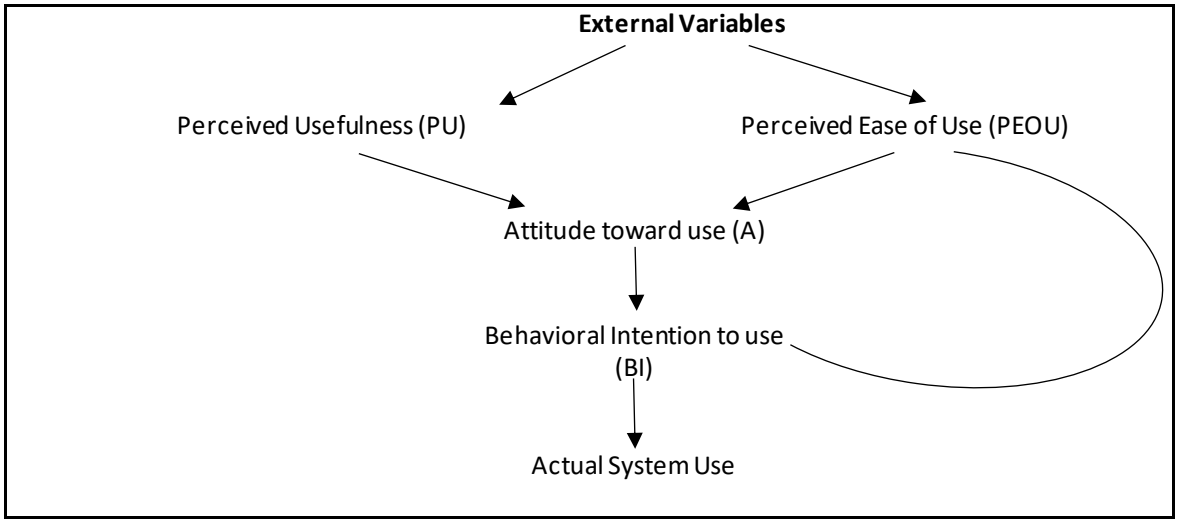
focusing on the flipped classroom, differentiated instruction, federal and state mandates, assessments, and technology integration.

Conceptual Framework

Understanding the fundamental causes of teachers' choices to implement FLM and creating interventions that could support these choices are essential to some researchers in a research study about educational pedagogies. Davis' (1989) technology acceptance model (TAM) was used as a starting point to support this study's development partially. Besides, Ajzen and Fishbein's (1972) theory of planned behavior (TPB) was used to address teachers' choices. TAM focused on two main concepts: perceived usefulness (PU) and perceived ease of use (PEOU) (see Figure 1) (Davis, 1989). Perceived usefulness focused on the potential teachers' bias or the chance that teachers would use a particular system or an idea (e.g., flipped classroom) with teachers hoping to use the idea (e.g., flipped classroom) would improve the teaching and learning in the classroom. Perceived ease of use refers to the extent to which the teacher believes the flipped classroom is unproblematic (Davis, 1989).

Figure 1

Technology Acceptance Model (TAM) (Davis, 1989)



According to Davis (1989), PU and PEOU are different in functionality. Davis (1986) explained that PEOU has a significant impact on PU if an educational methodology is easy to use. PEOU would increase usage by educators in their classrooms; this is with the understanding that external factors such as school leaders, colleagues, and constant technical support are present. An educational method (e.g., flipped classroom) that is simple to use would have an optimistic effect on teachers' feelings. Influencing both PU and PEOU of the flipped classroom might affect using technology within the school. Technology integration is considered an external variable (e.g., attitude toward use, intention to use, and actual usage). Educators' attitude and

acceptance or lack of acceptance to flipped classrooms is the beginning stage of the actual implementation. In conjunction with planned behavior theory (Ajzen & Fishbein, 1972), TAM framed teachers' choices for implementing the flipped classroom.

This study includes Ajzen and Fishbein's (1972) theory of planned behavior (TPB). Davis used this theory to develop the TAM, and these theories support the development of teachers' implementation of the flipped classroom model. TAM is constructed partially from two widely tested models of human behaviors: (a) theory of reasoned action (Ajzen & Fishbein, 1980, 2005; Fishbein & Ajzen, 1975) and (b) theory of planned behavior (TPB) (Ajzen, 1985, 1991; Ajzen & Fishbein, 1980, 2005). The theory of reasoned action (TRA) suggests teachers' rituals are indicators of their behavioral intentions, followed by their attitudes and subjective norms. The theory of planned behavior (TPB), which includes the TRA components, added the extension of teachers' perceived choices of their behavior as an inclusion factor expecting both their behavioral intentions and behavior norms.

Fishbien and Ajzen's (1975) and Ajzen and Fishbein's (1980) TPB, which stemmed from TRA, has been influential in predicting human behavior and behavior disposition. TRA indicates that educators' attitudes about performing an action (e.g., implement flipped classroom) would predict their behavioral intentions (want to implement flipped classroom). They might execute the behavior (would implement the flipped classroom) to predict their behavior (would implement the flipped classroom

model). Since one may consider how individuals observe another person's performance (subjective norms) and how they act, it is essential to add an individual's behavioral intentions. Thus, behavioral intentions would be the best foretell of individuals' behavior (Fishbein & Ajzen, 1975). Therefore in (TRA), *salient belief* would-be teachers' attitude toward the behavior (implement flipped classroom) as a sum of their common accessible beliefs about the anticipated effects of executing the wanted behavior (actual implementation of the flipped classroom). In contrast, *subjective norms* are when teachers are explicated as heeded to others' general opinions to do or not do the expected behavior (e.g., implement flipped classroom). *Behavioral intentions* would be the perceived chance of teachers performing the wanted behavior (actual implementation of the flipped classroom).

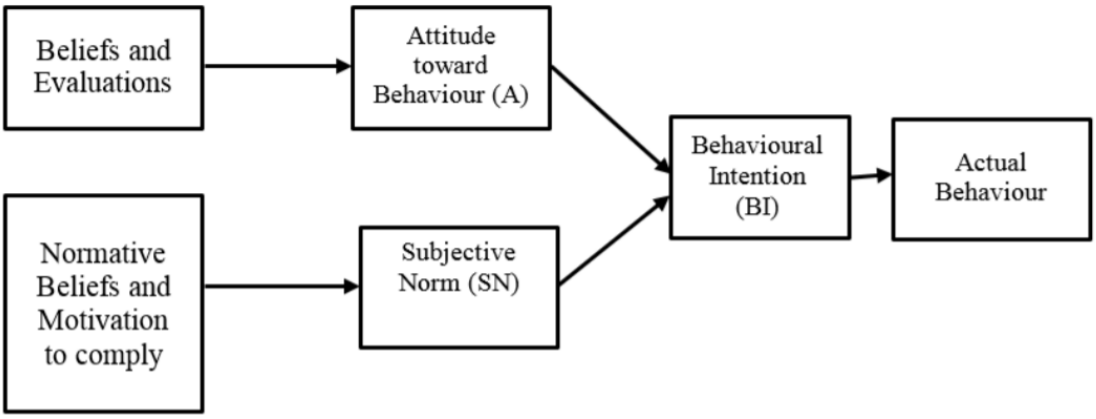
TRA's significant concern stemmed from the interpretation of behavioral intentions to enact the wanted behavior. Thus, Fishbien and Ajzen (1975) improved the TRA to TPB by adding perceived behavioral control. Behavioral control specifies teachers' expected skills to do what is hoped for (e.g., the target behavior-flipped classroom). TPB's central tenets focused on motivation as a part of the theory, or one is mindful disposition to affix effort to complete wanted conduct. Teachers' beliefs would decide behavioral intentions (e.g., if implementing the flipped classroom is deemed detrimental or positive). Teachers have perceived ideas about the strategy (e.g., do others give teachers a sense that they should implement flipped classrooms). One has perceived

behavioral control (e.g., how likely it would be to implement a flipped classroom would be easy or hardened). The following external factors, such as the convenience of time, educational software, or technical support within the school and inside factors such as ability and skills, are mirrored by this model's perceived behavior.

Consequently, teachers' low perceived behavioral control would exist in situations where the target behavior's performance would depend on other indicators that could or could not be within the educators' control. For example, educators might experience minimal perceived behavioral control for a wanted behavior (e.g., implement flipped classroom) if obstacles such as time, low-cost, technical support. Also, the lack of expertise would be viewed as a challenge to perform the behavior regardless of how high one intends to implement the flipped classroom. Thus, if the supposed behavioral control is high for the desired behavior, guessing the likelihood of behavioral intentions for that behavior is also high; it is more likely for educators to implement the flipped classroom. There is a commonality between TRA (e.g., subjective norms, perceived behavioral control, attitudes toward the behavior, and intention) (see Figure 2) and TRA (e.g., skills, abilities, actual authority, and ecological indicators that sway one's capacity to perform an intended behavior). This common thread would be referred to as the *reasoned action approach* (Ajzen & Albarracín, 2007; Ajzen & Madden, 1986; Fishbein & Ajzen, 2010) in this study.

Figure 2

Theory of Reasoned Action (TRA) Model by (Fishbein & Ajzen, 1975) (Permission granted to use)



According to Fishbein and Ajzen (1974) and Ajzen and Fishbein's (1972) in TRA, there is a correlation between one's intentions, beliefs, and attitude to performing a specific behavior. This study was in line with Davis (1986), who stated that attitude changes mainly through changes in one's belief system. I used TAM and TPB to understand educators' choice to use FLM. The conceptual frameworks (TAM and TPB) provided parameters to confine and guide this proposed study's research questions to obtain a full understanding of educators' choices to the flipped classroom. Each of the conceptual frameworks looked at a different aspect of teachers' behavior or perception of flipping their classroom. Individually the conceptual frameworks appeared to look at the different perspectives of educators' behavior; in this case, the frameworks' tenets were all

moving together. They were used to determine factors that influence educators' choices to implement FLM.

Many research studies have been conducted on the flipped classroom model at different levels with different educational theories (Chen, 2016; D'addato & Miller, 2016; Delozier & Rhodes, 2017; Graziano, 2017; Sarkar et al., 2019; Schmidt & Ralph, 2016). However, many of these research studies focused on students' flipped classroom perspectives, regardless of the theoretical framework (Chen, 2016; D'addato & Miller, 2016; Delozier & Rhodes, 2017; Graziano, 2017; Sarkar et al., 2019; Schmidt & Ralph, 2016). The researchers documented both positive and negative students' opinions of FLM. However, there were minimal documented research studies focusing on teachers' choices to implement FLM (Bond, 2020; Hsieh et al., 2017; Mikalef et al., 2016; Simonson, 2017).

Ravitch and Carl (2015) explained that the conceptual framework should be used to explain the value of a research study and helped support the study's design. Researchers who have used these frameworks (TAM and TPB) to collect data provided value to this study in many ways. First, the frameworks offered parameters to write the research questions and the interview questions. Second, the frameworks provided a process of how this study met the literature gap in the lack of research studies focusing on teachers' choices to implement FLM. Third, the framework supported this study's purpose to explore teachers' choices to implement FLM and bridge the literature gap. From there,

using the research study's findings, strategies to support and train educators could be created to offset these obstacles for teachers to implement FLM in their classroom.

Type of Frameworks from Previous Studies

It was essential to align the research questions with the right framework, as Ravitch and Carl (2015) noted. Many researchers studied the flipped classroom model using a myriad of frameworks. Graziano (2017) used the framework teach, apply, and reflect model to investigate the experiences of preservice teachers' experiences taught in a flipped classroom. The results showed that the preservice teacher reported that the flipped classroom was more engaging and interactive. Kostaris et al. (2017) used the process of Lewin, plan, act, observe, and reflect as a framework to collect data on the flipped classroom effect in K-12 ICT teaching and learning at a junior high school. Their findings showed the flipped classroom's benefit on students' engagement and motivation, consistent with other researchers. Strohmyer (2016) used a combination of frameworks (combining cognitive load theory, sociocultural learning theory, and schema theory) to collect data on high school students' lived experience in a flipped classroom. The results showed an increase in students' engagement and interaction as well as higher self-regulated learning. These findings are consistent with other studies documented in the literature (Clark, 2015; Jensen et al., 2015; Kirvan et al., 2015; Lo & Hew, 2017b; Yoshida, 2016).

Researchers need to look at what has been done around their topic of study. Current researchers would have an opportunity to analyze other researchers' choice of the framework used to create research questions. The parameters used to analyze the participant's response, documented results, and recommendations for future studies. The critical benefit of looking at other studies around the flipped classroom is the opportunity to see the framework, methodology, and type of participants included in these studies. Another benefit of this study is the recommendation made by these researchers. They suggested that future researchers use different age levels, smaller or larger samples, participants' size, and other frameworks. Taking the researchers' advice, TAM and TPB was used to explore factors that influence educators' choices to implement the flipped classroom by middle school teachers.

Literature Review Related to Key Concept

Lage et al. (2000), Baker and Settle (2013), and Bergmann and Sams (2012) are the seminal authors or pioneers of the flip learning model. As mentioned above, the authors attempted an educational strategy to meet their students' academic needs by adding videos online for their absent students. In doing so, putting an instructional video online gained popularity as more educators shared their success using the same process. The flipped classroom started back when Lage et al. (2000) published a book about inverted classrooms. In their book, *Inverting the classroom: A gateway to creating an inclusive learning environment,* the authors assigned videos for their college-level

economic students to watch before class. The students would then come to class prepared to discuss the content of the videos. As time passed and the increased use of technology, other educators started to notice and apply the inverted classroom concept. In 2000, Fisch made the term flipped popular as opposed to the inverted classroom. However, Fisch gave credit to Bergmann and Sams's two other teachers, from whom he received the concept (Bergmann & Sams, 2012). In contrast, Baker and Settle (2013) credited Salman Khan, the founder of Khan Academy, in helping the concept gain popularity. Salman Khan created a series of videos to help his cousin with Math; from that point on, these free videos were available to the public (Khan Academy, 2018).

To help their absent students to remain abreast with class and homework, Jonathan Bergmann and Aaron Sams started videotaping their lessons (Bergmann & Sams, 2012). FLM became increasingly popular once educators began noticing it. For example, two schools benefitted from the concept from the beginning. First, Bryon High School in Minnesota flipped all their Math classes, and their students' Math test scores increased. Math scores doubled compared to the previous three years (Fulton, 2012, 2012a; Hamdan et al., 2013).

Similarly, Clintondale High School in Michigan flipped their entire school curriculum with the expectation that it would help increase graduation rates and decrease dropout rates (Rosenberg, 2013). Clintondale High School did experience a decrease in

the dropout rate and increased their graduation. Graziano (2017) reported that the implementation of the flipped classroom increased by 30% since 2012.

Flipped Classroom Model Process

Since Bergmann and Sams in 2012 made the flipped classroom model famous, this model has gained popularity in a diverse educational setting. At the introduction of the flipped classroom model, Siegle (2014) listed reverse instruction, flip teaching, backward classroom, and reverse teaching when explaining the flipped classroom. Ramaglia (2015) described the flipped classroom as an instructional strategy that did not use traditional lectures with students seated and listened to long lectures by a teacher.

Foldnes (2016), Hsieh et al. (2017), Mikalef et al. (2016) considered the flipped classroom model as a pedagogical approach that allowed teachers to move direct instruction from the classroom to video-based (individual's home) to group learning (the classroom). They stated that the flipped classroom model contains two main tenants: (a) online video instruction to view as homework and (b) direct instruction and interactive activities are completed with students-to-students and teacher-to-students. The flipped classroom's basic concept entails teachers creating virtual classroom websites, YouTube videos, or other teacher-made videos. These teaching materials/ videos are posted as lectures for students to view as homework (at home). Inversely, a traditional assignment is completed in the classroom (Bergmann et al., 2012; Foldnes, 2016; Hsieh et al., 2017; Mikalef et al., 2016).

Sams and Bergmann (2013) wrote that the flipped classroom "redefines class time as a student-centered environment" (p. 17). Lo et al. (2018) framed the flipped classroom within four components (activation, application, demonstration, and integration) of First Principles of Instruction's framework to explain its value in the school. Chen et al. (2014) associated the flipped classroom model with *an inverted classroom* or *blended learning.* The Flipped Learning Network (2014) differentiated the definition among the flipped classroom and flipped learning model. As FLM gained popularity, there was confusion in defining the concept systematically.

According to Huang et al. (2014), to clarify and standardize the flipped classroom approach, the authors Hamdan et al. (2013) proposed the four pillars of F-L-I-P. The four pillars are: "a flexible (F) learning environment, cultural learning (L) shift, well-planned (P) teaching content and professional teachers" (FLN, 2014). To emphasize the change, FLN (2014) wrote that flipped classrooms and flipped learning are not interchangeable. There is a difference between the concepts because educators may have already flipped their classrooms by having students read outside of class and requiring them to do independent research before coming to class. To clarify further, FLN (2014) wrote that educators should incorporate the four pillars by shifting their classrooms:

> In which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic,

> interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter. (para. 1)

For this study, the flipped classroom model focused on implementing FLM in terms of shifting instruction from face-to-face to online instruction. Students and teachers were using class time for collaboration. The decision of making the distinction was based on the fact that the flipped classroom was innovative, where teachers used and integrated technology within their teaching repertoire in their traditional classroom (Gough et al., 2017; Hajhashemi et al., 2017; Hsieh et al., 2017; Mikalef et al., 2016). The flipped classroom model comprised of two main parts: (1) direct instruction was done at home with students watching a video, and (2) application and group activities were done in the class with the teacher (Bishop & Verleger, 2013). Lo and Hew (2017a) explained the two components as (a) out-of-class component learning before face-to-face with the teachers, and (b) in-class time was spent with educators solidifying students' previous knowledge.

Previous Studies

Lo et al. (2018) conducted a study by framing FLM's concept within the theory of the First Principles of Instruction. The authors explained the component of the 'out-of-class,' which is the computer-based learning part of FLM, has two components: (a) Preclass video lecture (activation/demonstration) and (b) online follow-up exercise (application/demonstration). The 'in-class interactive learning has three components: (a) a brief review of out-of-class learning, (b) mini-educational lecture, and (c) problem-

solving activities where the students experience all four components of First Principles of Instruction (activation, demonstration, application, and integration) in the classroom. Using the First Principles of Instruction, the focus was on FLM and how students benefitted from being part of a flipped learning classroom. The results showed increased students' engagement. Although Lo et al. (2018) did not focus on teachers' choices to implement FLM, their study provided a needed definition of FLM's critical components within the concept of First Principles of Instruction, which is beneficial information for the education field and this study. Lo et al. did not focus on teachers' choices to implement the flipped classroom, which this proposed study did.

Gough et al. (2017) collected data on teachers' perceptions regarding the flipped classroom model in their qualitative study. The teachers, who implemented the flipped classroom model, reported that they perceived the flipped classroom model helpful for absent and struggling students. They added that FLM provided active learning opportunities, student and teacher interaction, learning time, and personalized learning. Within the same study, the same teachers also reported that they perceived that their students did not like the flipped classroom model's structure. FLM did not help improve their student academic responsibilities or decrease classroom discipline issues. This sentiment warrants investigating.

Foldnes (2016) conducted a two-part study to compare two different implementations of FLM. There were contradictory results within their research. The first

implementation showed no significant changes in students' procedural knowledge than traditional lecture-based classrooms based on final exam scores. However, cooperative learning results were significant in the second study, where FLM was implemented with random students. What is essential about these discrepancies from the implementation of FLM stemmed from the way that educators are implementing the model (Ozdamli et al., 2016) regardless of the educational level of K-12 or higher education. Foldnes did not focus on secondary teachers' perception of implementing FLM.

