

The attached seminar paper, by Lily Zhang, entitled “The Feasibility of The Flipped Classroom in Chinese Classrooms” when completed, is to be submitted to the Graduate Faculty of the University of Wisconsin-Platteville in partial fulfillment of the requirements for the Master of Science in Education degree, for which 3 credits shall be allowed, is hereby:

Approved: \_\_\_\_\_ *Richard L. Darrett* \_\_\_\_\_ Date: 05/12/2017 \_\_\_\_\_

Paper Advisor

THE FEASIBILITY OF THE FLIPPED CLASSROOM  
IN CHINESE CLASSROOMS

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Presented to  
The Graduate Faculty  
University of Wisconsin-Platteville

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## **Abstract**

### **THE FEASIBILITY OF THE FLIPPED CLASSROOM IN CHINESE CLASSROOMS**

Lily Zhang

Under the Supervision of Prof. Richard Garrett, Ph.D.

In recent years, Chinese students are less diligent and they lack the initiative to study, and many students are confused about their whole education. They do not know why they study, how they study and when to study. They also do not have the enthusiasm to study. They just follow the teacher's lead. In the final analysis, the reason is due to the limitation of the traditional classroom, while the flipped classroom enables the students to scan the whole class procedure. When they watch the video of the contents of the class, they can choose the teacher whose teaching style is suitable for them quickly. Many universities offer courses and the flipped classroom approach may be the better way for students to learn. The flipped classroom is a radical pedagogy whereby online lectures take place outside class, and the traditional classroom is used for active problem solving. Research would suggest the best way to engage students and to promote learning, the teaching approaches that go beyond traditional lecture instruction are the most effective (Ferreri and O'Connor, 2013). That is why we need reform and to apply the flipped classroom in higher education for remedying the limitation of the traditional college classroom. This paper not only introduces the flipped classroom but also compares the traditional classroom and flipped classroom. The topic of "The Feasibility of Flipped Classroom in Chinese Classrooms", then, comes out.

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## **Chapter I Introduction**

The flipped classroom, also called “inverted classroom”, means the classroom is opposite from the traditional classroom which the teacher posts the lectures before class in the form of pre-recorded videos. Meanwhile the students have the flexibility to watch the videos, then engage in the class by means of many activities and interactions. The flipped classroom paradigm has recently emerged from K-12 education (Ash, 2012), which is a relatively new trend in China these days. Nowadays more Chinese schools tend to use the flipped classroom over the traditional classroom, especially in the college.

### **Statement of the Problem**

The traditional classroom cannot satisfy all students’ needs, they do not have many choices to select teachers and lectures that they are interested in, and the students are not able to review the previous class.

### **Definition of Terms**

The flipped-classroom model is the most frequently used one, in which “students rotate on a fixed schedule between face-to-face teacher-guided practice (or projects) on campus during the standard school day and online delivery of content and instruction of the same subject from a remote location (often home) after school” (Staker and Horn, 2012) and/or before school (Herreid, 2013) for a specific course or subject (e.g., math)

		<b>Traditional Classroom</b>	<b>Flipped Classroom</b>
Time	Pre-classroom		Lectures
	Classroom time	Lectures	Active learning Activities (pair or group programming)
	Post-classroom	Homework (programming exercises)	

**Purpose of the Study**

The purpose of this study is to evaluate the use of the flipped classroom into the traditional classroom

**Significance of the Study**

If the flipped classroom is more effective than the traditional classroom, it would change our educational model in future.

**Delimitation of the Study**

There is only one university that has the flipped classroom mode in the Sichuan province in China and the time of applying the flipped classroom is only two years. Because the time of applying flipped classroom is short in China, there is not enough data to observe.

## **Methodology**

I plan to use the library research methodology.

My research project compares the flipped classroom and the traditional classroom. The research question is to explore the effectiveness among the traditional classroom, flipped classroom and the blended classroom. I need to collect the materials such as: the explanations of flipped classroom, and of the advantages and disadvantages of flipped classroom.

