

# Blended Teaching For English Majors Based On SPOC Flipped-Classroom

Zheng Luyan and Lee Keok Cheong

**Abstract** -- As a brand-new “student-centred” teaching and learning ideology, blended learning has been welcomed in Chinese universities, famous for the combination of “self-paced learning generally through web-based application and face-to-face classroom teaching”. For years many teachers of English Major have been carrying out blended teaching practice, hoping for enhancing students’ learning quality; however, problems affecting students’ achievements and satisfaction of learning still exist. How to effectively combine online environment and face-to-face environment together to improve students’ learning achievements? How can blended teaching be built to meet different students’ personal needs? To solve the problems, the article focuses on the design and implementation of a blended teaching strategy based on SPOC flipped-classroom in an English major course, and explores the effects of the strategy on students’ academic performance and satisfaction within English major teaching. The research adopts the mixed methodology including interpretive, descriptive and correlational analysis. On the one hand, a quasi-experiment is carried out to find out the correlation between the strategy and students’ academic achievement. On the other hand, a questionnaire, an interview and students’ behavior analysis are adopted to figure out students’ satisfaction towards the blended teaching. In the data-process procedure, quantitative data are analyzed by SPSS 26.0, and qualitative data will be sorted out and interpreted by record, transcripts and description. The results show that the blended teaching strategy based on SPOC flipped-classroom can effectively improve students’ achievements, as well as enhance their satisfaction towards blended teaching of the course.

**Keywords** -- blended teaching strategy, SPOC flipped-classroom, academic achievements, learning satisfaction

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## I. INTRODUCTION

Blended teaching has received highlight attention in language teaching and learning for its benefits to promote teaching and learning. But in recent years, the practice of English major blended teaching falls into predicament. Students gradually lost interest and enthusiasm towards the blended teaching mode since their learning outcomes has not been enhanced, which causes low effectiveness in teaching and learning. Therefore, this study focuses on constructing and implementing an effective blended teaching strategy for English majors, aiming to improve students’ academic achievements and raise their satisfaction, and finally enhance effectiveness and quality of English major blended teaching.

This conceptual paper is composed of four parts. The first part is an introduction of the research background, problem statement, research objectives, research questions, scope and significance of the study. The second part is the literature review on variables, terms, related researches as well as the theoretical background involving in the study. Methodology is the main content of part three, including the research design, population and sample, and data collection instruments. Part four is the conclusion of the article, in which the summary of the study, limitations of the study and suggestions to the further researches are given.

### 1.1 Research Background

With the transformation of educational environment, update of teaching and learning concepts and development of information technology(IT), especially the emergency of teaching during COVID-19 epidemic, challenges to the traditional face-to-face (F2F) English teaching and learning have been more and more urgent nowadays in Chinese higher education. The drawbacks of traditional face-to-face teaching and learning, such as “teacher-centred” mode, limited time and closed space for teaching and learning, monotonous and insufficient learning resources, and lack of

interaction between teacher and students before and after class have diminished students' enthusiasm and interest in learning, and affected the effectiveness of teaching and learning.

In order to deepen the reform of undergraduate education, and comprehensively improve the quality of talent training, the Education Ministry of China has been enacting policies and taking measures to develop "internet+pedagogy" concept and explore new modalities of intelligent education. As "blended learning" concept was introduced into Chinese education, the government encouraged colleges and universities to actively implement blended teaching practice by combining online and offline resources and methods in teaching and learning, encouraged college teachers to actively carry out blended teaching for guiding students to interact, strengthen research-based learning and collaborative learning, and evaluate learning tasks in inquiry and reporting ways. In December 2021, at the 12th Xinhuanet Education Forum, Wu Yan, director of the Higher Education Department of the Ministry of Education, proposed that learning technology is a new educational productivity. Teachers' "teaching" should adopt new technology, and students' "learning" should be accomplished through new technology. The new integration of technology and education will lead to a new learning revolution. He stated that blended teaching should become the new norm of higher education and teaching in the future. It is under such circumstances that blended teaching, as a teaching and learning mode (or method) in higher education of China, has gradually been prevalent in teaching and learning among different disciplines and majors of Chinese universities.