Hsieh et al. (2017) conducted a mixed-method study framed by TAM and mobile learning. Their participants were college sophomores as English Majors. Hsieh et al. used TAM to explore these college student's perceptions of mobile learning. They reported that the participants' overall English oral proficiency increased, and a positive perception of FLM design. Using TAM, they noted they could predict the learners' behavioral intention to use the English Line in a flipped learning model. TAM is only one component to understand the participants' willingness to use technology as an educational tool. Therefore, to get a full understanding of secondary educators' choices, this study included TAM and the theory of planned behavior (TPB) that made it up to collect such data.

In summary, many studies conducted around FLM focused on students' academic performance compared to that of a traditional classroom. Many of these studies were conducted outside the United States and higher education, mainly in Asia (Antonova et

al., 2017; Foldnes, 2016; Hsieh et al., 2017; Wang, 2017), with participants who attended college. Gough et al. (2017) focused on educators in the United States from K-12. This lack of focus on educators' choices to implement FLM justified this study's rationale to focus on educators' choices, especially those in secondary schools. Their studies' weaknesses stemmed from the lack of focus on educators' choices to implement FLM, especially educators that are teaching in secondary schools from grades six to eight, which is needed. The strengths of these studies have documented many advantages and disadvantages of implementing FLM for students.

Advantages

With the age of increased information and technology, it is essential for educators to properly prepare their students to perform 21st Century Skills (Faulkner & Latham, 2016). As educators began incorporating FLM into their curriculum and teaching styles, there was a direct correlation of an increase in students' grades and behaviors (Kurshan, 2020). Since its beginning, the flipped classroom has made an impact on students' academic performance. The FLN (2014) surveyed 450 teachers using the flipped model. The results showed that of the 450 educators surveyed, 67% reported increased students' standardized test scores, and 80% improved their attitudes. Since 2012, other educators have claimed implementing a flipped classroom was beneficial to their learning environment. These findings are in line with what Lo and Hew (2017b) stated: flipped classroom implementation has played a significant role in increasing student learning.

Another benefit is that there is a better use of class time and fostering better relationships between teachers and students (Hall & DuFrene, 2016). Unal and Unal (2017) supported this claim and added increased motivation and excitement in the flipped classroom.

Educators mentioned other benefits such as improved students' attitude (D'addato & Miller, 2016), improved student autonomy of low performing students (Bhagat et al., 2016; Gough et al., 2017), increased motivation (Gough et al., 2017; Unal & Unal, 2017), increased engagement and performance, and increased students' learning (Bhagat et al., 2016; D'addato & Miller, 2016; Gough et al., 2017; Schmidt & Ralph, 2016; Unal & Unal, 2017). Similarly, at an early stage, FLN (2014b) reported 80% improved students' attitude toward learning, 67% improvement in students' performance in their standardized tests, and 80% of job satisfaction for teachers. In Schmidt and Ralph's (2016) case study, an elementary school teacher and two high school teachers reported that students had fewer incomplete assignments due to implementing the flipped classroom model. Another significant advantage of flipping is that students can quickly revisit teaching resources at their own time and pace as independent learners (Abeysekera & Dawson, 2015; Hermanns et al., 2015). As Smale-Jacobse et al. (2019) explained, students could pause and rewind videos until they feel they have mastered the concept studied.

Most of the course content was shared online through virtual classroom platforms; thus, lessons can be shared with a substitute, parents, and other educators. For example, absent students can stay informed about what the teacher is teaching in class (Bergmann

& Sams, 2012), a great advantage noted by Gough et al. (2017) results. Parents can also watch the video to support their children's progress, an advantage reported by Bond (2019). Bergmann and Sams (2012) mentioned that teachers could use the videos with substitute teachers to guide students with ease. Since flipped classrooms have an online educational platform, educational resources are shared with colleagues or administration to support the substitute, if needed. This method of teaching has advantages over traditional lecture-based education; however, there are limitations to the flipped classroom (Akçayır & Akçayır, 2018).

Disadvantages

Working with flipped classrooms has its advantages; however, some flipped classroom aspects do not work. Chen (2016) explained that some students reported their lack of excitement for watching videos and working on their time after attending class. Likewise, some teachers are not happy about creating all the videos for instruction (Chen, 2016; Johnson & Misterek, 2017) or finding a suitable video that would match instructions and in-class activities. Some teachers are concerned about some students' inability to adapt to the flipped classroom structure (Gough et al., 2017; Hermanns et al., 2015; Van Sickle, 2015). Students are used to traditional settings from their past educational experiences. Hermanns et al. (2015) noted that some educators are apprehensive about using the flipped classroom's new structure due to unfamiliarity with the technology used for instruction and the quality of teaching using the videos (Chen,

2016). The video lesson may not upload properly, or students do not watch the video before coming to class for various reasons (Chen, 2016; Johnson & Misterek, 2017; Van Sickle, 2015). Some teachers find it challenging to deal with students who do not watch the video as their homework or do not have Internet access (Schmidt & Ralph, 2016; Van Sickle, 2015).

Another disadvantage of the flipped classroom is that teachers' planning, and preparation time increases, and they still have to meet students' instructional needs with different learning styles (Guy & Marquis, 2016; Hajhashemi et al., 2017; Petrovici & Nemeşu, 2015). There are variances in students' learning styles; some students learned best with direct instruction, and others learn in a collaborative environment. Other students use class time to socialize with peers instead of working (Petrovici & Nemeşu, 2015). For example, compared to planning for the traditional classroom environment, creating videos and anticipating students' responses can be more work for teachers (Hao & Lee, 2016). Teachers have to plan and meet students' needs with limited Internet access at home (Petrovici & Nemeşu, 2015), a challenge that traditional lecture-based educators rarely focus on. Some teachers created poor videos with poor speech and low audio that were hard to hear (Zainuddin & Halili, 2016). Some teachers do not make proper use of class time with poor planning, making them unable to ensure students' engagement. These teachers do not choose appropriate classroom activities in line with the videos (Lo et al., 2018). The flipped classroom is not a standardized instructional

strategy; it must be approached with careful planning to frontload preparation for students by the educators (Simonson, 2017).

Differentiated Instruction

In the age of technology, educators' role has changed from teacher-centered to student-centered. Teachers' challenges in the age of technology have remained the same as the teachers of ancient history in a one-room schoolhouse nowadays. Classrooms are made up of different students (e.g., age, ability, learning styles, socio-economic, and culture) (Maeng & Bell, 2015; Smale-Jacobse et al., 2019; Tomlinson, 2014, 2015). Educators are expected to meet all their students' academic needs regardless of the mix, and one-way or strategy to meet students' academic requirements is to differentiate classroom instruction (Carhill-Poza, 2019; Tomlinson, 2014, 2015; Tomlinson & Moon, 2014). FLM integrates well with the tenets of differentiated instruction strategy, which makes FLM beneficial.

Educators have moved away from whole-group instruction (Carhill-Poza, 2019), making it difficult for them to differentiate instruction regularly. Within a flip classroom, educators have more class time to meet their students' individual needs, and that is the connection between the flipped classroom and differentiated instruction (Bergmann & Sams, 2012). An educator can differentiate content or the assessment (Bergmann & Sams, 2012; Moon, 2016) within FLM. In the flipped classroom, educators have many

ways to assess their students differently (e.g., visually, written, or videos formative or summative assessments) (Carhill-Poza, 2019; Tomlinson & Moon, 2014).

Technology Integration

As millennial students spend much of their time using social media, Boholano (2017), Casey and Wells (2015), Georgakainas, and Zaharias (2016) wrote that educators should figure out how to integrate technology effectively in their teaching repertoire. Educators should have a growth mindset when considering incorporating technology into their teaching repertoire (Dweck, 2016). Many school districts claimed to be innovative because their grading policy and sharing information with the community is online in different languages – that is what school districts consider to be innovative (Laho, 2019). However, effective technology integration would have students and teachers using educational technology for instruction and learning (Hajhashemi et al., 2017). Having a computer in the classroom and turning it on to check email, and having students and parents checking grades is not technology integration for active learning and teaching (Laho, 2019). The flipped classroom model provides teachers with a method to elevate their pedagogy approaches while remaining technologically relevant (Gunyou, 2015) and improving accessibility to all students.

One challenge with technology integration in school districts is the intellectual gap between veteran teachers and millennial students who are native users of technology, but this gap is minimized when working with millennial educators who are native

technology users (Boholano, 2017; Gleason & Von Gillern, 2018). However, these millennial educators still need to be trained in incorporating technology safely in the classroom (Boholano, 2017). Educators should be given access to professional development that provides training on operating, implementing, and best practices for technology use within the classroom (Bennett & Lin, 2018).

Another challenge with technology integration in school is the budget. The limited funding for technology in schools often prevents students and educators from accessing the most recent and advanced educational technology (Herold, 2016). In some cases, once school districts buy the devices and equipment, they cannot always keep up with the upgrade that these devices need, and they become outdated (Bennett & Lin, 2018). Many school districts hire technology experts to deploy devices, fix technological issues, and maintain the devices (Bennett & Lin, 2018) to keep the devices up to date. Some districts can set aside money in the operating budget to pay for technology implementation and upkeep. Unfortunately, not all districts are financially able to do so (Bennett & Lin, 2018).

Federal Mandates

In 1983, in the *Nation at Risk* report, the United States (U.S.) ranked low in education internationally based on economic competitiveness using test scores (Mathis & Trujillo, 2016). That report paved the way for lawmakers to create the first mandate, 'Goal 2000', requiring school districts to develop standard-based tests and a plan to

achieve them (Mathis & Trujillo, 2016). In 2001, Congress issued the No Child Left Behind Act (NCLB). NCLB was the first mandate to hold states accountable for their students' achievement. NCLB and other government mandates increased the requirements for students' test scores to demonstrate improvement. This mandate caused school districts to explore alternative instruction methods to meet the mandated Annual Yearly Progress (AYP) of NCLB **(**Gewertz, 2014; Ladd, 2017; Lee & Wu, 2017; United States Department of Education, 2001).

NCLB mandated that states develop an assessment system that would track students' academic performance based on a common set of instructional standards (United States Department of Education, 2001, 2016). The grades three through eight were tested every year in both reading and math annually and in high school between grades 10 to 12 (Ladd, 2017; Whitney & Candelaria, 2017). Even though NCLB's main focus was accountability for states to create standards, properly test their students, and track their students' academic success using testing (Krownapple, 2016), there were other components. Schools are now held responsible for subgroups that were once ignored (e.g., low socioeconomic or race groups) test scores. Educators are expected to be more highly qualified before entering a classroom.

Ladd (2017) expounded that NCLB encountered challenges, as well.

NCLB's focus was too limited, concentrating on raw school data, unrealistic and unproductive expectations of 100% improvement, and the heavy pressure to ensure

students' academic success without the support, which affected teachers' morale in schools. However, NCLB's strict expectations of school districts meeting the Annual Yearly Progress (AYP) created many challenges for the districts, especially the schools that failed to meet AYP (Ladd, 2017; Lee & Wu, 2017; Whitney & Candelaria, 2017). After 14 years of conflict over NCLB's benefits and challenges, it came to an end in 2015 when President Obama re-envisioned the Elementary and Secondary Education Act (ESEA). It is now known as Every Student Succeeds Act (ESSA) (Fennell, 2016; Mathis & Trujillo, 2016; Shepard et al., 2017; United States Department of Education, 2016; Whitney & Candelaria, 2017).

The ESSA stemmed from the Elementary and Secondary Education Act of 1965 (United States Department of Education [USDE], 2016) with the belief that every child can learn and be successful. Therefore, the significant components of NCLB are still part of ESSA. Like NCLB, ESSA's focus is on test-based accountability for states to intervene to show progress on their lowest-scoring schools (Korte, 2015; Ladd, 2017; Mathis & Trujillo, 2016; United States Department of Education, 2016; Whitney & Candelaria, 2017). Regardless, there are some noticeable differences between NCLB and ESSA.

Fennell (2016), Mathis and Trujillo (2016), Shepard et al. (2017), United States Department of Education (2016), and Whitney and Candelaria (2017) explained that the main difference of ESSA is the flexibility that states have in terms of its implementation and the opportunity to choose other measures for students' achievement beyond the

required academic indicators. As previously believed in the history of the United States, the expectation is that every student in grades K-12 must be prepared to succeed in college and career readiness (Desimone et al., 2019).

State Mandates

After NCLB was signed into law, states searched for an accountability system to help them make AYP, which led to the adoption of the Common Core State Standards (Lee & Wu, 2017). The National Governors Association Center for Best Practices (National Governors Association [NGA] Center, 2018) highlighted many job positions requiring advanced technical education. However, there were a few numbers of workers qualified to meet those demands. The NGA Center also established a map for the governors to solve the problems by aligning education and training. As explained by the Center, the main issue with American education is that each state had different educational standards to prepare its students to enter the global economic system (NGA Center, 2018). Additionally, these disparities among states' standards created many challenges for families moving from one State to another, creating a more profound gap in their children's academic journeys. These pupils are behind on their skills to be college and career-ready.

To eliminate the gap for these pupils, State officials began working on an initiative to standardize instructions for all students to be college-ready at the end of their K-12 academic journey for all States. The education commissioners and state's

governors, the National Governors Association Center for Best Practices (NGA), with their representative organizations, and the Council of Chief State School Officers (CCSSO) started the process for developing the Common Core State Standards (CCSS) to remedy the problems reported by NCSL. Many states' educational leaders gathered to develop CCSS, a precise and clear college and career-ready standards for English Language Arts/Literacy and Mathematics in grades K-12. Even though all states have not adopted the CCSS, States must have rigorous standards to meet college and career readiness demands, new as ESSA (Gewertz, 2014; Lee & Wu, 2017). Since school districts were responsible for creating rigorous standards and an assessment system to track their students' performance (Nation's Report Card, 2017), using an instructional methodology like FLM would aid in preparing students to be ready for college and career, not just to take assessments.

From NCLB to ESSA, states are expected to report their AYP to the Department of Education and monitor their progress and success to schools, districts, parents, and the public from year to year (Nation's Report Card, 2017; Phillips, 2016). National Assessment Education Progress (NAEP) is the standard used to compare one State to another State. Even though some states (Florida, New York, and Kansas) have college-ready standards compared to NAEP, Phillips (2016) reported that states' assessments are falling behind when comparing their proficiency levels to that of NAEP. Therefore, States are responsible for creating a curriculum with the rigor that prepares their students

to meet NAEP standards in the annual State exam. Flipped Learning Model (FLM) is an avenue that the school district may use as instructional pedagogy to help students learn 21st Century Skills while preparing to achieve proficiency in standardized tests.

From assessments to instructions to accountability, educators are the vital change agent in the classroom. Moving away from traditional settings to implement a new educational (e. g., FLM) methodology might be a challenge for many educators. Even though Kostaris et al. (2017) and Teo and Milutinovic (2015) explained that technology integration is one of the best practices to transform the learning environment. As society progresses and advances through the millennium, it is critical that classroom teaching, and learning are transformed to satisfy the needs of 21st-century students. Understanding teachers' choices to FLM are essential to moving learning and teaching from the traditional to the 21st century (Avery et al., 2018).

Alignment of Other Studies

Strohmyer (2016) conducted a phenomenological study to explore high school math students' lived experiences of flipped learning related to their math class content and instruction, critical thinking, and collaboration and interactions. The author used the following conceptual frameworks: combining cognitive load theory, sociocultural learning theory, and schema theory. The study was conducted in two high schools with 16 students. Data was collected using interviews, which increased students' engagement, interactions, and in-depth learning in flipped environments. Increased critical thinking

was related to both instructional strategies employed and students' ability to self-regulate learning. This study was conducted with high school students' perceptions of FLM, but the research questions did not explore educators' choices to implement FLM.

Jensen et al. (2015) conducted a quasi-experimental design to compare an active non-flipped classroom with a dynamic flipped classroom at a large private University. Both classrooms used the 5-E learning cycle, with 60 students, with each class section lasting 50 minutes. The results showed no significant difference in students' performance on unit exams and low-level and high-level items on a comprehensive final exam. When using active learning, flipped learning did not increase understanding or attitude over non-flipped. This study provided detailed information regarding the level of improvement resulting from FLM based on the college students' perspective, not the professors. This study focused on higher education at a private college, whereas this study focused on public middle school educators.

Kirvan et al. (2015) conducted a quantitative quasi-experimental study to investigate if a flipped algebra classroom would lead to a better focus on conceptual understanding and improved learning of systems of linear equations. There were 54 seventh and eighth-grade students in the study in both traditional and the flipped classroom. The results found comparable statistically significant learning gains in both treatment groups. In both groups, the conceptual understanding was similar in the flipped and controlled classroom with a statistically significant learning gain. They also noted

that the at-home videos and in-class activities are needed to successfully use the flipped classroom model to shift the instructional focus from procedural to conceptual understanding. However, this study focused on the students, not the educators, who concentrated on teachers, unlike this study.

Lo et al. (2018) conducted a quasi-experiment in two stages to address how teachers can design and implement flipped classrooms in ways that benefit learners. The first stage was the pilot study in math class with 12 graders for two to four weeks; 13 out of the 24 students attended the flipped classroom with no comparison group. The second stage was the first study conducted in math class with nine students in grade nine for 14 weeks, 28 flipped/27non-flipped. The results show higher student achievement (e. g., self-paced learning and active learning during class time). However, students struggled to recall the information from videos during the Out-of-class learning component. As a good practice, the authors suggested that teachers should be prepared to do some direct instruction during the in-class learning component when needed. Teachers should use their time to practice real-world problems to prepare their students for 21st Century Skills. Lo et al. focused on how educators designed and planned to benefit in a flipped classroom. Therefore, this study assumed that educators desired to implement the flipped classroom.

Many research studies (Jensen et al., 2015; Kirvan et al., 2015; Lo et al., 2018; Strohmyer, 2016) focused on students' perspectives in a flipped classroom. These

researchers used different frameworks (e.g., cognitive load theory, sociocultural learning theory, schema theory, and First Principles of Instruction) to conduct these studies to collect and analyze data of the benefit from students' perspectives. These studies focused on different educational levels of the students from middle school to higher education. The flipped classrooms have both advantages and disadvantages to students' performance. Although FLN (2014) clarified the difference between the flipped classroom and flipped learning, some educational researchers used these two words interchangeably. The weaknesses inherent in these studies' approach are the exclusion of educators' perspectives on what is required to implement the flipped classroom to impact teaching and learning.

Studies focusing on middle school educators' choices to implement the flipped classroom are scarce. This literature gap has been filled by the proposed generic qualitative research, which explored educators' choices to implement the flipped classroom within these frameworks' parameters (TAM and TPB). Because the flipped learning involves more than teachers' behaviors about using technology in their classroom, I incorporated TAM and TPB to provide parameters to write the research questions and the interview questions. These two conceptual frameworks provided parameters to analyze educators' data to understand their choices to implement the flipped classroom. Although researchers have shared many perspectives on different topics

related to the flipped classroom, very little research focuses on educators' choices to implement the flipped classroom within middle schools.

Summary and Transition

From its introduction by Bergmann and Sams (2012), technology and the Internet have made implementing FLM easier for educators. The Internet has a myriad of resources to minimize the workload for educators when utilizing FLM (Bond, 2020; Herold, 2016; Schmidt & Ralph, 2016), and the flipped learning network provides numerous supports for educators willing to implement FLM (FLN, 2014b). Effectively utilizing these resources to implement FLM would increase active learning, student engagement, and motivation (Sams & Bergmann, 2013; Schmidt & Ralph, 2016). As more educators implement FLM, other educators are beginning to understand and recognize numerous advantages of FLM, especially the amount of time saves for in-class support of students' learning (Hall & DuFrene, 2016).