## **Chapter II Review of Literature**

The flipped classroom paradigm has recently emerged from K-12 education (Ash, 2012). It is a radical pedagogy whereby online lectures take place outside class, and the traditional classroom is used for active problem solving. Research would suggest to best engage students and to promote learning, teaching approaches that go beyond traditional lecture instruction are the most effective (Ferreri and O'Connor, 2013). There are two reasons for applying this model. First, it is an active way for students' studying. second, most of college students are of the current millennial generation. As this late 80s or 90s generation, they accept new things immediately. Now if we maintain the old model of traditional classroom, it will add the limitation of the teacher's knowledge. As a result, the teachers cannot satisfy the students' needs and the desires of learning any more. This literature review considers whether the application of flipped classroom in college is necessary by responding to the following questions:

1. What is the flipped classroom?
2. What are the advantages of applying the flipped classroom?
3. What are the disadvantages of applying the flipped classroom?
4. What distinguishes the flipped classroom from the traditional classroom?
5. Is blended learning more effective for students and teachers?

### **What is the flipped classroom?**

In a flipped classroom, sometimes called "inverted classroom", the teacher "delivers"

lectures before class in the form of pre-recorded videos, and spends class time engaging students in learning activities that involve collaboration and interaction. Passive learning activities such as unidirectional lectures are pushed to outside class hours, to be replaced with active learning activities in class. The style of “flipped classroom” appeared in the literature as early as 2000 (Lage, Platt and Treglia, 2000) and was made popular by Chemistry teachers Bergmann and Sams in recent years (Bergmann and Sams, 2012, 2012a). It was popularized and solidified as a model by Jonathan Bergmann and Aaron Sams. They first published a book on it in 2012, titled "Flip Your Classroom: Reach Every Student in Every Class Every Day". This model aims to reform age-old teaching methods that are inefficient and often fail to engage students in the classroom. The flipped classroom is a concept whereby schoolwork is done at home and homework is done at school, The flipped-classroom model is the most frequently used one, in which “students rotate on a fixed schedule between face-to-face teacher-guided practice (or projects) on campus during the standard school day and online delivery of content and instruction of the same subject from a remote location (often home) after school” (Staker and Horn, 2012, p. 10) and/or before school (Herreid, 2013) for a specific course or subject (e.g., math). This variedly used approach has many advantages for 21st century generation of students, as well as for teachers, administrators, and parents. With the successful similar implementations of web-based lecture technologies – the often quoted success stories being the Khan Academy and Massive Open Online Courses – the flipped classroom gained traction at educational institutions in North America across a spectrum of disciplines and at different levels of instruction. This pedagogy has also been consistently rated as one of the top trends in educational

technology (for example, Watters, 2012). Some educators have reported lower failure rates (Michigan Radio, 2013), greater flexibility, lesser stress (NBC, 2013), improved student attitudes and even better test scores (Flipped Learning Network, 2012) for classes that adopted this model.

### **What are the advantages of applying the flipped classroom?**

Current studies report that the flipped classroom model has many benefits for students and teachers. For instance, one study reports that students are able to make progress at their own pace (Fulton, 2012). Herreid (2013) reports that teachers emphasize several benefits of the flipped classroom model, such as finding more time to spend with students on research, engaging students with scientific equipment in the classroom, providing alternative learning opportunities (e.g. students who miss classes can use the equipment to make videos for making up of what the teacher has taught in the classroom), and creating a conducive atmosphere for students to actively engage and enjoy the learning process. Brunsell and Horejsi (2013) detected other benefits of the flipped classroom model including increases in parent involvement; parents were able to see what was going on in the class and the quality of content. In addition, Brunsell and Horejsi stated that the availability of flipped classroom videos allowed administrators to see how courses are taught in terms of content and quality in their schools. Additionally, the videos helped the administrators establish trust and accountability with their teachers. The study demonstrated that teachers who tried the flipped classroom model indicated improved job satisfaction. Another proposed advantage of the flipped classroom is that it allows instructors and students to make better use of face-to-face time. Removal of didactic course material to an online

environment means that class time is freed for other, more active forms of learning. The use of small-group, case-based or team-based exercises in flipped classrooms has been documented, and it is thought that such active learning teaching techniques aid learner retention and understanding. Such active learning exercises also facilitate instructor–student interaction. With traditional courses, the instructor delivers material in class, but it will not be present when the learner attempts to apply the material, e.g., during an assignment. With the flipped classroom, the instructor is physically present during this application-of-knowledge stage, a feature of the teaching approach that appeals to both educators and students.