Blended teaching is a brand-new teaching and learning idea combining face-to-face instruction with computer mediated instruction (or online instruction). Bilgin (2013) points out that "teaching English blending face-to-face teaching with an online LMS (Learning Management System) can be beneficial over solely in-class teaching".

Blended teaching offers the convenience of online learning together with the instructional interactions in the classroom and offers more engagement opportunities for teachers and students into the established courses. Some researchers proved in their studies that blended teaching are advantageous in enhance English teaching and learning quality and effectiveness (Hebah Asaad Sheerah 2018; Kang

Qi 2019; Aminuddin Hashemi&Kew Si Na 2020). For students, their interest in embarking on own learning process and motivation of learning to study at their own convenient can be stimulated in the blended learning environment provided by blended teaching mode (Owston et al. 2018). Moreover, in the blended learning environment students' cognitive burden can be relived and high-level learning consequently will occur (Zhang Jin, Du Shangrong 2020). For teachers, blended teaching can compensate for the limitation and the insufficiency of English major face-to-face classroom teaching in the aspects of teaching and learning resources, teacher-student interactions, and evaluations of students' learning. In addition, blended learning can provide teachers access to global course resources and syllabus materials that help them improve their teaching quality (Al-shami et al. 2019).

In spite of the advantages of English blended teaching mode comparing with face-to-face classroom teaching, dilemma of "lively appearance but ineffective reality" during the implementation of blended teaching in Chinese universities has appeared and gravely affected students' learning outcomes and blended teaching quality.

### **1.2 Problem Statement**

For teachers and educators, the purpose of adopting a new pedagogical mode or method is to improve the quality and enhance the effectiveness of teaching and learning. However, many colleges and universities have not achieved the expected results in the actual practice of blended teaching. Students' interests began decreasing as they found later that they couldn't get professional improvement in the mode of blended teaching (Yang Li 2021). Moreover, Lin and Gong (2021) found in their study that most students feel confused in blended teaching for lacking teachers' guidance in learning and hope teachers explain the difficult content, organize activities in class and use digital teaching resources in class. Teachers also confronted the dilemma of incompetency in handling the shift between classroom and online teaching.

Blended teaching can compensate for the shortages of traditional face-to-face teaching, provides more time, space and opportunities of interaction for teachers and students in improving teaching and learning quality. However, the negative impacts of blended teaching should not be ignored. Although the researchers began to be aware of the

importance of examining the influencing factors of blended teaching quality, there are still inadequate researches carried out from the perspective of the blended teaching and learning elements, as well as how to rearrange the elements for redesigning the blended teaching. Moreover, as the traditional face-to-face teaching has been combined with online teaching, the traditional classroom teaching elements should be reconstructed and rearranged, and the design of teaching also should be changed within blended learning environment. However, the current researches still stay on the exploration of the influencing factors of blended teaching and learning quality, studies that focus on the reconstruction and rearranging of teaching and learning elements for redesign blended teaching to improve students' achievements and satisfaction are limited.

In addition, current studies, such as Wilson-Armour (2020), only emphasized on the importance of transition of teachers' role and redesign of courses, there are still inadequate studies that explore effective blended teaching strategy, hence this gap need to be filled.

In the aspect of research methodology, most of the current studies on exploring effects of blended teaching on students' learning achievements and satisfaction adopt qualitative methodology but less quantitative and mixed methodology. As to the research scope, more blended teaching researches are on College English teaching and English for Special Purposes (ESP) teaching, but little on English major teaching.

In some extended research scope, such as in Sullivan's study, the researcher believes that gender is a factor that should be considered in blended teaching, and he points out that women have a more positive attitude towards online learning (Elizabeth & April, 2016). However, this research was done among the nursing major students, the result needs to be verified by data from other majors.

### **1.3 Research Objectives**

The study aims to construct a "SPOC and Flipped-classroom" based blended teaching strategy, then explore the effects of the strategy on the achievements of English major students, and finally evaluate students' satisfaction to the redesigned blended teaching for verifying the effectiveness of the strategy on students' learning. Additionally, gender is also taken into consideration in the exploring of students' achievements and satisfaction towards the blended teaching

strategy. Specifically, the Research Objectives (RO) are:

RO1. to explore whether there is any difference of the "SPOC Flipped-classroom Based" blended teaching strategy comparing with the traditional "online+offline" blended teaching strategy on students' academic performance.

