Spring 2022

The Effects of a Flipped Classroom on Student Engagement and Motivation

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A School Improvement Plan Project Presented

in Partial Fulfillment of the Requirements

For the Degree of Master of Education

Abstract

The Lone Star High School, which is part of the Frisco Independent School District located in Frisco, Texas is looking for ways to better engage and motivate students in the classroom especially since the COVID-19 pandemic has changed the way teachers teach and students learn. The problem is that Lone Star High School students lack the motivation to learn and stay engaged in the classroom setting. The purpose of this school improvement plan was to research the flipped classroom teaching model and to educate teachers through professional development about the benefits of using the flipped teaching method of instruction as a way to increase student motivation and engagement. The research gathered for the literature review was analyzed based on flipped teaching methods, teachers' perception of flipped teaching practices, student motivation and achievement, and effective professional development practices. Based on the findings that the flipped classroom teaching methods increase student engagement and motivation a professional development plan was developed for the Lone Star High School teachers.

Keywords: flipped classroom model, professional development, motivation, engagement

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After a year of remote learning, due to COVID-19, students are less motivated and engaged in the classroom, and school districts have to find a way to resolve this. Upon conducting some research, a 2019 research study by Qiang Jian found that flipped classroom teaching methods integrated cooperative learning on the promotion of learning motivation, and flipped classroom teaching methods integrated cooperative learning on the promotion of learning outcomes. For example, the group-based flipped classroom, allows students to team up to work together on that day's assignment. This encourages students to learn from one another and helps them learn the correct answers and be able to explain to their peers why the answers are correct. The gap in practice that this project will explore, is the importance that flipped classrooms/teaching will have on student motivation as well as teacher satisfaction. The problem is students lack the motivation to learn and stay engaged in the k-12 classroom setting.

The purpose of this school improvement plan is to educate teachers through professional development about the benefits of using the flipped teaching method of instruction as a way to increase student motivation and engagement in the k-12 classroom. Flipped teaching methods are focused on students as passive receivers of information transitioning to active participants in their learning. The more information teachers gain about the benefits of flipped teaching in terms of student motivation and engagement, the more they will be excited to use the flipped teaching method in their classrooms. The goal of this school improvement plan is to educate teachers through professional development about the benefits of using flipped teaching as a way to motivate students to learn and to have ownership of their learning.

The peer-reviewed journals that will be used for this school improvement plan are the Northwestern College Dewitt Library database and Google Scholar. The article inclusion criteria

for the peer-reviewed journal articles consisted of teaching methods, student engagement, motivation, achievement, and teacher satisfaction with flipped teaching. All the peer-reviewed journal articles were published within the last ten years and some of the articles are subject-specific to flipped teaching.

This school improvement plan is going to educate teachers about the benefits of integrating flipped teaching into the classroom to enhance student engagement, achievement, and motivation. This research aims to answer the question "What is the best way to design and deliver professional development focused on flipped teaching methods?" By conducting this research and designing a professional development model for flipped teaching, teachers will increase their knowledge and use of flipped teaching to increase student learning and motivation in the classroom. The value of this type of professional development is that teachers will be able to utilize flipped learning as an alternative method of teaching to enhance their educational practices. Professional development for flipped teaching will include a peer-coaching model which allows for colleague collaboration, time for exploration of flipped teaching, and implementation, along with self-reflection and feedback after implementation.

As a part of this school improvement plan, a literature review was conducted to determine the best models to deliver professional development centered around the effects of flipped teaching on student motivation and achievement. The literature review addresses flipped teaching, teachers' perception of flipped teaching practices, student motivation and achievement, and practices of effective professional development. This literature review will be used to design a professional development plan that meets the needs of teachers for them to implement the flipped teaching method in their classrooms.

Review of the Literature

Flipped Teaching

Researchers Lo & Hew (2017) conducted a research study to identify the main challenges of using the flipped teaching method in a K-12 classroom. The flipped teaching method included a variety of pre-class (e.g., online exercises) and in-class (e.g., brief review, individual practices) activities, instructional videos, and small-group activities, respectively. The results of this study found the use of the flipped classroom teaching method in the K-12 classroom yielded a neutral or positive impact on student achievement when compared to the traditional teaching method. Challenges of implementing flipped classrooms were identified and categorized into student-related challenges, faculty challenges, and operational challenges. Lo & Hew suggested that a pre-test would be useful in a comparison study to evaluate the student's prior knowledge instead of assuming the students had prior knowledge of the subject topics. Based on the findings of this study, students were content with the flipped teaching method compared to the normal teaching methods in a K-12 classroom. As teachers, to improve or maintain student achievement when implementing a new learning method, the first thing to do would be to start with study habits and study behavior.

Researchers Boeve, et al. (2016) utilized their research study to explore student behavior toward flipped teaching, based on their bi-weekly diary journaling exhibits. A total of 495 students in an introductory statistics course were included in this study, with 205 students in a flipped teaching classroom and 295 students in a traditional teaching classroom. Comparing and analyzing the student's behavior demonstrated through their journaling exhibits, it can be concluded that the student's behavior toward the flipped teaching method did not appear to be different from the student's behavior in the traditional teaching classroom. Furthermore, student behavior in this study did not seem relative to student performance in both classroom teaching

environments. Unlike the study by researchers Lo & Hew (2017), no real evidence was gathered to prove that the flipped teaching methods versus the traditional teaching methods made a difference in terms of student behavior.

Researchers Lawson, et al. (2019) examined three outcomes between the basic flipped and PC (practicing-connections) flipped courses. Seventy-two students enrolled in an "*Inferential Statistics for Psychology*" course were split up between a basic flipped teaching group and a PC group. Students in both groups were given questions about their implicit theories of intelligence and math ability. The students in the PC flipped teaching method group demonstrated better skills in applying concepts compared to the students that practiced textbook problems in the flipped teaching group. Students in the PC flipped group increased their quantitative reasoning ability between the beginning of the class and the end of the class. The PC flipped class design helped students develop growth mindsets about intelligence and math relative to the basic flipped course. As per the study by Delozier & Rhodes (2016), there is evidence that teachers will have more class time for activities and active learning through the utilization of the flipped classroom model.