Minimal qualitative research has been done around implementing the flipped classroom, particularly on teachers' choices to implement FLM (Simonson, 2017). This lack of recorded data from the educators' perspective created a knowledge gap in the literature. This study explored teachers' choices for implementing FLM, and provided evidence-based practices and recommendations for the creation of a support system, the transfer of knowledge to teachers' professional practice, and to help create a support system capable of assisting teachers in their own attempt to use FLM successfully in their

classroom. TAM and TRA provided the lenses for examining literature related to educators' choices to implement FLM. The themes that surfaced during the literature review and the results documented by researchers served as the basis for examining the educators' choices in this study.

In the past five years, the recent literature on implementing FLM focused on students' perspectives and educators who already flipped their classrooms in higher education and internationally. The majority of the research included themes noting the challenges some educators faced after implementing FLM. The results also showed minimal differences in students' academic performance between FLM and traditional classrooms regarding academic performance. This inconsistency of students' academic performance from FLM and traditional classrooms may have created a challenge for some educators to implement FLM. This study revealed teachers' choices to implement FLM and provided resolutions to support these founded choices.

This study explored grades six to eight grade teachers' choices for implementing FLM, and provided evidence-based practices, recommendations for the creation of a support system, the transfer of knowledge to teachers' professional practice, and to help create a support system capable of assisting teachers in their own attempt to use FLM successfully in their classroom.

In Chapter 3, there is a description of the research study design and rationale. Within the rest of Chapter 3, there is a discussion of my role as a researcher,

methodology, participant selection and recruitment, and instruments used to collect data. Next, there is an explanation of the data collection and analysis plan, as well as an explanation of how I addressed trustworthiness and ethical procedures.

Chapter 3: Research Methods

This study used a generic qualitative method to collect data for two reasons. The first reason was to explore teachers' choices for implementing FLM, and second, to provide evidence-based practices and recommendations for the creation of a support system, the transfer of knowledge to teachers' professional practice, and to help create a support system capable of assisting teachers in their own attempt to use FLM successfully in their classroom.

The rest of this chapter described the research methods used in the study, including an outline of the research design and the study's rationale. There is an explanation of the role I played as the principal investigator and the methodology. Other elements specified here include the process I used for participant selection, instrumentation used, and constructs used for data collection, the procedures, and tools used for data analyses. Lastly, I explained my process to handle ethical and privacy precautions and provided a summary and a conclusion.

Research Design and Rationale

This study stemmed from the gap in the literature concerning educators' perceptions around the flipped classroom model. The advent of technology changed the classroom; more than ever, educators have more resources to meet their students' different learning styles or abilities. FLM is an educational strategy that support teachers in meeting their students' needs (Hajhashemi et al., 2017; Petrovici & Nemeşu, 2015). It

was vital to the educational field to collect data on teachers' choices for implementing FLM. There were minimal documented data that focused on the educators' choices to implement the flipped classroom. These two research questions aligned with the research design and was used to collect data from the educators about their choices to implement FLM:

RQ1. How do teachers describe their choices to implement the flipped learning model in their classes?

RQ2. How do teachers perceive the usefulness and ease of use of the flipped learning model?

FLM was a pedagogical concept that moved direct instruction from the classroom to an online format, and homework is now done with the teachers in class (Bergmann & Sams, 2012; Bond, 2020; Clark, 2015). The flipped learning has been studied in many different settings and different age groups; however, none of these research studies reported on teachers' choices to implement FLM. The purpose of this study was to collect data on factors that influence participants' choice to implement FLM in their classrooms.

This study employed a qualitative research design based on semistructured interviews with middle-school teachers. This generic qualitative study aimed to explore middle-school teachers' choices who implemented the flipped learning in their classrooms. Interviews were conducted to identify middle-school teachers' specific decisions to implement FLM in their classrooms. In general, qualitative research is

employed when scholars wish to understand the structure—to some extent, the motives—of human behaviors or experiences occur in natural and information-rich environments (Creswell, 2012; Patton, 2002, 2015; Yin, 2015). The interviews were semi-structured to provide answers to two research questions. Accordingly, I designed the instruments (questionnaire and interview questions) (see Appendix A & B) used in this study to provide in-depth descriptions of the psychological, organizational, and interpersonal challenges involved in implementing FLM. I did this based on participants' self-reported experiences working with the model and explored their choices to improve their learning environment.

I needed to choose which of the qualitative methodologies would align with the study's purpose to collect the research questions' answers. According to Patton (2015), qualitative research is suitable when a researcher explored the participant's perspective on a phenomenon. Researchers who used the quantitative approach focus on participants' most popular responses, contrary to qualitative research that focused on participants' multiple responses (Simon & Goes, 2018). From the list that Patton (2002) listed, there are five types of qualitative methodologies for researchers to choose from. They are narrative, phenomenology, grounded theory, ethnography, or case studies.

Selecting these methodologies required choosing a method that best achieved this study's purpose and answered the research questions. To accomplish this, I examined each methodology's characteristics to find a suitable alignment with this study's objective

(Lewis, 2015). For example, narrative research is best suited for telling the story of one or more individuals' experiences (Patton, 2015) of a phenomenon. This study was not looking to share educators' stories about the flipped classroom. Therefore, the narrative methodology was not aligned with the purpose of this study. Narrative research was not suitable for the study because this study's purpose was not to write the educators' narrative about the flipped classroom (Patton, 2015) but to explore their choices to implement FLM.

Phenomenology research focuses on understanding the essence of a group of people's experiences by describing the 'essence of a lived phenomenon,' This study did not focus on educators' lived experience about the flipped classroom (Vagle, 2018). Therefore, phenomenology was not suitable for this study. Since this study aimed not to generate a theory around the flipped classroom and educators, the ground theory was not ideal for this study (Patton, 2015; Yin, 2015). Furthermore, this study was not looking to study a single educator, a single school, or classroom working with FLM as it is the focus of the case study; therefore, a case study was not suitable for this study (Tetnowski, 2015; Yin, 2018).

Ethnography is best suited for investigating and looking at changes in culture, and this study was not looking at the culture change of a flipped classroom (Draper, 2015). Generic qualitative research was thus the suitable choice for this study. The research questions did not readily lend themselves to being described using the tools and

characteristics of grounded theory, narrative, ethnography, phenomenology, or case studies (Percy et al., 2015). A generic qualitative design was suitable to accomplish this study's purpose (Merriam & Tisdell, 2016; Percy et al., 2015) to collect data by allowing the educators to express their choices when considering implementing FLM.

Role of the Researcher

In qualitative research, the investigator is the principal instrument of data collection and data analysis (Patton, 2002; Yin, 2015). My role as the researcher is essential to the study's success. However, this depth of familiarity may produce some unavoidable bias during data analysis (Bailey & Bailey, 2017), which was accounted for.

The process of self-disclosure was designed to allow researchers to focus narrowly on the participants' perceptions of critical topics rather than on their own beliefs or assumptions about the same issues (Patton, 2015). As the researcher, I collected and analyzed the data and observed while interviewing the participants. I disclosed my assumptions, beliefs, and biases about FLM before undertaking the teachers' responses as part of the interview notes' analysis. I used a reflexive journal to identify my biases when writing interview questions and throughout the analysis process.

I was the only contact point from the administration of the online questionnaire to the face-to-face interviews. I coded and ensured the transcripts' accuracy, and participants were provided a copy of the interview's transcript. They confirmed that their views had been captured correctly. I did my due diligence to keep the participants' identities private.

The online questionnaire (Appendix A) was conducted anonymously, and for the interview transcripts, I used pseudonyms, allowing participants to express their opinions freely and protect their identity. I was not in a position of leadership of the participants; therefore, there is no power relationship or incentives for me to manage.

Methodology

The study included two data-collection elements, a general online questionnaire, and interviews with ten selected individuals exploring their choices in greater depth. In the rest of this section, I described selecting and recruiting participants, followed by the processes used for each data collection element and data analysis.

Participant Selection Logic

The study's population was 10 secondary school teachers working with students in grades 6 through 8 who have implemented FLM in their classrooms. Content areas of interest were math, social studies, science, and English/language arts. The rationale for choosing these subjects is that the States collects students' academic performance data annually. Districts report students' scores on the State Report Card to show good teaching and learning, noting if students are on track to be college and career-ready when they graduate high school. However, students' scores were not collected or analyzed as part of this study.

The purpose of sampling in qualitative research is to reach data saturation or code saturation, as Hennink et al. (2017) stated. Although there is not a set number of

participants for qualitative studies, Merriam and Tisdell (2016, p. 101) explain that "data saturation"- an important indicator of the likelihood that the study has covered all critical angles of the topic —is reached once the investigators "begin hearing the same responses to" their questions. In qualitative studies, sample size changes based on the type of research and the research questions' nature (Creswell, 2014; Gentles et al., 2015). Based on these considerations and the available participants, the sample for this present study was ten teachers within the range to reach thematic saturation as described by Guest et al. (2020).

There were many criteria to select teacher participants for this study. First, participating teachers were educators who have implemented and stopped using FLM in their classrooms. Second, they were certified and teaching math, science, social studies, or English art in grades six to eight. Third, they were teaching in a public middle school. Before completing the online questionnaire (see Appendix A), these participants self-identified as meeting these study criteria. The questionnaire consists of general information about the teachers' current grade level of instructing, years in teaching, and their knowledge about FLM.

After receiving IRB approval, I posted the invitation letter on social media networks such as Facebook, LinkedIn, and Twitter to recruit participants. In the letter, I described the study's purpose, my contact information, the details of the procedures involved, and the time commitment required for each instrument. All interested

participants emailed me for additional questions and to express their interest in participating in this study. Participants were self-selected to meeting the study's criteria after reading the invitation letter. Afterward, I emailed the consent form to participants to make an informed decision. Once they signed the consent form, I emailed the questionnaire link for participants to complete.

The study adopted a purposeful sampling protocol for participant selection, in that participants were chosen on the basis that they met the study criteria (Showkat & Parveen, 2017). The project was confronted with an insufficient number of participants after eight weeks of recruiting. I expanded the recruitment process to include science and social studies middle-school teachers, not just math and English Language art teachers. I contacted IRB to add science and social studies as qualifying criteria to obtain additional participants, and the change was approved quickly by IRB.

As described, I employed a two-step data collection process by conducting face-to-face interviews and a questionnaire to gather background information from participants. The questionnaire and one-on-one interviews reached saturation after ten participants shared their choices to implement FLM. The combination of the steps significantly increased the study's chances of reaching data saturation, as did the triangulation of data through the teachers at different schools and various content areas. By including teachers working at multiple institutions in other subjects and by collecting data from them in two formats and styles data saturation improved significantly. I coded

and analyzed the data to identify themes concerning teachers' choices to implement FLM from the ten participants to reach data saturation.

Instrumentation

Trigueros et al. (2017) described many research instruments that collect qualitative data. The authors mentioned that the study's purpose in question should decide what tool to use to accomplish the study's goal when collecting data. From the list of the research tools (e. g., case study, in-depth interviews, observations, surveys, and focus groups), all effective tools to collect data from teacher participants. I used an online questionnaire and one-on-one interviews to collect data based on this study's purpose to explore teachers' choices to implement FLM.

I designed both instruments for this study. The survey (See Appendix A) was designed specifically for this study to collect general information from the teachers about the flipped classroom (Merriam & Tisdell, 2016; Trigueros et al., 2017. The questionnaire was a starting point to collect general information from the teachers of their knowledge of FLM and their level of competency with technology and overall experience with FLM. By hosting the questionnaire online, teachers completed the questionnaire quicker, and the data was analyzed quickly. All consented participants completed the questionnaire once they received the link.

The questionnaire was a combination of Likert scale and open-ended-questions to collect standard demographic questions and background information (e.g., number of

years in teaching). To design the semi-structured interview instrument, I used the conceptual frameworks to formulate open-ended questions about the flipped classroom. Once teachers completed the initial questionnaire, I emailed them the consent form explaining the process for participating in the individual interviews. I conducted the interviews via video conferencing (Zoom). Once I received the signed document from participants, I emailed them two options of days and times to schedule their interviews. All participants quickly scheduled their one-on-one interviews.

Each participant scheduled a 30 to 45-minute interview. Afterward, I contacted participants via email to confirm their scheduled time for the one-on-one video conferencing. The individual interviews adhered to the procedures detailed in existing guidebooks on interview protocols for qualitative research, such as those given by Dowling et al. (2016) and by Stanford University (National Center for Postsecondary Improvement (2003).

These interviews lasted between 30 to 45 minutes online via Zoom. As the Zoom meeting administrator, I recorded the interviews digitally. I did not take any notes while interviewing participants; I wrote notes before and after the interviews. Following the interviews, participants received transcripts of their sessions via email within three weeks of their one-on-one interview. I asked all participants to review the transcript for accuracy and that I captured their responses accurately. Participants were encouraged to offer feedback, add or omit any inaccurate information in the transcript.

Researcher-Developed Instruments

My motivation for developing the questionnaire was that little was known about teachers' choices when considering FLM. Therefore, a questionnaire (see Appendix A) had to be developed to gather preliminary data from the educators about the flipped classroom (Merriam & Tisdell, 2016; Trigueros et al., 2017). I developed interview questions (see Appendix B) for one-on-one interviews to collect in-depth data about participants' choices. These questions were both direct and open-ended to allow participants to respond and provide rich and in-depth responses. Once created, these questions aligned with the research questions and the conceptual framework (see Table 4).

Table 4

Alignment of Research Questions to Conceptual Framework

Research Questions	Theory	Data Instruments
RQ1. How do teachers describe their choices to implement the flipped learning model in their classes?	Theory of Planned Behavior (TPB)	one-on-one interview
RQ2. How do teachers perceive the usefulness and ease of use of the flipped learning model?	Technology Acceptance (TAM)	Survey questions/interview

Several steps were taken to confirm the validity of the instruments being used. Once the individual interview was conducted, the participants received the transcripts of

their participants' responses to provide feedback. I asked them to confirm that the notes were clear and that their words had been captured accurately (Aurini et al., 2016; Creswell & Miller, 2000). This process of allowing participants to review the transcript of their interviews is referred to as a "member check" or "respondent validation" (Merriam & Tisdell, 2015, p. 246). The second measure that was taken to improve validity is what Creswell and Miller (2000) described as "researcher flexibility" (p. 127). In agreement with Creswell and Miller (2000) and Aurini et al. (2016), they made a similar recommendation to researchers to improve their research's validity by being flexible. I, the primary researcher, conducted the data coding and analysis.

Triangulation of key results using multiple data collection methods targeting the same information increased the results obtained from each instrument's trustworthiness (Patton, 2015). By providing a full description and rich details and by extracting themes and commonalities, this study design made it possible to compare the data obtained from each instrument. Three highly qualified faculty members reviewed the instruments as part of the development of this project. All advisors are experts in assessing both the face and content validity of the online questionnaire (Appendix A) and the face-to-face interview questions (Appendix B) I used in this study (Yildirim, 2017). I made the necessary corrections using the experts' advice on how to minimize bias from both instruments.

Procedures for Recruitment, Participation, and Data Collection

I invited teachers to participate in this study through social media (Twitter, LinkedIn, and Facebook). At the time to recruit participants for the study, there was a national Pandemic (COVID 19) happening, it was necessary to use a snowball sampling to aid with recruitment. First instrument to collect data was the questionnaire. The questionnaire consisted of general information about participants and their general knowledge about FLM. The second instrument was a semi-structured interview which I used a purposeful sampling strategy. I interviewed ten participants who met the study criteria. The participants had two days and time as options to schedule their one-on-one interview. Generally, the interviews lasted between 30 to 45 minutes, and they were recorded on my computer.

Clark (2015) used qualitative methods to study the flipped model's effects on student engagement and performance in the secondary mathematics classroom. Clark used student interviews, a focus group session, and the researcher's journal to collect data from 12 students to obtain an in-depth understanding of their flipped math classroom experiences. In this study, I used semi-structured interviews to collect data from teacher participants about their choices to implement FLM. There was no need for participants to schedule any follow-up interviews for this study. Teachers were informed that their identity would remain confidential, and none of the teachers left the study.

Data Analysis Plan

Instruments Guide

The questionnaire (Appendix A) was online on Google form and was analyzed as participants complete the form. The first eight questions of the questionnaire collected general information. Questions number 9 to 13 aligned with TAM, and the last few questions, number 14 to 24, focused on teachers' choice of implementing FLM.

Participants answered 11 questions during in-depth interviews (see Appendix B). I described question numbers one to six to establish a comfort level before moving forward. The following interview questions (1, 2, 5, 6, 8, 9, and 11) aligned with the first research question to allow the teachers time to discuss their choice when implementing FLM. The rest of the interview questions (3, 4, 7, and 10) aligned with the second research question to collect information on teachers' perceptions of FLM approach's ease and usefulness in their teaching.

Codes and Categories

Coding involved assigning code values to small pieces or chunks of data from transcripts, field notes, audio, or video. I uploaded the participants' responses to HyperResearch software to assign code values to participants' answers to the research questions (Merriam, 2009; Saldaña, 2016). Before coding, I analyzed the raw data inductively via transcription and completed initial processing (Merriam, 2002). Data that were not coded during the data collection process were "unfocused and overwhelming"

(Merriam & Tisdell, 2015, p. 197). When that happened, I created categories explaining these discrepancies as potential themes to look out for when coding the transcription in HyperResearch. I used the Temi app to transcribe participants' responses and downloaded them into a Microsoft Word document. I kept running notes of the content and themes that emerged and prevalent within the conceptual frameworks of this study.

HyperResearch Software

The HyperResearch tool was well-suited for working with multiple data sources to transcribe and analyze. The software was user-friendly and had strong data-tracking capabilities. I uploaded all transcripts of the teacher responses and original video and audio files into the software for analysis. However, the questionnaire's answers were not uploaded to HyperResearch; the responses were already analyzed via Google form. It was possible to keep all the study's data in one place and on a single computer hard drive for privacy and ease of use for the analysis process. Having all the data in one place (see Table 5) ensured and minimized miss-coding from missing data.

Table 5

Connection of Data Collected to Research Question

Instruments	RQ1. How do teachers describe their choices to implement the flipped learning model in their classes?	RQ2. How do teachers perceive the usefulness and ease of use of the flipped learning model?
Questionnaire	Link to a Google form to answer preliminary questions around the flipped classroom.	Link to a Google form to answer preliminary questions around the flipped classroom.
One-on-one Interviews	Similar questions were used with the participants and were recorded digitally on a computer hard drive—minimal hand-written notes from the researcher.	Similar questions were used with the participants and were recorded digitally on a computer hard drive—minimal hand-written notes from the researcher.

The variety of tools and functions allow researchers to engage with their data more consistently and reliably, improving the likelihood of a successful analysis (Sapat et al., 2017). For instance, the software supported an interface with text and audio, allowing transcripts to be attached directly to audio recordings as aligned in Table 5. It also provided a report builder tool that offered advanced data sorting options and auto-coding options together, enabling precise matching of search phrases and topics across multiple media. Generally, the software was used for coding annotations, code mapping to identify themes and relationships, and visualization to analyze frequencies of coded items. I used the HyperResearch tool to code the data into groups, subgroups and to identify themes.

The coding process was intended to process a large amount of raw data, which I turned into smaller units, making it easier to accurately analyze the data and avoid discrepancies (Creswell, 2014; Maher et al., 2018).

Issues of Trustworthiness

There are several methodological issues relating to research and data trustworthiness. A study needs to be proven trustworthy. A study must have credibility, transferability, dependability, and confirmability to accomplish such a task. This generic qualitative study demonstrated its merit and answer questions around the components mentioned above.