RO2. to explore whether there is any difference in English majors' achievements between genders by adopting "SPOC flipped-classroom" based blended teaching strategy.

RO3: to identify the level of English majors' satisfaction to the "SPOC Flipped-classroom Based" blended teaching.

RO4. to analyze whether there is any difference in the level of English majors' satisfaction to the "SPOC flipped-classroom based" blended learning between genders.

### **1.4 Research Questions**

In order to achieve the aim of this research, the following research questions are formulation to guide this study:

RQ1: Is there any difference in English Majors' achievements by adopting "SPOC flipped-classroom based" blended teaching strategy comparing with the traditional "online+offline" blended teaching strategy?

RQ2: Is there any difference in English Majors' achievements between genders by adopting "SPOC flipped-classroom based" blended teaching strategy?

RQ3: What's the level of English major' satisfaction to the "SPOC flipped-classroom based" blended teaching?

RQ4: Is there any difference in the level of English majors' satisfaction to the "SPOC flipped-classroom based" blended learning between genders?

### **1.5 Hypotheses of the Research**

The hypotheses of the research are as following:

H1: There is a difference in English majors' achievements by adopting the "SPOC flipped-classroom" based blended teaching strategy comparing with the traditional "online+offline" blended teaching strategy.

H2: There is significant difference of in English majors' achievements between genders by adopting "SPOC flipped-classroom based" blended teaching strategy.

H3: There is no significant difference in the level of English majors' satisfaction to the "SPOC flipped-classroom based" blended learning between genders.

### **1.6 Scope of the Research**

The study is not meant to do a large-scale research on blended teaching strategy, but is bounded within a specific scope. Firstly, the study takes SPOC-based blended teaching as object, blended teaching based on MOOC is not included. Secondly, the population of the study are English major students from Chinese universities, non-English majors and students studying College English and English for Special Purposes(ESP) and are not included. Thirdly, the purpose of the study is to explore the effects of a blended learning strategy on English Majors' academic performance and satisfaction, effects on other aspects of students' development are not involved in the study.

### **1.7 Significance**

Although many previous studies have made important contributions to blended teaching strategies, this study has the potentials to add something to the literature in the following areas:

Theoretically, previous researches rarely work on the relation and difference of "blended learning" and "blended teaching", the distinguish of the two concepts in this study may give a clear picture for the further researches from the perspective of the concepts. Moreover, the previous studies have made significant contributions on MOOC-based blended teaching, and were mostly in non-English major blended teaching, limited systematic research on SPOC-based blended teaching for English major students. This study is worthwhile in the sense that blended English teaching and learning based on SPOC may be very different from that based on MOOC due to the different supportive elements of teaching and learning resources, methods, interaction and evaluation. In addition, the insight and findings obtained from this study can also contribute to a more general understanding of the blended teaching strategy on the effectiveness of blended teaching in English major class.

Practically, the study has added some new elements to the previous "online+offline" blended teaching mode, and constructed the blended teaching strategy based on SPOC and Flipped-classroom by rearranging the elements. The findings obtained from this study can contribute to knowing how far the "SPOC flipped-classroom" blended teaching mode promote language learning outcomes.

Pedagogically, this study explores a very important

aspect of English language teaching and learning in mainland China -- foreign language teaching and learning in the blended environment of SPOC and flipped-classroom. This is a worthy endeavor for enhancing the effectiveness and quality of English blended teaching and learning. The findings of the study also can offer implications to decision-makers of Chinese education institutions to theoretically and practically improve blended teaching.

## **II. LITERATURE REVIEW**

This part firstly depicts the previous studies on the definitions and the implementations of blended teaching, elaborately describing the findings of the previous studies held in different English language learning contexts and discussing the gaps in the literature; then the concepts and features of SPOC and flipped-classroom teaching are introduced; finally, theories supportive to the constructing of the blended teaching strategy are elaborated.