DeLozier & Rhodes (2016) determined from their research that video instruction itself does not appear responsible for changes in learning performance but may provide additional time for in-class activities that enhance learning performance due to active learning. Other learning activities common in the flipped classroom (e.g., quizzes or clicker questions, pair-and-share activities, student presentations, and discussion) differ both in their effectiveness and in the conditions necessary for enhancing learning performance. Perhaps most important, the benefit of testing students – either through standard quizzes or clicker questions – is not contingent upon the performance of others. Of all the active learning methods discussed, testing is the simplest to

isolate and identify as an effective learning strategy. As such, we note that the benefits of testing are robust and likely to enhance performance regardless of how it is carried out—something difficult to say about many techniques. Clickers may present an opportunity to incorporate frequent testing in a manner that students find more enjoyable than traditional exams or quizzes. However, it remains to consider (a) whether out-of-class assignments are regularly completed in flipped classrooms and (b) whether the rate of adherence differs between flipped and traditional classroom formats.

Researchers Kostaris, et al. (2017) sought to examine a form of data-driven disciplined inquiry in which a practitioner (namely teacher-researcher) aims to understand, analyze, and potentially improve their practice. The action research was implemented with the full population of two classes (i.e., 46 students), one as the experimental group (which attended the FCM-enhanced ICT course) and the other as the control group (which attended the "traditional" ICT course). Each of the student groups comprised 23 students, with 11 boys and 12 girls. One experimental group and the other as the control group. The findings of this study provide evidence for potential advantages in students' cognitive learning outcomes related to subject domain knowledge, the exploitation of teaching time during the classroom face-to-face sessions, the student's level of motivation, as well as their level of engagement. The results indicated that the FCM provided two main benefits: (a) the students were significantly more engaged throughout the course with a continuously increasing trend, and (b) within-group cluster analysis in the experimental group revealed that the low performers had the largest percentage of improvement. These benefits (as well as the evidence regarding student motivation) can be largely attributed to the better exploitation of face-to-face sessions that the FCM promoted.

Researchers, Lo & Hew (2017) saw that the use of the flipped classroom teaching method in the K-12 classroom yielded a neutral or positive impact on student achievement when compared to the traditional teaching method. Researchers Boeve, et al. (2016) noted that no real evidence was gathered to prove that the flipped teaching methods versus the traditional teaching methods made a difference in terms of student behavior. Researchers Lawson, et al. (2019) found the students in the Practicing-Connections flipped teaching method group demonstrated better skills in applying concepts compared to the students that practiced textbook problems in the flipped teaching group. Researchers Lawson, et al. agreed with DeLozier & Rhodes (2016) stating there is evidence that teachers will have more class time for activities and active learning through the utilization of the flipped classroom model. Researchers Kostaris, et al. (2017) concluded that the Flipped Classroom Method provided two main benefits: (a) the students were significantly more engaged throughout the course with a continuously increasing trend, and (b) within-group cluster analysis in the experimental group revealed that the low performers had the largest percentage of improvement. Researchers Boeve, et al. (2016) were the only scholars to argue against the flipped teaching method by stating that there is no real evidence discovered to prove that the flipped teaching methods versus the traditional teaching methods made a difference in terms of student behavior. The flipped classroom model has been proven in some cases to increase student engagement and allow students to have time for more in-class activities, but how would a flipped classroom affect the teachers?

Teachers' Perception of Flipped Teaching Practices

Flipped classrooms relate to technology disengagement because, in a flipped classroom, teachers are relying less on technology and more on active learning activities. This means that students will be more engaged in what they are learning since they are not using digital

technology which can hinder or slow their learning process. Researchers Bergdahl & Bond (2021) conducted a qualitative research study to determine and explore how digital technologies are influencing how students (dis-)engage in a disadvantaged upper secondary school. Twelve teachers agreed to participate in the following subjects: Swedish as a second language (SSL), English, Mathematics, Chemistry, Geography, Social Sciences, and Music. Thirty-Two students (years 10-12). The findings stated that the impact of digital technologies on the learning context e.g. when teachers initiated uses or avoided uses of digital technologies, experienced technology breakdowns, or students lacked necessary digital skills, equipment, or login details, that a teacher is physically managing the classroom (to foster engagement) by initiating and shifting interactions (e.g., question/answer, dialogue), tone of voice, signals, prompts, and by providing or withholding information. Researchers determined that the study concluded that work pace was related to awareness of how to orchestrate digital technologies and resources to reduce work pace.

Digital technologies were found to influence leadership conditions. Teachers manage (dis-)engagement differently. Where digital technologies fall short is work pace, because some teachers are better at using technology than others so they would work faster with digital technology. Whereas some teachers are not as skilled with technology, and technology malfunctions from time to time, which will slow teachers down. Researchers Gough, et al. (2017) state that teachers view the flipped classroom as a way to create more time for active learning activities. With more active learning activities, students will be more engaged in the classroom and the content, because they can control their own work pace. This work pace is not based on the teacher but is instead student-centered.

Researchers Gough, et al. (2017) conducted a research study to examine the perceptions of K-12 teachers regarding the Flipped Classroom. The quantitative research spanned over three weeks. The study participants included 6th-12th grade teachers. There were a total of forty-four participants. Of the participants, twenty-seven high school teachers, fifteen middle school teachers, and two teachers identified as others. The findings suggest that teachers agree that the flipped classroom benefits absent students. This study also indicated that students struggling with learning do benefit from the recorded lectures. This study also found that teachers view the flipped classroom as a way to create more time for active learning activities.

Researchers, Gough et al. (2017) were able to determine that first, teachers must carefully consider accessibility to the flipped classroom due to technological requirements. Teachers, administrators, and school board members need to be educated on the fact that the flipped classroom may not improve student learning, but it does create increased time for active learning and higher-order thinking. The final recommendation is for teachers to consider and school leaders to promote utilizing the flipped classroom to aid absent students. Flipped classrooms allow students to improve active learning and generate higher-order thinking. This is an arguing point with researchers Grant, et al. (2015) because their research finds that teachers use devices to improve their curricula, but ownership and control impacting how students use mobile computing devices will be a factor in students staying motivated and being accountable.

Researchers Grant, et al. (2015) conducted a qualitative case study to analyze how teachers felt about mobile computing devices (MCDs). The participants in this study were K-12 teachers who either taught using MCDs or who had students using MCDs. There were a total of nine teachers in his study. Of the participants: (a) five were female, (b) ages ranged from 27 to 53, (c) five were White Caucasian, (d) eight were from public schools, and (e) grades ranged

from Pre-K through 12th with four teaching Grades 9-12, (f) states included Kentucky, Michigan, Mississippi, New York, and Tennessee, and (g) eight participants were using Apple iPads while one used an Apple iPhone. The findings suggested ownership and control of the impacted use of MCDs. Administrators champion teachers' use of MCDs, especially for student accountability. Teachers use devices to enhance their curricula and as motivation for their students. Teachers receive and seek out relevant professional development. Technical issues were common, but support was available.