Credibility

The difficulty with credibility in studies of this kind was summarized by Patton (1990) when he wrote, "The credibility of qualitative inquiry is especially dependent on the credibility of the researcher because the researcher is the instrument of data collection and the center of the analysis process" (p. 461). The same notion was written by Arriaza et al. (2015) and to ensure the accuracy of capturing participants' responses, I provided participants a copy of their responses for viewing. Secondly, the thorough explanation of how I collected the data also assured the study credibility (Avenier & Thomas, 2015). Having participants reviewed the interview transcripts ensured that their views, ideas, and perceptions had been captured correctly also provided credibility to the study. Additionally, participants reviewed the transcripts for missing or inaccurate information

to provide credibility, confirmability, and dependability (Patton, 2015). Lastly, in working closely with my committee members, asking them frequently to check the analysis process to see if the generalizations of the findings were reasonable, and to ensure if the data used in the analysis was complete, fair, and valid (Merriam & Tisdell, 2016; Patton, 2002, 2015) for this study.

Transferability

Transferability was assured in a variety of ways. First, I addressed the scope, limitations, and delimitations of this research. Second, once I collected the participants' data, I provided a thorough explanation of teachers' choices for implementing FLM. Generalizing findings is not the primary goal of qualitative research. However, high-quality qualitative work results should be transferable to similar contexts and similar groups of participants. Although the participants were middle school educators recruited from a social network, using the recommendations for future study, I included various participant selection, other sampling methods, and locations for researchers to use. This study is transferable because the analysis and coding process was described in detailed. Additionally, this study produced transferable results replicated in future studies using the same instruments but with, for instance, high-school teachers or middle-school teachers in a different district (Patton, 2015).

Dependability

Maher et al. (2018) explained that a study is dependable when it provides rich details enough for another researcher to replicate it. The interview questions (See Appendix B) are provided along with the dissertation. To ensure that the study's results are dependable. The interviews' transcripts were compared with the digital recording of the participants' responses to reduce the probability of missing information when analyzing the data (Renz et al., 2018). Also, the analysis software I used enables me to cross-check data in different modalities. This follows recommendations made by Merriam and Tisdell (2016), who wrote that reliability could be obtained using other modalities to cross-reference participants' responses.

Confirmability

Finally, I monitored this study reflexivity using a research journal to document and describe each step in the process. Researchers can establish confirmability by asking for feedback during the data analysis process, while working in collaboration with my committee to monitor bias or challenges. In addition, confirmability was reduced by allowing participants to view the transcripts of their responses, looking for areas where any bias or influence was more prevalent than that of the participants' responses (Patton, 2015).

Ethical Procedures

I applied for approval from Walden University's Institutional Review Board (IRB) to conduct the study. My authorization to conduct the research, Walden University's approval number for this study is 09-09-20-0302925, and it expires on September 8th, 2021. I posted an invitation letter on social media (Twiter, Facebook, and LinkedIn) to start the recruitment process. The social network is across the different school districts and separates from the participant's workplace; therefore, I did not need to apply for district approval to conduct this study. More importantly, it was not necessary to contact school districts to access educators' contact information since they volunteered to participate in the study from their social media account. After participants expressed interest via email, I sent them the consent form to make an informed decision to participate in this study. All teachers' identities that participated in the study was kept confidential.

All participants had access to an electronic consent form; this form outlined the study's purpose, described the need for teacher volunteers, enumerated the criteria for participating, and described FLM. Additionally, there were a description of the general nature of the study, data collection and analysis processes, and the methods used to keep participants' identities confidential and anonymous. In the consent form, participants received an email with my contact information and that of Walden's IRB representative to ask questions, express any grievances or concerns about this study. The participants

emailed me once I answered all their questions. I asked them to email me 'I consent' before beginning the data collection process.

In addressing ethical procedures throughout this study, all protocols required by Walden University's IRB were followed, and the consent form procedures described above, as well as constant reminders to participants that they were able to exit the study at any time. As part of the interview protocol, before conducting interviews, I reminded participants of their right to vacate the research, asked clarification questions, and freely shared their perspectives. Throughout the study, none of the participants informed me of any physical or emotional stress or discomfort. The study did not have any impact on participants' employment with their school districts.

I recorded all interviews digitally and stored an encrypted file and password protected on my laptop. All the digital transcripts from HyperResearch software were encrypted with a specific login and password. All the data is stored on a USB device in a locked box safe in my office and stored there for five years. The data collected could be accessible to my committee and me.

Summary and Transition

In this chapter, I covered the rationale for conducting the study using generic qualitative research. The generic qualitative design was well-suited for this study's goal of exploring teachers' choices for implementing FLM. Additionally, I discussed the process of recruiting participants; they were recruited on a volunteer basis from social

media. This study used a two-part data collection procedure, consisted of an online questionnaire and semi-structured individual interviews, all of which were collected from ten middle-school teachers from a social network, LinkedIn, and Facebook, and Twitter. There was a discussion on the process that was taken to assure the study's trustworthiness and safeguard the participants' identity and confidentiality. Lastly, a discussion on collecting data from participants and the storage method was explained in detail.

In Chapter 4, there will be a detailed explanation of the results. There will be a discussion of the setting, demographics, data collection, and variation in the data collection plan. Additionally, there will be a discussion on data analysis, evidence of trustworthiness (transferability, dependability, and confirmability). The chapter will conclude with a discussion of factors that influence teachers' choice, challenges with FLM, and the perceived usefulness and ease of use of FLM, as well as concluding remarks.

Chapter 4: Results

The purpose of this study was to explore teachers' choices for implementing FLM and provided evidence-based practices and recommendations for the creation of a support system, the transfer of knowledge to teachers' professional practice, and to help create a support system capable of assisting teachers in their own attempt to use FLM successfully in their classroom. In this chapter, I provide a review of the research questions and the setting. Also, I describe the participants' demographics and outline my process for data collection and my data analysis process. I present evidence of trustworthiness and end with the results of the research.

These research questions guided the study:

RQ1. How do teachers describe their choices to implement the flipped learning model in their classes?

RQ2. How do teachers perceive the usefulness and ease of use of the flipped learning model?

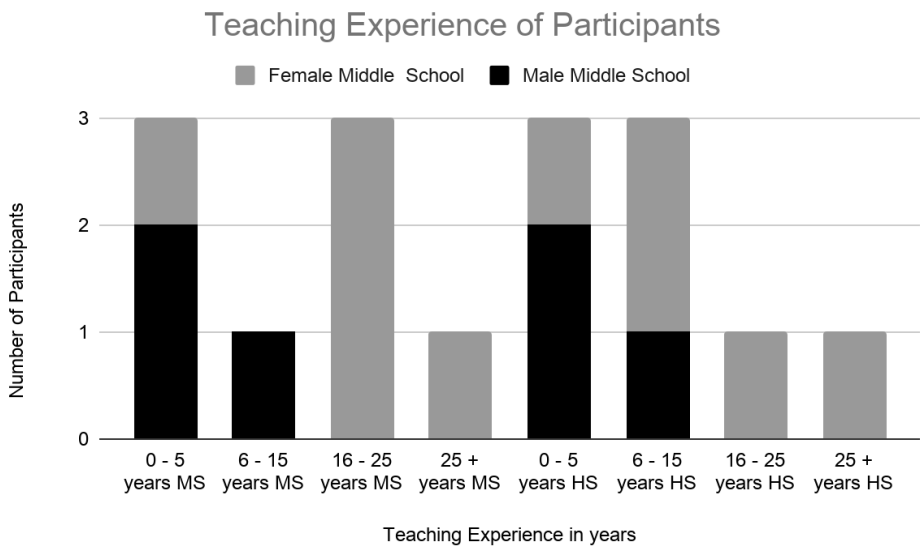
Setting

Every participant was interviewed in their chosen space as the interview took place via video conference, virtually. During the year of 2020 when this research was conducted, there was a Pandemic (COVID 19) happening around the world. In many school districts around the United States and internationally, schools have been conducted virtually. Based on that fact, participants may have associated a hybrid (students show up some

days physically and other days stay home for virtual instruction) with FLM. Only one participant did not make the distinction between FLM and the current hybrid model. Many of the general demographic information was collected via an online questionnaire. The demographic information was volunteered and not part of the semi-structured interview questions. These questions are included because the teaching experience (See Figure 3) of the participants and their level was essential to this study, specifically when discussing participants' implementation of FLM with fidelity. Further research will be needed to determine whether the successful implementation of the FLM is based on the grade-level of students or the participants' teaching experience.

Figure 3

Teaching Experiences of Participants and School Level (middle or high school)



Demographics

At the time of data collection, all participants are full-time certified classroom teachers ranging from 22 to 54 years old (see Table 6). Six participants had no more than five years of teaching experience, and eight participants had between six to 15 years of teaching experience. Only two participants had 25 years plus teaching experience. Eight participants teach middle school currently, and one participant teach high school at the time of the interview was conducted. It is important to note that the one high school teacher only discussed her flipped learning experiences from her 15 years of teaching at the middle school level. The participant started teaching high school two years prior to this interview.

Table 6

Participants by Gender and Age Group

Gender	Ages 22 - 28	Ages 29 - 35	Ages 36 - 44	Ages 45 - 54
Males	3	3	0	0
Females	2	1	3	4

Data Collection

Participants

Although I attempted to recruit 15 participants to recruit at least 12 to complete an interview, the invitation on social media resulted in 20 responses, and 16 teachers gave

consent to participate in the study. Four participants never responded after the initial email. Of the 16 participants that agreed to participate in this research, only ten completed the interview. Four participants did not complete the interview due to their inability to speak English. Two participants did not show up for the initially scheduled appointment nor after three re-scheduled meetings. Although in this study, I planned to have 12 participants, only ten participants provided thematic and code saturation (Hennink et al., 2017). It is possible to reach about 85% thematic saturation from nine to 16 interviews (Guest et al., 2020). In the current study, there were no new themes revealed by participants after the ninth in-depth interview.

Data Collection Instrument

There were two data collection instruments. First, participants had to complete a ten-minute online questionnaire via Google form; their 45 minutes interview was then scheduled via Zoom application. All interviews were conducted and recorded through the Zoom application, which provided both video and audio recordings. The interviews lasted between 30 to 40 minutes. The diversity of participant location and internet strength impacted the duration of the interviews. Also, the Pandemic (COVID 19) affected the deliverance of K-12 instructions because many schools were closed and went virtually.

Variations in the Data Collection Plan

I scheduled interviews between ten to 15 participants; however, recruiting participants was a challenge due to COVID 19. After receiving IRB approval, I posted the invitation letter on all social media outlets (LinkedIn, Facebook, and Twitter). Initially, I posted a letter on my homepage daily for a week tagging education groups based on my criteria (middle school, math, or English language art teachers). After three weeks, this process did not yield any responses, so I specifically posted the invitation to specialized groups on all social media outlets for the following four weeks. I posted on eight specialized educational groups plus direct messages to my network of 200 plus educators.

One invitation post recorded 95 total views on LinkedIn at the time of the data analysis, but I did not receive one LinkedIn posting request. I posted the invitation letter on my Facebook page publicly before targeting a specific group, and I did the same thing on Twitter. In the fifth week, I received ten Facebook requests after posting more than 200 direct messages on Facebook. Five out of the ten participants could not complete the interview process since they did not speak English. I continued recruiting participants.

After three weeks of being short of five participants, I reached out to the IRB to include both science and social studies teachers and minimize the total number of participants to be interviewed from 12 to 15 to 10 to 12 instead. While waiting for IRB approval, four participants from Twitter gave consent to participate in the study and

completed the interviews. Once IRB approved my request to include science and social studies teachers, I reached out to them on my social networks, and the last participant was a science teacher.

Data Analysis

I transcribed all the interviews and all participants verified for the transcriptions for accuracy. After the fifth interview, many common words and phrases started to emerge while listening to the participants. By the tenth interview, the familiar terms and the phrases remain common in participants' responses. The following themes emerged: *differentiation, excitement, students take responsibility for their learning, editing videos is a challenge, teaching is fun, a better relationship with students, better classroom environment, and meeting students' academic needs*. While transcribing the interviews, I conducted handwritten precoding based on the tenets of the conceptual frameworks, previous research, words, and phrases that repeated the most on participants' responses. Within the technology acceptance model (TAM) concept, the following term or phrases showed up repeatedly: perceived ease of use, perceived *usefulness, technology role, informational technology skills, technical support, recording or editing videos*. Within the theory of planned behavior (TPB) concept, the following word or phrases often repeated *motivation, excitement, support from colleagues and leaders, knowledge about FLM, differentiation, planning time, motivation, attitude, and choice to implement, relationship in the classroom.* After uploading the transcriptions into HyperResearch, I

used the common phrases to code each document manually. However, new words and phrases emerged while manually coding the text within HyperResearch. The following appeared *no support, traditional versus FLM, early adapters, a challenge to FLM, preparation before flipping, video length, and quality*. Table 7 listed the initial list codes with explanations.

Table 7

List of Initial Codes with Explanations

Conceptual Lens/Preliminary Ideas	Code/Theme	Explanation
TAM	Technical support	Statements that gave examples of a dedicated IT specialist in the school to support with technical issues with the internet or broken devices.
	Internet access	Statements that gave examples of students or teachers have access to working internet, or how students have access to the internet and devices in and out of school.
	Devices	Statements that mentioned students and staff have access to computers, tablets, and phones.
	Perceive ease of use	Statements that teachers used gave examples of how teachers described

Conceptual Lens/Preliminary Ideas	Code/Theme	Explanation
		the ease of use of the FLM.
	Perceived usefulness	Statements that teachers used gave examples of how teachers described the perceived usefulness of FLM.
	Technology role	Statements teachers used to note the role of technology when choosing to implement FLM.
	Components of FLM	Phrases teachers used to explain the components of FLM and how they connected them for instruction.
	Informational technology skills	Phrases teachers used to describe their technical skills to implement FLM.
	Video length and quality	Statements teachers used to explain the importance of video length and quality.
	Recording or editing videos	Statements teachers used, noting their ease or challenge with recording or editing videos.
	Preparation to implement FLM	Statements teachers used to explain the critical factors to think about when considering FLM.

Conceptual Lens/Preliminary Ideas	Code/Theme	Explanation
	Challenge to FLM	Statements teachers used to note their challenges with FLM.
TPB	Motivation	Statements teachers used to note teachers' motivation to flip
	Differentiation	Phrases that teachers gave as examples when differentiating their instruction in FLM.
	Support from both colleagues and leaders	Statements that explained the kind of support teachers received from their leaders and peers.
	Excitement	Statements teachers used to describe teachers and students' excitements in FLM.
	Knowledge about FLM	Phrases teachers used to explain their knowledge of FLM and how it prepared them to implement it.
	Attitude	Statements teachers used to give examples of teachers and students' attitudes in a flip classroom.
	Choice to implement	Statements teachers used to explain a rationale for implementing FLM.
	Relationship in classroom	Statements teachers gave as examples of the relationship between students-to-students and teacher-to-students.

Conceptual Lens/Preliminary Ideas	Code/Theme	Explanation
	Early adopters	Statements that teachers gave as examples of teachers implementing FLM early.
	Traditional versus FLM	Statements that gave examples of when teachers differentiate between traditional versus FLM
	Start slow vs. all at once	Statements teachers used to give examples of advice on how to start implementing FLM.
	Students' academic level	Phrases teachers used to explain which academic group enjoyed or struggled with FLM.
	Organization to manage workload in FLM	Phrases teachers used to explain strategies to manage the workload in a flipped classroom.
	FLM the norm	Statements that teachers used to give examples if FLM is the norm in teachers' schools.

I reviewed the conceptual frameworks to see the connections between the precodes and how to answer the research questions (Saldaña 2016). Although the precoding process focused on the search's broader perspective, it was not enough to thoroughly analyze the data nor provided a detail understanding for me to answer the research questions. I used HyperResearch auto-code as a backup to see if I missed any

phrases or common words from the participants' responses so that I could have a better understanding of the participant's responses. Through the interviews, the participants provided in-depth and thorough details of their experiences with FLM. It would not be reasonable for me to group the statements into one code to represent a data section; it was necessary to split the passages into smaller phrases that addressed the research questions (see Saldaña, 2016). After that process, I reviewed the transcriptions again to note the themes aligned with the original pre-codes based on the conceptual framework. Also, to check alignment with the research questions (perceived ease of use, perceived usefulness, and factors that influence choices to implement FLM), minor changes were made to the pre-codes. Saldaña (2016) explained that repeated phrases or words by more than half of the participants are themes and potentially relevant to the study. In this study, seven or more participants repeated the themes, which are noted as necessary. Table 8 listed the themes aligned with the code and participants' quotes, conceptual frameworks, and research questions.

Table 8

Themes, Code, and Quotes Related to Conceptual Frameworks and Research Questions

Theme (commonality)	Conceptual Framework	RQ	Relevant codes/quote
Perceived Usefulness (10)	TAM	2	"It is useful because it's flexible. It is useful because even if a child comes to school or says, a student comes to school every day in your zoom classroom. They do not quite get it, and they can go back to that video and play it over and over just

Theme (commonality)	Conceptual Framework	RQ	Relevant codes/quote
			like most adults do when they are trying to learn something, they pause, they go forward, they take notes, they reflect, and flip It allows that to go on beyond the classroom time. Because as you know, many of us sometimes have over 30 or more students, and we cannot get to all the questions for every student. We cannot sit down and help every student, but having those resources pre-set and available for those students will allow that to happen."
Attitude (8)	TPB	1	"Do you want to know it's been phenomenal, and you get the thank yous, you get the smiles, you get the haha, you hear them saying, 'I get it now?' I did not hear enough of that before FLM. So, it has been just a full ride for both of us. And like I said, the ultimate goal is to have the students learn the materials, but the caveat for me is not only are they learning it, but they're also teaching their younger siblings too. They are talking to the parents about it, and the parents tell me, so I cannot say enough about it. So, it's been awesome."
Differentiate Instruction (9)	TPB	1	"Okay. But at the same time, I can still direct them to the information that I want them to focus on. So yes, they still have all this information. But when we come to the class, just like I was saying about those students who may not have access, since it was still a group effort and they still learn. They were still able to engage because they were still listening to their peers, listening to their responses, and

Theme (commonality)	Conceptual Framework	RQ	Relevant codes/quote
			listening to the summarization of the content or those important aspects of the lesson."
Relationship in the Classroom (8)	TPB	1	"Oh, I love that. I would talk to anybody, encourage them to try it. I really enjoy seeing my kids in the room understanding and doing work together and helping each other understand when they are peer tutoring or doing cooperative learning. I watched one kid, who is totally confident of it, helping another student who is struggling. And I watched that student understand and come, you know, and able to help someone else, who is also struggling? I just love the level of understanding and how it is a more relaxed environment. I am not under the gun to stand up there and be for 45 minutes. The kids are not just sitting around soaking information, and they are using it; they are interacting. I like the life it brings to my classroom."
Perceived Ease of Use (10)	TAM	2	"It's easy, once you get the videos together and you thought, wow, I mean, it's pretty easy because it was just enabling me to do more activities with the class. So yeah, I think it is; it's fairly easy."
Motivation (7)	TPB	2	"Yeah. And I would also say our students are tech-focused, or this generation of students is pretty tech-savvy and pretty connected to computer tech and applications already. It is just the way that they do business. We must do business their way."