### **2.1 Blended Teaching**

#### **2.1.1 Definitions of Blended Teaching**

The concept of "blended learning" was initially established at the beginning of the 21<sup>st</sup> century. According to Bonk, blended learning is "combination of face-to-face instruction and online learning" (Zhan Zehui, Li Xiaohua 2016). It offers a profound basic concept for us to understand the essence of blended learning. Blended learning is considered as the combination of face-to-face instruction with technology-mediated instruction or online learning that reached the most popular among the 21<sup>st</sup> century skills in today's higher education (Bolandifar 2017).

Many researchers defined blended learning from different perspectives. Some think that "blended learning combines face-to face with distance delivery systems but it's more than showing a page from a website on the classroom screen, those who use blended learning environments are trying to maximize the benefits of both face-to-face and online methods" (Osguthorpe & Graham.2003). Nevertheless, Dziuban et al. (2004) noted that blended learning should be viewed as a pedagogical approach that combines the effectiveness and socialization opportunities of the classroom with the technological enhancements of the online environment. In other words, blended learning should be approached as a fundamental

redesign of the instructional approach.

He Kekang firstly introduced “blended learning” concept into China in 2005, and pointed that “the idea of blended learning is the deepening of our understanding toward constructivism and the teaching design. In the following years, many Chinese researchers turned to doing researches on “blended teaching”. In some researches, “blended teaching” was mostly interpreted as a new teaching mode or a teaching method by connecting online instruction with offline classroom teaching. Some researchers equated the definitions of “blended teaching” and “blended learning” in their studies (Yu Shengquan et al. 2005; Zhang Qiliang 2014). Li (2016) distinguished the two concepts in his study. He pointed out that “blended teaching”, being different from “blended learning”, starts from teachers’ position, focusing on how to help students get optimal learning effect. Actually, blended teaching and blended learning are two different aspects of the same problem, and from teachers’ perspective, it’s “blended teaching”. He further defined blended teaching as “a teaching method to achieve the optimal teaching effect at the appropriate time, through the application of the appropriate media technology, and to provide resources and activities compatible with the appropriate learning environment for the appropriate students to form appropriate abilities”. But the core problem is how to use blended teaching to enrich the truly participatory and personalized learning experience for students. According to Wang (2019), blended teaching is an "online" + "offline" teaching that combines the advantages of online and traditional teaching, and through the organic combination of the two teaching organization forms, learners can improve the learning quality from surface learning to deep learning.

Referring to the features of blended learning, and from the purpose, form and means of implementing “blended learning” instruction, blended teaching is defined in this research as an instructional strategy base on internet technology that takes the most advantages of both online and offline teaching to provide students practical opportunities to acquire knowledge, solve problems and promote deep learning by designing abundant, diversifying and well-organized teaching resources, activities and evaluations. In this way, blended teaching and blended learning are two perspectives of blended instructional procedure.

### **2.1.2 Previous Studies on English Blended Teaching**

Since blended teaching has been widely promoted in universities, both Chinese and western researchers began to do studies on blended teaching from the perspectives of course or teaching design, mode construction and teaching practice. Some are about the effects of blended teaching on students’ achievement compared with in-class teaching. Bilgin (2013) found in his study that teaching English by combining face-to-face instruction environment with an online environment can help students get improved in their achievements, but due to the disadvantages of online learning resources, most students did not want to have an online component in their conventional learning. Sheerah (2018) explored EFL undergraduate students’ perceptions concerning the strengths and weaknesses of blended learning as a technology-enhanced pedagogic tool on the development of their academic English skills and found that. Han (2019) did a research to verify the subjective value of the blended teaching mode in mobilizing students’ initiative and creativity of learning English, and to verify whether teachers can play a leading role in the blended teaching mode. The results of the studies showed that blended teaching mode has more advantages than face-to-face teaching in improving students’ English application ability and is helpful to stimulate their interest in learning, and further enhance their listening, speaking, reading and writing performance in learning English for Special Purposes (ESP).