The problem with Mobile Computing Devices as a teacher is the teacher has no control over what the students view during class. In the flipped classroom model, teachers have control over what the students are viewing during class because technology is not being depended on as the main learning tool. However, if teachers want to use Mobile Computing devices for an in-class activity, the most effective MCD app to use would be GooseChase, teachers can set up a scavenger hunt, and put their students in groups, so they are actively learning but also having some fun while doing so. As Greenhow & Askari (2017) mention, social network sites can be not useful for class time. Teachers do not typically use social networking sites for teaching in school but do for out-of-school learning.

In a flipped classroom model, teachers would be able to use social network sites like Ted-ed, in which they could assign kids to watch educational videos and lessons that correspond to the content in the current unit. Teachers can also use Teamie, which is an excellent collaborative learning platform with mobile apps that easily supports flipped learning. Researchers Greenhow & Askari (2017) conducted an empirical research study to examine how learning and teaching with social network sites can be helpful or not useful. To determine the results of this study the researchers utilized a select review of research articles published in refereed journals between

2004 and 2014 was undertaken. This review yielded twenty-four studies focused on teaching and learning with social network sites. The findings stated that many of the studies emphasized students' learning with social network sites outside of school in informal learning settings. Others emphasized students' learning with social network sites, in traditional learning environments such as classrooms is focused on the connections between students' in-school and out-of-school use of social networks. Articles that addressed teachers' use of social network sites focused mainly on pre-service teachers. Only one article focused on in-service teachers' use of social network sites in their teaching. Social networking sites can be useful for a teacher but when using the flipped classroom model, they may not be useful during class time because that is the time for the active learning environment to take over.

Researchers Holman & Hanson (2016) conducted a mixed methods research study to compare flipped classrooms to traditional lectures. The study took place for two semesters, the participants were nursing students and there were a total of 236 students participating. Students were asked to complete standard end-of-course evaluations developed by the school of nursing. The evaluations consisted of Likert scale statements with scores ranging from 1 (poor) to 5 (excellent). Three statements were chosen for their applicability to the study: “Effectiveness of the required course materials to support student learning”; “Effectiveness of course assignments and grading rubrics in measuring the achievement of course learning outcomes”; and “Overall effectiveness of the course to support the achievement of course learning outcomes.” The researchers Holman & Hanson concluded that the stated course evaluation ratings favored the Traditional Learning Model, a finding congruent with previous research by Al-Modhefer and Roe (2009), who identified that students preferred passive to active learning strategies. This pilot study contributes to our beginning understanding of the Flipped Model by showing that, although

student evaluations favored passive learning, students reported increased learning with the active learning environment of the FM. Nurse educators can use this information to ease the transition to active learning for beginning nursing students.

Researchers Bergdahl & Bond (2021) concluded that work pace was related to awareness of how to orchestrate digital technologies and resources to reduce work pace. Researchers Gough, et al. (2017) concluded that teachers agree that the flipped classroom benefits absent students. This study also indicated that students struggling with learning do benefit from the recorded lectures. Researchers Grant, et al. (2015) concluded that ownership and control the impacted use of Mobile Computing Devices. Researchers Greenhow & Askari (2017) concluded many of the studies emphasized students' learning with social network sites outside of school in informal learning settings. Others emphasized students' learning with social network sites, in traditional learning environments such as classrooms is focused on the connections between students' in-school and out-of-school use of social networks. Researchers Holman & Hanson (2016) concluded that although student evaluations favored passive learning, students reported increased learning with the active learning environment of the Flipped Model. As it pertains to teachers' perceptions of the flipped classroom model, the studies show that teachers do not have negative thoughts when it comes to implementing a flipped classroom model as opposed to a traditional model. Student-centered learning is a good alternative for teachers to use, because it does not depend on the teacher to set the pace, and it allows the students to take control of their learning. If the learning is student-centered, the students will be more motivated when it comes to the content.

Student Motivation and Achievement

Student motivation and achievement are the main focus of this school improvement plan. Improving student motivation will improve their achievement scores. For students to get better scores and grades, they must first be motivated. Providing them with the opportunity to learn through student centered learning, is allowing students to explore different methods of teaching themselves and working through problems at their pace. Researchers Chou, et al. (2021) conducted a quantitative research study to determine if flipped learning would affect learning motivation, as well as if learning motivation presents significant and positive effects on the cognition component, affection component, and behavioral tendency of learning attitude. Using the Likert 7-point scale, where 1 refers to extremely disagree and 7 refers to extremely agree. This study took place in Chungli, Taiwan with a total of three hundred and eighty-six high school students. The research for this study took sixteen weeks to complete. The researchers had the students participate, on average three hours per week, for a total of forty-eight hours over the sixteen weeks. The data was collected through questionnaires, which were analyzed with Statistical Packages for the Social Sciences (SPSS) and further analysis of variance and regression analysis were utilized for testing the formulated hypotheses.

The research results show students in the experimental group present significantly higher language learning motivation and attitude than those in the control group. This study also revealed that flipped learning could help low-performance students enhance language learning effectiveness. In other words, flipped learning, compared to traditional teaching, could enhance students' learning motivation and learning attitude and because of these reasons flipped learning is certainly worth attempting. With the implementation of flipped learning, students feel that the teaching content is easier to learn and internalize. Furthermore, flipped learning allows students to discuss topics with each other and teachers to guide their learning. Researchers Chou, et al.

found data similar to Qiang Jian (2019) in regards to flipped learning increasing learning motivation. Both studies from Chou et al. and Qiang Jian, provide evidence that flipped learning also enhances; earning effectiveness in low-performing students.

Researcher Qiang Jian (2019) conducted a nonequivalent pretest/posttest study to examine the effects of digital flipped classroom teaching methods with an integrated cooperative learning model on learning motivation and outcome. This study spanned over fifteen weeks, with sessions being carried out three hours a week. Qiang conducted this study in Henan Province, China, with a total of two hundred and forty-two college students. Dividing the students into four groups: The first group adopts the flipped classroom teaching method, the second group adopts the cooperative teaching method, the third group adopts the flipped classroom teaching method integrated with the cooperative teaching method, and the fourth group (control group) adopts the traditional teaching method.