Theme (commonality)	Conceptual Framework	RQ	Relevant codes/quote
Preparation to Flip (10)	TPB	1	"First, they should be very willing to do it because if you do not have the passion, I can tell you it might get difficult, and at some point, you might give up on the model or your students that might not be that good. And, you will have to, like, ask for help. You will have to, like, encourage the school administration to support you. You just must justify why you need to do this positively and encouragingly. So, I will say it, and it's just coming from your passion."
Facilitator (4)	TPB	1	"Yes. I do nothing but stand outside the circle and stand with a clipboard. The students are mostly the ones running the classroom, and they are asking questions, correcting each other, and finding support in the text. And I am just there, you know when they need something or guidance. If they cannot get the info by themselves. They will ask, "does anybody remember where this was? Or what was the lesson we did with X, Y, or Z? I am just there to answer them. And when they get stuck, and they do not have any more questions, I'm here to add another question to the pile so that they can keep moving forward."
Factors that Influence Teachers Choices (10)	TPB	1	"I will tell you what made me take that chance; I was tired. I was exerting too much energy, and you know, into teaching, and I just felt like I was putting more energy into the learning than the students. And I was like, well, wait a minute. I know this information, and they

Theme (commonality)	Conceptual Framework	RQ	Relevant codes/quote
			don't; why am I tired? And, when I thought about that flipped model, I said, 'let me look at it." But I just glazed over it, and only a surface look. I started with a surface-level understanding of what it was. And I said, okay, you know, so it is just videos for direct instruction, okay. I started with some videos; that is not enough. And so, I kind of started to dig deeper, and, you know, it is more than just a video. So, I was only tired and bored with the everyday same thing."
Knowledge of Flipped Learning Model (9)	TPB	1	"Well, we've focused on different blended learning models in my school. So, I have tried kind of dabbled in a few of them, but the flipped would be where generally it could be for introducing new content, or it could be reinforcing content where students are usually watching a video at home for that learning. And I would expect them to be taking notes and coming in, prepare with that, and then the activities in class. There is less than direct teaching in class because they have had that opportunity to watch the video at home. Whether it is independent activities, small groups, or with me, the application piece is how I considered flipped learning. So, it is less direct instructions in the classroom during class time, but more of the application and practice and activity. And it is not eliminating direct instruction because some students will need that in those small groups who are not clear on what was going on in the videos."

Theme (commonality)	Conceptual Framework	RQ	Relevant codes/quote
General Skills (10)	TPB	1	"It also helps me build higher-level skills in teaching and also enhance my computer skills the same way."
Support in General (10)	TPB	1	"We just had a meeting with the principal, and she's a very understanding person. So, she had not much conflict about it. So, she was ready to support us too."
Technology Role in FLM (9)	TAM	2	"I don't think it probably would have been on my radar if I didn't have my kids with Chromebooks at home. Everything was so heavily dependent on access to technology. And that is what I really valued was that my kids had access to everything when they needed it at all times."
Challenges with Flip Learning Model (8)	TPB	1	"That's who I was. Now it is simply hard because all my kids are on a different page. So, it is essentially like I have 36 preps a day, and it is exhausting. And I have to be on top of everyone's work because they're not going to be on top of their work."
Planning Time (10)	TPB	2	"I'm going, to be honest with you. I see myself using probably double the amount of time that I normally would plan. And I am okay with that because the outcome has been wonderful. So, I do see myself needing extra planning time to plan for flipped learning, using technology, et cetera. So, I would say that my planning time has doubled, and sometimes I do not get it all in doing the Monday through Friday work. I must put some time in on the weekends for it to be effective in

Theme (commonality)	Conceptual Framework	RQ	Relevant codes/quote
			school. So yeah, I do spend a lot more time than I traditionally would have, but it's certainly worth it."
Traditional Method versus Flip Learning Model (6)	TAM	2	"So, if I give them feedback on a test and say, you need to do X, Y, Z on the next test to improve, which I've done my entire teaching career in a traditional method. And they would still make the same mistakes on the next test, and they would still make the same mistakes again. Once I started flipping, I would say it once, and they would not make those mistakes on the next test, like all of them. And I was just blown away by that.
Technical Support (8)	TPB	1	"Our district has a K-12 instructional technology coach whose job it is to support teachers as they integrate technology into their classroom. So, she was good at providing professional development...We utilize Google classroom, and all the G suite tools."

There are two research questions in this study. The first question focused on how teachers described their choices to implement FLM in their classes. The following themes surfaced to address the first research question: *relationship in the classroom, differentiation, factors that influence my choices, motivation, a challenge to consider when deciding to implement FLM, attitude towards FLM, innovative strategies, a better teacher with FLM, support in general, and preparation to implement FLM*. The second research question focused on how teachers perceived the usefulness and ease of use of the

flipped learning model. The following themes emerged: *perceive usefulness of FLM, perceived ease of use of FLM, technology role in FLM, technology Information Skills, an easy component of FLM, technical support, and support to ask leaders*. Eight participants reported the challenging part of FLM is needed a lot of time to plan for FLM compared to the traditional classroom (see Table 9).

Table 9

Amount of Planning Time Needed to Implement the Flipped Learning Model

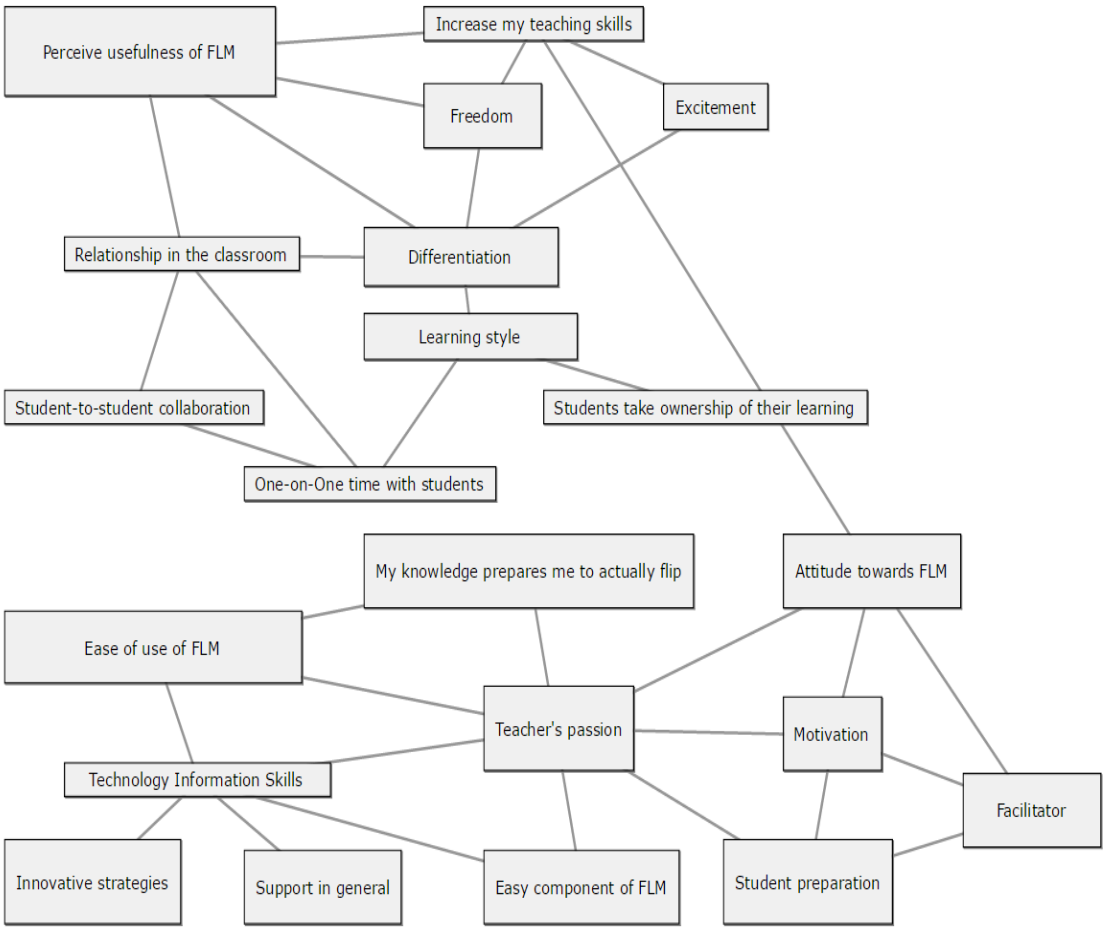
Pseudonyms	Quotes
Noel	"I know, at times, it is hard. The setup of the video, the camera itself must be noticeably clear. Then you must make sure the lighting, things like those techniques that I did not have. I must learn in time."
Marie	"So, when I started, I focused on the videos first because that's very time-consuming. And when I started ten years ago, the internet was not as good as it is now. So, it would take me all night to upload a 10 minute or not even a 10-minute, five-minute video onto YouTube. I would have to leave it going overnight just for one video. And often, I would wake up in the morning. It still had not uploaded fully."
Joe	"And so, I spent a lot of time over the summer, informing myself, you know, doing research, that type of stuff."
Dinah	"It is time it takes; some things may take an awfully long time, and which compared to the traditional way, is a lot of time to plan. Like you find yourself focusing a lot of your time on one thing that you will have completed already doing it the traditional method, especially when it is in the implementation phase."

Pseudonyms	Quotes
Nguyen	"You would have to have your resources available. You would have to have time to make the new resources. I mean, see the benefits, but the recurring thing is time."
Charlene	"So, what I did is I sat down, and I pretty much kind of threw out my textbook, and I sat down, and I took all the content that I felt needed to be taught throughout the year. And I did a mapping of that, of how I felt it scaffolded together well. And I created lectures or found videos or recorded content on every topic and every idea. Yeah, that can be taxing. So, I try to scatter those times. Like, I know when those timeframes are coming up because I have tried to map out my master for my quarter, well enough so that I am not overwhelmed with all my classes at the same time. So, it takes a lot of preparation and scheduling to make sure that I am taking a quiz in one class while creating an assignment in another class. And I am not doubling up on work."
Noble	"I am going, to be honest with you. I see myself using probably double the amount of time that I normally will plan. And I am okay with that because the outcome has been wonderful. So, I do see myself needing extra planning time to plan for flipping learning, using technology, et cetera. So, I would say that my planning time has doubled, and sometimes I do not get it all in doing the Monday through Friday work. I must put some time in on the weekends for it to be effective in school. So yeah, I do spend a lot more time than I traditionally would have, but it is certainly worth it."
Claudia	"Yeah, it is an investment in time, and it can be, but it will get easier. The more you work on it, just like anything, right. It is going to get easier with practice, but yeah, it is a lot of front-loading time for preparation and getting those lessons ready. The first go-round, it is going to be a challenge, and it is going to seem overwhelming."

There many similarities between the two research questions after noting that each theme aligned with each research question separately. The themes that showed factors that influenced teachers' choices to implement FLM (research question 1) also aligned with the perceived ease of use or usefulness (research question 2) of FLM. With that being said, I reviewed the transcription and codes again to find a relationship among the themes that shared commonalities with factors that influenced teachers' choice to perceive ease of use and usefulness of the FLM (see Figure 4).

Figure 4

Relationships Among Themes And Codes Related to Both Research Questions



Evidence of Trustworthiness

Credibility

The credibility of this study started with a plan to conduct this research. The construct of the literature review provided the parameters to evaluate this work. Throughout the process, regularly, I collaborated with my dissertation committee. The data collection tools were closely analyzed and critiqued by committee members and an expert panel. The tools were analyzed to ensure their ability to provide in-depth information to answer both research questions. The participants received the written transcript of their interview about a week after their interview. All the participants had an opportunity to check the transcript's accuracy and that their responses were captured accurately. All participants returned the transcription after they reviewed them with minimal editing. I made the corrections before beginning the analysis process.

Transferability

This study addressed transferability by describing (see chapter 3) the study's boundaries, scope, and delimitations. Furthermore, in the results, I presented a clear depiction of the participants' choices to allow the readers to formulate their conclusion. Recruiting on social medial made it equitable to recruit a diverse group of middle school teachers (math, science, social studies, or English), gender, age, and years of teaching experience. These criteria were part of the research; therefore, choosing participants was random. A limitation to transferability was among the participants' demographics and

location. Even when creating a specific audience for the United States on social media, two of the participants teach in an international institutional setting different from the United States. The participants' choice may not reflect other teachers within the same school or district.

Dependability

FLM is still being studied as an innovative teaching strategy. Therefore, I gave a complete explanation of the methodology and design so that this study could be duplicated easily. Furthermore, each participant had a chance to preview the interview transcript for accuracy. Within the coding process, there are themes from both conceptual frameworks and other research. Moreover, I kept a detailed audit trail, invitation letter to participants, notes throughout the data collection process, and data analysis process.

Confirmability

There is a detailed and reflexive journal to keep an audit trail during the data analysis process. At the beginning of each interview, I journaled thoughts, concerns, and reflections on the last interview process. I maintained the same journaling process of reflection after each interview to note any potential biases or risks to the research's objectivity. The detailed audit trail of the analysis from the codes to themes and written notes of thoughts provides confirmability.

Results

Based on the emerged themes, this study's results aligned with both research questions. The emerged themes are intertwined with each other and did not fit into a specific research question. The results are grouped by the themes, which were noticeable from the analysis of the interview transcripts. Therefore, there are discussions of the participants' experiences, successes, or barriers that were discovered throughout the interviews. These themes revealed a common thread from seven or more participants' responses; however, themes that only five or fewer participants mentioned are also noted here. The themes that showed up in five or fewer participants' responses are discussed generally in this chapter. Still, they are essential to keep in mind for a successful implementation of FLM. All common threads among the participants' responses will generally be discussed here, but a more thorough discussion will be in chapter 5.

Factors that Influence Teachers Choices

The first research question asked: How do teachers describe their choices to implement FLM in their classes? In this study, I focused on the details and rationale teachers provided for flipping their middle school classrooms. Flipped learning is an educational approach where teachers invert direct instruction to video-based instruction. Typically, at-home students view a video for direct instruction, then come to class practice with teachers and peers. The educator supports students to apply learned concepts from the subject matter. The classroom becomes a cooperative environment

between teachers and students, resulting in the group space becoming a dynamic and interactive learning environment. (FLN, 2014a). The following themes appeared (student academic needs, facilitator, technology role in FLM, and knowledge of FLM) to address the first research question.

Student Academic Needs

Educators noted that one rationale was to give students more responsibility in the classroom. Noel offered this explanation for choosing to flip her classes:

> I needed to embrace new technology, and I needed to make students understand more on various topics and have that sense of responsibility on the students' side. Yeah, and to have something new to look forward to. No, it is more convenient and accessible at the same time because I can refer back to a lesson without having to reteach it traditionally.

Likewise, Michelle explained that she was excited to try something new to engage her students, and her school started to implement blended learning; therefore, she stated that it was an excellent opportunity to flip her classroom, and she said:

> I'm going to say the county's movement towards blended learning and my own personal, or I should say my own professional experience with how technology can be used to enhance student learning and just my complete awe at all the things that are created out.

Another factor that educators explained was the need to support chronic absentee students to keep up with their learning. Marie desired to support her athletes and sick students to keep up with their work, and she said:

> I ended up with two or more students who were high levels support students but chose to miss many school days because they were traveling worldwide to go to the Olympics and things like that, and students who were unwell and in hospital. So, I was trying to think of a way to keep them engaged with the math classes. So, I thought FLM might be able to help them with that. So, I thought I would be giving it a go. So, I started making videos.

Yet another factor came from Joe. He wanted to foster a better relationship with his students, so he said:

> I attended a conference; one of the speakers explained that he was able to meet one-on-one with his students; I was just on fire after that. Oh my gosh. I can go one-on-one with all of my kids, you know, I was just very, very excited.

Dee, Charlene, and Noble desired to encourage their students with Individualize Education Plan (IEP) to complete their assignments or work with their classmates and meet their academic needs. Dee stated:

> I would have students who would have IEP or wouldn't do any homework, but when they came back to the classroom when there is an engaging discussion with everyone, even though they didn't read, they were still okay because we're

> summarizing the lesson…The IEP students were still getting the information they needed; I got excited because their scores even went up…They still learned the concepts when they come to class. So, I know it works, and I got excited, and I just continued to invest my time in it because I was investing in the students.

Similarly, Charlene explained her sentiment:

> I had a difficult schoolyear keeping up one particular class; I had many students with Learning Disorder (LD) in the class, and I was doing individualized plans for multiple kids. These kids were stressed out, really struggling. Parents were calling me upset because their kid is trying to do their homework at home, and parents did not understand it and could not do it with them. I just got to the point where I was like, something must change here. I cannot keep doing this style any longer. I was speaking to one of the ladies that I was interviewing for my master's program; she was mainly focused on a lot of students who had LD. So, she was talking about how easy it was to individualize and how her LD students grasped onto it, and it is kind of just resonated with me. I need to try this because I cannot give these students what they need right now. So, I have got to do something different. I am not meeting their needs. So, I guess that was the emphasis on making me do this.

Along the same line of thought, Noble wanted to have a more inclusive classroom, so she said:

> I deal with students with various social, emotional needs as some of our students are just so shy. They want to ask you questions, but their shyness prevents them. Some feel like if I ask questions during class, maybe someone may look at me funny or think I'm slow or just not with it. So, they won't ask questions, but when they go home and look at those materials that you have created, like the videos and other materials, they will be okay, and say I got it. I did not have the opportunity to ask questions in class because I'm so shy. I felt like, you know, I will be perceived way, but I got it now. In Flip classrooms, these feelings are eliminated, and we get to what students need, which was learning the material.

These teachers shared these factors influenced their choices to flip. Aside from those critical factors mentioned above, other educators said the need to transform the classroom environment from stagnant to a livelier atmosphere. Charlene said it this way, "…the kids aren't just sitting; they are soaking information…I like the life it brings to my classroom." They enjoyed their new role as facilitators.

Facilitator

Although only four educators explicitly described themselves as facilitators, it is important to note that those educators contribute their motivation and excitement to work

based on their role change to a facilitator. As a facilitator, they performed could assess students' learning immediately. Claudia had this to say:

> So, the easy part was being a facilitator in the classroom rather than just standing up and talking and watching students fall asleep as I'm going, blah, blah, blah…it freed up my time to work more specifically with students who needed the help. Sometimes I would facilitate the activities or just push those who needed to be push forward; oh, you understand this concept; I want you to move on. You know, it allowed me to differentiate a bit more, I would say.

Likewise, Charlene shared a similar sentiment:

> I enjoy seeing my kids in the room understanding and doing work together and helping each other come to a better understanding of the materials. When they're peer tutoring or doing cooperative learning, they are learning. I watched one student who becomes confident of his knowledge, helping another student who's struggling. Then I observed that the same struggling student understands the concept enough to help someone else who's also struggling. I love the level of understanding and how it's a more relaxed environment.

Michelle expressed her experience this way:

> The students are taking over the screen, the students display their lesson, and they are showing their tasks and asking questions as they go through the activity with

> their classmates. I am a facilitator, like a student will say, "this is what the directions say, but I don't understand it." And I'm there to answer those questions.

Technology Role in Flipped Learning Model

Technology covers both (a) the change of a natural environment to satisfy some pre-conceived human needs and desires and (b) human innovation that involves knowledge and development of systems that solve problems and stretched human capabilities (MSDE, 2016) beyond their limits. Based on that definition, participants explained that technology played an important role in considering implementing FLM. All participants described without technology, and it would have been challenging to start or continued with FLM. There are situations where some students do not have computer devices or the internet at home, and participants must plan to meet these students' needs. Technology is an integral part to implement FLM in the classroom, as Joe stated:

> I could not have done it without it. Everything was so heavily dependent on access to technology. What I really valued was that my kids had access to everything when they always needed it. I really do not think I could have done it if my kids did not all have their own Chromebook and access to wifi.

Similarly, Claudia had all the resources she needed as she noted:

> Yeah, we are a one-to-one laptop school, so it makes it relatively easy for us to say, you have got to go home and watch this video or do this activity or whatever

> it is. Our students have access to technology and the internet, so that is not an issue at all. And I have all the tech that I need.