Researchers began to reflect on the influencing factors of blended teaching quality in recent years, aiming to decrease the negative influence of blended teaching on students’ learning and to enhance teaching and learning effectiveness. Results of studies on blended teaching quality show that influencing factors as teachers’ ability of blended teaching design and implementation, students’ participation and their autonomous learning, blended teaching resources and learning evaluation affect the quality of blended teaching (Xie Xiaoshan, Zhu Zulin 2012; Wang Lei 2021; Ji Dan 2021; Yang Li 2021). Difficulty of online interaction among teachers and students (Chuanpit Sriwichai, 2020), and low-level of students’ autonomous learning ability (Na Lin, Jia Kai 2020) even cause students’ antipathy towards the blended teaching mode. Anthony Jr. et al. (2019) developed a model to explore the impact of Blended Learning (BL) for teaching and learning effectiveness. The

findings of their study implies that impact of BL on learners' effectiveness is positively predicted by achievement, engagement, involvement, retention, and cognitive outcome. Findings also suggest that the impact of BL on academic staffs' effectiveness is significantly influenced by delivery, performance, evaluation and motivation.

### **2.1.3 Problems of Blended Teaching and Possible Causes**

From the review of previous studies on blended teaching, the problems have been appearing. It shows in the researches that the effectiveness of blended teaching has decreased: Students' low autonomous learning ability in the online part (Na Lin & Jia Kai, 2020); students' interests began decreasing as they found later that they couldn't get professional improvement in the mode of blended teaching (Yang Li, 2021). Students feel confused in blended teaching for lacking teachers' guidance in learning and hope teachers explain the difficult content, organize activities in class and use digital teaching resources in class (Lin Gengkun & Gong Qing, 2021). Teachers confronted the dilemma of incompetency in handling the shift between classroom and online teaching (Lin Gengkun & Gong Qing, 2021).

Researchers began working on the possible causes of the phenomena. Some found that not-well prepared blended teaching design leads to students' surface learning and finally resulted in inefficient class (Peng Feixia & Yang Wen, 2017). Teachers' lack of techniques in arranging knowledge, teaching design and guidance in blended teaching brings negative effects on students' learning motivation, enthusiasm and satisfaction in learning and causes students' inefficient and surface learning (Zheng Yuqing, 2022).

Difficulties in students' learning process assessment, teachers and students' timely online interaction, and online resource production and trade-offs (Zheng Jing, 2018), as well as considerable class size, limited access of online lessons, difficulty of online interaction with teachers and classmates, lack of experience and skills for digital tools, and time management for two learning modes (Chuanpit Sriwichai, 2020) also contribute to the decreasing of blended teaching and learning effectiveness.

So, what should to be done for blended teaching? First of all, to rearrange influencing factors of blended teaching is the vital task to do for teachers; then, to design blended teaching concerning students' needs and difficulties, quantity and quality of teaching resources, methods of

effective knowledge transmission from teacher to students; and finally, to design new paths and forms of teacher-students' interaction, and learning assessments.

## **2.2 Concepts of Blended Teaching Strategy**

The broad teaching strategy includes both teaching strategies and learning strategies, while the narrow sense of teaching strategies belongs to an integral part of teaching design, that is, the teaching procedure plan and teaching implementation measures formulated to complete the teaching objectives and adapt to the cognitive needs of students in a specific teaching situation.

## **2.3 Definition and Features of SPOC and Flipped-classroom**

### **2.3.1 Definition and Features of SPOC**

SPOC is an abbreviation of "Small Private Online Course", which was originally proposed by Armando Fox in 2013 based on the comparison with MOOC (Massive Open Online Course). "Small" refers to the number of students generally ranging from dozens to hundreds. "Private", comparing with "Open" in MOOC, means that only identified learners on campus have access to these resources and has good course privacy (Han Wanjiang et al. 2015).

Compared to MOOC, SPOC emphasizes more on students' complete and in-depth learning experience, which is conducive to improving the course completion rate. Teachers can set up and automatically regulate the teaching pace and course scoring management system of each course according to students' personal interests and preferences and actual needs of each student. The system is targeted at MOOC The integration of high-quality resources provides new possibilities for further optimization of classroom teaching. It also has been found that SPOC makes blended learning easier and more effective (Chen Ran, Yang Cheng 2015), and has positive influence on improving learners' learning participation and autonomous learning ability (Hu Xiaojing et al. 2018).

There is a tight relation between SPOC and Blended Teaching (Chen Ran & Yang Cheng, 2015). SPOC-based blended teaching can create a more superior teaching environment for teachers and students, and the complete teaching links and structure design of SPOC effectively supports students' independent learning and reduces the

difficulty of blended learning. The convenient use of SPOC online curriculum resources can enable teachers to return to the campus more often, so as to focus on the exploration of offline personalized learning and cooperative learning mode.