The results reveal that, in comparison with traditional didactic instruction, almost all students are in favor of flipped classroom instruction and completing homework during in-class activities. Results also stated that the students with better capabilities actively helped lower-level classmates so that almost all students were participating during the in-class activity. The in-class activities enhance students' reading, thinking, and comprehension opportunities, whereas teachers merely need to timely guide to reduce the load, and the students enhance their learning motivation and efficiency in practical learning. Flipped classrooms could cultivate children's attitudes towards autonomous learning, induce children's learning motivation, and allow teachers' individualized instruction to further enhance learning outcomes. Research from Qiang (2019), disputes the research from Missildine, et al. (2013) because the data from Missildine et

al. states that students were less satisfied with the flipped classroom method. After all, it requires more work compared to a traditional lecture or lecture plus lecture capture approach.

Researchers Missildine, et al. (2013) conducted a quasi-experimental design that was aimed to determine the effects of a flipped classroom (i.e., reversal of time allotment for lecture and homework) and innovative learning activities on academic success and the satisfaction of nursing students. The quasi-experimental design was used in two adult health courses that are offered consecutively in semesters two and three of the nursing curriculum. There were three approaches to teaching Adult Health nursing used: (a) lecture only (LO) (fall 2009), classroom lectures by faculty and via interactive television; (b) lecture plus lecture capture (LLC) (spring 2010), classroom lecture format plus lecture capture backup; and (c) lecture capture plus innovation (LCI) (fall 2010) using the flipped classroom approach, in which there were no classroom lectures.

This study took place in Texas, with a convenience sample of five hundred and eighty-nine students that were recruited for the study over three semesters. A majority of the participants were white (75%) and female (81%), with a mean age of 24.32 years. The findings show that examination scores were higher for the flipped classroom LCI group than for both the LLC and LO groups. However, Students were less satisfied with the flipped classroom method than with either of the other methods, because students claimed that the LCI approach required more work, and they did not seem to perceive the value of interactive learning approaches. Nursing students did achieve higher scores when using the Flipped Classroom Method, but the motivation did not increase upon using the FCM. The next study uses Computer science students to examine the motivation and achievement of a Flipped Classroom Model.

Researchers Subramaniam & Muniandy (2019) conducted a quantitative study to investigate the effect of flipped classrooms on computer science students' engagement level among pre-university students. This study was conducted in Malaysia and spanned over two weeks, with a total of ninety-eight students. The population of this study used a purposive sampling technique was chosen for sampling as it consumes less time compared to many other sampling methods because only suitable candidates are targeted. In this study, the research sample is made up of 98 students from Computer Science. From this total, 47 students were placed in the flipped classroom (experimental group) and another 51 were placed in a didactic classroom (control group).

This study showed that students were highly engaged in flipped classrooms and the early stage of research, on par with other major findings, the outcome expected was to have a higher engagement level by flipped classroom students compared to the didactic classroom. However, the difference in engagement levels of students in flipped classrooms and didactic classrooms was insignificant. Even though the students in flipped classrooms didn't show rejection of the method, probably the approach suited only some students who have an interest in viewing the video before coming to class and participating in classroom activities. This study both agrees with and argues with the study conducted by the researcher Joshua Winter (2018). In Winter's study, there is a correlation between students' effort and their performance when it comes to flipped teaching. In the study by Subramaniam & Muniandy (2019) they were only able to determine the engagement level, but they did not measure the performance concerning the instruction method.

Winter (2018) conducted a quantitative research study to identify the relationship between student motivation and student performance in a flipped learning course. This study

took place in Hawaii, for over eight weeks, with 35 sixth grade students as participants, that ranged from 11-12 years of age. The methodology for this study was that students were enrolled in a required social studies course divided into two sections of 18 and 17. Section placement was based on scheduling factors at the beginning of the school year. Findings suggest flipped learning benefits average achieving students through differentiated instruction. Findings also indicate a correlation between students' perceived effort and their performance in the course. Studies in online schools have identified a relationship between self-efficacy and performance, claiming effort regulation increases motivation "when students engage in learning tasks perceived as easy to execute and interesting and enjoyable".

Chou, et al. (2021) concluded results show students in the experimental group (flipped learning) present significantly higher language learning motivation and attitude than those in the control group (traditional group). Researcher Qiang Jian (2019) concluded that in comparison with traditional didactic instruction, almost all students are in favor of flipped classroom instruction and completing homework during in-class activities. Researchers Missildine, et al. (2013) concluded that examination scores were higher for the flipped classroom LCI group than for both the LLC and LO groups. However, Students were less satisfied with the flipped classroom method than with either of the other methods, because students claimed that the LCI approach required more work. Researchers Subramaniam & Muniandy (2019) concluded that students were highly engaged in flipped classrooms and in the early stage of research, on par with other major findings, the outcome expected was to have a higher engagement level by flipped classroom students compared to the didactic classroom. However, the difference in engagement levels of students in flipped classrooms and didactic classrooms was insignificant.

Researcher, Joshua Winter (2018) concluded that there is a correlation between students' perceived effort and their performance in the course. Missildine et al. (2013) were the only authors to conclude that students were less satisfied with the flipped classroom method, even after receiving higher examination scores. Subramaniam & Muniandy (2019) were the only authors to state that there was no significant difference in levels of engagement in the flipped classroom compared to the didactic classroom. For Flipped learning to be effective, teachers have to have some Professional Development so they can implement the FCM effectively.

Practices of Effective Professional Development

Professional Development is very important for teachers, constantly improving their teaching and being a lifelong learner but also being able to understand how to implement a new teaching and learning method in your classroom without the students struggling to adapt is what most teachers prefer. Researcher Baytiyeh (2017) conducted a qualitative case study research design to investigate the effectiveness of the flipped classroom model in teaching and learning as well as the skills that can be acquired by students after being exposed to this learning style. The research for this study lasted for a semester, with there being twenty participants that spanned various majors. The methodology for this study enrolled the students in a web-design course, and they participated in a survey that consisted of open-ended questions exploring their perceptions of the flipped classroom approach. Upon completion of the study, the students' comments offered evidence for a deeper and broader perspective on learning, and five themes emerged: self-regulated learning, problem-solving skills, teamwork and communication skills, enjoyment, and creativity. The primary findings reveal positive results: in addition to their satisfactory performance on tests and assignments as compared with a traditional classroom, students were confidently enthusiastic about learning through this model, and the qualitative data confirmed

their positive perception. This study also reveals that teaching style can enrich the learning experience of students and can help them develop the soft skills they need to succeed in any profession. This makes no mention of professional development for teachers, but notice that it does mention the development that this would provide for students and their skills.