Whereas Marie used her own money to buy the devices to flip her classes:

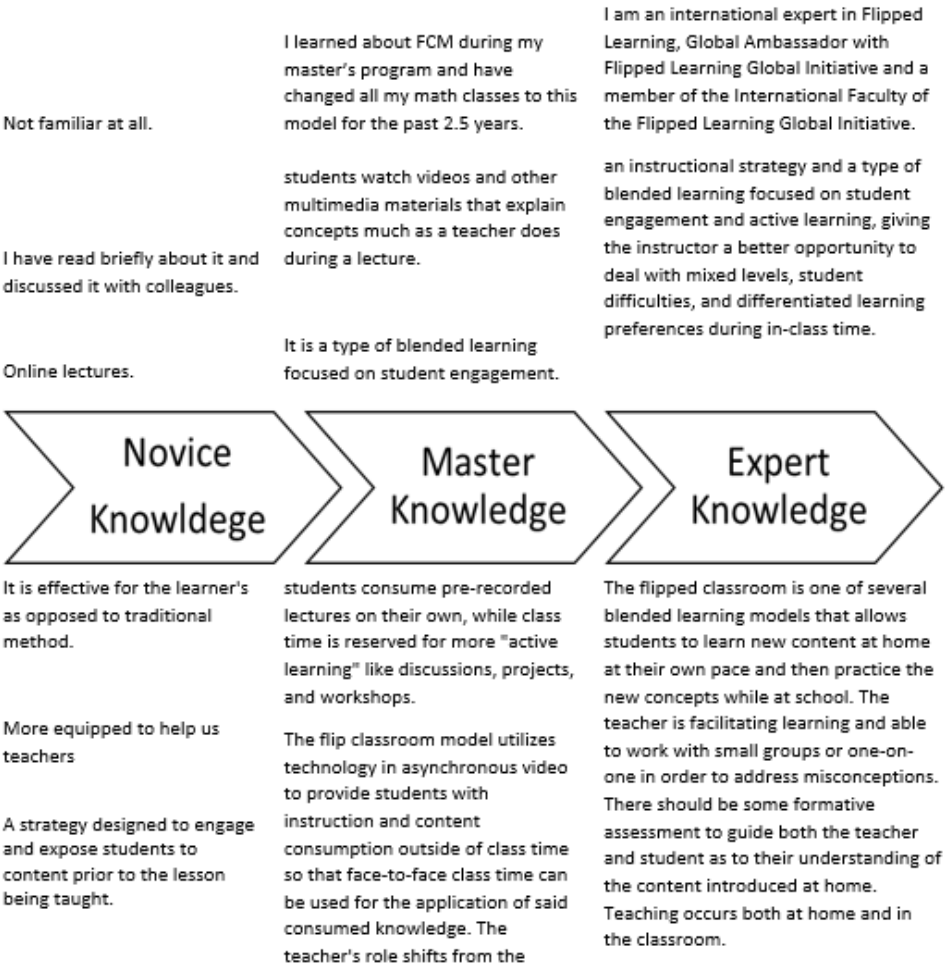
> I purchased all my own technology to do this because I believed in it, and I wanted to make sure that I had the technology. I spent a lot of time researching, and I wanted to make sure that I had the technology that I wanted to be able to do it. And I am glad I did, but not everyone can afford to do that.

Knowledge of Flipped Learning Model

It is key to a successful implementation of the model. The components are (at-home learning and in-class activities). Educators must plan accordingly to ensure that the video-based instructions are aligned with in-class activities to maximize class time. If that component is missing, it creates confusion and chaos for both the teacher and students. Nine participants explained their knowledge of the flip help as factors that influenced their choices to implement the model with ease. Their knowledge ranged from a surfaced understanding of a master thesis based on FLM (see Figure 5).

Figure 5

The Ranges of Participants' Knowledge of the Flipped Learning Model

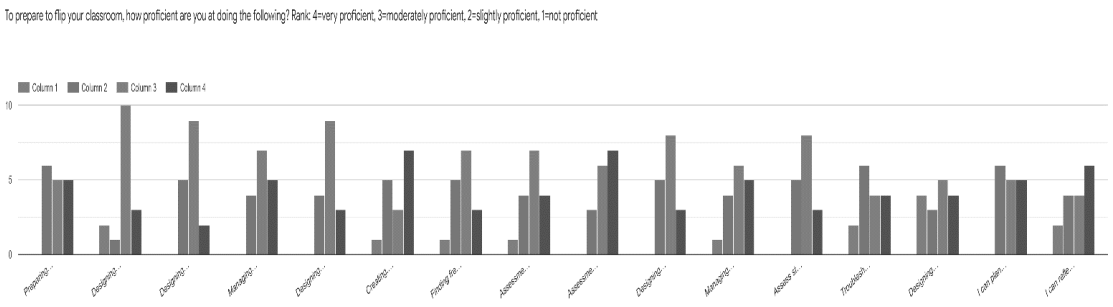


Pulling from the questionnaire, the participants described the process they followed to prepare to implement FLM. The following themes emerged from the questionnaire. The themes are general skills, support in general, and level of proficiency to implement FLM. All participants explained the process to get ready to flip (See Figure

6). The teachers mentioned that teachers need to check their mindset and attitudes. Also, they noted that educators should check for available resources, devices, and internet for both in and out of school and available videos that matched their topic or content. Additionally, teachers described the process to support teachers if they do not have available resources at their schools.

Figure 6

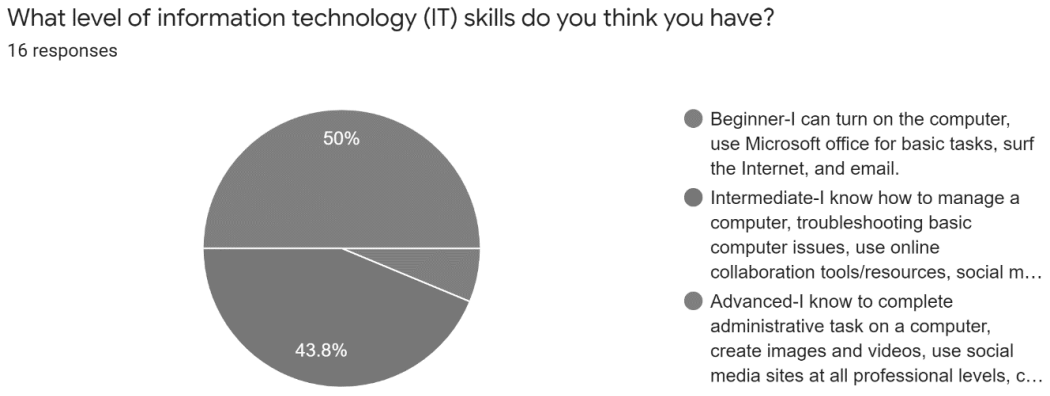
Participant Proficiency Level Before Flipping (From the Questionnaire)



General Skills. They include the following: the ability to record and edit videos, operating peripheral devices (computer, tablet, smartboards, etc.), basic troubleshooting technical issues with the educational app being used, organizational skills to manage the paperwork classroom management. It is unnecessary to have all these skills in place before flipping, and all ten participants were proficient in those skills. Advanced skills and basic skills helped teachers to plan accordingly to ask for support before or during class to avoid interruption during instruction. These kinds of support could be a colleague next door, a media specialist, the Informational Technology (IT) specialist. There were seven participants with intermediate skills in informational skills, eight participants with advanced skills, and only one participant was a beginner (see Figure 7).

Figure 7

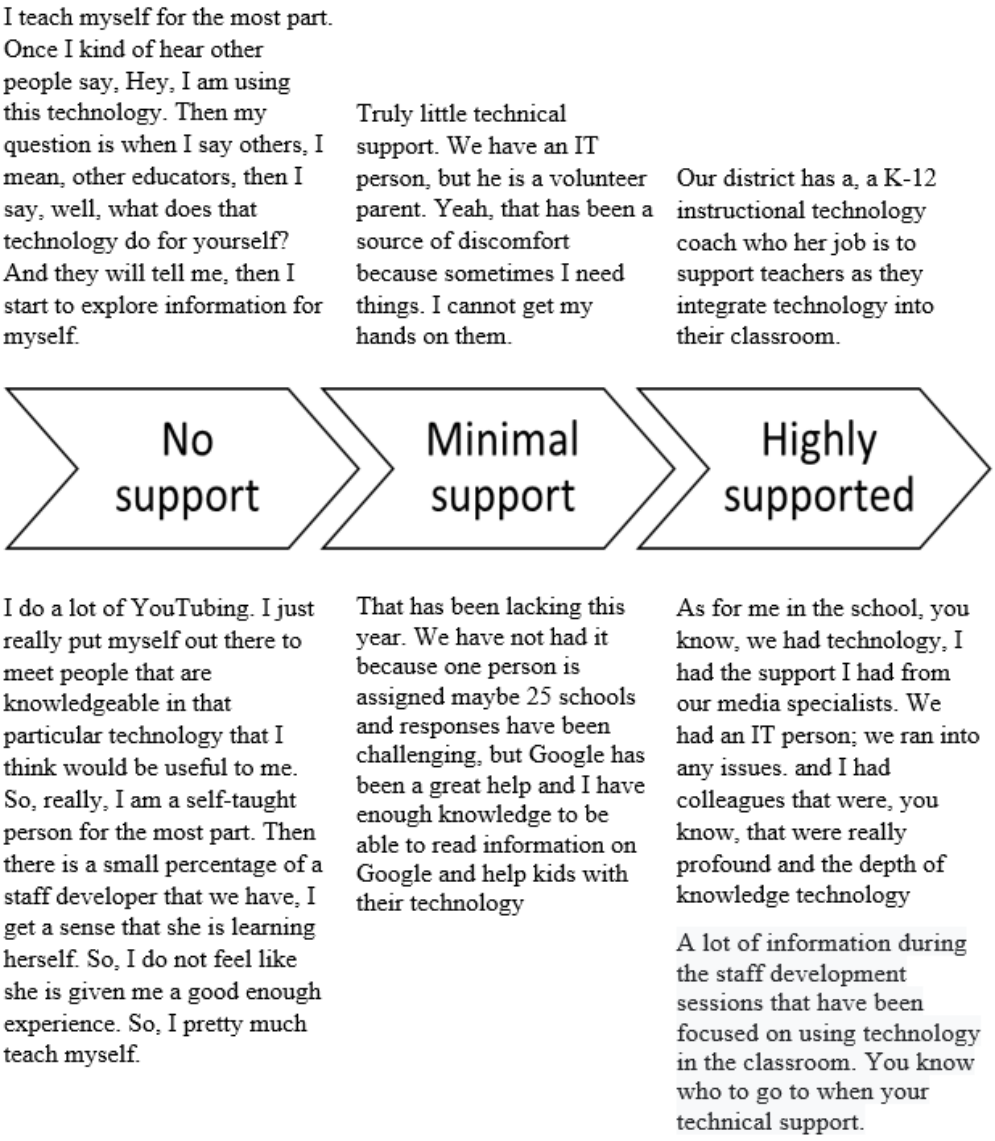
The Range of General Informational Technology Skills



Support in General. It is described as receiving support from the school leaders, peers (grade level or content), IT specialists, students, and parents. This kind of support is when the administration provides the necessary internet devices and help communicate with parents the purpose and possible benefit of FLM. Likewise, support from colleagues comes in the form of encouragement or to provide needed feedback when warranted. Lastly, support from students and parents is their willingness to be patient with the process throughout the first phase of the implementation or beyond. Proper support is a key component. Based on teachers' description, support ranged from no support to having complete support to implement FLM (see Figure 8).

Figure 8

The Range of Support Received by Participants To Flip Their Classroo.



Challenges with Flip Learning Model

Teachers described the challenges they experienced with FLM as students with no computer devices or internet access and a lack of technical support. Additionally, teachers described the increased workload to track students' progress or lack of it. They also mentioned the need for additional time to plan activities and find the right videos to align with their content or topic. They switch back to traditional, depending on the complexity of the topic students need to learn.

Planning Time

Eight teachers mentioned that planning time doubles when flipping their classroom. It took time to record, edit, and align videos with classroom instructions. It took time to plan to differentiate instructions for the students since they would be at different instructions. This sentiment is evident in Dinah's response:

> It is time it takes; some things may take an awfully long time, and which compared to the traditional way, is a lot of time to plan. You find yourself focusing a lot of your time on one thing you would have had completed already by doing it the traditional method, especially in the implementation phase.

Noble echoed the same sentiment:

> I am honest with you. I see myself using probably double the amount of time that I usually will plan. And I am okay with that because the outcome has been incredible. So, I do see myself needing extra planning time to prepare for flipping

> learning, using technology, et cetera. So, I would say that my planning time has doubled, and sometimes I do not get it all in doing the Monday through Friday work. I must put some time in on the weekends for it to be effective in school. So yeah, I do spend a lot more time than I traditionally would have, but it is certainly worth it.

Ngyuen appreciates FLM enough to focus on creating resources, not the planning time. She stated, "you would have to have your resources available. You would have to have time to make the new resources. I mean, see the benefits, but the recurring thing is time."

Traditional Method versus Flip Learning Model

Six participants mentioned they switch from flipped to traditional to accommodate the complexity of the lesson being taught. They described that it is important for teachers to know their content well enough to know when to switch because some contents are too complicated for students to grasp by initially watching a video. Noel best states this sentiment:

> I know the content that I'm going to teach to students; based on the topics, I couldn't teach challenging content into videos. I would do that using the traditional way. When I know that's the next topics are very hard, I'll make sure that I go through with students in the traditional method. It won't be like they are struggling…I don't want the students to suffer any more difficulties by teaching

> them hard stuff on videos. They'll get this information directly from me instead of a video that they do not like…

In the same way, Charlene described her rationale for switching:

> I do a combination of a flipped classroom and traditional. I came to a point where I realized that not every single topic could be flipped, especially in an algebra two classroom. Some concepts were just too much at one time in a video or too quickly introduced. So, I would say I probably only do 60% flipped classroom and 40% traditional. So, I go back and forth depending upon the topic. It's more topic-driven than it is the method.

Technical Support

Eight participants described technical support as needing an IT specialist to support broken devices, issues with the internet, or lack of Chromebooks for students' usage in and out of school. Charlene explained that she lacks IT support in her school. She offered this response, "truly little technical support. We have an IT person, but he is a volunteer parent. Yeah, that's been a source of discomfort because sometimes I need things. I can't get my hands on them." In like manner, Michelle expressed a similar notion:

> That has been lacking this year. We haven't had it because one IT person is assigned to maybe 25 schools, and getting responses have been challenging, but Google has been a great help to me. I have enough knowledge to read the

> information on Google and help students with their technology issues. I'm also available to help other staff members with some things. It's mostly been colleagues helping colleagues.

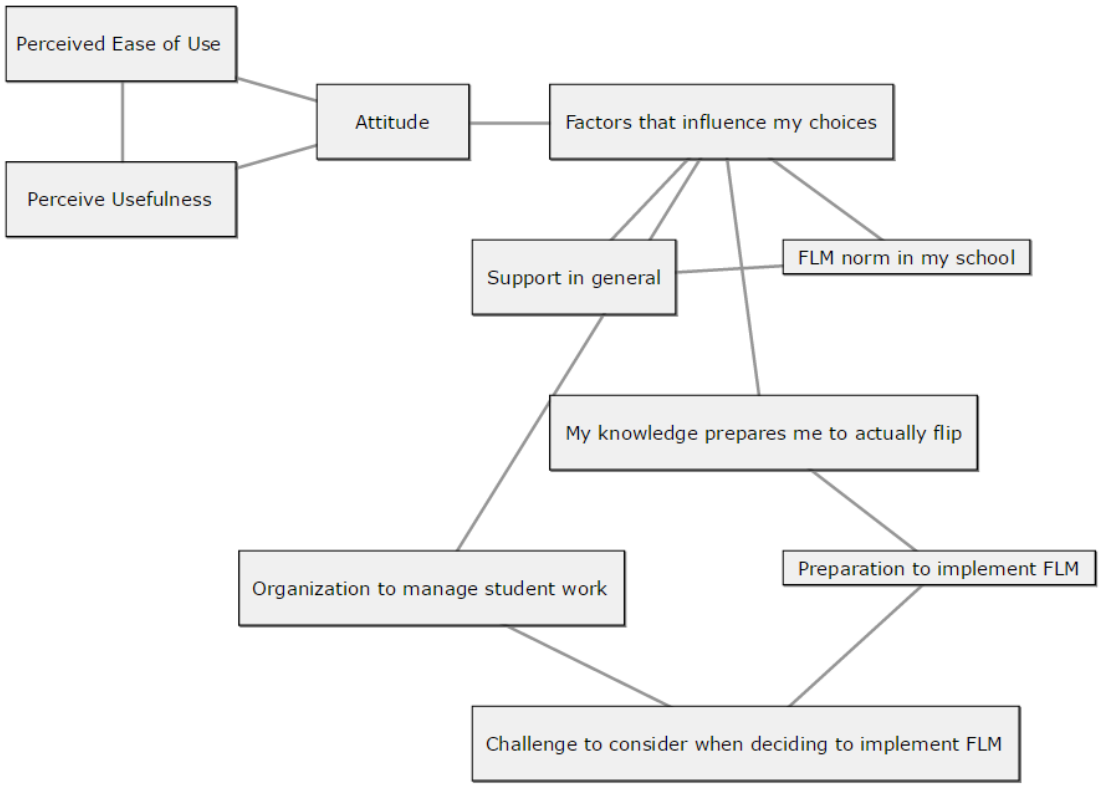
On the other hand, Dee mentioned:

> As for me in the school, you know, we have IT support. I had help from our media specialists. We had an IT person if we ran into any issues. And I had colleagues that were, you know, profound and the depth of knowledge technology. I could reach out to them if I needed to.

The themes presented in this section addressed the factors that influenced teachers' choices to implement FLM. The results showed that all ten participants had positive attitudes towards FLM. The educators shared their behavioral intentions to implement FLM regardless of skill level or IT support. It is important to note, and there were correlations between the themes that addressed factors that influence educators to implement FLM to perceived ease of use and usefulness of FLM, which is the focus of the second research question (see Figure 9).

Figure 9

The Commonality Between TAM and TPB



Perceived Usefulness and Ease of Use of Flipped Learning Model

The second research question asked: How do teachers perceive the usefulness and ease of use of the flipped learning model? In this study, I focused on the Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) of FLM. In this study, flipped learning is a flexible environment where a modified classroom is designed to ease group-

based work (FLN, 2014a). All participants described the usefulness and ease of use of FLM for teaching and learning in their classrooms. Only five responses are noted here, starting with Marie's answer:

> I've had a lot of positive feedback from students. They enjoy it and have a greater understanding. They retain the content longer over the school year. In the past, you know, traditional teaching, I used to teach a topic in one term or semester one, by the time I got to the end of the year, often they would have forgotten the information, and I'd need to kind of recap it before we can go on to the next part of the topic. But once I started doing flipped learning, I was blown away. Students would remember videos, word for word, and parrot it back to me, the exact wording that I used, and I was just stunned; this is so powerful. I don't know how you're doing this, but great.

Noel described it this way:

> I think it's useful. You know, using the flip model, it's easily accessible. For instance, a student missed school. She gets the videos, and she should be able to catch up with her learning. And also, she is given the instructions that she can do her work independently.

Claudia had this to say:

Sometimes I would facilitate the activities or just push those who needed to be push forward; oh, you understand this concept; I want you to move on. You know, it allowed me to differentiate a bit more, I would say.