### **2.3.2 Definition and Advantages of Flipped-classroom**

Flipped classroom teaching is a new teaching technology and method based on good network communication conditions in the 20th century. Originally, Lage et al. (2000) put forward "Inverted Classroom" and defined it as "what traditionally happened inside the Classroom now happens outside the Classroom, and vice versa." The concept involves students in more classroom activities, thus subverting the traditional classroom teaching schedule. The "Flipped Classroom" introduced by Baker (2000) emphasizes "understanding and application rather than recall; At the same time not sacrificing the presentation of factual knowledge; Students' having more control over their learning; Making students more responsible for their own learning; Providing more peer learning opportunities for students". Bishop and Verleger (2013) proposed the definition framework of flipped classroom and considered that flipped classroom consists of two parts, namely, Interactive Classroom Activities guided by student-centered learning theory and Explicit Instruction Method guided by teacher-oriented learning theory. This definition emphasizes the type of learning on which pre-class and in-class sessions are based and excludes classes that do not use video as learning material for extracurricular activities. Abeysekera and Dawson (2015) provided a general theoretical model for flipped classroom based on motivation theory and cognitive load theory. They believed that in flipped classroom, the feeling of Competence, relevance, autonomy could improve learners' external and internal motivation, while customized expertise and self-paced learning can better manage learners' cognitive load.

Zhang et al. (2012) firstly introduced "flipped classroom" in China. They compared various elements of traditional classroom and flipped classroom from six aspects, such as teaching form, classroom content, technology application and evaluation method, and pointed out the connotation of flipped classroom from the perspectives of teacher role transformation, redistribution of the class time, and allocation of student's roles. He Kekang (2014) believes

that the most essential feature of flipped classroom is the transformation of classroom teaching structure, that is, the status and role of the four elements of the classroom teaching system (teachers, students, teaching content and teaching media) have changed.

According to the definitions of flipped-classroom, flipped classroom has the following features compared with traditional teaching: (1) The learning environment is more extensive and flexible; (2) Reflecting the idea of "student-centered" teaching transformation; (3) The changing roles of teachers and students.

The most prominent advantages of flipped-classroom for blended teaching (Jonathan Bergmann & Aaron Sams, 2015):

Firstly, flipped classroom provides teachers with practical teaching strategies;

Secondly, flipped classroom promotes high efficient face-to-face classroom time;

Thirdly, flipped classroom reshapes the teacher-student relationship and improves students' interpersonal skills;

Finally, flipped classroom promotes students' personalized learning and raise their interest and abilities towards autonomous learning.

### **2.4 Theoretical Background**

The current decreasing effectiveness of blended teaching caused students' surface learning and led to low-level learning effectiveness; while the low-level learning effectiveness, in turn, caused students' antipathy towards blended teaching and learning. In view of the research aim, how to design blended teaching strategies to promote teaching and learning effectiveness for English major teaching is the primary task. The "SPOC Flipped-classroom" based blended teaching strategy is constructed based on deep learning theory and effective teaching theory (see Figure 1), which is to promote students from surface learning to deep learning and help teachers implement effective blended teaching, finally enhance blended teaching and learning effectiveness for English majors.

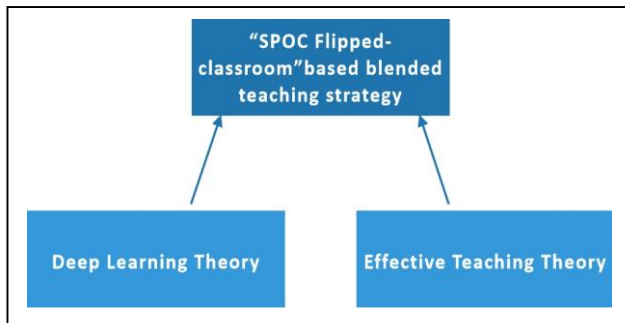


Figure 1 Theoretical Framework

#### 2.4.1 Deep Learning Theory

In 1976 Marton and Salje carried out a series of researches on learning process, and published the learning and essential difference: results and process. In their book, according to the different ways to obtain and processing information, They distinguished learners by deep-level processors and shallow-level processors, and put forward two concepts of “deep learning” and “surface learning”.