Many educators and students also agree that the flipped classroom is a valuable way of improving learner engagement and promoting a sense of responsibility for one’s education. Further, studies suggest that the teaching method improves their academic performance. McLaughlin et al (2013) found that the approach enhanced student performance and learning on the first-year basic pharmaceuticals course offered at the University of North Carolina, USA; cumulative final examination performance rose and overall grades increased from 80% to 82.5% when a flipped classroom approach was adopted.

### **What are the disadvantages of applying the flipped classroom?**

The flipped classroom also has a number of perceived drawbacks. Although the flipped classroom is thought to encourage learners to take responsibility for their own learning, this will only happen if they are willing and able to do so. For example, at a basic level, instructors using

an online learning management system must ensure that students have access to the required technology and to a reliable internet connection. In addition, it may be necessary to help students to buy into the value of the flipped classroom. This is especially relevant when students are used to a passive, didactic lecture environment and are being asked to adapt to one that centers on active learning. Giving structure and meaning to the flipped classroom is vital.

Students are not the only ones to benefit from careful orientation to the flipped classroom. Educators who are not familiar with the flipped classroom are also likely to require support because they take on the responsibility of preparing a variety of pre-class materials and assignments, e.g., video lectures and active learning classroom exercises. Educators have reported concerns about the significantly increased workload involved with migrating from traditional lectures to a flipped classroom. However, the time commitment involved may not be as severe as first thought. As Talbert (2014) explains, “The expense of creating materials for class is largely a one-time startup expense, since videos and activities can be reused and updated over time.” On the other hand, there are also negative qualities of the flipped classroom. For example, not all students are pleased to accept the new model. Some students who are new to this approach could be resistant, because of their background in traditional learning approaches. Moreover, the materials for the flipped classroom should be in good quality and they should match with students’ level. Furthermore, preparing a good quality video can consume a lot of time for teachers and some teachers can be resistant because of their lack of experience with the necessary technology. Therefore, using the flipped classroom model may require some additional preparation time compared to the traditional classroom teaching model for both teachers and

students.

### **What distinguishes the flipped classroom from the traditional classroom?**

1. Students can control their own pace, and not just follow their teachers.

In former traditional classroom, the teacher plays the dominant role to control the whole class, while the students just receive what the teacher provides them, so the teacher speaks actively and the students listen passively. There is not enough time left for students to internalize the materials, and they just understand them. When they meet problems after class, they need more chances to ask their teachers for solutions.

In a traditional classroom, the teacher has a limited amount to put forward questions to the students, and the students, in turn, do not ask questions in public if they have any. But when the classrooms are flipped, the students can attend every class when they will through the videos, and the availability of videos allows students to review and preview materials as they see fit, when they meet questions, they can take notes and ask teacher in the class. As the table below, we can see the whole produce:

		<b>Traditional Classroom</b>	<b>Flipped Classroom</b>
Time	Pre-classroom		Lectures
	Classroom time	Lectures	Active learning Activities (pair or

			group programming)
	Post-classroom	Homework (programming exercises)	

2. Flipped classroom differentiates "homework" from the traditional one in functions.

The different "homework" functions between the traditional and flipped classroom In traditional classes, teachers view the homework as the evidence to exam the students' command of knowledge, but it is still incomplete, and the students may still be confused about their mistakes. But with flipping classroom, the teacher is there looking over the students' mistakes, which they can correct in time.

3. Students have more chances to get the teachers' opinion.

If a student has trouble in his points of homework video, he is no longer confused in his teacher's explanation. Rather, he can choose another teacher's video, maybe the style of this teacher is just suitable for his own pace, and the student understands from a new aspect through another insight. But to the traditional classroom, if you have some problems, you just have no choice but to interrupt the teacher to solve the question, or continue to study with the unanswered questions, and finally you will find yourself frustrated for you master none at all to the end of the class. The time of the flipped classroom can be used more effectively and creatively. In the traditional classroom, the teachers are inclined to lecture all by themselves. By contrast, The teachers are

spend more time teaching and facilitating in the flipped classroom, meanwhile the students learn by doing, and, in the flipped classroom, the doing is happening within a hand-raise of the teacher. Students are no longer at home in isolation and unsupported while they do the difficult work of learning. Teachers can use class time to make meaningful contact with students, observing, guiding, and helping students.