Researchers Hardin & Koppenhaver (2016) conducted a study to determine if flipping professional development would be innovative for teacher insights. This is not a standard research study, but instead a survey and evaluation. The findings suggest that participants appreciated the quality of the online resources and felt that the online discussion board was a valuable component of their preparation. They also deemed the online accountability measures a strong component of the preparatory module. In reflecting on the final module following the face-to-face session, teachers were confident that their final product was not only an accurate reflection of their learning but that it would be helpful to them after the workshop. Teachers' comfort level in sharing and using what they had learned was high, and they felt strongly that the flipped PD structure was an effective instructional model. The success of the flipped classroom PD structure increases the likelihood that teachers will continue to engage in future flipped PD opportunities and recommend the experience to colleagues. In this study, Hardin & Koppenhaver (2016) proved that teachers participating in flipped professional development increased their Professional Development. The more flipped Professional Development sessions that teachers have, the better opportunity they have to recognize the benefits of using Flipped teaching in their classrooms.

Researchers Lee, et al. (2016) conducted a model development research study that spanned over one semester. The study involved three sets of participants whose feedback was sought at different times in the model construction and validations. The first set of participants

was composed of four members of an instructional team (one university professor and three teaching assistants) who served as model users. The second set of participants included five professors from US and South Korean universities. The third set of participants in the study included 18 college students enrolled in an algebra course. The purpose of this study was to develop a Flipped Learning design model for higher education that could systematically guide instructors or designers in creating an appropriate blend of individualized online lectures and collaborative face-to-face learning activities. A full set of online sessions were developed, and then F2F sessions were developed and implemented. Researchers Lee, et al. (2016) study displayed to teachers that a flipped model can be effective for both students and teachers.

Researchers Minaz, et al. (2018) conducted a pretest/posttest equivalent group experimental research design that had a total of forty-eight teachers as participants. The forty-eight prospective teachers were further divided through paired random sampling techniques into two groups that are flipped classrooms and non-flipped classrooms based on pretest scores. The groups were split evenly, leaving each group with twenty-four participants. The study was focused on the objective to investigate the performance of prospective teachers of flipped classrooms and non-flipped classrooms concerning flipped classroom strategy. Results of the study illustrated that there was a significant effect of flipped classroom strategy on the performance of prospective teachers after treatment. Furthermore, flipped classrooms achieved higher mean scores than the non-flip classroom prospective teachers. Flipped classroom strategy needs to be included in professional training programs so that the upcoming professional teachers can easily create their learning materials. Flipped classrooms as a teaching strategy need to be incorporated in Pedagogical Skills Course in Professional Teaching courses. Researchers Minaz, et al. were able to prove that if flipped classroom strategies were included in professional

development for teachers, teachers would be able to create their learning materials as opposed to re-using old material from past classes. Teachers would still need to find effective ways of implementing flipped learning into their classrooms.

Researchers Yurtseven, et al. (2019) conducted a case study that aimed to explore the critical factors for effective professional development (PD) activities to support teachers' technology integration and suggested a design model: flipped PD. This study was conducted in Boston, Massachusetts. The methodology for this study selected articles that were sourced using the Education Resources Information Center (Education Research Complete) and Google Scholar. Researchers focused on articles published between 2000 and 2017, which focused on the key elements of effective teacher PD and models for PD that are designed to effectively prepare teachers to integrate technology into their teaching. The findings were able to determine that the PD model that combines flipped PD strategies with the implementation strategies of effective PD is a call for action to design PD experiences based on teacher needs. For professional development to be effective, teachers must be able to implement what they are learning in their PD in their classroom. The study conducted by Yurtseven, et al. takes a closer look at this information, by researching past articles on effective teacher PD and preparing teachers to integrate technology into their teaching. To integrate flipped learning into their teaching, the teachers have to find models that are designed to effectively prepare teachers for the implementation of flipped learning.

Researcher Baytiyeh (2017) concluded that this teaching style (FCM) enriches the learning experience of students and helps the students develop the soft skills they need to succeed in any profession. Researchers Hardin & Koppenhaver (2016) concluded that teachers judged the flipped PD model to be an effective approach. Researchers Lee, et al. (2016)

concluded that a flipped Learning design model for higher education could systematically guide instructors or designers in creating an appropriate blend of individualized online lectures and collaborative face-to-face learning activities

Researchers Minaz, et al. (2018) concluded that there was a significant effect of flipped classroom strategy on the performance of prospective teachers after treatment. He found that flipped classroom strategies need to be included in professional training programs so that the upcoming professional teachers can easily create their learning materials. Researchers Yurtseven, et al. (2019) concluded that the PD model that combines flipped PD strategies with the implementation strategies of effective PD is a call for action to design PD experiences based on teacher needs. The researchers from this section all seem to agree that practices of effective professional development using the flipped classroom method, can lead to teachers effectively and successfully implementing the FCM into their classrooms.

School Profile & Baseline

The Frisco Independent School District (FISD) is found just 30 miles north of Dallas in Frisco, Texas, and encompasses 75 square miles in Collin and Denton counties, including most of the City of Frisco and portions of neighboring Plano, McKinney, and Little Elm. The current population of Frisco is over 170,000 residents. The demographics of Frisco Independent School District (FISD) consist of 13% of its students from low-income homes. The cost of living in Frisco Texas is significantly more expensive than the Texas state average with a median home value of $509,200. The Texas state average median home cost is $243,600 (Cost of living in Frisco, Texas. 2021).

The Frisco Independent School District employs almost 8,100 certified staff members and serves over 65,000 students from the surrounding area. The district consists of forty-two

elementary schools, seventeen middle schools, eleven high schools, and three special program centers, bringing the total number of schools in the FISD to seventy-three. The average student-to-teacher ratio in Frisco is 16:1. The FISD has been able to maintain high levels of achievement with an attendance rate of 96.6% and a four-year graduation rate of 99.4%. Frisco ISD is a very diverse school district in which 33.7% of the students are White, 36.7% are Asian, 12.86% are Hispanic, and 11.1% are African American.

This school improvement plan will focus on Lone Star High School, which is in the Frisco Independent School District. The high school serves 2,147 students and has 134 full-time teachers. The high school includes grades 9-12. The Lone Star High School serves 185 special education students.