Jensen et al. proposed Deeper Learning Cycle (DEL) Theory (Wen Nuan, 2010), taking students’ deep learning as the main research body, stimulates students’ deep learning motivation, guide students through multiple thinking, and provide strategic basis for promoting the teaching design of students’ deep learning.

The basic features of deep learning include the following points: (1) emphasizing knowledge construction; (2) focusing on activity experience; (3) deep processing knowledge; (4) problem-solving orientated; and (5) stressing on critical reflection.

#### 2.4.2 Effective Teaching Theory

Effective teaching/instruction, as a term, originated from the scientific movement of teaching in the west in the first half of the 20th century. Braskamp and Ory (1994) believe that effective teaching means that teachers can effectively promote the occurrence of appropriate learning. Dunne and Wragg (2005) believe that the first characteristic of effective teaching is to help students learn valuable content. Devlin and Samarawickrema (2010) believe that effective teaching is the teaching that focuses on students and learning progress. Cui Yunche (2001), a Chinese scholar, believes that students’ progress or development is the only evaluation index for effective teaching. According to the requirements of the new curriculum reform, Song Qiuqian (2007) believes that effective teaching is to promote

students' progress and development in knowledge, skills, process, methods, emotions, attitudes and values.

The influencing factors of effective teaching can be divided into two categories: one is the influencing factors focusing on the overall teaching results and teaching process. The other is on teaching factors. Richards (2008) proposed four main factors affecting effective teaching, namely teacher factor, teaching factor, school factor and learner factor. Teacher factor refers to the teaching skills and qualifications of teachers. Teaching factors refer to those related to curriculum. Chen Youqing (2012) proposed that there are three types of variables affecting teaching effectiveness: effect variables (learning results and efficiency) control variables (teaching and learning behavior) conditional variables (teaching objectives, content conditions and learning situation). The other research method focuses on teacher's teaching behavior and expounds the factors that influence it.

### III. METHODOLOGY

This chapter discusses the methodology of this study including the research design, participants of the research, instruments, and data analysis. It starts with describing the participants of the research, then talks about the preparation of the instruments namely surveys, interviews and classroom observations, pilot-testing, procedures of data collection and data analysis, and, lastly, reliability and validity of the instruments.

#### 3.1 Research Design

The research is carried out by firstly constructing a “SPOC Flipped-classroom” blended teaching strategy based on Deep Learning Theory and Effective Teaching Theory. Then the mixed methodology is adopted to examine the correlation between students’ achievements and the “SPOC Flipped-classroom” based blended teaching strategy. A quasi-experiment is implemented for verify the first research hypothesis. A questionnaire, an interview and students’ behavior analysis are subsequently adopted for verifying the second, third and fourth research hypotheses. The main strength of using mixed method was the ability to apply diverse data-collection instruments, enabling the researcher to address a variety of behavioral issues through multiple lens, using the strengths of both types of data to



minimize the weakness of one type of data, and strengthening the validity of the study (Creswell, 2012). On the basis of both qualitative and quantitative data such as quasi-experiment, close-ended questionnaire surveys, interviews and behavior observations, the researcher owned the privileges to triangulate the sources of data and determine the consistency of the findings.

Quantitative data will be analyzed by SPSS 26.0, and qualitative data will be sorted out by record, transcripts and description. Quantitative data are collected by taking a quasi-experiment and doing a questionnaire, while qualitative data are from interview and behavior observation. Quantitative data analysis will be carried out by SPSS 26.0, while qualitative data are analyzed by transcript, description and interpretation. Results of the study are supposed to explore an effective way of improve the effectiveness of English major blended teaching and learning for both teachers and students, and give suggestions to the further study on blended teaching.

### **3.2 Population and Samples**

The population in the study is English major students from a Chinese university.

The samples are differentiated in the study:

In the quasi-experiment, there are two classes of English Majors in a university of China are the participants, who are divided into control class and experimental class. English majors from the experiment class are surveyed by the questionnaire, and about 10 English majors from the experiment class are randomly selected as the interviewees in the interview.