Ngyuen expressed it this way:

> It helps prevent redundancy. I don't have to give students the information they don't need because they already know what they know or what they don't know. So, we can cut out the unimportant stuff and maximize class time. When they watched the videos right, they already know the part they know or don't…So, they've just asked a direct question about something they don't understand. I don't understand that. So now I'll tell them how to find the slope of a line without wasting time going over the stuff they already know.

Noble responded directly by saying:

> It's useful because it's flexible. It's useful because even if a student comes to school every day in your zoom classroom, and they don't quite get it, they can go back to that video and play it over and over, just like most adults do when they're trying to learn something. The adult pauses it; they go forward, they take notes, they reflect. Flip allows that to go on beyond the classroom time. Because as you know, many of us sometimes have over 30 or more students, and we can't get to all the questions for every student. We can't sit down and help every student, but

> having those resources pre-set and available for those students will allow that to happen.

Attitude

Participants' attitudes towards FLM either encourage or hinder their willingness to implement the model. Eight teachers described their attitudes towards FLM. They explained and expressed their excitement and passion for teaching and their desires to support their students' academic needs. Charlene, Noble, and Michelle shared similar attitudes towards FLM. Charlene said:

> Now that I've gotten the hang of it, I think it's easier for me than traditional because my students come in with some base knowledge about topics. So, the interaction we're doing in the classrooms is much higher. I feel more fulfilled as a teacher standing in front of the classroom, feeling like my students know more of what I'm talking about now. I start with the lesson, and I can build from there. So, I like it for myself, and I feel like my students like it more than traditional teaching. They may not love it, but they like it more than traditional.

A similar notion was expressed by Noble, "yeah, I hope I have conveyed my feeling to you. Whoever would read this, I think it's terrific. I can't even imagine going back to the traditional way of teaching, and I just can't." Likewise, Michelle stated, "that environment was phenomenal. Having just being a coach, I feel like, you know, had a lot of energy. It made learning more fun for me." It should be noted that only three

participants described the difference in students' attitudes towards FLM based on their academic level. Marie described her experience, saying:

> I find that it's most effective with learning support students and reluctant learners. When I explained to them that all you have to do is watch a 10-minute video at home. That is your only homework. Their responses usually are, 'well, that's all; actually, I can do that. That's easy.' And they appreciate that they can go back and watch the video again and again, and they can watch it slower. The extension students like to make it go faster. So, they don't have to sit through a boring half-hour lecture when they got it within the first five minutes; they watch it on double speed. And yeah, reluctant, I've had entire classes of learning support students. I've had classes of inclusion students and use this model with, and they have been the most successful, and they are just continually saying to me, this is a fantastic technique. I wish all my teachers taught like, because it means I can watch this video again and again and again, and I don't have to be embarrassed about asking the teacher to repeat themselves again.

In contrast, Joe noted his experience this way:

> The majority of the resistance came from my higher-level students yearning for more traditional content. But that minimized after I'd say about six weeks, and I never heard an ounce of resistance from the parent level either. They were pretty resistant to it at first because those are the kids that have figured out of school.

> And the advantage to a flipped learning classroom is it puts the student's work's responsibility and burden on them. And so those kids who have figured out the game of school, 'tell me what I'm supposed to do. And this is how I get an A.' They're the ones that gave me the most resistance at first, in a flipped classroom, because it's a change of their status quo, and you're more effectively able to differentiate for them. It is a term that I know a lot of teachers use for our students who aren't meeting the standard, but that absolutely applies to our students who need an extra push at the higher end too.

Whereas Claudia noted the difference in terms of students' maturity and ability to self-manage:

> I've used it in grade eight with the older students. I do find that their maturity was a factor because I teach sixth, seven, and eight, and I found that the grade eight were actually a little bit more successful because of their maturity and their ability to self-manage…Are the students going to be able to be responsible and do the learning at home effectively, and then come into class and apply that knowledge. I found that students who struggle with organization or attention, those children who are in learning support classrooms. Those children find it a bit more challenging because of the skill of note-taking and not just watching a video. Still, taking notes on the information, they do not understand the essential things: they should be pulling out of those videos on their own…then they come into the class,

> and they're not prepared. So, they're not able to engage in the activities because they haven't done that pre-learning or have that exposure…

Differentiate Instruction

Nine teachers described the usefulness of FLM when it comes to differentiating instructions for their students. They explained how useful it is to group students based on their understanding of topics, not academic level. Teachers could create a group for students to work at their own pace and understanding. As described by educators, students could be ready to move with advanced work on a topic, others need a brief explanation before moving on, and others need one-on-one to grasp the subject thoroughly. Claudia had this to say:

> The easy part was being a facilitator in the classroom rather than feeling like I'm just standing up there… then it freed up my time to work more specifically with students who needed the help. Sometimes, I would facilitate the activities or push those who needed to be push forward. You understand this concept; I want you to move on. You know, it allowed me to differentiate a bit more, I would say.

Ngyuen explained her experience this way:

> It helps prevent redundancy. I don't have to give them the information they don't need…So, we can cut out the unimportant stuff and maximize class time. When they watched the videos right, they already know the part they know or don't…So, they've just asked a direct question about something they don't

> understand. I don't understand that. Now I'll tell them how to find the slope of a line without wasting time going over the stuff they already know.

Dee said it this way:

> I guess the easy part was creating the lessons for them to use. When I say creating the lesson, actually finding the videos and creating the lessons to match the videos. I knew what I wanted them to do. I knew the curriculum, what the expectation was, and what I wanted them to walk away with. So, creating the lessons was easy for me.

Noble said:

> It's useful because it's flexible. It's useful because even if a student comes to school every day in your zoom classroom, and they don't quite get it, they can go back to that video and play it over and over, just like most adults do when they're trying to learn something. The adult pauses it, and they go forward, they take notes, they reflect. Flip allows that to go on beyond the classroom time…sometimes, we have over 30 or more students, and we can't get to all the questions for every student. We can't sit down and help every student, but having those resources pre-set and available for those students will allow that to happen.

Michelle appreciated this fact about FLM:

> Students like the idea that they can move at their own pace. It is more comfortable for them…And I use the objectives to connect with things that kids are doing. I

> ask them about television shows and television series, and we apply what the objectives were?

Relationship in the Classroom

Eight teachers described the difference in the relationship in the classroom. The connection in the school got better. For example, the educators described the classrooms as livelier with constant buzzing with students talking and working. Teachers stated there was increased time to work one-on-one with students and increased student-to-student collaboration. Dee used humor with her students:

> I have fun now, walk around having fun. You know, I usually tell them I'm an actress as well. It was just a little more exciting because, you know, they want to be engaged…They are racing in the hall, have two lines running to complete a matching activity. Here are the words; put them in the correct pile or order.

Marie described her experience:

> When the students first come into the class, I greet them all at the door. I greet them by name, and I make sure I look them in the eye and touch base with them. So, I've been able to work a lot more on my relationships with the time that I've got. I check in with them and just say, how are you doing? What are you up to? And they all know that I expect them to work independently and take responsibility for their own learning and the work they're completing…

Dinah said this:

> It increased understanding, interacting, and learning of the materials in the classroom; it fostered a good relationship between the teacher and students and improved student's grades. They ask fewer questions now that they are used to the flip model, and they have more understanding. So, there are fewer challenges.

Michelle noted:

> The relationship is impacted because I get to spend more time and feel freer to spend time talking to my students personally…Now that I don't have to be a hundred percent on all the time, I can actually interject and connect with the students on a personal level and have them connect to the lesson easier.

Perceived Ease of Use

All participants expressed similar sentiments about the ease of use of the flipped learning model. As one of TAM's central tenets, teachers perceived the ease of use of FLM, motivating them to implement it readily. All educators described their preparation to flip their classrooms.

Motivation

Seven teachers explained the need to transform their classroom as motivation. Also, they shared that they needed to deliver instruction familiarly to students, which is the use of technology. Technology, as an external factor, motivated the educators to implement FLM. Charlene said:

> I love it. I feel like students are more engaged. I mean, they complain, but that's just it; I feel like they're more engaged. Their grades are so much better, and mastery of the concepts. It's much higher. I said my percentages are just significantly high for students' grades. I've tracked the past three years. And I think that my grades have gone up about 20% across all my classes since.

Noble said, "what was easy for me is to create the resources and the videos and other important resources to give to the students before they even come to the classroom." Joe mentioned he was motivated to have more one-on-one time with students in the classroom:

> I knew it would be good for my students…there was this girl there who I knew was a student of mine, right. Since August, she's been in my class, but I remember thinking, I don't know anything about her, you know, she's quiet, she's a C student. So, she didn't really ever hit my radar too severely. She wasn't excelling, but she wasn't failing either. So, she was sort of slipped through the cracks pretty easily. I remember just feeling awful that I didn't know anything about this student just sitting right there in my class, you know…

Preparation to Flip

Teachers explained that once the videos' recording was completed, the most challenging part about implementing FLM was over. All the teachers shared this notion

when implementing FLM; they cautioned others by saying that implementing may seem challenging initially, but it gets easier. Ngyuen said it this way:

> It's much easier to teach in person and then put in the preparation required ahead of time to flip. You have to prepare the videos. You have to prepare all the resources and make sure they align. You have to do all of that. And then you have to prepare more help because they don't have to listen to the direct instruction, which means there is more time for them to practice. It requires more of your effort.

Charlene said that to focus on the benefits, “Oh, I would talk to anybody, encourage them to try it. I enjoy seeing my students in the room understanding and doing work together and helping each other come to an understanding.” Marie explained that educators should start with their notes:

> So, the preparation time for that well, when I teach people how to do flipped learning, I recommend using the notes that they've already got rather than start again. So whatever format their notes are in. So, there wouldn't be any preparations. Putting the notes together, I would spend maybe 10 to 15 minutes just making sure the notes will suit the work that I'm doing.

Claudia shared:

> Yeah, it is an investment of time, and it can be, but it will get easier. The more you work at it, just like anything, right. It's going to get easier with practice, but it is a lot of front-loading to prepare and get those lessons, the first go-round is going to be a challenge, and it is going to seem overwhelming. So, my advice would be not to try and do too much all at once, you know, make it realistic, even if it's just a few lessons, it doesn't even have to be a whole unit. My advice would be just to start until you get comfortable. Start with small chunks and not setting those expectations too high because the investment of time to do the prep work is quite heavy at first.

Dee said this:

> Well, one thing you have to consider, you know, if you've come up old school teaching, you will need to let go of control. That I think is the biggest fear that is involved in flipping a classroom…being able to differentiate, is to let go of control. If you can't, well, that's the first hurdle; you have to be able to let go and let whatever happens happen, let it happen. Let the students do their thing. I would ask someone to consider your learning as a teacher and how sometimes it can stifle the child's learning, especially if there's a generational gap because we don't speak the same language. Like I said earlier, technology is not our native language. It's their native language. They can do things with technology that we

> can scratch our heads about, so we have to bring it out and make our classrooms relevant for them. We must make the classrooms pertinent to students. And in a nutshell, you have to accept the new way of teaching and learning.

Michelle's advice to potential flippers, she said:

> I would just say that teachers need to be kind to themselves and know that you're not going to get it right the first time. You're going to make a lot of mistakes along the way. And it's okay. It's the way most of us, in case you forgot, it's the way most of us learned our best lesson, through mistakes. I feel like sometimes we're afraid to make a mistake or to get out there and try something new and not do well. Another thing is to look to the future and not to the past, don't say this is the way I've always done it. Because then the next question is, if this is the way you've always done it, has it always been successful? You got to think about moving forward; if you can't, I guess it's like you can't fit a square peg in a round hole, and the past is the round hole. You can't do it anymore. Kids just don't fit into a round hole anymore.

Summary and Transition

In terms of the first question, this study exposed several common threads among the participants' responses when describing their choices when implementing the flip classroom. All the educators explained the choices that influence their desire to flip their classrooms. All the participants expressed a process to follow when considering

implementing FLM. Six participants explained that it is vital for educators to figure out when to switch from flipped to traditional methods to meet their students' academic needs. Eight educators shared the challenges with FLM in terms of planning time for creating and editing videos and managing the workload that comes with students working at different levels and activities. Only four participants explicitly described themselves as facilitators, which allowed them to meet with students one-on-one often.

In terms of the second question, all the teachers expressed the usefulness and ease of using FLM. Nine participants explained the role technology played in deciding to flip, making it easy for educators to differentiate instructions. Seven teachers explained that their motivation to flip stemmed from their desire to meet students' academic needs more effectively. Eight educators explained that it was easy to develop a better relationship with students in a flipped classroom; they have more one-on-one with students. All participants expressed that FLM was useful to students even when they did not view the videos before coming to class; students would still get the content when they get to the classroom working with their peers to summarize the videos' content. As for future teachers looking to implement FLM, the educators shared that it is crucial to let go of control to differentiate effectively. Additionally, they shared that future educators should start small (e. g., one lesson or unit) with one class. Finally, they shared that students need to use technology, therefore consider implementing FLM in your classroom.

In Chapter 5, I will provide a detailed analysis of participants' responses. There will be a discussion and the interpretation of the findings. Additionally, there will be a discussion on the study's limitations and recommendations for future research around FLM. The chapter will conclude with a discussion of this study's implications and recommendations for practice when planning to implement the flip learning model.

Chapter 5: Discussion, Conclusions, and Recommendations

In this qualitative study, I aimed to explore teachers' choices for implementing FLM. I provided evidence-based practices and recommendations for the creation of a support system, for the transfer of knowledge to teachers' professional practice, and to help create a support system capable of assisting teachers in their own attempt to use FLM successfully in their classroom. Using a semi-structured interview, I collected data from educators who implemented FLM in their classrooms. In this study, I aimed to provide rich data on teachers' choices when implementing FLM in middle school. Ten teachers offered detailed information about factors that influenced their choices when implementing FLM and the ease of use and usefulness of the model. With this study, I am adding data to the field of middle school teachers' education around FLM with the analysis of the teachers' responses to the research questions, bridging the gap of lack of data for middle school teachers.

Throughout this discovery of factors that influenced middle school teachers' choices to implement FLM, the results illuminated several themes, however, these themes overlapped when addressing the tenets of both TAM and TPB. For example, these themes (attitude, differentiated instruction, relationship in the classroom, motivation, and facilitator) that addressed PEOU and PU also influenced teachers' choices. Furthermore, these themes (knowledge of FLM, general skills, support in general, technology role in FLM, planning time, traditional method versus flip learning model, and technical

support) that addressed factors that influence teachers' choices overlapped with PEOU and PU. Additionally, to note the best instructional practices for using FLM in middle school, I disclosed the teachers' strategies in this study.

Many of the themes became apparent when I interviewed middle school teachers. Many teachers implemented FLM to increase engagement, increase classroom relationships among students-to-students and teacher-to-students, and better meet students' academic needs. They viewed FLM as an instructional strategy to connect better with students and increase students' understanding of the content. The educators in this study also shared their challenges implementing FLM, a finding that was similar to previous researchers' findings (Chen, 2016; D'addato & Miller, 2016; Unal & Unal, 2017). Although the teachers faced many challenges (e. g., increased workload, concern for lack of internet connectivity, and planning time constraints), these challenges did not prevent the teachers from implementing FLM. Moreover, educators used these challenges as a catalyst to increase their professional skills as educators.

Interpretation of the Findings

In the past five years, previous studies conducted on FLM noted several themes: better relationship in the classroom, student autonomy, differentiate instruction, higher student engagement, teachers as facilitators, better attitude and motivation, technology integration, and challenges and concerns from implementing FLM into the teaching and learning environment. In this study, I focused on factors that influenced teachers' choice

to implement FLM and teachers' perceived ease of use and usefulness of FLM. Similar themes in this study's findings emerged to those found in previous research. The data results showed that participants' responses and experience with FLM did align with some researched-based practices described in Chapter 2 and filled a gap in the current research.

Building Relationship

Many research studies on FLM focused on high school (grade 9 to 12) and higher education and emphasized the values of relationships in the classroom. All ten middle school teachers in this study expressed their satisfaction with the classroom relationship, which changed from their previous traditional settings. All participants said they experienced increased job satisfaction (e. g., happiness, increase energy, and a lively classroom environment). The educators described having increased one-on-one time with students, similar to the findings of Hall and DuFrene (2016) and Unal and Unal (2017). According to the participants, students' disruptive behavior was non-existent (Kurshan, 2020).

Classroom Setting

According to the findings from other research studies, educators explained that FLM transformed their classroom environment better. All participants in this study confirmed similar results. The educators expressed that they were better able to support absentee students and have increased class time for active learning, identical to the study conducted by Gough et al. (2017). All participants in this study mentioned increased

students' engagement, student-to-student collaboration, and higher assessment scores, which confirmed the findings from the studies conducted by Kostaris et al. (2017) and Smallhorn (2017). Teachers also confirmed a switch in teachers' role to a facilitator (D'addato & Miller, 2016).

Another classroom environment factor is teachers' abilities to meet their students' academic needs by differentiating instructions. All participants noted their satisfaction with differentiated instructions based on students' educational level and needs. All participants described their students' independence and took control of their learning by reviewing the videos when needed to confirm Lo and Hew's (2017b) results. In their study, Lo et al. (2018) and Lo and Hew (2017a) noted that teachers had increased time for one-on-one with students in their flipped classroom, which four participants confirmed in this study.

Challenges and Concerns: Perception Versus Reality

Previous studies mentioned the following challenges with FLM, such as lack of technical skills to manage the recording, editing, and uploading lessons on videos. Furthermore, some educators could not align the videos to classroom activities; they did not have a streamlined process to manage all the paperwork or juggled multiple activities within the classroom daily (Chen, 2016). Most importantly, planning time was a challenge in FLM. Planning time goes beyond the duty day to plan for differentiated instructions, and extra time is needed to record and edit videos. Time as a challenge

remained to be true. In this study, all ten participants described their need for extra planning time to plan for differentiation to meet students' academic needs. However, due to better quality videos and numerous creations of new educational technology tools, the educators' lack of technical skills was not present in this study compared to the result noted by Chen (2016). Good videos are available on the Internet, and teachers are less likely to create and edit their own videos which minimize the planning time barrier.

The one participant that described herself as a beginner in technical skills had an IT coach and savvy technical colleagues to support her. Another reality was that teachers have streamlined the process of managing the paperwork from students' work and can juggle multiple classroom activities due to educational technology platforms that are readily available to support teachers who flipped their classrooms. The educators mentioned that future flip teachers should prepare for students who did not view the videos the night before or struggled with executive functioning; these students need to learn note-taking skills when viewing the videos (Gough et al., 2017; Van Alten et al., 2020).

Conceptual Lenses

Technology Acceptance Theory (TAM)

When exploring the educators' reflections with Davis' (1989) TAM framework, TAM's idea considered the ease of use and usefulness of FLM. Examining the implementation of FLM, the ease of use and usefulness of FLM was present in all ten

participants' responses. The participants in this study specifically addressed the ease of use of FLM. The participants agreed with Kirvan et al. (2015) on the increased class time for students-to-students collaboration, increased students' autonomy, and the critical role technology plays in the successful implementation of FLM. The participants also agreed that technology overall gave absentee students easy and quick access to the lessons' recording. Furthermore, participants mentioned that they use these videos year after year with some edit if necessary, which minimizes their planning time in recording and editing videos.

The interpretation of the teachers' experience with FLM through Davis's (1989) TAM informed this current research. The participants stated that FLM changed their classroom environment by making it livelier, excited, and increased students' discourse because building relationships is easier. The TAM definition of perceived ease of use-the level to which teachers were expecting to implement FLM would be free of effort (Hsieh et al., 2017). Teachers explained that it did take a little bit of effort to implement FLM because of planning, but it was easy to implement the model in their classrooms. Based on this study's findings, implementing FLM in their classrooms, educators found the perceived usefulness of the FLM for absentee students and students with learning disabilities. The educators shared that they noticed an increased engagement and assessment scores from their students; similar results were noted by Chen (2016), Kostaris et al. (2017), and Scovotti (2016). Moreover, the participants agreed there was

increased usage of technology in the classroom; students took ownership and responsibility for their learning by self-assessing when to move forward to the next activity level.