Student Performance

The Texas Academic Performance Reports (TAPR) pull together a wide range of information on the performance of students in each school and district in Texas every year. Performance is shown disaggregated by student groups, including ethnicity and socioeconomic status. The TAPR reports show that students from all grades in the Frisco ISD performed significantly better in most courses, in the year 2019, than they did in the school year of 2021. There were only two courses in which the students had no significant drop-off in performance between the 2019 school year and the 2021 school year; those two courses were English and US History / Social Studies (2020-21 Texas Academic Performance Report (TAPR). 2021). The reports also provided extensive information on school and district staff, programs, and student demographics. The TAPR report included student performance data SAT and ACT participation and performance. Frisco ISD data continues to represent the increasing student participation with the ACT and SAT increased (87.6% in 2020 vs 83.5% in 2019) with overall performance on the

assessments down slightly (74.4% of students meet or exceed criteria in 2020 vs 74.6% in 2019) (Texas Academic Performance Report. 2022). Frisco ISD is successful in terms of keeping students in school, with a dropout rate of 0.1% throughout the district. (Murphy et al., 2022).

Student Community and Characteristics

The school community at FISD is similar to most of the other Texas school districts where students, staff, and stakeholders work together to provide a safe and healthy learning environment for all of the students. All the schools in the district strive to honor and uphold the mission and vision statement of the district by providing a welcoming and friendly atmosphere. The Lone Star High School within the Frisco Independent School District reports that students generally work hard and turn in daily work and assignments, but concerns have been expressed about students taking advantage of the grading policy where the teachers are discouraged in giving students zeros on assignments. Naturally, students take advantage of this policy and turn in assignments late because there are little to no consequences for submitting late work.

School Characteristics

Lone Star High School is a very collaborative school where teachers work well together and share resources to support one another. Teachers of the same subject typically meet before beginning a new unit to discuss teaching strategies, based on their past knowledge of what worked well for the unit and what did not. This allows teachers to be on the same page and pace as their colleagues. Lone Star administration supports the teaching methods and trusts its professionals to do what they think is best for their students. This atmosphere of collaboration and trust between teachers and administrators allows for Lone Star's students to receive instruction from teachers that are fully dedicated to the goals the school is hoping to achieve.

Parent Involvement

The days of parents being in the dark about what their children are learning and doing in class are over. Lone Star High School utilizes canvas as its online learning platform for its students. Canvas holds attendance records, daily lessons, assignments, assessment scores, and grade book information on each student. Parents, students, teachers, and staff have access to canvas. Parents are not involved in fundraising events or events for the school. The teachers at Lone Star high school met the parents at the beginning of the school year at an open house. Other than that, parents are not involved or seen by teachers, the most interaction parents and teachers have after the open house is standard emails.

School Mission / Vision

This Frisco ISD mission is to know every student by name and need. This vision is to look at education differently, through the eyes of children. Education is a shared responsibility of students, school, home, and community. With that as an essential principle, some of the core beliefs for students, faculty, and the communities are: everyone needs challenge, opportunity, and encouragement, integrity is essential, imagination and creativity are vital, a safe environment is necessary for learning, every person can learn, learning is lifelong and unlimited, and all students must graduate with the skills they need to pursue their aspirations (Frisco ISD).

Current School Learning Goals

Lone Star High School's current school learning goals are to see every student receive a High School diploma and help students to develop a plan for what life will look like after they finish high school. Creating a plan for every student's next steps in life and how they will get there is critical to each student's success when it comes to shifting from high school life to adulthood. This is an important learning goal because a lot of high schools just want their students to graduate, but that does not always lead to a successful transition from school to life

after high school. Lone Star is taking the extra step to help students develop a plan for desired college locations and potential subject areas of study.

Current School Learning Goals

1. Teacher Work: Once a week the teachers of each department get together and discuss their lesson plans for the upcoming week. Most teachers at Lone Star high school do not take their work home, these teachers like to do their grading and documenting during their conference (off) period each day.
2. Curriculum: The Lone Star High School curriculum is centered around student mastery of subject-specific TEKS (Texas Essential Knowledge and Skills).
3. Instruction: Teacher instructional methods are centered around the traditional learning method, where students come to class and receive lectures from their teachers on the content. They are then assigned homework that has to be completed on the student's own time after school.
4. Assessment Practices: The Texas state test at the end of the year is still a computerized standard test that utilizes the typical testing methods to ensure that its students are prepared for the STARR (end of year Texas state test). Lone Star High School uses Mastery Connect, which is a competency-based learning platform that helps teachers identify levels of understanding, target students for intervention, and inform instruction with the idea that teachers have more time to teach, and students have more time to learn.
5. Professional Development: Lone Star High School is very collaborative when it comes to teachers working with one another, so the faculty weekly meets in their PLC (professional learning communities) to plan the next week's lessons and share resources and strategies for their classes.

Lone Star has put measures in place to help its students be successful in graduating high school. Teacher collaboration and the implemented school curriculum are preparing the students well. Lone Star High School has been shown to have a reputation as a really good school, but like all schools, some things can be improved. The most important areas of improvement for Lone Star High School would be student motivation to learn and being actively engaged in learning.

Needs Assessment

Lone Star High School still uses the traditional way of teaching through daily lectures with little student engagement, activities, or technology. Students lack the motivation and engagement needed to improve or see the results in their achievement scores because of the traditional way of teaching. The need for improvement in instruction delivery could greatly improve student engagement and motivation. Research shows that using a flipped learning model enhances student learning motivation and efficiency (Jian, 2019). Allowing students the ability to take control of their learning as opposed to didactic instruction will help to enhance students' reading, thinking, and comprehension abilities.

As mentioned, the students at Lone Star High School do not all possess the motivation and engagement needed to be successful in school. A part of the reason for this is the lack of accountability for students to turn in their homework and assignments on time. Lone Star teachers are not allowed to give zeros on assignments, which has led to the students turning in homework extremely late or partially done. The flipped learning model will not have students completing assignments at home but instead in the classroom as a way to ensure each student completes their work promptly. The flipped teaching model requires that students watch lecture material and videos to prepare for the next day's classwork instead of students completing

assignments at home. The lectures and videos are easier for the students to digest at home rather than homework.

With the flipped learning model, teachers will be able to give their students zeros because they had the opportunity to complete their work in class. Not completing the work in class means one of two things, students were not motivated to do so, or they did not watch the lecture that correlated to the assignments. The flipped learning model provides students with a sense of accountability because they are in control of their learning and expected to complete their assignments when in class, which would naturally lead to an increase in engagement.

School Data & Analysis

Lone Star High School data displays a slight decrease in students meeting grade-level content standards during the 2018-2019 school year. Seventy-seven percent of students met grade-level standards, while 37% of students mastered them. During the 2021 school year, 75% of students met grade-level standards, and 33% of students mastered them (Description of State Accountability System, 2021). The decreases in percentages of students meeting and mastering grade-level standards are not significant but students have clearly shown a drop off in terms of learning and mastering content. With the high school focused on student mastery of subjects, meeting the district average for mastering grade-level content should be achievable. Forty-one percent of students have achieved subject mastery district-wide. Lone Star High School students currently average 33% subject mastery. This data indicates that students are having a hard time mastering the material that is being presented to them at Lone Star High School. Student difficulty may be due to a lack of engagement in the content. Students may also believe that they will not be penalized for late homework, resulting in no incentive to master any material.