4. Parents can recall the whole course and then help the students' learning process.

Most parents find it hard to recall the points of knowledge; they become frustrated when they're unable to help their child's homework and get stuck on a problem. They always hope that the problem of explaining is done in school by teachers. As one parent said, "Since my learning skills are a little rusty since I was in high school, I appreciate that any homework questions can be asked in the classroom rather than at home. That approach is much more helpful to students. Furthermore, with the flipped classroom, parents can watch the videos with their children, refreshing their own learning skills, and then growing their confidence to answer the questions.

### **Is blended learning more effective for students and teachers?**

Blended learning keeps the advantages of both traditional learning (instructor-oriented) and flipped learning (learner-oriented). Combine traditional learning and flipped learning paradigms will allow students to absorb knowledge and build skills on the basis of repetitive reading and practice. Today, the students are lack of the initiative in their study. If we totally put the students

in the flipped classroom, some of them students may break the plan rule. Otherwise, if we continue with the traditional classroom style exclusively, the teacher cannot satisfy all the students' needs, and it would constrain some students' special skills. Nowadays, we live in a technology and media driven environment with rapid changes in technology tools.

With these rapid technological changes, the students access the information quickly and widely, their needs are not just stay for the materials from the books, and they need more and deeper than before, so the teaching has become a more complex and challenging profession (Moore, 2005; Good and Brophy, 2008). The art of teaching in today's classrooms has also changed dramatically because students' learning approaches are different than those of the previous generation (Brunsell & Horejsi, 2013). In addition, various forms of technology have been integrated into learning and teaching environments. Accordingly, teachers need to have a large repertoire of skills and the ability to apply them in different situations for success (Moore, 2005). A teacher should be able to "design, implement, and assess learning experiences to engage students and improve learning; enrich professional practices; and provide positive models for students, colleagues, and the community" (International Society for Technology in Education [ISTE], 2008, p. 1) and also use his or her "knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments" (ISTE, 2008, p. 1) for effective teaching in today's learning environments. Meanwhile, in this approach, students first learn the content and instruction through online delivery, with the students controlling the time, place, path, and/or pace (Staker & Horn, 2012). And then in the traditional classroom, the teachers solve the

questions and the students in the group to discuss. Therefore, applying the two approaches can make the class active and the students get more impression than they get in the flipped classroom.

### **Chapter III Conclusion and Recommendations**

According to the introduction and comparisons above, the structure of the flipped classroom has been summarized clearly. The feasibility of the flipped classroom is still doubted. It has been received in China in formality; however, this model is still in its infancy and improvement step, which needs more time and practical samples to prove.

The flipped classroom benefits numerous types of learners; with the information delivery, a rising number of students have more opportunities to learn via various mediums, Through information gathering, they have their own thoughts and unique opinions. They also desire to take their own way of learning. That is why they often feel limited by the traditional education model which cannot satisfy them totally; even some students think the traditional class is a stereotypical learning mold to make the class boring. However, the flipped classroom allows students to adjust their own pace as well as repeat the videos and choose their teachers on a personal level to best support their learning at any time in case students miss the class. Consequently, the flipped classroom meets the needs of students who have different capacities at their comfort zone; the students of the millennial generation are used to getting information by clicking at their fingertips via the internet. The flipped classroom mostly works for the students who are willing to study and get a high level of knowledge. The students can get more autonomous rights from this pedagogy; moreover, it is very easy for students to engage themselves totally in class based on their preparation of finishing the assigned videos before the class. This could have helped build up their confidence and enjoyment of the subject matter. Due

to the mode of pedagogy, teachers transmit the pre-recorded videos on line, and spend class time involving students in learning by various kinds of collaboration and interactions; it also can enhance the students' internalization. However, there is no perfection in the world. While there are so many advantages of the flipped classroom, undoubtedly there will be disadvantages. Not every educator is familiar with the equipment for preparing the pre-class materials and assignments, especially the older teachers. Additionally, the flipped classroom will force the teachers to consume more time, so the time commitment is the biggest obstacle for teachers. Also, there are not most of students would like to accept this new mode of leaning for study, because they have gotten used to being like a receiver and the teacher has also gotten used to being like a tape-recorder in their study from their childhood times; the students have already lost the learning initiative for a long time, so they cannot accept this mode of been educated.