Theory of Planned Behavior (TPB)

This study's findings identified the positive beliefs about FLM, which also positively impacted implementing FLM. The results also showed the usage and normative (administration or colleagues support) beliefs of the participants, which established subjective norms toward the implementation of FLM. All participants expressed the benefits (e. g., differentiate instructions, increase students' discourse, improve classroom relationship) of implementing FLM in their classrooms. Furthermore, participants felt that their instructional skills improved when differentiating instruction to meet their students' academic need, especially for students with an individualized educational plan (IEP) or absentee students (Bergmann & Sams, 2012; Carhill-Poza, 2019; Gough et al., 2017; Tomlinson, 2014, 2015; Tomlinson & Moon, 2014). All participants addressed the correlation between their intentions, beliefs, and attitude to implement FLM by expressing joy and content with teaching since they implemented FLM. Although only four participants explicitly said their role as facilitators in their classrooms, their responses support D'addato and Miller's (2016) study, which noted a change in teachers' role.

To conclude, Davis's (1989) TAM and Ajzen and Fishbein's (1972) TRA were the conceptual frameworks used to understand this study. Davis's and Ajzen's model found that one could predict teachers' behavior by understanding their attitudes, motivation, and beliefs toward an action. In this study, the teachers described their positive beliefs about the ease and usefulness of FLM produced favorable attitudes toward FLM implementation. They noted that FLM helps them change their learning and teaching environment, their instructional model, and the learning assessment even though all participants expressed the need for increased time to differentiate instructions effectively.

Limitations of the Study

This study had four limitations. The first limitation was the participants' recruitment via social media outlets, making it challenging to ensure that all participants spoke English well enough to be interviewed. I posted the invitation letters in all social media outlet such as Facebook, Twitter, Instagram, and LinkedIn which mean that participants were from different school districts and have access to technology readily available for students and staff. The other time zones created the second limitation for this study. It was a challenge to find a convenient time to schedule the interviews for some participants. Approximately 3,000 or more people viewed the invitation letter on social media; four participants teach outside the United States. From the 3,000 people who viewed the invitation letter, only 20 people expressed the desire to participate in this

study, and 16 gave consent to participate. However, four of the participants did not speak English well enough to be interviewed, and two participants never showed up for the three scheduled interviews. Therefore, the questionnaire results could not be generalized, which is another limitation of this study.

The fourth limitation is the total number of participants is too minimal to generalize the findings, even though this study exceeded the minimum required of nine participants to reach data saturation, as noted by Hennink et al. (2017) and Guest et al. (2020). Nonetheless, Saldaña (2016) wrote that a quarter of the participants need to share specific codes to classify the data as relevant. In this study, one-quarter of the participant is equal to three people, which is too minimal to add significant value to the body of literature, which is another limitation. Therefore, a larger sample of participants would have given this study more relevant codes to generalize the findings.

Recommendations

From the analysis of the data, there were potential areas that warrant further study. Some participants noted that in a flipped learning model, students' age and maturity are factors for educators to consider when planning to flip their classrooms. One participant gave an example of the difference between her sixth and eighth-grade student in terms of watching the videos and be prepared for class the next day. Another area that future research may need to focus on students' executive functioning as another factor that might be impaired the successful implementation of FLM. Another area that warrants

more study is the credibility of the number of participants and the recruitment process. A study with a larger sampling of participants in a specific area may provide additional data regarding factors that influenced teachers' choices when implementing FLM.

Additionally, the many emergent themes in this study, some areas that warrant further studies, are what aspect of FLM that increased teachers' workload, especially when it comes to differentiating instructions. The participants expressed the importance for educators to have strong organizational skills to manage the workload. Furthermore, future studies could collect data on the impact of teachers' organizational skills on managing students' work or assessments, which was increased in FLM, a sentiment noted by all participants.

Another concept that all educators found to be the critical reason to flip was technology and firm support. Educators must consider FLM to have a plan to address students with low to no internet access at home (Schmidt & Ralph, 2016). Additionally, educators need to plan with leaders to ensure that students have access to working devices both in and out of school (Chen, 2016). Another area of support for teachers to consider is to plan with the media specialist as a backup to use the computer lab when necessary. This study could be repeated to compare school districts with unlimited internet access with schools with low to no internet access regardless of educators' ability to implement FLM with fidelity.

Lastly, some educators noted that their students were happier and took increased risks by exploring new lessons not assigned. Students choose to go deeper in their learning independently of the assigned classwork. They noted students would decide to help a struggling classmate when possible, which increases student-to-student relationships. Additional research needs to be conducted to connect students' choice to go beyond their assigned classwork in a flipped learning model.

Implications

The findings of this study have many implications for social change at the national and local level. First, local school districts are responsible for preparing students for the 21st-century workforce; these students will need to participate in peer collaboration, communicate clearly, and possess critical thinking skills to solve complex global problems (Graziano, 2017; Short & Keller-Bell, 2021). School districts need to have adequate funding from the state to support teaching and learning with sufficient resources to prepare students for the future. This study's findings confirmed the importance of students participating in a classroom environment using FLM. Students applied all these skills necessary for the digital age workforce in the flipped classroom, as Erlinda (2019), Gretter and Yadav (2016), Short and Keller-Bell (2021) noted. This study's findings provide recommendations for educators to implement FLM to prepare students for the digital age. In contrast, Gough et al. (2017) noted that educators did not

notice any difference in their students' scores meaning that FLM had did not impact students' academically.

Previous studies noted that FLM change the classroom environment with increased students' engagement and discourse, increased one-on-one time with peers or teachers, increased students' autonomy, and increase assessment scores (Kirvan et al., 2015; Kostaris et al., 2017; Scovotti, 2016). This study's findings illuminated that even though teachers were concerned with a lack of adequate planning time using FLM, they could implement FLM with fidelity and create a fun and creative learning environment in agreement with the findings of Kirvan et al. (2015), Kostaris et al. (2017), and Scovotti (2016). Another concern for observers of teachers who flipped their classrooms is the educational value of moving direct instruction to a video and place the responsibility on students to learn the material before coming to class (Johnson & Misterek, 2017). The findings of this study revealed that students did better in the flipped learning classroom because they had an opportunity to view the material more than once (e. g. at home and in class).

The notion of not having enough time to plan for flipped learning has deterred many classroom educators from implementing the concept (Gough et al., 2017). This notion of lack of planning time creates a significant barrier to implementing FLM. First, the time barrier minimizes educators' opportunity to prepare students for college and career readiness and 21st Century skills (Desimone et al., 2019; Short & Keller-Bell,

2021). Besides, most educators' inability to combat this challenge without support gives the impression that adequate planning time is essential to innovate teaching and learning, which is not the case.

The educational value of FLM is gaining momentum among educators. Knowing the challenge, educators in this study found ways to plan their lessons accordingly. They seek support within and outside their schools from educators who flipped their classrooms to share resources. They have demonstrated the value of FLM in preparing students for college and career readiness with their actions. The findings of this study show the benefits of FLM as an innovative pedagogy to prepare students to work collaboratively and to increase their critical thinking skills. These findings provide cause to provide additional support in terms of adequate planning time to motivate educators to implement the model. With the increased use of technology, this study's results might give middle school teachers additional information to find and create a support system to implement FLM more readily. With more understanding of middle school teachers' needs, school districts might formulate professional development to help teachers implement FLM in their teaching and learning environment (Bond, 2020).

Social Change

With the increased use of technology in the classroom, teachers can understand and meet their students' academic needs more readily, especially in a flipped classroom. This study expands the body of evidence that supported the implementation of FLM in

middle school. This study provided a groundwork for positive social change for school districts to obtain a shared goal of preparing students for 21st Century Skills by implementing FLM districtwide. This study's findings might inform and support school districts to effectively formulate professional development to help teachers implement FLM in their teaching and learning environment.

Theoretical Implications

Theoretically, this study's findings confirmed TAM's tenets through the ease of use and the usefulness of FLM in the classroom. FLM demonstrated TAM's principles regarding its usefulness when educators share resources such as lesson activities, recorded videos, unit lesson plans, and ready-made assessments with fellow flipped educators, students, and parents. Second, the ease-of-use help educators set up their classroom to meet students' academic needs with differentiation instructions. Third, educators must have workable devices and readily available internet access also confirmed FLM's usefulness and ease of use for teachers and students. Lastly, educators' acceptance of using technology readily and easily further support the tenets of TAM.

In terms of the theory of planned behavior, the findings of this aligned with the interpretation of behavioral intentions to one's ability to enact the wanted behavior. All participants had the minimum (Behavioral control) expected skills to implement FLM. In terms of motivation, all participants expressed their motivation to implement FLM to meet their students' academic needs and transform their classroom environment. All

participants perceived implementing (behavioral control) FLM to be easy and confirmed that these external factors, such as lack of adequate educational software or lack of technical support within the school, did not deter or influence their decision to implement FLM.

Based on this study's findings, educators' experiences showed best instructional practices for implementing FLM as an innovative teaching strategy to prepare students for 21st Century skills. The participants described their classrooms before and after flipping as being excited with increased opportunities to foster a strong relationship with their students while meeting their academic needs. The teachers prepared the students, parents, and administrative team for what success and progress look like in a flipped classroom. The educators allow students to own and create their learning journey to mastering the course concepts. The educators work collaboratively with other flip teachers to support and share lesson planning responsibility by seeking out other experienced flippers. Additionally, the educators mentioned that others should identify resources that align with their schools, students, and teachers' teaching practice and philosophy when considering FLM.

The educators reflected on the impact of FLM on the classroom environment. Students took responsibility for their behavior and learning in the classroom. Students who did not watch the videos took responsibility and made up the work on their own. Many students expressed gratitude to educators for making learning fun and engaging.

Educators have a greater opportunity to connect deeply with students and better meet these students' social-emotional needs. There are little to no behavior issues in the classroom. Educators noted an increase in better students' scores in assessments. However, when flipping the classrooms, the educators mentioned that educators need to find solutions that work best to deal with disruptive behaviors (Gough et al., 2017).

Educators expressed better job satisfaction in FLM. The educators expressed being excited when going to work. Although the workload is a bit heavier than in a traditional classroom, teachers could help students reach mastery of content easier. Also, teachers expressed the joy of being part of the innovative community of flip teachers who share success and challenge stories. Moreover, the educators said they valued the opportunity to provide their best to their students and community.

Conclusion

The digital age opens the doors for innumerable educational technology and an opportunity for new unknown skills. Schools must prepare the pupil to be career-ready to fulfill the workforce demands of 21st Century Skills (Gretter & Yadav, 2016; Short & Keller-Bell, 2021). However, education lags behind the ability to prepare children to be productive citizens of a global economy. Even though some educators are reluctant to implement FLM, they missed the opportunity to train, engage, and foster communication and collaborative skills in their students. With that in mind, in agreement with Hajhashemi et al.'s (2017) and Ali Abdalrhman Al Zebidi's (2021) notion of the

innumerable educational technology for classroom teaching and learning, educators should implement the FLM to take advantage of innovative strategy.

There are many challenges with FLM noted in previous studies, as well as this study. Many educators are not technologically savvy enough to record, edit, and upload lessons on videos. Other educators do not align the videos to classroom activities and have an organized process to keep students' academic progress from day-to-day. Another challenge that educators must prepare for is the lack of adequate planning time during working hours; extra time is needed to record and edit videos. This study noted the benefits of implementing FLM even with inadequate time to plan, and these findings should not be understated. These implications are not only for flipped teachers and their students. Implementing FLM allowed educators to prepare students to manage their daily workload, an essential 21st Century Skill in the workforce (Lai & Hwang, 2016; Short & Keller-Bell, 2021). In fact, in a flipped classroom, students learn how to collaborate, engage in meaningful communication, appropriate interaction and behavior, and managing different opinions and perspectives; all necessary skills to be a productive citizen of the digital age workforce.

Even though previous studies reported these challenges (e. g., time, students not learning, and technology problems) about FLM, this should not deter educators from implementing the FLM. For the educators in this study, and these challenges allowed them to reflect on their daily routine of the use of their time. The educators used these

challenges to communicate with parents and the administrative team to ask for necessary support. The educators set high expectations for themselves and students to perform at a higher level with time management discipline. In a flipped classroom, educators have an opportunity to deliver their content in an engaging and relevant manner connecting to their students' lives and experience and creating an inclusive learning environment. This study has contributed to the existing literature on FLM by developing a better understanding of teacher choices as they implement an innovative classroom strategy.

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Appendix A

Flipped Classroom General Questionnaire

This survey is to gather general information of your knowledge of the Flipped Learning Model (FLM)

* Required

1. Gender *

Mark only one oval.

- ◯ Female
- ◯ Male
- ◯ Prefer not to say
- ◯ Other: _____

2. Age Group *

Mark only one oval.

- ◯ 22-28
- ◯ 29-35
- ◯ 36-44
- ◯ 45-54
- ◯ 55+

3. Teaching Experience *

Mark only one oval.

- ◯ 0-5 years
- ◯ 6-15 years
- ◯ 16-25 years
- ◯ 25+

4. School Type *

Mark only one oval.

- ◯ Middle School
- ◯ High School

5. Your certification *

Mark only one oval.

- ◯ English Language Art
- ◯ Reading
- ◯ Math
- ◯ Other: _____

6. Your current position *

_____

7. Number of students you are teaching this year *

_____

8. What subject (s) are you teaching this year? *

_____

9. Do you strive to be a facilitator, mentor, and guide for your students to discover their own voice? *

Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Sometimes

10. Does your school encourage technology integration in the classroom? *

Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Maybe

11. How comfortable are you to integrate technology in your classroom *

Mark only one oval.

- ◯ Very Comfortable
- ◯ Somewhat Comfortable
- ◯ Somewhat uncomfortable
- ◯ Very uncomfortable

12. Is there support for you if you want to integrate technology in your classroom? *

Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ I am not sure

13. What kind of support do you receive or would like to receive to integrate technology into your classroom? *

14. What is flipped learning model *

Check all that apply.

- [ ] Switching classroom instruction by teachers to students watching videos at home as homework.
- [ ] Students do homework in school with teachers.
- [ ] Classroom time is spend on students collaboration using their learned concepts.
- [ ] Teachers act as facilitators.
- [ ] Flipped learning has 3 components: before-class activities, during-class activites, and after-class activites
- [ ] Teachers have time to differentiate instructions to meet students academic needs within one class period.
- [ ] Teachers have time to spend with students one-on-one.
- [ ] Opportunities for quick and informal assessments of students' understanding of concepts.
- [ ] Immediate feedback on teaching and learning between teachers and students.
- [ ] Flipped learning model only use videos for instructions.
- [ ] Teachers and students have time to reflect on the effectiveness of teaching and learning

15. Are you familiar with the flipped classroom model? *

Mark only one oval.

- ◯ Yes
- ◯ No

16. Briefly describe your knowledge about the flipped classroom model *

17. Have you ever attempted to flip your classroom? *

Mark only one oval.

- ◯ Yes *Skip to question 18*
- ◯ No *Skip to question 19*

I flipped my classroom

My rationale for flipping my classroom

18. Briefly describe your rationale for flipping your classroom *

I did not flip my classroom

My rationale for not flipping my classroom

19. Briefly describe your rationale for not flipping your classroom *

20. What resources or training would you need to flip your classroom? *

Flipped Learning Model

An upside down approach to teaching and learning

21. To prepare to flip your classroom, how proficient are you at doing the following? Rank: 4=very proficient, 3=moderately proficient, 2=slightly proficient, 1=not proficient *

Mark only one oval per row.

	Column 1	Column 2	Column 3	Column 4
Preparing flip lesson plans.				
Designing in-class activities to maximize students' learning.				
Designing out-of-class activities to maximize instruction.				
Managing students' collaboration during class time.				
Designing a range of methods to connect out-of-class activities to in-class activities.				
Creating, editing, and publishing learning content videos on the web.				
Finding free and quality educational applications (offline and online) for teaching, learning, practice, and assessments.				
Assessment of students' work during out-of-class (home time).				
Assessment of students' work during in-class activities.				
Designing fun and interactive digital presentations.				
Managing your time between in-class activities and out-of-class activities.				
Assess students' mastery of contents in flipped classroom.				
Troubleshooting when content videos do				

not work well.				
Designing lessons with low or no tech in a flipped learning model.				
I can plan and differentiate instruction for a diverse class.				
I can reflect on my teaching style and delivery				

22. What level of information technology (IT) skills do you think you have? *

Mark only one oval.

- Beginner-I can turn on the computer, use Microsoft office for basic tasks, surf the Internet, and email.
- Intermediate-I know how to manage a computer, troubleshooting basic computer issues, use online collaboration tools/resources, social media sites, create and edit images, and websites.
- Advanced-I know to complete administrative task on a computer, create images and videos, use social media sites at all professional levels, can assess content and help guide my colleagues find best practices.

23. How proficient are you at creating, editing, and publishing interactive digital media? Rank: 4=very proficient, 3=moderately proficient, 2=slightly proficient, 1=not proficient *

Mark only one oval per row.

	Column 1	Column 2	Column 3	Column 4
Using technology to videotape a lesson.	◯	◯	◯	◯
Using technology to share academic performance with parents and students.	◯	◯	◯	◯
Uploading and downloading videos into online learning platform.	◯	◯	◯	◯
Embedding hypertext and different media elements in your videos.	◯	◯	◯	◯
Designing a space for students to make comment or questions while watching content videos.	◯	◯	◯	◯
I can assess and identify effective resources for my videos to hold students accountable to watch the videos at home.	◯	◯	◯	◯
I can adapt advanced digital tools to share my digital presentations professionally with all stakeholders.	◯	◯	◯	◯

24. What tools does your school provide? Describe their availability. *

Check all that apply.

	Yes, always for all teachers	Yes, always for all students	Yes, I will have to look for it if I need it (teacher)	No, not available to students	Not available to students or teachers	I use my own device (teacher only)
Computer with Internet	☐	☐	☐	☐	☐	☐
Digital Camera	☐	☐	☐	☐	☐	☐
Drawing Tablet	☐	☐	☐	☐	☐	☐
Tablet	☐	☐	☐	☐	☐	☐
Students' Chromebook	☐	☐	☐	☐	☐	☐
Computer Lab	☐	☐	☐	☐	☐	☐
Interactive board	☐	☐	☐	☐	☐	☐
High Speed Internet access	☐	☐	☐	☐	☐	☐
Presentation toolkit: (computer plus projector/Elmo)	☐	☐	☐	☐	☐	☐

Appendix B

Interview Questions

1. How would you define innovation in teaching and learning?
    a. Describe any innovative strategies you have used in your classroom?
2. Do you believe that you have the skills to innovate your classroom effectively?
    a. What level of informational technology (IT) skills do you think you have? Beginner, intermediate, or advance?
3. Does your school encourage you to be innovative in your classroom? What technical support is available for you to innovate your classroom?
4. What support would you like to ask your school leaders to help you innovate your classroom?
5. Describe your knowledge about the flipped learning model?
6. What did you need to know to flip your classroom?
7. How well do you understand the different components of the flipped learning model?
8. How do you perceive the flipped learning model approach on its usefulness and ease of use in your teaching?
9. What were the factors that influenced your choices to implement flipped learning into your classroom?

10. Based on your technology skills, what component of the flipped learning model was easy?
11. Based on your technology skills, what component of the flipped learning model was challenging?