Lone Star's primary areas of weakness are in the biology department and the algebra department. There is a significant difference between the averages from Lone Star High School and the rest of Frisco ISD. In biology, Lone Star High School's mastery level average is 30%, whereas Frisco ISD's mastery level average is 49%. Lone Star's 2021 average is also lower than it was in the 2019 school year when the mastery level average was 40%. In algebra, North Star students' mastery level average is 18%, whereas Frisco ISD's mastery level average is 54%. The average mastery level at North Star during the 2019 school year was 35%. North Star students are struggling and these subjects are areas of weakness for the school. Biology and algebra require students to be the most engaged and complete all their assigned work to understand the content, so it is no surprise students struggle in these areas.

Social studies are an area of strength at Lone Star High School, with a mastery level average of 64%; Frisco ISD's mastery level average is 70%. Lone Star's 2021 average is down from the 2019 school year when the mastery level average was 67%. These percentages indicate that social studies are an area of strength for Lone Star High School. Students do not struggle as much to complete their work in these particular courses. Lone Star High School also excels in its attendance rate, which is currently at 98.9%. This is an impressive number for attendance, considering the district average for student attendance is 99.3%; Lone Star is not far from reaching that goal. When a high school has an attendance rate as great as Lone Star's they can try to implement a flipped classroom model because the students are showing up to school a majority of the time. Instead of hoping students show up with their homework from the night before, the flipped classroom model would require assignment completion, potentially leading to increases in students meeting grade-level standards and achieving a mastery-level average in all subjects. This mastery level is ultimately Lone Star High School's goal for its students.

SAT and ACT scores should also be considered when analyzing Lone Star High School student achievement. Lone Star students' average scores on these standardized tests are higher than the national average. After the 2019-2020 school year, the Lone Star High School average for students that took the SAT was 1109, and the average ACT composite score was 23.9 (Murphy et al., 2022). The national average for students that took the SAT was 1051 and the average ACT composite score was 20.6. These test scores cannot be compared to the 2020-2021 school year, because the testing data has not yet been reported. Frisco ISD requires students to take End-of-Curriculum (EOC) assessments in high school as a part of the STAAR test preparation. Students are tested on biology as freshmen, Algebra 1 as sophomores, and English 2 and US History as juniors.

The results of Frisco ISD's biology summative assessment from the spring of 2019 display that 90% of students were able to meet grade-level standards, whereas 82% of students from Lone Star High School met grade-level standards in biology. In the spring of 2021, Frisco ISD saw a slight decrease, with 82% of students meeting biology grade-level standards. Lone Star High School saw a significant decrease in biology, with the school reporting that only 68% of students met grade-level standards; this is down 14% from the previous year's test (Lone Star High School, 2021). In the Algebra 1 assessment from the spring of 2019, it was reported that 86% of students in Frisco ISD were able to meet grade-level standards, compared to Lone Star High School where 65% of students met grade-level standards. In spring 2021, the percentage of Frisco ISD students that met grade-level Algebra 1 standards showed a significant decrease, with only 72% of students meeting the grade-level standards. In contrast, 45% of students from Lone Star High School met Algebra 1 grade-level standards. Lone Star reported a 20% decrease in students meeting grade-level standards from the previous year's test.

In the spring of 2019, 83% of students in Frisco ISD met grade-level standards in English. Lone Star High School reported that 71% of students met grade-level standards in English. In the spring of 2021, Frisco ISD students showed a slight increase in English, as 86% of students met grade-level standards. Lone Star High School, when compared to the spring of 2019, showed a significant increase in English, with 81% of students meeting grade-level standards. English is the only subject in which both Frisco ISD and Lone Star High School indicated an increase in the percentage of students meeting grade-level standards. History is a strong subject for Frisco ISD; in 2019 94% of students met grade-level standards. In comparison, Lone Star high school reported that 91% of its students met grade-level standards. In the spring of 2021, there was a slight decrease in the percentage of students that met US History grade-level standards, with 91% of students in Frisco ISD meeting the grade-level standard and 88% of students in Lone Star High School meeting the grade-level standard.

Action Plan

The goal of this school improvement plan is to develop and deliver professional development focused on flipped teaching methods to increase student motivation and engagement in the high school classroom. This professional development plan is aligned with the Standards-Based Grading system that breaks assignments into the Texas Essential Knowledge and Skills standards which weigh each grade equally. Students will receive grades based on the quality and accuracy of the work they complete in the classroom. Assignments may include quizzes, homework, and/or group work. Utilizing a flipped classroom method helps increase student motivation and engagement while allowing teachers to analyze its effectiveness.

The first part of this plan consists of creating and planning the professional development model and resources. Yurtseven et al. (2019) determined that combining flipped classroom strategies with the implementation strategies of effective professional development would be more helpful for designing experiences based on teacher needs. Teachers practicing flipped model strategies and implementation in their professional development are better suited for the real-world application of a flipped classroom method. During professional development, teachers practice effective implementation strategies, which makes utilizing this plan achievable for Lone Star High School teachers.

The second part of the school improvement plan is the implementation of the flipped classroom methodology. Minaz et al. (2018) state that if flipped classroom strategies were included in professional development for teachers, then teachers would be able to create their learning materials as opposed to reusing old material from past classes. This year-to-year change in material would discourage students from reproducing previous students' work, thus increasing current student engagement. Additionally, this enables teachers to gauge how well their implementation of the new teaching method is going. With students completing all assignments inside the classroom, the number of incomplete assignments will be lowered. The indication of success will be determined by the accuracy of the answers, rather than the submission of assignments. Students reaching achievements or failing to achieve classroom goals provides the teacher with feedback on their learning materials.

The third part of the school improvement plan is gathering teacher feedback on the professional development experience to make future improvements. Researchers Hardin & Koppenhaver (2016) conducted a study using surveys and evaluations to determine if

professional development would be innovative for teacher insights. The study indicated that the creation of an online teacher discussion board encouraged interactions between teachers. From these discussions, teachers were able to share the resources that they used in their classrooms with colleagues. A similar discussion board will be made available to the teachers at Lone Star High School. At year-end, teachers will be issued a survey asking if they believed the flipped classroom method approach was effective, if student motivation increased, and if student engagement increased. A free-response question asking teachers to describe any struggles with the implementation of the flipped classroom model will complete the survey. From the responses to the surveys, future improvements and adjustments will be made to the professional development training.