In my opinion, although the flipped classroom is becoming more popular in parts of China, this model of teaching is still an exploratory question due to the short time of application. Based on the comparison of the advantages and disadvantages above, the flipped classroom should become available in many Chinese schools in the future if it is applied in appropriate ways. Meanwhile the students in China are more international than before. they would like to try many new things which are truly wanted during their studies, and this phenomenon corresponds to the goals of the current education needs of building independent learners. From this view, there is a great potential in the flipped classroom being applied in Chinese courses.

I arranged my thinking into three points combined with the research above.

1. Is the flipped classroom suitable for the Chinese students?

The teacher has the absolute authority in Chinese history, especially in the teacher-oriented class. If the students follow their instructions, the teacher would judge them as good students, but if the students do not follow their instructions, the teacher would judge them as bad students. Due to this, the students cannot express themselves totally even if they have some innovative ideas and comments, because they do not want to be regarded as bad students. That is why they would rather accept passively all of the teacher's instructions. The students are like containers which are filled with everything by teachers; they are forced to do everything which they may not want to do. The traditional way of teaching makes students act like receivers. Because the students have been familiarized with this mode of education, most of them lost initiative gradually and unconsciously; they stopped thinking by themselves regularly. They do not know how to do the pre-class assignments and even do not know which courses they would like to study. They are also afraid to speak out about their understandings in class in case the teacher would judge the ideas as false. Based on the information, this research question "when should the flipped classroom be applied in Chinese class?" leads to the further research.

2. Are the students eager to have freedom from fear when they get used to this pedagogy of the flipped classroom?

China is not a free country, especially in the political sense, so the students are educated to restrict their behaviors and speeches all the time. Based on this current situation, my second research question above becomes clear. If the students in China from kindergarten to high

school, sometimes even in the university, want to express their ideas, they should put their hands up to get the teachers' approvals, then they can stand up to answer the questions or express themselves. There are also no activities in the class due to the phenomenon of the teachers' lecturing which is a stereotype of the traditional class that is why the discipline of the class is easy for teachers to control. If the flipped classroom is applied in the Chinese traditional classroom, the students would change the advantages of the new teaching style into disadvantages, because the students do not have the discipline to control their behaviors. The advantages of the flipped classroom can support more flexibilities to students who can choose courses and times to match their personal situations; it is very convenient for students to access information to save a lot of time with their commute or miss the day of class. Also, the students can benefit from the internalization from well-preparations for the class. This style of learning stimulates the students' motivations and interests. However, this application of the flipped classroom is just for some students who have initiative, it cannot be suitable for all students. Because it is hard for the students who are used to study in passively, they always consider the freedom of flipped classroom as an excuse for escaping their study;

If the students lack the contents in the class before, it is harder for them to amend issues and continue the next class. Therefore, it would be a great burden once their missed classes add up; this matter would be a delay for them to catch up with other students. Assuming the feasibility of the flipped classroom applied in the traditional classroom, how much should this new mode of teaching be applied in the Chinese classroom?

3. Should the educational system be changed if the flipped classroom is applied in China?

In China, there are many fiercely competitive entrance examinations, such as: the examination from elementary school to middle school, middle school to high school, and the most fiercely competitive examination is high school to university. Consequently, the students have to choose some courses which they do not truly desire to learn to meet the examination requirements. They should follow the instructions by their teachers and parents to pass these examinations. That is why many students do not know what they want to be after their graduation. They lack their natural talents except for the mandatory studying. However, the flipped classroom needs the students who have the initiative and creativity. It is a paradox. Assuming most students accept the flipped classroom, they choose courses which they like, but they cannot pass the entrance examination, how could they do the rest of their study? Maybe they will lack the chance to be enrolled in further schools. With the diverse ways of studying, most students can get more information on line. Meanwhile the students in rural places who cannot access the internet, cannot get information and videos on line at all. No matter where they live, they should be treated equally by having the same examination through the educational system. Due to these factors, the third question comes out above.

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