### **3.3 Data Collection Instruments**

Tests, a questionnaire and an interview are provided through the study for collecting data.

#### **3.3.1 Tests**

The tests include pre-test and post-test. Pre-test will be taken before the experiment for verifying there is no difference between students' performance in the control class and the experimental class, while post-test will be taken after the experiment for verifying there is a difference between students' academic performance in the control class and the experimental class, and students in the experimental class have better academic performance than those in the

control class.

#### **3.3.2 Questionnaire**

The questionnaire is composed of two sections-- demographic information and five-level Likert scale statements. The questionnaire used a five-level Likert scale from "strongly agree" to "strongly disagree" to offer options for responses to the questions. The questionnaire will be piloted before the actual distribution, and some modifications will be made based on the results of the pilot study. Reliability and validity information will also be presented.

#### **3.3.3 Interview**

The purposes of the semi-structured in-depth interviews are:

(1) To triangulate the questionnaire findings and behavior observation results;

(2) To further examine the different levels of satisfaction and the causes;

(3) To explore new possible dimensions aligned with the research questions.

Questions in the interview are made according to the research objectives;

### **3.4 Data Analysis**

Data of the quasi-experiment are collected from pre-test and post-test and then be analyzed by Independent T-test through SPSS, results such as t-value, df, Sig.(2-tailed), Mean Difference and p-value will be reported for exploring whether there is any difference in the effects of "online+offline" blended learning strategy and the "SPOC Flipped classroom" based blended learning strategy on students' achievements.

Data collected from the questionnaire will be analyzed by Multiple Linear Regression Analysis method (MLRA), which is used to identify English majors' satisfaction to the "flipped classroom-based" SPOC blended teaching. Results from the perspectives of genders and grade are also reported.

Qualitative data are mainly from the interview. The data will be recorded, sorted and transcribed by the researcher to correspond to the results of quantitative data analysis.

#### **IV. CONCLUSION**

In this part, the summary of the study is presented, limitations of the study are described and the suggestions are given to the future research.

##### **4.1 Summary of the Study**

The study is carried out under the circumstances of Chinese pedagogical reform and the emergency of ineffective of blended teaching and learning. After a brief introduction to the research background and problem statement from the perspective of personal teaching experience and literature, the study aims to construct a “SPOC Flipped-classroom” based blended teaching strategy for enhancing blended teaching and learning effectiveness. The research objectives, research questions and research hypotheses are put forward with the purpose of identifying the correlation between the strategy and students’ achievements, and exploring students’ satisfaction towards the strategy. The remainders of the article are literature review, methodology and conclusion. The organization of the study is clearly combed and presented. Findings of the study are supposed to make theoretical, practical and pedagogical contributions to enhancing English major blended teaching and learning effectiveness, and to the further study and practice of blended teaching for English majors.

##### **4.2 Limitations of the Study**

The construction of the redesigned blended teaching strategy, the research path and methods have been reported in the previous sections of this article, which depicted the outline of the study. Despite the comprehensive framework, there are some limitations which need to be considered before interpreting the results. Firstly, one major limitation is the lack of using appropriate software to test and report the qualitative data. The traditional model of transcription and interpretation cannot thoroughly be objective in explaining how much students are satisfied with the new teaching strategy. Another limitation is the reliability of sampling. Though the researcher of the study remained to be very critical in sampling the students in the experiment, not all background factors were taken into account while analyzing the data. However, such background information was given while coding and interpreting the interview data.

Moreover, the male-female ratio among the samples was very low. Lastly, though this study thoroughly analyzed the literature related to blended teaching effectiveness, due to the rapid updating of the literature, the timeliness of the study is hard to guaranteed.

The third limitation of the study is that due to limited time and lack of financial support, the study could not focus on collecting data from different universities and observe their classroom teaching, which might take the findings to a more general view.

##### **4.3 Suggestions to the Future Research**

Several directions for further research can be inferred considering the limitation of this research. First of all, as the lagging of qualitative data analysis tool becomes the limitation of the study, new advanced qualitative data analysis tools are suggested to be adopted in the following researches. Secondly, the voice of male students is not well represented in this research due to the size of samples. Large-size samples are suggested to selected.

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