The final part of the school improvement plan will analyze the completion and accuracy of assignment results from the students before and after implementing the flipped classroom model. Because of the Frisco ISD curriculum, Lone Star students have no incentive or motivation to complete their work because they recognize that teachers will not and cannot give them a zero. This knowledge may have led to a decrease in motivation and engagement. To determine if there was an improvement in motivation, teachers will begin tracking the students that turn in assignments late while noting how late the assignments are. To determine if there was an improvement in engagement, teachers will grade the assignments based on the answers provided by students to analyze if the students understand the content. Teachers will compare the student achievement of this year's class to the previous year's class that used a traditional learning method to determine if the flipped classroom model was effective.

Implementation of the Plan

Like most schools in America, Frisco ISD ended the 2019-20 school year with online classes. In a 2021 news report written by Kaylehn Molitor, she states "Frisco ISD students are adjusting to not only going back to in-person classes this school year but also to a new grading system. Standards-Based Grading is a system that breaks assignments into the Texas Essential Knowledge and Skills (TEKS) standards required by teachers to teach and students to learn and weighs each grade equally" (Molitor, 2021). The goal of this grading system is to break down chapters or topics by standards so the teachers know exactly what part of the lesson that students are struggling with. Since TEKS is centered around student mastery of subject specifics, the best way for students to master their learning is in a flipped classroom model where students can take control of their learning.

Before the beginning of the school year, high school teachers will develop collaborative tasks for professional development. The tasks should be designed to be flexible and relevant to each classroom subject. In professional development (PD) settings, teachers have PD overviews and timelines that detail the focus and objective of every PD meeting. The outline for each week includes the competency being addressed, tools to be explored, an objective or task for teachers to complete in the form of a solution, and teaching guidance and feedback for the week. For a flipped classroom method (FCM) to be effective, teachers will implement the unit of study for about two weeks. Professional development on flipped classroom model training will take place a couple of weeks in advance of implementation so that teachers will have time to prepare their needed classroom materials.

Through regular PD sessions, teachers are encouraged to work with other teachers in their department or create cross-disciplinary activities. These tasks allow them to develop their own

ideas and improve their teaching. They are also given the freedom to develop their own resources that are beneficial to their classroom. During this time, teachers can also explore new tools and develop projects for their upcoming units. They can also reflect on their own ideas and feedback from their peers and coaches

To monitor the success or failure of the interventions, data collection must happen throughout all professional development sessions relating to the flipped classroom method. Before beginning to practice effective PD with the flipped classroom method, teachers should first be able to self-assess their skill ability. Teachers will take a survey at the beginning of the PD to determine their knowledge of a flipped classroom model along with what their skills are. Each teacher will revisit the survey at the end of the professional development sessions to identify new skills acquired throughout the PD.

Through a survey, teachers will be able to compare the pre- and post-data to determine how their skills and perceptions of a flipped classroom model have changed. The results of the study will be shared with the instructional coaches and principal to develop further opportunities for training. The goal of this study is to identify the most effective ways to implement the model in the district.

Barriers should also be considered for future training sessions when implementing the flipped classroom model. One barrier that will impact the delivery of this professional development is the amount of technology provided to students in schools. Because Frisco ISD is a one-to-one school district, its students are provided with Chromebooks to complete their work. Student Chromebooks may be a barrier because in a flipped classroom students would complete their assignments at their own pace in class. Since the students have Chromebooks, they should

be using those to complete their assignments. The barrier that teachers will face is having to monitor the students to make sure they are constantly completing their assignments and not using their computers for non-school or non-assignment-related things. This could impede the success of the plan because the goal is to increase students' motivation and engagement. If students are utilizing their Chromebooks for things other than assignments, then their engagement is decreasing, along with the motivation to complete their work.

Another barrier exists when the teachers' beliefs about the flipped classroom model do not align with the goals of the training. Several teachers may express concern about the flipped classroom model and have to re-train themselves to use the FCM. These teachers may become more willing to commit to the flipped classroom model when they participate in professional development sessions and see how other teachers are successfully implementing FCM. Through regular PD sessions, instructional coaches can also help teachers improve their skills in creating learning materials. They can also provide them with additional support and questions related to the flipped classroom model. Weekly check-ins are also conducted to provide teachers with additional opportunities to ask questions.

The implementation of this plan can be successful in assisting students with mastering their learning by allowing students to take control of their learning. Teachers will have to utilize the pre-and post-data from the survey to determine if the implementation of a flipped classroom model was effective for students. Implementing this school improvement plan will allow teachers to analyze their own previous teaching methods in comparison to the flipped classroom methods to determine when to implement a flipped classroom method into their units of study based on student needs and engagement. For Frisco ISD, professional development should

include some tips for teachers on incorporating one-to-one technology to your advantage as a teacher. The barriers may be concerning to some teachers, but attending professional development will help you successfully implement a flipped classroom model.

Conclusion

The 2020-2021 school year has provided teachers across the United States with an opportunity to rethink and improve their teaching strategies. The initial problem was that Lone Star High School students lack the motivation to learn and stay engaged in the classroom setting. Teachers were unprepared and unequipped with the resources and skills needed to provide instruction that enhanced student engagement in the classroom following the COVID-19 pandemic, which may have led to a decrease in student motivation. Teachers in the Frisco Independent School District will be provided with professional development that focuses on the effective implementation of a flipped classroom model. This professional development will provide teachers time to learn, explore, and ask questions while designing their tools that could be used immediately for classroom instruction.

The goal of the study was to find out what makes effective professional development sessions. It was also determined that the quality of the sessions should be timely, relevant, and collaborative. Data on student assignment promptness and assignment content accuracy will be used to determine the effectiveness of the professional development provided. Through regular professional development sessions, teachers can also reach the effective category in developing content for the students. This will allow them to implement the flipped classroom model in their daily lessons. It will also help them provide better opportunities for their students to increase engagement and motivation.

The COVID-19 pandemic created an opportunistic circumstance that led to the creation of the Lone Star High School improvement plan. After six months of remote learning, students may have lost their motivation to sit in a classroom and listen to a lecture. The flipped classroom method training will provide teachers with skills that can be used to create more active learning activities, opportunities, and a unique method of learning for the students. These active learning activities will provide students with opportunities to increase their engagement in the classroom by controlling the pace at which their work is completed. Allowing students to control their work pace, should increase their motivation to learn and comprehend the content being presented to them.

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